Technical Review Coversheet

Applicant: Regents of the University of California, Los Angeles (U336S140049)
Reader #1: **********

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**Priority Questions**

**Competitive Preference Priority 1**

Promoting STEM Education
1. CPP 1

**Competitive Preference Priority 2**

Implementing Academic Standards
1. CPP 2

Total 107 95
Technical Review Form

Panel #7 - 2014 TQP Grant Review - 7: 84.336S

Reader #1: **********
Applicant: Regents of the University of California, Los Angeles (U336S140049)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project.

2) In determining the significance of the proposed project, the Secretary considers the following factors:

i) The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.

ii) The likelihood that the proposed project will result in system change or improvement.

iii) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated.

Strengths:

Applicant provides documentation of its high needs target population in high poverty high schools to include data addressing target population’s high percentage of free and reduced lunch, high teacher need, and economic need. To address the needs of the target population, Applicant’s proposed project will build on its’ previous successful IMPACT program through this second phase (proposed project) by expanding services as a multi-level, three-tiered program, to prepare 96 new STEM teachers in an enhanced residency program situated in 18-STEM-focused elementary and secondary schools in high-need school district communities. Proposed multi-level initiative will improve college and career readiness of traditionally underserved students, respond to local need and the national 100Kin10 call, advance school and district-level Linked Learning/STEM reforms with focus on mentor teacher support, enhance STEM/STEAM partnerships to support teacher and students learning, and promote continuing innovation in teacher preparation and program sustainability.

Applicant states that the support and momentum from partners and the previous accomplishments such as preparation of highly qualified teachers to be change agents in hard go staff schools, community-based organizations involvement, Linked Learning schools focused on STEM education and careers, growth of the STEM pathways all increased the likelihood that the proposed project will result in system change and improvement.

Applicant states that proposed project will address statewide shortage of more than 2000 Math teachers, 1000 Life Sciences teachers, and 1000 Physical Education teachers Math. Proposed project will address increased demand for highly-qualified STEM/Linked Learning Teachers by preparing teachers in high-need areas of Math and Science. IMPACT candidates (phase 2) will be placed in STEM elementary and secondary schools with mentor teachers, supporting accountability for high student achievement and competencies within the college and career readiness framework.

Weaknesses:

Although Applicant mentions systemic change, specifics are not given as to what elements and how those elements of this project will be utilized to bring about systemic change.
Selection Criteria - Quality of Project Design

1. 1) The Secretary considers the quality of the design of the proposed project.

2) In determining the quality of the design of the proposed project, the Secretary considers the extent to which the proposed project consists of a comprehensive plan that includes a description of:

i) The extent to which the proposed project is supported by strong theory (as defined in this notice).

ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

iii) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

iv) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

v) The extent to which the applicant demonstrates that it has the resources to operate the project beyond the length of the grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any partners; evidence of broad support from stakeholders (e.g., State educational agencies, teachers unions) critical to the projects long-term success; or more than one of these types of evidence.

Note: In order to address this criterion, applicants are encouraged to develop logic models to demonstrate their projects theory of action. Applicants should connect available evidence of past history of successful outcomes to their logic models. Applicants may use resources such as the Pacific Education Laboratory’s Education Logic Model Application (www.relpacific.mcrel.org/PERR.html) or the Northeast and Islands REL Skill Builder Workshops (www.relnei.org/events/skill-builder-archive.html) to help design their logic models. In addressing this criterion, applicants are also encouraged to connect the project design to the intended impact of the project, including an explanation of how the project will affect the preparation, placement, retention, induction, and professional development of teachers, and ultimately student achievement. Finally, applicants are encouraged to discuss the role and commitment of each partner and how the IHE and LEA(s) plan to sustain their partnership beyond the life of the grant.

Strengths:

Applicant supports proposed project with a variety of theories on multiculturalism, critical pedagogy, culturally responsive teaching, second language acquisition, community organization, and follows the body of sociocultural research on learning enabling students to excel and teacher learning, development, and support to successfully occur.

Proposed Project is the second phase of Applicant’s IMPACT project, and will continue to build and expand upon it’s previous success in teacher preparation and improvement in practice by focusing on studying the apprentice- and mentor-level outcomes and school-level effects of residency programs. The training covers rigorous and quality teacher preparation, where for a three-year period program participants engage in a three-tier training and professional development being Apprenticeship, Apprentice and mentor co-teaching, and Apprentice Masters Project and induction, leading to improvement in teacher practice.

The proposed project activities will be carried out over a three-tier, 3-year period of teacher preparation with residency in a STEM focused, school environment. The program follows a logical progression of expansion and growth upon the base of its previous IMPACT phase one program.

