

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

Status: Submitted

Last Updated: 08/06/2018 03:48 PM

## Technical Review Coversheet

**Applicant:** California State University Bakersfield Auxiliary for Sponso (U336S180012)

**Reader #1:** \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of Project Services</b>		
1. Project Services	15	15
<b>Quality of Project Design</b>		
1. Project Design	40	38
<b>Quality of the Management Plan</b>		
1. Management Plan	25	25
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	18
<b>Sub Total</b>	100	96
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Promoting STEM ED w/a focus on Computer Science</b>		
1. CPP 1	3	3
<b>Promoting Effective Instr. in Classrooms &amp; Schools</b>		
1. CPP 2	3	3
<b>Novice Applicant</b>		
1. CPP 3	2	0
<b>Sub Total</b>	8	6
<b>Total</b>	108	102

# Technical Review Form

Panel #1 - Teacher Quality Partnership - 1: 84.336S

Reader #1: \*\*\*\*\*

Applicant: California State University Bakersfield Auxiliary for Sponso (U336S180012)

## Questions

### Selection Criteria - Quality of Project Services

1. In determining the quality of project services of the proposed project, the Secretary considers the following factors:

(i) 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.

(ii) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(iii) 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.

### Strengths:

i. The applicant has clearly addressed that the partnerships and their collaborations will produce the desired outcomes of this project. The Citizen Scientist project will extend from three existing teacher residency programs; therefore, a partnership already exists among several partners in the proposal. Additional partners include the Department of Computer and Electrical Engineering and Computer Science and The Kegley Institute of Ethics that will serve to infuse elements of civic engagement into the curriculum (e20-e22). Additionally, all three LEAs are high need applicants and have shown a clear need for increasing underrepresented teachers to their districts (e43-e46). Commitments have been made by partners relative to financial support, materials and supplies, facilities, and expertise that showcase the initial and continued support for this project and will increase the likelihood of sustainability (e40).

ii. The applicant has made a strong case for infusing civic engagement into the STEM-C curriculum citing current research, especially surrounding deficits in underrepresented populations (e20-e22). For example, the applicant showed the population of students that the new teachers would serve to demonstrate opportunity gaps in civics and STEM as evidenced by low state test scores in math, science, and literacy (e21).

The applicant also cited content pedagogical research to support curriculum and clinical experiences which are driven by national standards, the clinical work of Darling-Hammond, and high-priority residency practice research are identified (e23).

iii. Activities begun during the funding period and intended for continuation after five years are well-planned and support the three goals of the project. Professional development, co-teaching experiences, and civic engagement integrated curricula with STEM-C all are of sufficient quality, intensity, and duration and should lead to improvements in practice. The initial efforts within the grant funding period are supported by a well-planned, focused period of induction that supports retention of novice teachers (e48).

### Weaknesses:

i. No weaknesses noted.

ii. No weaknesses noted.

iii. No weaknesses noted.

**Reader's Score: 15**

### **Selection Criteria - Quality of Project Design**

**1. 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 demonstrates a rationale (as defined in 34 CFR 77.1(c)).**

**(ii) The extent to which the goals, objectives and outcomes to be achieved by the proposed project are clearly specified and measurable;**

**(iii) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.**

**(iv) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for this competition.**

#### **Strengths:**

i. A residency program exists that will be augmented by the goals and objectives of the proposal. A rationale that supports the need for civic engagement training, especially by underrepresented groups, and a strong, integrated, collaborative curriculum in STEM-C was supported by cited research (e20-e22). Additional confirmation of need were citations of research regarding variations in educational opportunities for majority and underrepresented groups, particularly in reference to preparation of teachers and teaching in high-need schools (e32).

ii. A detailed Logic Model (e82; e93) is presented that provides resources, activities, outputs, and short-, mid- and long-term outcomes for the project. For example, short-, mid-, and long-term outcomes are provided for Goal One: Civics Focused STEM-C Residency Pathway which include obtaining initial certification, improvement of STEM-C pedagogy and increased credential completers.

