

**U.S. Department of Education - EDCAPS
G5-Technical Review Form (New)**

Status: Submitted

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Technical Review Coversheet

Applicant: CSUB Auxiliary for Sponsored Programs Administration (U336S140047)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	15	15
Quality of Project Design		
1. Project Design	45	45
Quality of the Management Plan		
1. Management Plan	20	16
Quality of the Project Evaluation		
1. Project Evaluation	20	16
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	99

Technical Review Form

Panel #9 - 2014 TQP Grant Review- 9: 84.336S

Reader #1: *****

Applicant: CSUB Auxiliary for Sponsored Programs Administration (U336S140047)

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:

The proposal conveys a level of significance for the project in several ways. The proposal states that an element of the program will be to enhance the administrative and teacher leadership skills of administrators, teacher leaders, and Residents in rural, high-need partner schools through professional development. (p. 2). This demonstrates that the program seeks to build the local capacity of teachers and schools.

The proposal cites a study by Wested that the Central Valley will have some of the highest demands for teachers in all of California (p. 2). This is further evidence that the program is strategically addressing the needs of the target population and addressing shortages of personnel.

The proposal states that the Residents' academic time with K-8 students will increase by over 300% compared to the current model of teacher candidacy (p. 6), which is evidence for the proposed project creating system change.

The proposal notes that the three partner school districts are high need in terms of the number of students who qualify for free or reduced lunches and the number of English language learners. (p. 7-8) For example, Semitropic Elementary School District has 54% who qualify for free or reduced lunch and 36% of the students are identified as English language learners. (p. 8).

The proposal also mentions that fact that the applicant has prior success with a teacher quality partnership grant, which serves as some evidence that the project will address the needs of the target population. (p. 10).

Weaknesses:

No weaknesses noted.

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 project's 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 project's 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 Island's 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:

The proposal states that the focus will be on a 15-18 month program that culminates with Residents receiving a multiple-subjects credential with a master's in Curriculum and Instruction and the ability to pass the California Subject Examination for Teachers (CSET) in either Foundational Mathematics or Foundational Science. (p. 11). This is evidence for professional development program in the project being of high quality.

The proposal cites studies on teacher residency models as empirical warrant for their approach to teacher education and positions the work with distributed cognition as a theoretical perspective (p. 12). This demonstrates that the program is supported by strong theory.

The proposal states that one of the project's goal is establishing a 15-month residency program that prepares Residents to develop, teach, and assess high quality STEM curriculum in rural, high-need schools through a co-teaching experience beginning with a summer STEM academy, completion of a multiple subjects credential, and culminating in a masters research project. (p. 12). This goal is accompanied by four measurable objectives and anticipated outcomes (p. 12-13). These examples serve as evidence that the project design is coherent and a sustained training program.

The proposal mentions that part of the mode of instruction for Residents will be a set of weeklong extensive professional development seminars collectively called LaunchPad. A secondary goal of LaunchPad will be to build the cohort's interconnectedness and team spirit while learning STEM activities that will be used during the camp. (p. 14). This effort to build collective capacity is evidence of the project design focusing on the sustainability of the project.

Part of the academic year work will be focused on address CalTPA tasks (18). These are teaching performance assessment tasks, which demonstrates that the academic work is of high quality and connected to what is important for effective teaching.

The proposal mentions that the PD model that will be adapted and used by Growing Rural Opportunities (GRL) STEM is the Kern High School District (KHSD) model of Common Core professional development. GRL STEM will adapt the model to include Science and Engineering and Residents and teachers will work in teams with CSUB faculty to develop STEM anchor tasks. (p. 24).

The proposal demonstrates extensive partner and stakeholder support as evidenced by the letters of support on pages e82-e102. This demonstrates that the program is relying on collaborations to maximize the impact of the program.

A logic model is provided that suggests that makes an explicit connection between the activities of the project and the outcomes they are anticipated. (attached p. 52). This is evidence of the theoretical perspective that will guide the overall design of the project.

To further support the sustainability of the project, the letter of support from the Dean states that the University will commit matching funds to aid in the financial sustainability of the project.

Weaknesses:

No weaknesses noted.

Reader's Score: 45

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:

There are several important components of the proposal that demonstrate a comprehensive management plan. For example, the key staff teams to carry out the work are identified in the proposal as the Program Management Team, the Core Management Committee, and the Executive Council. (p. 35). In addition, on page e110, the proposal provides the organizational hierarchy that provides some evidence of who is managing whom. In the appendix, the resumes are provided for all of the key staff personnel, which provides evidence for the qualifications and appropriate training that they have experienced.