The proposed project involves extensive partner collaboration for maximizing the effectiveness of project services through
(1) the Applicant-building staff, delivering residency program, achieving financial sustainability and assuring assessment and evaluation; (2) Partner UCLA Center X’s work is in graduate credential programs, Teacher Education Program and Principal Leadership Institute with administrative support in overseeing large grants, contracts, and sales and services; and (3) Partner Center for Powerful Public Schools which builds capacity of educators to create and sustain powerful schools that prepare students for college, career and life. These three collaborative project participants will lead the second phase of applicant IMPACT program with STEM/Linked Learning schools and mentors. Other partners such as NASA and Inner City Arts will help to substantially deepen and extend teacher and student learning of Science Technology, Engineering and Mathematics. Components.

Applicant provides letters of broad support and commitment to proposed project from partners, State Education agency and other stakeholders and community organizations, addressing the importance of and critical need for the program success. Applicant provided letter from Partner NASA providing pro-bono Learning Opportunities that they will supply for the project with equaling “In Kind” Costs listed. Applicant supplies letter of support from its school board, mentioning that the work in this area of Linked Learning of this proposed project will supplement two recent LA School District grants (a Federal Dept. of Labor grant and a d a California Career Pathway Trust Grant). Applicant includes a multi-year budget narrative with accompanying plan covering the five-year grant period.

Weaknesses:

Although Applicant discusses outcomes from the previous Phase I of its’ IMPACT project, specific details on the quality and intensity of the training and professional development in this project phase are not mentioned. (For instance: Applicant did not give specific examples of what learning activities will be covered in the apprentice training, or what will be some specific methodologies covered in the teacher-mentor phase.)

Applicant provided no evidence or letters of financial support that would enable the project to go beyond the length of the grant period. Although Applicant addresses ways that it intends to generate funds, such as having a team what will oversee the financial health and development multi-year financial projects, a Program Director and staff that will review and recommit financial contributions from all partners annually, a GSE&IS Development Director who will work to build a funding base, as well as its’ intent to apply for federal funds and seek state legislations to provide funding streams, Applicant does not provide evidence of any of this streams of revenue already being provided and in place for the project.

Reader’s Score: 40

Selection Criteria - Quality of the Management Plan

1. 1) The Secretary considers the quality of the management plan for the proposed project.

2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:

   i) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

   ii) The qualifications, including relevant training and experience, of key project personnel.

   iii) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.

Note: In order to address this criterion, applicants are encouraged to include in the application narrative a clear, well thought-out implementation plan that includes annual timelines, key project milestones, and a schedule of activities with sufficient time for developing an adequate implementation plan, as well as a description and qualifications of the personnel who would be responsible for each activity and the
level of effort each activity entails. Applicants may also describe how the partnering organizations will communicate and coordinate in order to achieve project goals.

Strengths:
Applicant gives milestones timeline for teacher candidates, mentors and lead teachers, and project STEM/Linked Learning Schools, and general milestones such as online group seminars for mentors, Cohorts, Credentialing, and School sites with STEM PDs. Timeline is given in months across grant period. Applicant provides narrative as to responsibilities of Advisory Board and Leadership Team quarterly meeting times. Applicant also includes information on project teacher and mentor contracts, with the financial stipends and requirements for repayment should participants not complete their obligations.

Applicant provides information on qualifications and relevant training and experience of key personnel to include the Principal Investigator (20%), Graduate Researcher (49%), Program Planner and Oversee (25%-10% in-kind); all are qualified and experienced. Applicant lists areas of responsibilities of each. Applicant also lists an independent Evaluator, UCLS Natl. Center for Research on Evaluation, Standards and Student Testing (CRESST) who engaged in evaluation of the Phase I of the IMPACT project.

Applicant mentions obtaining performance feedback through quarterly meetings of Advisory and Leadership Team. Applicant includes information on performance of first phase of IMPACT project, and how the success of that will be the baseline for continuous improvement in this proposed project, which if phase two of their IMPACT project.

Weaknesses:
Although Applicant mentions quarterly leadership team meetings and quarterly advisory board meetings to review implementation plans, measure program progress against project milestones and provide programmatic support, specific times are not given as to formative assessment and feedback to project participants.

Reader’s Score: 18

Selection Criteria - Quality of the Project Evaluation

1. 1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

2) In determining the quality of the evaluation, the Secretary considers:

i) The extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes.

Note: In response to this selection factor, applicants are encouraged to include data on student learning.

ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

iii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

Note: In addressing this criterion, applicants are encouraged to include a plan for how the projects evaluation will address the TQP Grant Program performance measures established by the Department under the Government Performance and Results Act of 1993 (GPRA), as well as the measures established in section 204(a) of the HEA. (The specific performance measures established for the overall TQP Grant Program are discussed under Performance Measures in section VI of this notice.) Further, applicants are encouraged to describe how the applicants evaluation plan will be designed to collect both output data and outcome data, including benchmarks, to monitor progress. Finally, each applicant is encouraged to select an independent, objective evaluator who has experience in evaluating educational programs and
who will play an active role in the design and implementation of the projects evaluation.

**Strengths:**
Applicant lists proposed study as a mixed-method evaluation, where both quantitative and qualitative data will be collected and analyzed across duration of grant period. Applicant mentions research design with a purpose to test the effectiveness of the IMPACT program as evidenced by impact on student learning.