A unique and innovative approach to launching the first cohort is to provide a summer institute for residents, IHE faculty, LEA mentors, and high school and middle school students that involves co-teaching STEM-C coursework integrated with elements of civic engagement (e25). Also, the use of clinical coaching provides ongoing, sustained professional development for educators (e26). Further, the coaching team will help residents hone their ability to facilitate a STEM-C curriculum and link it to use of empirical research (e26). The components of engaging in research, data analysis, and following an IEP are positive attributes of the project that will support the candidates while teaching after becoming program completers (e27.)

Utilizing real-world situations through the Digital Civics Infrastructure Unit and honing leadership skills through the Chief Science Officer Program are also strengths of the project (e27-e28)

iii. Recruitment and retention of underrepresented candidates to the teaching field was well-documented, supported the need for the project goals, and promoted sustainability (e32-e34).

The continuation from clinical experience through induction of the faculty mentor is a plus for the program and will help ensure sustainability as well as heightened teaching success throughout the program and into the first two years of teaching (e35-e37).

iv. Two unique factors exist that showcase this project as an exceptional approach to training STEM-C educators. First, the project is built upon an existing residency program with the three LEAs. Secondly, the project will infuse civic engagement into coursework and clinicals for teacher candidates (e22-e23).

**Weaknesses:**

- i. No weaknesses noted.
- ii. The roles of the middle and high school students in the summer institute was not well-delineated. (e25)
- iii. The induction/mentorship appears to be funded by the IHE/LEA, but specifics were not found (e35-e37).
- iv. No weaknesses noted.

**Reader's Score: 38**

**Selection Criteria - Quality of the Management Plan**

**1. 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 potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding;**

**(iii) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.**

**Strengths:**

i. The management plan clearly outlines the organizational structure and activities of the proposal and aligns with the goals and objectives of the program (e57). Examples of well-structured components include the three core committees charged with executing all components of the project; structuring and maintaining recruitment, retention, and induction efforts; and development and monitoring of curriculum and professional development activities (e49-e50). Additionally, Table 1 provides a detailed year-by-year plan that includes design in year one, launch in year two, revisions and renewal years 3 and 4, and revision, renewal and transition in the final year of the project (e50). The Design Plan in Table 1 (e52) provides a timeline of activities, milestones, and responsibilities for year 1 which is a planning year.

ii. A sustainability framework exists that will support the efforts of grant personnel in completing the project successfully and increasing the likelihood of sustainability. It includes four dimensions: Stakeholder support and communication, capacity for widespread use, financial support, and return on investment (e54-e56). Each dimension addresses specific commitments to change.

iii. Qualifications of personnel are provided as well as vitae for appropriate personnel. All appear to be qualified to carry out their roles toward successful completion of the project. (e50-e52). For example, the principal investigator is funded appropriately for the responsibilities given her and her credentials support the position (e95, e138).

**Weaknesses:**

- i. No weaknesses noted.
- ii. No weaknesses noted.
- iii. No weaknesses noted.

### Selection Criteria - Quality of the Project Evaluation

#### 1. In determining the quality of the evaluation, the Secretary considers:

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

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

#### Strengths:

i. WestEd provides the applicant with an experienced team of evaluators and proven collection methods as well as access to data and analyses from other studies to drive a sound quasi-experimental approach to project evaluation (e58-e60).

Table 2 provides a detailed evaluation plan with evaluation methods and sources directly linked to each goal and activity (e58-e60). The plan provides for both quantitative and qualitative evaluation.

A continuous improvement model of program evaluation will assist partners throughout the project in making informed decisions (e61).

ii. The evaluation plan links to the goals and objectives of the project and uses both qualitative and quantitative methods of collecting data. Analyses will be done and feedback continuously provided to project personnel. GPRA and HEA measures will be assessed (e62-e69).