The members of the core management committee, the program management team and the executive council are provided along with some of their responsibilities. (p. 35-38).

On pages e110-e114, the proposal provides a management plan table. In this table, key staff are once again identified by position, specific tasks and milestones that they will engage in as well as the month and year in which the work will take place. This demonstrates that the management plan contains the elements of a high quality plan and is tied to the objectives of the work.

The proposal states that the Core Management Committee will meet monthly during the life of the grant. The committee function will be similar to a professional learning committee. The committee will look at relevant data collected on the success/issues of the project, determine areas of growth and areas of de-emphasis, monitor progress of the implementation plan and timeline, develop solutions for unanticipated problems, and act as the feedback loop for continuous improvement for the grant. (p. 35-38).

Weaknesses:

No weaknesses were noted.

Reader's Score: 16

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 project s 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 applicant s 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 project s evaluation.

Strengths:

The proposal states that the evaluation will be carried out by researchers at Wested, which is evidence of a high quality evaluation team. (p. 41). This is evidence that the evaluation will be carried out by competent and experienced evaluators. The proposal states that the evaluation team will analyze quantitative and qualitative data to evaluate the objectives and performance targets (p. 41). This is evidence that the evaluation methods are thorough and will yield useful information for the project.

The proposal also states that the evaluation will employ a quasi-experimental design (QED) to assess whether GRL STEM results in improved teacher and student outcomes relative to traditional teacher preparation and induction programs. WestEd will compare findings on performance measures for GRL STEM participants with national and state standards of excellence in teacher preparation as well as with outcomes of other credentialing. (p. 41).

The evaluation will monitor the outcomes related to teacher retention, placement, graduation and certification, teacher preparation and recruitment and selection. (42-45).

The project will develop a data sharing MOU, which will facilitate the data collection process (p. 51). The proposal describes the data sources that will be used for the evaluation work (p. 41-50).

The evaluation plan is grounded in the logic model on page 52, which further suggests that the methods are thorough and adequate for the objectives of the project.

Weaknesses:

The timeline for the evaluation plan does not include adequate detail. This would make clear the extent to which the feedback would be timely and offer the opportunity for period assessment. For example, it is not clear that the data collection would be carried out frequently enough to provide period feedback. (p. 42-45).

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 proposal provides extensive evidence for this competitive preference priority.

The proposal states that Residents will gain content knowledge, pedagogy, and experience inquiry based science, technology, engineering, and mathematics (STEM) preparation upon completion of their multiple subject credential (p. e14).

The proposal also states that the GRL STEM project addresses the need for qualified educators with high teacher turnover rates in high-need rural schools of minority and English learner populations (p. e14).

The proposal mentions that Residents, through the credential, masters, and induction process, will work with minority students of low socioeconomic status with a focus on interdisciplinary integration of STEM curriculum and academic literacy (p. e14).

Weaknesses:

No weaknesses noted.

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 provides extensive evidence for this competitive preference priority.

The proposal states that Residents, district teachers and administrators will participate in intensive Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS) professional development. (p. e14).

Moreover, the GRL STEM residency program goals includes establishing a 15 month residency program that prepares Residents, in cooperation with the partner districts, to develop, teach and assess

high quality STEM curriculum in rural, high-need schools through a co-teaching experience beginning with a summer STEM academy, completion of a multiple subjects credential and culminating in a masters research project. (p. e14).

Also, the program intends to develop teachers who promote the critical factors for success in the 21st Century of grit, tenacity, and perseverance through effective teaching that closes the achievement gap of high needs rural students through the use of Common Core State Standards and the Next Generation

Science Standards. (p. e14).

Weaknesses:

No weaknesses noted.

Reader's Score: 2

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Technical Review Coversheet

Applicant: CSUB Auxiliary for Sponsored Programs Administration (U336S140047)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	15	15
Quality of Project Design		
1. Project Design	45	45
Quality of the Management Plan		
1. Management Plan	20	15
Quality of the Project Evaluation		
1. Project Evaluation	20	14
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	96

Technical Review Form

Panel #9 - 2014 TQP Grant Review- 9: 84.336S

Reader #2: *****

Applicant: CSUB Auxiliary for Sponsored Programs Administration (U336S140047)

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:

- i. The project is likely to build capacity to improve services for the target population. The proposed program will improve student achievement and decrease the high teacher turnover rate in the Central Valley by recruiting, preparing, and mentoring minority teachers; by providing teachers customized induction; and by placing students in local high-need rural schools upon program completion (pages 1-2). Components of the program will enhance the administrative and teacher leadership skills of administrators, teacher leaders, and Residents in rural, high-need partner schools through professional development.
- ii. The project will likely result in improvement of student achievement and system change. The project will enhance the administrative and teacher leadership skills of administrators, teacher leaders, and Residents in rural, high-need partner schools through professional development (paged 2-4). Residents will gain content knowledge and pedagogy, and will experience inquiry-based STEM preparation upon completion of their multiple subject credential. Residents will build their capacity as STEM teachers through experiential opportunities including participation in STEM afterschool and summer programs, additional content support, professional development, and classroom instruction.
- iii. The program will prepare teachers to work in academic fields where there is a shortage of teachers. The partnership will address the critical shortage and high teacher turnover facing rural schools by developing a 15-month multiple subject credential and master's residency program with an emphasis in STEM. The partnership will prepare 120 post baccalaureate multiple subject credential completers (K-8 California teacher certification) with a master's degree in Curriculum and Instruction over five-years. The targeted area will need 1,657 teachers based on student-enrollment projections and 2,115 teachers based on retirement projections (page 3). The proposed Residency Program will address the demand for STEM teachers

Weaknesses:

No weaknesses noted.

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 project's 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 project's 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 Island's 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:

i. The applicant cites a variety of research to support the project. Residents will be simultaneously exposed to abstract theory of practice within courses and the concrete classroom application of those theories as co-teachers in authentic classrooms (page 11). The program embraces the ideology of distribution of cognition, by infusing the cohort model into the program and having all Residents participate in professional learning communities (PLCs), both horizontally (educators of the same grade level and content) and vertically (teachers of different grade levels). A Logic model is presented to support the project acts as a conceptual framework. Information is clear on what is going into the program, who will participate, the activities and the outcomes, including long-term impacts (page 52).

ii. and iii. Project participants will receive sufficient professional development and training on the project. The goals of the project is to establish a 15-month residency program that prepares Residents, in cooperation with the partner districts, to develop, teach, and assess high quality STEM curriculum in rural, high-need schools through a co-teaching experience beginning with a summer STEM academy, completion of a multiple subjects credential, and culminating in a masters research project. Residents, district teachers, and administrators will participate in intensive Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS) professional development (PD) (page 4). The PD will address both the content and process aspects of teacher growth that research shows is important in an effective PD model. Candidates will participate in in-service training, participation in the BLAST! Summer Academy, Saturday

workshops, and coursework, all of which reflect the program's sustainable approach to delivering high-quality. LEAs partnership will support and fund PD by providing matching funds as well as in-kind support. Professional development training will provide an interdisciplinary approach to content and learning with university faculty from different academic fields (Teacher Education, Math, Science & Engineering) (pages 4-5). All Residents will begin their program participating in a set of weeklong extensive professional development seminars collectively called LaunchPad (page 14).

iv. The applicant describes collaborative partnerships for the project. The School of Social Sciences & Education and is the largest of the four schools at CSUB, and within the school the Department of Teacher Education offers preliminary credentials in multiple subject, single subject, and special education. The proposed partnership will be between California State University, Bakersfield (CSUB) in a collaborative effort with three Central Valley California rural high-need districts. The partnership will address the critical shortage and high teacher turnover facing rural schools by developing a 15-month multiple subject credential and Master's residency program with an emphasis in STEM

(v) The applicant demonstrates the project has support that includes support beyond the period of the grant (page 10). Each partner brings to the partnership unique resources, including grant funds, financial support, supplies, technology, and expertise. These resources will help to sustain the program after funding ends. LEAs have afterschool and summer funding models that will support the integration of STEM into the curriculum. LEAs will also provide staff and administrator time to the project at no cost to the grant. Through prior TQP funding, technology equipment and expertise is already established. The partnership will also continue to apply for grants to support the goals of the project. CSUB faculty will support the project by using empirically-based practice and scientifically valid research on teaching and learning.

Weaknesses:

No weaknesses noted.