Project evaluation will collect data from State tests, edTPA, District Program data, teacher surveys, mentor data and partner school data. Project methods of evaluation include various descriptive statistics, t-test, and multiple regression analysis to track other quantitative indices from surveys, classroom logs, edTPA, GPRA program and district data on retention and persistence, observational rubric. Qualitative data coding will be used to analyze interview and focus group data.

Analysis of teacher assignments, classroom observations, teacher/teacher candidate surveys, State tests, yearly mentor surveys, classroom logs of mentor classroom practices will be used to understand mentor experiences and impact. Once each year School level data collection will be used to understand the role of the impact school in apprentice teacher’s learning process and to determine how school participation in the program might influence school level practices and norms around data-driven decision making. These are very good elements of the project evaluation plan.

**Weaknesses:**
Specific information on how formative assessment would be conducted and how results would be analyzed, evaluated and applied to provide performance feedback and permit periodic assessment of progress toward achieving project intended outcomes was not clearly articulated.

Possibility of bias exists with utilization of an internal evaluator. Some of the measures were not described as valid and reliable (instructional quality and survey measures from IMPACT evaluation).

**Reader's Score:** 18

**Priority Questions**

**Competitive Preference Priority 1 - Promoting STEM Education**

1. Projects that are designed to address one or both of the following priority areas:
   a) Increasing the opportunities for high-quality preparation of, or professional development for, teachers or other educators of STEM subjects.
   b) Increasing the number of individuals from groups traditionally underrepresented in STEM, including minorities, individuals with disabilities, and women, who are teachers or educators of STEM subjects and have increased opportunities for high-quality preparation or professional development.

Note: Applicants that respond to Competitive Preference Priority 1 and Absolute Priority 1 are still required to implement the required reforms within the whole teacher preparation program, as reflected in sections (a) and (b) of Absolute Priority 1.

In responding to this competitive preference priority, applicants are encouraged to include the following elements in their proposed projects:

1) Institutional collaboration to ensure that students in a college of education who intend to teach STEM courses have access to courses that build appropriate content knowledge. Such students should have
access to course sequencing that is equal to the course sequencing for other STEM majors outside the college of education.

2) Emphasis on hands-on and inquiry-based STEM experiences for prospective teachers, including dedicated research or laboratory experiences, STEM discipline-specific pedagogical instruction, and explicit instruction in the interdisciplinary connections between learning sciences and STEM instruction; and

3) Early and multiple field-based instructional experiences for prospective teachers that are structured to provide exposure to a variety of teaching and learning environments, and that are coordinated and aligned with the teacher preparation curriculum.

Strengths:
Proposed project focus is high-quality preparation of teachers of STEM subjects through a comprehensive teacher development program to include teacher coursework, school on-site apprenticeship and mentoring. Project will prepare 96 STEM teachers in 18 STEM-focused elementary and secondary high need schools in order to improve college and career readiness of traditionally underserved students, respond to the local need and national 100Kin10 call for high-effective STEM teachers, advance school and district-level Linked Learning/STEM reforms with focus on mentor teacher support, deepen STEM and STEAM partnerships to support teacher and student learning, and to promote continuing innovation in teacher preparation and program sustainability. Applicant mentions preparing project applicants from those who are under-represented.

Weaknesses:
Applicant did not specifically mention individuals with disabilities and women who are teachers or educators of STEM subjects.

Reader’s Score: 4

Competitive Preference Priority 2 - Implementing Academic Standards

1. Projects that are designed to support the implementation of internationally benchmarked, college- and career-ready academic standards held in common by multiple States and to improve instruction and learning, including projects in the following priority areas:

   a) The development or implementation of professional development or preparation programs aligned with those standards.

   b) Strategies that translate the standards into classroom practice.

Strengths:
The proposed project focus is the development and implementation of teacher preparation programs aligned with aligned with internationally benchmarked college and career ready academic standards held in common by multiple States. The proposed program promotes Science, Technology, Engineering and Mathematics (STEM) Education aligned with the Common Core Standards, with preparation of teachers to instruct students in these areas. Applicant mentions project implements internationally benchmarked college-and-career-ready Elementary and secondary academic standards. Project strategies to prepare teachers utilizing performance tasks to translate standards into classroom practice through professional development, coursework, on-site apprenticeship, and mentorship

Weaknesses:
N/A
## Technical Review Coversheet

**Applicant:** Regents of the University of California, Los Angeles (U336S140049)  
**Reader #2:** **********

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**Priority Questions**

**Competitive Preference Priority 1**

**Promoting STEM Education**

1. CPP 1  
   5  5

**Competitive Preference Priority 2**

**Implementing Academic Standards**

1. CPP 2  
   2  2

**Total**  
107  101
Technical Review Form

Panel #7 - 2014 TQP Grant Review - 7: 84.336S

Reader #2: **********

Applicant: Regents of the University of California, Los Angeles (U365140049)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project.