A data sharing MOU with the EdQ Center will facilitate collection and analysis of a broad array of data (e65).

#### Weaknesses:

i. No weaknesses noted.

ii. It is not clear if evaluation measures will be utilized to form a baseline then measure change in student and teacher performance during the course of the five-year project funding. It appears that the first cohort to complete all components of the project will not graduate until year five—which puts them in their first year of teaching. The same consideration may be made for success with the induction program. Limited data on these topics can be attained during the life of the funding period. Therefore, it would have been beneficial to see some form of commitment to continue evaluations after the conclusion of funding (e39).

### Priority Questions

#### Competitive Preference Priority - Promoting STEM ED w/a focus on Computer Science

#### 1. Projects designed to improve student achievement or other educational outcomes in one or more of the following areas: science, technology, engineering, math, or computer science. These projects must address the following priority area:

**Increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based (as defined in 34 CFR 77.1) professional**

development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subjects to STEM fields.

**NOTE:**

How does an applicant demonstrate that its proposed strategy for professional development and retention strategy for current STEM educators is evidence-based?

1. Submitting a citation of a study that is (1) focused on a STEM-focused professional development or retraining strategies, (2) relevant to the proposed project, and meets at least the design standards set forth in the "Promising Evidence" definition; OR
2. Submitting a "Logic Model" that (1) identifies the STEM professional development or retraining strategy of the project and (2) is informed by research or evaluation findings that suggest the project component is likely to improve "Relevant Outcomes."

**Strengths:**

The applicant will leverage existing partnerships with LEAs to create pathways to licensure that include STEM-C content and pedagogy, augmenting instruction on meeting the needs of special populations, elements of integrated literacy and civic engagement, shared professional development, and clinical practice with educators who will mentor candidates through the induction phase. A solid plan for recruitment and retention has been provided (e39; e48-e49). A detailed Logic Model (e82; e93) is presented that provides resources, activities, outputs, and short-, mid- and long-term outcomes for the project.

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 3**

**Competitive Preference Priority - Promoting Effective Instr. in Classrooms & Schools**

1. Projects that are designed to support the recruitment or retention of educators who are effective and increase diversity (including, but not limited to, racial and ethnic diversity).

**Strengths:**

Recruitment, retention, and induction components are built into the project that appear to be well-planned, ongoing, and sustainable. According to Goal Two, there will be a focused recruitment campaign for underrepresented populations in STEM-C fields, tailored retention programs for each residency, and support for candidates during the two-year induction (e93). All partners have been/will be engaged in planning and executing these elements of the program (e76; e79).

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 3**

**Competitive Preference Priority - Novice Applicant**

1. Projects submitted by applicants that meet the definition of novice applicant at the time they submit their application.

**NOTE:**

The lead applicant must meet all three requirements to earn CPP 3 points:

1. Has never received a grant or sub-grant under the TQP program; and
2. Has never been a member of a group application (i.e. in a TQP eligible partnership); and
3. Has not had an active discretionary grant from the Federal Government in the five years before the deadline date for applications under the program.

**Strengths:**

n/a

**Weaknesses:**

The applicant did not meet all requirements to receive points.

**Reader's Score: 0**

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**Status:** Submitted  
**Last Updated:** 08/06/2018 03:48 PM



Status: Submitted

Last Updated: 08/06/2018 03:30 PM

## Technical Review Coversheet

**Applicant:** California State University Bakersfield Auxiliary for Sponso (U336S180012)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of Project Services</b>		
1. Project Services	15	15
<b>Quality of Project Design</b>		
1. Project Design	40	39
<b>Quality of the Management Plan</b>		
1. Management Plan	25	25
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	19
<b>Sub Total</b>	100	98
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Promoting STEM ED w/a focus on Computer Science</b>		
1. CPP 1	3	3
<b>Promoting Effective Instr. in Classrooms &amp; Schools</b>		
1. CPP 2	3	3
<b>Novice Applicant</b>		
1. CPP 3	2	0
<b>Sub Total</b>	8	6
<b>Total</b>	108	104

# Technical Review Form

Panel #1 - Teacher Quality Partnership - 1: 84.336S

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

Applicant: California State University Bakersfield Auxiliary for Sponso (U336S180012)

## Questions

### Selection Criteria - Quality of Project Services

1. In determining the quality of project services of the proposed project, the Secretary considers the following factors:

(i) 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.