Reader's Score: 45

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:

i. The applicant presents a management that has potential to help guide staff in managing the program (pages 20-26). The plan aligns project goals, performance measures, timelines for completion, persons responsible for ensuring tasks are completed and outcomes (page e111-e115). The management plan will ensure that the project will be

completed within budget, and all grant objectives are done in a systematic and timely manner while meeting deadlines and upholding the quality of the partnership. The management plan is comprised of the Program Management Team, the Core Management Committee, and the Executive Council (page 35). The Program Management Team will be comprised of a PI, Co-PI, a Grant coordinator, and an Educational Coordinator. The Core Management Committee. Responsible for overseeing the achievement of the project goals and objectives at the LEA partner sites, the core team will consist of the PI, the Co-PI the grant coordinator, the Educational Coordinator, two LEA mentor teachers (one from each side of the county), one faculty mentor, and a principal from one of the LEA sites (page 36). The Executive Council will oversee the project, evaluate its effectiveness, and determine changes to be made to meet the stated goals and objectives. The Executive Council includes the members of the Core Management Committee, the superintendent from each LEA, a LEA CTM representative from each site, a LEA principal representative, a CSUB faculty representative, a Resident representative, a member from each of the three communities, and eventually a graduate of the program (page 37).

ii. The applicant has identified staff to work on the project. Key staff have been identified for the Grant Administrator/PI; Co-Director/Co-PI; Faculty Mentors, Faculty Experts; an Educational Coordinator (Budget Narrative).

iii. The applicant will incorporate mechanisms to ensure feedback and continuous improvement on the project. The Program Management team will meet monthly to review program successes, accomplishments, and the quality of the instructional materials used with the Residents (anchor tasks, technology, Mindset materials). The Core Management Committee, and the Executive Council will also meet to review Cohort progress. The Core Management Committee will be joined by the external evaluator(s) when meeting to act on recommendations and directions from the Executive Council (p. 36).

Weaknesses:

ii. The applicant does not present a clear description of staff assigned to the project. The proposal lacks information to help determine appropriate qualifications and experience.

Reader's Score: 15

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 project's 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 applicant's 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 project s evaluation.

Strengths:

- i. The applicant provides a mechanism that will ensure valid and reliable performance data on relevant outcome such as student learning. To facilitate acquisition of comparison teacher data WestEd 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. Data elements in the expanded CTQ database include many of the same elements we propose to collect via project surveys and program documents and archives (page 50).
- ii. WestEd will provide external evaluation for partnership. The evaluation will utilize both quantitative and qualitative data as appropriate and will be both objective and performance-driven. WestEd will collect and analyze quantitative data on Government Performance and Results Act (GPRA), Higher Education Act (HEA), and GRO STEM project performance measures. WestEd will collect and analyze qualitative data to contextualize and explicate quantitative findings, and maintain all data in a longitudinal database (Budget Narrative).
- iii. The project evaluator, WedEd, will use CTQ data to verify survey data, while relying on survey data to provide timely findings and feedback to CSUB.

Weaknesses:

- iii. Details on how the evaluator will use data to help provide feedback lacks detail.

Reader's Score: 14

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 applicant presents a project that includes a design and components that sufficiently address CPP1. The project supports and prepares Residents through the credential, masters, and induction process to work with minority students of low socioeconomic status with a focus on interdisciplinary integration of STEM curriculum and academic literacy. Residents will gain content knowledge, pedagogy, and experience inquiry based science, technology, engineering, and mathematics (STEM) preparation upon completion of their multiple subject credential (Competitive Preference Priority 1: Promoting Science, Technology, Engineering, and Mathematics).

Weaknesses:

No weaknesses noted.

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 design adequately supports Competitive Preference Priority 2— Implementing Internationally Benchmarked, College- and Career- Ready Elementary and Secondary Academic Standards. Residents, district teachers and administrators will participate in intensive Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS) professional development. Program residency program goals are Establish a 15 month residency program that prepares Residents, in cooperation with the partner districts, to develop, teach and assess high quality STEM curriculum in rural, high-need schools through a co-teaching experience beginning with a summer STEM academy, completion of a multiple subjects credential and culminating in a masters research project. Teachers will be prepared to promote the critical factors for success in the 21st Century through effective teaching that closes the achievement gap of high needs rural students through the use of Common Core State Standards and the Next Generation Science Standards.

Weaknesses:

No weaknesses noted.

Reader's Score: 2

Status: Submitted
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Status: Submitted

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Technical Review Coversheet

Applicant: CSUB Auxiliary for Sponsored Programs Administration (U336S140047)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	15	15
Quality of Project Design		
1. Project Design	45	45
Quality of the Management Plan		
1. Management Plan	20	20
Quality of the Project Evaluation		
1. Project Evaluation	20	17
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	104

Technical Review Form

Panel #9 - 2014 TQP Grant Review- 9: 84.336S

Reader #3: *****

Applicant: CSUB Auxiliary for Sponsored Programs Administration (U336S140047)

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:

The proposal will build local capacity through the GRL STEM Residency that will improve teacher preparation while emphasizing teaching English Learners (ELs) STEM and academic literacy (2).