2) In determining the significance of the proposed project, the Secretary considers the following factors:

i) The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.

ii) The likelihood that the proposed project will result in system change or improvement.

iii) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated.

Strengths:

This project will appropriately extend a prior TQP grant, IMPACT that prepared 155 math, science and early childhood teachers in high-need schools in the Los Angeles school district by preparing 96 new STEM teachers in 18 high need elementary and secondary schools. (Abstract). The project focuses on schools with high student need as demonstrated by poverty, language, and disability indicators and is documented by descriptive statistics of the percentage of students on free or reduced lunch in the target schools (p. 7; p. 53-54; Appendix, p. e77-78). The project will respond to these needs by integrating the Common Core standards into Phase 2 of the IMPACT program and by focusing on Linked Learning/STEM schools that prepare students for college and career success. (p. 6). State data also supported the project by citing that the state has the highest percentage of students scoring below basic and the lowest percentage of students scoring proficient on the NAEP science assessment. (p. 7).

The applicant appropriately projects that the project will result in system change and improvement by supplying additional qualified teachers in STEM. These projections are based on their past successes with the IMPACT program demonstrating IMPACT teachers’ higher than average retention rates, value-added scores, and demonstrated competencies on measures of efficacy. The applicant also projects system change on their ability to receive funding from private foundations and other federal government agencies. (Abstract; p. 6). In addition, the project will focus on recruiting teachers from underrepresented groups who can bring the cultural competency needed to succeed in schools with diverse populations. (p. 7).

The project appropriately focuses on preparing STEM teachers to fill needs created by the shortage of qualified teachers as identified by state data, such as descriptive statistics documenting the numbers of science and mathematics teachers in the state that have no credentials or are not qualified and the numbers reflecting teacher shortages in STEM fields (p. 6), as well as projected teacher retirements. (p. 7).
Weaknesses:
No weaknesses were found.

Reader’s Score: 15

Selection Criteria - Quality of Project Design

1) The Secretary considers the quality of the design of the proposed project.

2) In determining the quality of the design of the proposed project, the Secretary considers the extent to which the proposed project consists of a comprehensive plan that includes a description of:

i) The extent to which the proposed project is supported by strong theory (as defined in this notice).

ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

iii) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

iv) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

v) The extent to which the applicant demonstrates that it has the resources to operate the project beyond the length of the grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any partners; evidence of broad support from stakeholders (e.g., State educational agencies, teachers unions) critical to the projects long-term success; or more than one of these types of evidence.

Note: In order to address this criterion, applicants are encouraged to develop logic models to demonstrate their projects theory of action. Applicants should connect available evidence of past history of successful outcomes to their logic models. Applicants may use resources such as the Pacific Education Laboratorys Education Logic Model Application (www.relpacific.mcrel.org/PERR.html) or the Northeast and Islands REL Skill Builder Workshops (www.renel.org/events/skill-builder-archive.html) to help design their logic models. In addressing this criterion, applicants are also encouraged to connect the project design to the intended impact of the project, including an explanation of how the project will affect the preparation, placement, retention, induction, and professional development of teachers, and ultimately student achievement. Finally, applicants are encouraged to discuss the role and commitment of each partner and how the IHE and LEA(s) plan to sustain their partnership beyond the life of the grant.
The applicant appropriately cited the definition of strong theory from the Federal Register and described their theory of change accordingly. Three related activities of embedding teacher learning in the context of urban schools, recruiting and preparing a diverse local workforce, and educators’ continual learning are based on values and beliefs about teacher learning, as well as social justice that will guide the project and integrate state and national standards. (p. 8). The logic model clearly identifies inputs, activities tied directly to objectives, and relevant short, medium, and long-term outcomes, as well as appropriate measures to assess those outcomes. (p. 10). In addition, the applicant cited current research on teacher development and effective instruction that underlies the project. (p. 9). The applicant also clearly linked their prior TQP project’s 5 multiple measures and student test data as a methodological foundation for the proposed project (p. 15).

The proposed project is of sufficient intensity and duration to lead to improvements in practice. The professional development in the second phase of the TQP program will be appropriately based on lessons learned and needs identified from the prior TQP project. Cohort-based teams of 16 teachers and UCLA faculty advisors will work with Residents during the first year of full-time residency in a co-teaching model that includes adapted coursework and placements in STEM focused, high-need elementary and secondary schools. The project will allow for a state teaching credential at the end of the first year, a second year as a full time teacher of record, and summer/fall coursework from UCLA. A UCLA Master’s degree is offered after 18 months, and a staged two-year induction program will follow. (p. 16-18).

Mentor training is also extensive and will be based on a framework for effective teaching and advancing Mentors as facilitators of adult learning, as well as based on findings from a qualitative study of IMPACT mentors. The professional development will include training in a cognitive coaching model to help mentors reflect on feedback and questioning they provide to their apprentices. (p. 19-20). Mentors will receive monthly mentor forums, cognitive coaching seminars, release time, and teacher leadership programs in two forms leading to a certificate or an administrative credential.