(ii) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(iii) 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.

#### Strengths:

i. The applicant details strong collaborative partnerships (e40- e41) for the Citizen Scientist Residency Pathway initiative. These partners include high-need K-12 schools, multiple departments within California State University Bakersfield (i.e., Department of Teacher Education and the Department of Computer and Electrical Engineering and Computer Science), along with multiple school districts (e40- e41). Additionally, the LEAs are committed to providing administrator and staff support for this work at no cost to the grant.

ii. The applicant offers strong support in the academic literature for the key project components. For example, the focus on community and civic empowerment (e.g., e23, Levinson, 2012 citation) and immersion is supported by a fairly recent study (e85; Waddell, 2013). Additionally, the applicant draws on the NCTR's 2018 report in support of high priority Resident practices.

iii. The applicant demonstrates a clear plan for how The Citizen Scientist Residency Pathway program will incorporate immersive summer training institutes for participants (e24-e25), with each institute covering a three-week period. These institutes will be held during both the summer prior to clinical practice as well as the following summer.

#### Weaknesses:

i. No weaknesses are identified.

ii. No weaknesses are identified.

iii. No weaknesses are identified.

Reader's Score: 15

### Selection Criteria - Quality of Project Design

1. 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 demonstrates a rationale (as defined in 34 CFR 77.1(c)).**

**(ii) The extent to which the goals, objectives and outcomes to be achieved by the proposed project are clearly specified and measurable;**

**(iii) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.**

**(iv) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for this competition.**

**Strengths:**

i. The applicant's project description includes a strong rationale for their main project components(e-25). The focus on an intensive co-teaching clinical experience is well supported and aligned with the project goals. Additionally, the incorporation of a civics dimension (e25) that is grounded in social-emotional, ethical, and democratic competencies is also aligned with the overall project aims of improving community issues in the districts where these teachers will serve.

ii. The project's three primary goals are comprehensively described with each goal aligned with measurable objectives (e24-e47). For example, the applicant explains Goal 2 "Sustain a pipeline of credentialed teachers who are committed to teaching civics focused STEM-C curricula in high needs school districts by creating tailored recruitment, retention, and induction processes" (e31-e37). The plan for meeting this goal includes a focus on recruiting high-performing teacher residents, and also a focus on recruiting from the College's existing STEM and liberal studies programs. Moreover, recruitment efforts will be designed to promote recruitment of a diverse student population (e33).

iii. The applicant details a comprehensive plan for creating student STEM ambassadors (e28) from participating schools (grades 6-12), as well as developing a cadre of "rainmakers" (e29) who will be responsible for working to sustain these dual foci on STEM and civic empowerment after the funding cycle is complete.

iv. The applicant's novel approach to this work – specifically, the intentional marrying of civic empowerment and STEM education – is exciting and shows promise for both initial recruiting and sustainability over time. The work to educate teachers and students on civic empowerment, focus on community, and STEM is exciting. For example, the Chief Science Officer program (e47) is one that will bring educators and students together around these issues, and offers leadership opportunities to grades 6-12 students with a special focus on STEM issues.

**Weaknesses:**

i. No weaknesses are identified.

ii. No weaknesses are identified.

iii. It is not clear how the project activities would be funded beyond the grant period.

iv. No weaknesses are identified.