The proposed project will result in systemic change through the GRL STEM Residency as participants will gain content knowledge and pedagogy, and will experience inquiry-based STEM preparation upon completion of their multiple subject credential (4).

The proposal includes metrics regarding the shortage areas and high teacher turnover facing rural schools. The proposal will prepare teachers through the 15-month multiple subject credential and master's residency program with an emphasis in STEM. (4-5).

Weaknesses:

No weaknesses noted

Reader's Score: 15

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 project's 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 project's 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:

The proposal includes strong theory to support strategies of residency models such as Urban Teacher Residency United and the proposed GRL STEM Residency Partnership Program. The project's theory of action is well explained and connected to the logic model for the GRL STEM Residency Partnership Program which includes short and long term performance measures (42).

The proposal will provide training and professional development within the sustained 15-month residency program that will lead to improved practices that develop, teacher, and assess high quality STEM curriculum (12).

The proposal has a coherent, sustained program of training that begins with recruitment, includes the 15-month residency program and multiple activities such as Blast and Launch (14, 23).

The collaborative effort of this proposal maximizes the effectiveness of the project by including the sustained partnership between GRL STEM Residency Partnership Program, the independent evaluator WestEd, and partner LEAs (BUSD, LESD, and SESD). One such example of that partnership is the use of LEA mentors and cooperating teachers (52)

The proposal includes a comprehensive multi-year financial plan to fully support the project during the grant and to provide sustainability beyond the funding of the grant with IHE and LEAs partnership support that provides in-kind support (4).

Weaknesses:

No weaknesses noted

Reader's Score: 45

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 proposal contains a management plan with a detailed timeline, goals, objectives, and responsibilities that will allow the proposed project to achieve objectives and milestones on time and within a budget that is based on allowable, reasonable, and necessary costs to carry out the proposal. Furthermore, the proposal contains a detailed list of activities such as BLAST! and Launch Pad that are aligned to the timeline, objectives, and the person responsible for ensuring their completion (37, Appendix H).

The proposal includes a detailed listing of key personnel and their responsibilities. The key personnel are appropriately and adequately qualified for their respective positions based upon the listed qualifications, including relevant training and experiences (35).

The proposed program will systematically collect, disseminate, and evaluate data to provide feedback as an integral part of the proposed project design. This is strongly supported by the creation of the Program Management Team, The Core Management Committee and the Executive council that meet on a regular basis to internally and externally evaluate the feedback and make continuous improvements to the design of the program as needed (35).

Weaknesses:

No weaknesses noted

Reader's Score: 20

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 project's 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 applicant's 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 project's evaluation.

Strengths:

The proposal uses an independent evaluator (WestEd) to evaluate the GRL STEM Program at CSUB using both quantitative and qualitative data as appropriate and will be both objective and performance-driven within the mixed methods approach for the research design, which is valid and reliable (41).

The proposed research methods are thorough, feasible, and appropriate using a quasi-experimental design with quantitative and qualitative analysis as well as formative and summative assessments. (26, 41).

The proposal will collect and analyze qualitative data to contextualize and explicate quantitative findings, and maintain all data in a longitudinal database to gauge progress and allow for within- and cross-cohort comparisons. Furthermore, the Program Management Team, Core Management Committee and Executive Council meet periodically to internally and externally evaluate the feedback and make assessment of progress toward achieving intended outcomes. (36-38)

Weaknesses:

While there were aspects of how the evaluation was going to be completed, the proposed project lacked measures (GPRA or HEA) to provide feedback for the intended program outcomes.

Reader's Score: 17

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 proposal will increase opportunities for professional development and provide a sustained high-quality teaching residents program promoting STEM education with high-quality professional development. The proposal will result in an increase in the number of individuals who are traditionally underrepresented within STEM and are in high needs areas through the use of targeted recruitment and mentoring (2)

Weaknesses:

No weaknesses noted

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 proposal is designed to support the internationally benchmarked, college- and career- ready standards by implementing the GRL STEM Residency partnership that uses Common Core and NGSS for intensive professional development that will translate the standards into classroom practice (4).

Weaknesses:

No weaknesses noted

Reader's Score: 2

Status: Submitted

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