The project activities represent a coherent and sustained training. The residency program will consist of 18 months and an additional 24 months of induction support beginning in the fall of year two (p. 17). The induction support will be based on Standards of Quality and Effectiveness for Professional Teacher Induction Programs and aligned to the state standards for the teaching profession. (p. 26). Induction support will consist of biweekly observations demonstration lessons assistance with lesson planning and release time to observe other teachers. (p. 27). In their second and third years of teaching, IMPACT teachers will be supported through quarterly seminars and an online community. (p. 28).

The project appropriately builds on collaboration with relevant partners, including the Los Angeles Unified School district. The district will contribute to the project by identifying appropriate Resident clinical placements established through the federal Magnet School Assistance Program grants that supported developing STEM-based schools and Linked Learning. The school district will also provide accomplished STEM Mentors. (p. 28-29). Project partners of NASA and Inner-City Arts will enhance Apprentices’ and Mentors’ capacity to connect STEM learning to real-world contexts. NASA will provide STEM curricula and field experiences in science and engineering. NASA will also offer professional development in math curriculum and virtual guest speakers for math and science classrooms. Inner-City Arts will contribute professional development in the arts as curriculum connections for STEM subjects for Mentors and Apprentices. (p. 30). The Center for Powerful Public Schools will provide professional development on integrating Common Core standards (p. 32).

The applicant has appropriate plans for sustainability and continued partnership. The UCLA fiscal team will oversee and develop the partnerships’ multi-year financial projections and all partners will be asked to renew their financial contributions annually. The Development Director will work to solicit funds from local philanthropy and solicit local, state, and federal funds. In addition, the applicant will work with partners to sponsor legislation supporting the residency training model and work with the local businesses community to create a venture capital fund. (p. 35-36).
Weaknesses:
The content of the professional development for Apprentices and Mentors was not clearly described and some aspects of the curriculum are yet to be developed, such as the curriculum for the Teacher Leadership certificate and the Induction Program, making it difficult to judge the quality of the content (p. 22, 26). Some acronyms were used that were not explained, such as STEAM (p. 21) and edTPA (p. 23). The Principal Leadership Institute was also not clearly described, such as how the program improves teaching and learning, and what coursework from UCLA advances this goal. (p. 23).

Reader’s Score: 43

Selection Criteria - Quality of the Management Plan

1. 1) The Secretary considers the quality of the management plan for the proposed project.

2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:

i) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

ii) The qualifications, including relevant training and experience, of key project personnel.

iii) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.

Note: In order to address this criterion, applicants are encouraged to include in the application narrative a clear, well thought-out implementation plan that includes annual timelines, key project milestones, and a schedule of activities with sufficient time for developing an adequate implementation plan, as well as a description and qualifications of the personnel who would be responsible for each activity and the level of effort each activity entails. Applicants may also describe how the partnering organizations will communicate and coordinate in order to achieve project goals.

Strengths:
The management plan includes a clear overview of project activities each year for teacher candidates, mentors, and lead teachers with appropriate timelines for each of the three cohorts. (p. 40-41).

Key project personnel are well qualified by their prior educations and experiences for their role responsibilities on the project. For example, the Principal Investigator is currently the Executive Director of UCLA’s Center X and holds a doctorate in educational leadership and a California multiple subject credential. Other project staff include the Associate Director of UCLA’s teacher education program who will oversee the programmatic aspects of the program and work with faculty advisors and partners and the Director of the UCLA Principal Leadership Institute who was a school principal in the participating school district. (p. 36-38).

The applicant has appropriate methods and mechanisms for performance feedback and continuous improvement efforts. The leadership team will meet monthly to discuss the program planning function and sustainability. The Program Director and two other team members will form a Professional Learning Community for program faculty and support provides to meet monthly to improve the curriculum and use data-driven inquiry to enhance the residency experience. In addition, an Advisory Board composed of representatives from the three partner organizations and the two technical advisors will meet quarterly to review implementation plans and measure program progress and provide support. (p. 41).

Weaknesses:
The Program Milestones and Timeline table did not clearly identify project milestones; only dates were listed which are not milestones. The management plan also did not clearly specify which project staff would be responsible for overseeing
Selection Criteria - Quality of the Project Evaluation

1. 1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

2) In determining the quality of the evaluation, the Secretary considers:

i) The extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes.

Note: In response to this selection factor, applicants are encouraged to include data on student learning.

ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

iii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

Note: In addressing this criterion, applicants are encouraged to include a plan for how the projects evaluation will address the TQP Grant Program performance measures established by the Department under the Government Performance and Results Act of 1993 (GPRA), as well as the measures established in section 204(a) of the HEA. (The specific performance measures established for the overall TQP Grant Program are discussed under Performance Measures in section VI of this notice.) Further, applicants are encouraged to describe how the applicants evaluation plan will be designed to collect both output data and outcome data, including benchmarks, to monitor progress. Finally, each applicant is encouraged to select an independent, objective evaluator who has experience in evaluating educational programs and who will play an active role in the design and implementation of the projects evaluation.