**Reader's Score: 39**

**Selection Criteria - Quality of the Management Plan**

**1. 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 potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding;**

**(iii) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.**

**Strengths:**

- i. The applicant offers a clear and comprehensive management plan, with a project team that is clearly experienced (e49 – e57). In particular, the plan for the different leadership teams (e.g., executive committee; and the teacher recruitment, retention, and induction committee) to have structured, forecasted, and set meeting times is important. Also, the applicant specifies year one as a planning year, which should allow time for strong planning so that the remaining project timeline and tasks are achievable (e53 and e57).
- ii. The applicant outlines strong commitments from project partners that offer assurance that the work can be sustained after the end of federal funding (e55-e56). For example, two districts have provided assurances that they will fund their Residencies during and after the project period (e55).
- iii. The applicant offers details for resources available from the lead and partner organizations (e78). The university has adequate facilities and faculty expertise to meet their obligation, and the partner organizations are also well-positioned to maximize the use of this opportunity. For example, two school districts have committed to funding .5 administrator positions, as well as provide mentor teacher stipends (e78).

**Weaknesses:**

- i. No weaknesses are identified.
- ii. No weaknesses are identified.
- iii. No weaknesses are identified.

**Reader's Score:**     **25**

**Selection Criteria - Quality of the Project Evaluation****1. In determining the quality of the evaluation, the Secretary considers:**

- (i) The extent to which the methods of evaluation will provide valid and reliable performance data on relevant outcomes.**
- (ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.**

**Strengths:**

- (i) The evaluation plan (e58-e69) includes details for measuring each of the primary project components, and each of the required performance measures (e59-e60). For example, the evaluation plan makes clear the measures of project objectives and GRPA measures.
- (ii) No strengths noted.

**Weaknesses:**

- (i) No weaknesses noted.
- (ii) The evaluation plan specifies a quasi-experimental (QED) study as part of the approach to identifying how well the projects outcomes are met. The problem with this plan, however, is that the necessary data is not certain to be available to the project evaluation team (WestEd). The execution of a QED rests on the ability to secure data on a useful comparison group, and the applicant acknowledges the anticipated difficulties with obtaining these data (e64-e65), (“pending appropriate comparison data”). Although there is a plan to develop a data sharing MOU with the necessary group (e65) (“data sharing MOU with the EdQ Center) it is not clear that the evaluation team will be successful in securing the necessary comparison group data.

Reader's Score: 19

### Priority Questions

#### Competitive Preference Priority - Promoting STEM ED w/a focus on Computer Science

1. **Projects designed to improve student achievement or other educational outcomes in one or more of the following areas: science, technology, engineering, math, or computer science. These projects must address the following priority area:**

**Increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based (as defined in 34 CFR 77.1) professional development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subjects to STEM fields.**

#### NOTE:

**How does an applicant demonstrate that its proposed strategy for professional development and retention strategy for current STEM educators is evidence-based?**

1. **Submitting a citation of a study that is (1) focused on a STEM-focused professional development or retraining strategies, (2) relevant to the proposed project, and meets at least the design standards set forth in the "Promising Evidence" definition; OR**
2. **Submitting a "Logic Model" that (1) identifies the STEM professional development or retraining strategy of the project and (2) is informed by research or evaluation findings that suggest the project component is likely to improve "Relevant Outcomes."**

#### Strengths:

This project aims to prepare 240 STEM teachers, with a particular focus on computer science and civic empowerment. Additionally, the project aims to intentionally recruit typically underrepresented populations (e.g., women in STEM). The team plans to create a civics-focused STEM-computer science curriculum to meet the needs of partner high-need districts; the partner districts indicated in their needs assessment that this would be an area that would be beneficial for their students. The applicant provided a logic model (e67) and specific program goals.

#### Weaknesses:

No weaknesses noted.

Reader's Score: 3

#### Competitive Preference Priority - Promoting Effective Instr. in Classrooms & Schools

1. **Projects that are designed to support the recruitment or retention of educators who are effective and increase diversity (including, but not limited to, racial and ethnic diversity).**

#### Strengths:

This proposal outlines a plan (e18) to recruit from traditionally underrepresented populations (e.g., women and minorities for STEM education). The applicant aims to intentionally recruit females and ethnic minority undergraduate students with an interest in STEM education. Additionally, the project partners seek to work with university faculty and office of diversity and inclusion to increase the diversity of the teacher trainees in these areas. Specifically, the applicant plans to create marketing materials that are aimed at attracting minority applicants (e18).

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 3**

**Competitive Preference Priority - Novice Applicant**

1. Projects submitted by applicants that meet the definition of novice applicant at the time they submit their application.

**NOTE:**

The lead applicant must meet all three requirements to earn CPP 3 points:

1. Has never received a grant or sub-grant under the TQP program; and
2. Has never been a member of a group application (i.e. in a TQP eligible partnership); and
3. Has not had an active discretionary grant from the Federal Government in the five years before the deadline date for applications under the program.

**Strengths:**

N/A

**Weaknesses:**

N/A

**Reader's Score: 0**

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**Status:** Submitted  
**Last Updated:** 08/06/2018 03:30 PM

Status: Submitted

Last Updated: 08/06/2018 06:13 PM

## Technical Review Coversheet

**Applicant:** California State University Bakersfield Auxiliary for Sponso (U336S180012)

**Reader #3:** \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of Project Services</b>		
1. Project Services	15	15
<b>Quality of Project Design</b>		
1. Project Design	40	35
<b>Quality of the Management Plan</b>		
1. Management Plan	25	25
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	18
<b>Sub Total</b>	100	93
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Promoting STEM ED w/a focus on Computer Science</b>		
1. CPP 1	3	2
<b>Promoting Effective Instr. in Classrooms &amp; Schools</b>		
1. CPP 2	3	3
<b>Novice Applicant</b>		
1. CPP 3	2	0
<b>Sub Total</b>	8	5
<b>Total</b>	108	98

# Technical Review Form

Panel #1 - Teacher Quality Partnership - 1: 84.336S

Reader #3: \*\*\*\*\*

Applicant: California State University Bakersfield Auxiliary for Sponso (U336S180012)

## Questions

### Selection Criteria - Quality of Project Services

1. In determining the quality of project services of the proposed project, the Secretary considers the following factors:

(i) 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.

(ii) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(iii) 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.

#### Strengths:

(i) The application provides clear evidence that collaboration with the IHE teacher education and computer science departments, an ethics institute at the IHE, as well as three partner LEAs with existing residency programs will serve to effectively carry out the project. (e21-22)

(ii) The proposal was based on comprehensive research indicating lack of civic empowerment and literacy, which were particularly noticeable in under-represented individuals; students spend an inordinate time on digital media; there will be a large gap in the number of STEM-C teachers in the upcoming years; and there are traditionally a small number of teachers from under-represented groups. These research findings were well leveraged well to produce a plan to address these issues (e20-21, 23)

(iii) The applicant provides strong evidence that professional development (PD) services are broad and ongoing. Residents start their program in the summer before their initial clinical experience begins; they are then provided training in producing integrated lessons, literacy, analyzing data, differentiation, educational pedagogy, Learning by Design, digital citizenship, and others. (e29,30, 84 Additionally, a coach is assigned to each resident to offer constructive support. During the induction period, new teachers from the residency program will keep their coach as they work with their induction mentors (e24-28, 29-31).

#### Weaknesses:

(i) No weaknesses noted

(ii) No weaknesses noted

(iii) No weaknesses noted

Reader's Score: 15

### Selection Criteria - Quality of Project Design

1. 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 demonstrates a rationale (as defined in 34 CFR 77.1(c)).**

**(ii) The extent to which the goals, objectives and outcomes to be achieved by the proposed project are clearly specified and measurable;**