Strengths:

The evaluation will be thorough and feasible mixed-method and quasi-experimental evaluation using a matched comparison group design. Both quantitative and qualitative data will be collected and data collection and analysis will be guided by the logic model for both formative and summative evaluation. The evaluation will include assessing the GRPA measures of student learning outcomes and teacher learning, as well as program indicators over time, such as the percentage of teachers who are members of underrepresented groups and the percent teaching high need academic areas and the numbers who enroll and persist (p. 43, 45). These data will be compared to figures from other teacher education institutions in the state. (p 47). Valid and reliable measures will include standardized student achievement test data. Other qualitative data will include interviews, observations, and logs. The evaluation will be guided by six appropriate questions that focus on program outcomes and impact and four questions that address program implementation. (p. 44-45).

The evaluation will be thorough and feasible and use prior methods and measures from their past TQP project. The evaluation measures are clearly tied to and appropriate for addressing the 10 evaluation questions that guide the project to assess project goals for output and outcome data. (p. 46). Much of the evaluation is carefully constructed, including a priori power calculations to determine sufficient power to find a difference between the experimental and comparison groups, demographically matched samples in the two groups, and appropriate quantitative data analysis methods of regression.
Weaknesses:
The reliability and validity of some key measures were not clearly described. For example, it is unclear if items will be extracted from an extant instrument for the teacher and teacher candidate surveys which would require re-establishing validity and reliability on the new instrument and the items are not described. No information is provided about the type of validity or reliability that was established on the survey measure for IMPACT program evaluation and the survey measure items are not described (p. 48). It is unclear how the rubric/scoring methodology represents a valid and reliable measure and validity is yet to be established on the classroom observation rubric. (p. 48). The psychometric properties including the types of validity (e.g., face and construct) and reliability (e.g., internal consistency) are not identified for the Instructional Quality Instrument (p. 47).

No methods of data analysis were identified or described for any of the qualitative data. Coding data is only one step in the process of analyzing qualitative data and does not constitute a method, such as constant comparison or thematic analysis. (p. 52).

Reader's Score: 18

Priority Questions

Competitive Preference Priority 1 - Promoting STEM Education

1. Projects that are designed to address one or both of the following priority areas:
   
a) Increasing the opportunities for high-quality preparation of, or professional development for, teachers or other educators of STEM subjects.

b) Increasing the number of individuals from groups traditionally underrepresented in STEM, including minorities, individuals with disabilities, and women, who are teachers or educators of STEM subjects and have increased opportunities for high-quality preparation or professional development.

Note: Applicants that respond to Competitive Preference Priority 1 and Absolute Priority 1 are still required to implement the required reforms within the whole teacher preparation program, as reflected in sections (a) and (b) of Absolute Priority 1.

In responding to this competitive preference priority, applicants are encouraged to include the following elements in their proposed projects:

1) Institutional collaboration to ensure that students in a college of education who intend to teach STEM courses have access to courses that build appropriate content knowledge. Such students should have access to course sequencing that is equal to the course sequencing for other STEM majors outside the college of education.

2) Emphasis on hands-on and inquiry-based STEM experiences for prospective teachers, including dedicated research or laboratory experiences, STEM discipline-specific pedagogical instruction, and explicit instruction in the interdisciplinary connections between learning sciences and STEM instruction; and

3) Early and multiple field-based instructional experiences for prospective teachers that are structured to provide exposure to a variety of teaching and learning environments, and that are coordinated and aligned with the teacher preparation curriculum.
Strengths:
The project addresses increasing the number of STEM teachers from underrepresented groups by focusing on recruiting teachers from underrepresented groups who can bring the cultural competency needed to succeed in schools with diverse populations. (p. 7).

Aspects of the program promote inquiry based STEM experiences. Residents complete an inquiry project of teacher research where teachers determine a question or topic of interest based on their practices and observations and develop and implement action plans, collecting data to form conclusions based on their experiences and research during induction support. (p. 25).

Weaknesses:
No weaknesses were found.

Reader's Score: 5

Competitive Preference Priority 2 - Implementing Academic Standards

1. Projects that are designed to support the implementation of internationally benchmarked, college- and career-ready academic standards held in common by multiple States and to improve instruction and learning, including projects in the following priority areas:

   a) The development or implementation of professional development or preparation programs aligned with those standards.

   b) Strategies that translate the standards into classroom practice.

Strengths:
The project will appropriately align professional development with the Common Core College and Career Ready Standards in Mathematics and English/Language Arts and the Next Generation Science Standards. All standards and the Smarter Balanced assessments used to measure common core proficiencies were based on international standards of PISA and TIMSS and on national standards from NAEP, SAT and ACT, and content standards of high-performing states and countries. (p. 31). The project partner, the Center for Powerful Public Schools, will provide professional development on standards aligned performance tasks connecting to student learning outcomes that can be integrated into interdisciplinary units in the Linked Learning approach. (p. 32).

The Linked Learning approach allows teachers to understand each standard and design performance tasks for demonstrated student mastery within interdisciplinary projects and across multiple applications. A clear example was provided illustrating in six dimensions, including focus, intensity, and applications how mathematics instruction will be aligned with the Common Core standards through presenting real-world problems and projects. (p. 32-33).

Weaknesses:
No weaknesses were found.
Technical Review Coversheet

Applicant: Regents of the University of California, Los Angeles (U336S140049)
Reader #3: **********

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Priority Questions

Competitive Preference Priority 1
Promoting STEM Education
1. CPP 1                                    5          4  

Competitive Preference Priority 2
Implementing Academic Standards
1. CPP 2                                    2          2  

Total                                       107        98
Technical Review Form

Panel #7 - 2014 TQP Grant Review - 7: 84.336S

Reader #3: ************
Applicant: Regents of the University of California, Los Angeles (U336S140049)

Questions

Selection Criteria - Significance

1. 1) The Secretary considers the significance of the proposed project.

2) In determining the significance of the proposed project, the Secretary considers the following factors:

   i) The extent to which the proposed project is likely to build local capacity to provide, improve, or expand services that address the needs of the target population.

   ii) The likelihood that the proposed project will result in system change or improvement.

   iii) The extent to which the proposed project will prepare personnel for fields in which shortages have been demonstrated.

Strengths:

Project X has 20 years of success that includes positive outcomes. For example, 5 years ago Project X IMPACT trained 155 math, science, and early childhood educators for 32 high needs innovative urban schools supported by 109 mentor teachers. These teachers have had a higher retention rate, a higher student achievement results and teacher test pass rates than other new teachers. p3

Project X has a history of positive collaboration with a STEM focus having trained math and science teachers for high needs schools five years ago. p3

Project X effectively established that there is a shortage of qualified teachers in LA, as evidenced by the fact that statewide 25% to 35% of science and math teachers either have no credentials or are not qualified. There is a shortage in California of 2,000 math teachers, 1,000 life science teachers and 1,000 physical science teachers. p6

Weaknesses:

Because the proposal doesn’t clearly state its plan for placing teachers, it’s unclear if enough residents will be placed in the same schools to make a difference in student achievement. This makes it difficult to fully assess the extent to which this project will bring about a systems change.
Selection Criteria - Quality of Project Design

1. 1) The Secretary considers the quality of the design of the proposed project.

2) In determining the quality of the design of the proposed project, the Secretary considers the extent to which the proposed project consists of a comprehensive plan that includes a description of:

i) The extent to which the proposed project is supported by strong theory (as defined in this notice).

ii) The extent to which the training or professional development services to be provided by the proposed project are of sufficient quality, intensity, and duration to lead to improvements in practice among the recipients of those services.

iii) The extent to which the proposed activities constitute a coherent, sustained program of training in the field.

iv) The extent to which the services to be provided by the proposed project involve the collaboration of appropriate partners for maximizing the effectiveness of project services.

v) The extent to which the applicant demonstrates that it has the resources to operate the project beyond the length of the grant, including a multi-year financial and operating model and accompanying plan; the demonstrated commitment of any partners; evidence of broad support from stakeholders (e.g., State educational agencies, teachers unions) critical to the projects long-term success; or more than one of these types of evidence.

Note: In order to address this criterion, applicants are encouraged to develop logic models to demonstrate their projects theory of action. Applicants should connect available evidence of past history of successful outcomes to their logic models. Applicants may use resources such as the Pacific Education Laboratorys Education Logic Model Application (www.relpacific.mcrel.org/PERR.html) or the Northeast and Islands REL Skill Builder Workshops (www.relei.org/events/skill-builder-archive.html) to help design their logic models. In addressing this criterion, applicants are also encouraged to connect the project design to the intended impact of the project, including an explanation of how the project will affect the preparation, placement, retention, induction, and professional development of teachers, and ultimately student achievement. Finally, applicants are encouraged to discuss the role and commitment of each partner and how the IHE and LEA(s) plan to sustain their partnership beyond the life of the grant.

Strengths:

The logic model is comprehensive, understandable, and clear in all categories. These categories include inputs, program components, and outcomes. The percentages provided in outcomes section make success readily definable. The arrows clearly show program connections. p10

The definition of a strong theory, a process or a strategy, provided on p8 of the proposal is a plus. This definition introduces Project X’s strong theory of change that includes transforming public schools to create a more just, equitable, and humane society dependent on a high quality work force in high-poverty, urban areas.

Supporting theories do include research citations. This adds credibility to the proposal. p9

There are strong partners that bring the needed expertise to the table. They include UCLA’s Project X, UCLA Math and Science Initiative, LAUSD, and CRESST. These entities have gotten positive program outcomes in the past. p1
The 2 infographics provide lots of good impact information and are effectively designed. This sells the program and pulls the program together graphically. p13

The comparison of Project X phase 1 and phase 2 is helpful and shows the improved changes to the residency program. The changes include 16 teachers per cohort, more training and support from the mentor, and a staged two-year induction. pp17-19

The design includes an emphasis on assessment/high quality measures like the IMPACT Observation Rubric, the CRESST Instructional Quality Assessment and the edTPA. This helps with continuous improvement of the program. p15

Weaknesses:
There was not enough information in this section to determine the intensity of the professional development. It would have been helpful to see the number of hours devoted to PD.

Reader's Score: 40

Selection Criteria - Quality of the Management Plan

1. 1) The Secretary considers the quality of the management plan for the proposed project.

2) In determining the quality of the management plan for the proposed project, the Secretary considers the following factors:

   i) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

   ii) The qualifications, including relevant training and experience, of key project personnel.

   iii) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.

Note: In order to address this criterion, applicants are encouraged to include in the application narrative a clear, well thought-out implementation plan that includes annual timelines, key project milestones, and a schedule of activities with sufficient time for developing an adequate implementation plan, as well as a description and qualifications of the personnel who would be responsible for each activity and the level of effort each activity entails. Applicants may also describe how the partnering organizations will communicate and coordinate in order to achieve project goals.
The leadership team is representative of the 3 organizations and this supports shared leadership, which should ensure that all partners are well represented. p36

The milestones and timeline chart is comprehensive, well planned and self-explanatory. p39

Key leadership meetings happen at frequent times—monthly and quarterly depending on the subgroups. Frequency of meetings assists in communicating results, making necessary changes to the program, and assigning tasks that need to be completed. p41

The description of the leadership team’s roles and responsibilities is comprehensive, including appropriate percentages of time devoted to the program, staff members’ past work experiences, and assigned roles for the program. The assigned roles complement one another. p36

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**Weaknesses:**

Formative assessments for continuous improvement need to be more clearly described. It would be helpful to know what the formative assessments are and how they will be used.

**Reader’s Score:** 19

**Selection Criteria - Quality of the Project Evaluation**

1. 1) The Secretary considers the quality of the evaluation to be conducted of the proposed project.

   2) In determining the quality of the evaluation, the Secretary considers:

   i) The extent to which the methods of evaluation provide valid and reliable performance data on relevant outcomes.

   Note: In response to this selection factor, applicants are encouraged to include data on student learning.

   ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

   iii) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

   Note: In addressing this criterion, applicants are encouraged to include a plan for how the projects evaluation will address the TQP Grant Program performance measures established by the Department
under the Government Performance and Results Act of 1993 (GPRA), as well as the measures established in section 204(a) of the HEA. (The specific performance measures established for the overall TQP Grant Program are discussed under Performance Measures in section VI of this notice.) Further, applicants are encouraged to describe how the applicants evaluation plan will be designed to collect both output data and outcome data, including benchmarks, to monitor progress. Finally, each applicant is encouraged to select an independent, objective evaluator who has experience in evaluating educational programs and who will play an active role in the design and implementation of the projects evaluation.

Strengths:
CRESST, the external evaluator for the project, has an outstanding reputation. They also conducted the evaluation for phase 1 which supports continuity. p42

This is an appropriate and thorough research design that includes mixed methods and multiple measures. p43

Both formative and summative evaluations are included, supporting continuous improvement and outcomes. p43

Smarter Balance assessments will be used for the student outcome measures. This is a standards-based approach. p49

Reporting of the GPRA measures are comprehensive. p47

Weaknesses:
None

Reader’s Score: 20

Priority Questions
Competitive Preference Priority 1 - Promoting STEM Education

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3) Early and multiple field-based instructional experiences for prospective teachers that are structured to provide exposure to a variety of teaching and learning environments, and that are coordinated and aligned with the teacher preparation curriculum.

Strengths:
Clinical experiences and inquiry are mentioned throughout the proposal. Resident teachers are placed in schools with STEM themes for clinical experiences. p16 New teachers and mentor will be exposed to STEM learning in real world contexts. p29 STEM experts will speak about real world experiences through various art mediums.p31

Weaknesses:
It is unclear if explicit instruction in the interdisciplinary connections between learning sciences and STEM instruction is taking place.

Reader's Score: 4

Competitive Preference Priority 2 - Implementing Academic Standards

1. Projects that are designed to support the implementation of internationally benchmarked, college- and career-ready academic standards held in common by multiple States and to improve instruction and learning, including projects in the following priority areas:

a) The development or implementation of professional development or preparation programs aligned with those standards.

b) Strategies that translate the standards into classroom practice.

Strengths:
The proposal is written with standards (like CCSS) as the foundation. Next Generation Science standards are also mentioned related to knowledge and skills needed to succeed in postsecondary coursework and the workforce. p31

The standards are embedded in the coursework.

Weaknesses:
None

Reader's Score: 2

Status: Submitted
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