**(iii) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.**

**(iv) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for this competition.**

**Strengths:**

(i) The applicant has developed their plan based on the need for students to be scientifically literate and possess a sense of civic empowerment. Research indicates that students from under-represented groups generally have a lower sense of civic awareness and participate less on the political process. Since many young people spend an inordinate time on digital technology (phones, computers), the project seeks to parlay the two into a way to address teacher need in STEM-C subject areas, train highly effective teachers to teach in high needs schools, in an effort to increase ultimately increase student achievement. (20-21)

(ii) The proposal provides evidence that short-term goals, mid-term goals, and long-term goals are clear and measurable. The applicant addresses three goals for the program – development of a Civics-Focused STEM-C Residency Pathway, Civics-Focused STEM-C Recruitment, Retention, & Induction, and Civics-Focused STEM-C Curriculum, Pedagogy, Assessment, and Professional Development. Through the use of both qualitative and quantitative formative evaluation, project partners will be able to assess and amend the program as results indicate. (e93-94)

(iii) The application provides clear evidence regarding building capacity and results following the life of the grant. The project will use assistance from the Teacher Quality Partnership Technical Assistance center Sustainability Framework to use as a guide to determine whether results from the project can be extended following the grant period (e54). The development of a new credential, new curricula, new professional development, potential pipeline, and long-term relationships built with stakeholders, are indicators that the project can be sustained after the life of the grant. Additionally, LEA stakeholders have indicated their continued financial support following the completion of the grant (e53-56).

(iv) The proposed project describes an innovative approach to recruit teachers from under-represented groups and assist aspiring teachers to prepare to plan, teach, and evaluate integrated lessons from the STEM-C field with a civics and computer science emphasis – all with the goal of preparing highly qualified additional STEM-C teachers ready to improve student achievement in high needs schools (e20-22).

**Weaknesses:**

(i) No weaknesses noted

(ii) The application does not clearly define how the Chief Science Officers program will contribute to the Resident program; and it is unclear how Rainmakers (residents) will carry out their jobs due to time restraints in the clinical program (e28)

(iii) No weaknesses noted

(iv) The application does not define “residency”. Teacher credential candidates do have to complete a fifth year, but the application does not state whether “residency” is the term for all fifth - year clinical experiences or a different program entirely (e18; e20; e22).

**Reader's Score: 35**

## Selection Criteria - Quality of the Management Plan

1. 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 potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding;

(iii) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.

### Strengths:

(i) The application provides a detailed management plan. The management plan has three core committees. Each is charged with overseeing the execution of one of the project's three goals – responsibilities, timelines, and milestones are included (e49-52; e53-57). For example: The Executive committee will be responsible for the Civic-Focused STEM-C Pathway; the Teacher Recruitment, Retention, and Induction Committee will direct Recruitment, Retention, and Induction; and the Curriculum and Professional Committee will be responsible for Curriculum and Professional Development. (e52, 53)

(ii) The development of a new credential, new curricula, new Professional Development (PD), potential pipeline, and long-term relationships built with stakeholders, are strong indicators that the project can be sustained after the life of the grant. LEA stakeholders have indicated their continued financial support following the completion of the grant. For example: through referencing the TQP Sustainability Tool, the applicants will address four core dimensions of an effective sustainability plan: 1) Stakeholder Support and Communication, 2) Capacity for Widespread Use, 3) Financial Support, and 4) Return on Investment. The application states that the sustainability plan for these four areas will be in place by year 5 of the grant. (e53-56)

(iii) The strong support provided from the IHE departments and centers (for example, the Department of Education, the Department of Computer Science, and campus centers such as the Kegley Institute of Ethics and the Center for Advancement in Reading and Writing) is indicated by the proposed use of faculty release time to assist in the planning and implementation of the program - through assisting with curriculum design, professional development, and collaboration with other partners.(e78). Not specifically mentioned but implied are the provision of IHE facilities (buildings and rooms) for instruction and grant meetings.

### Weaknesses:

(i) No weaknesses noted

(ii) No weaknesses noted

(iii) No weaknesses noted

Reader's Score: 25

## Selection Criteria - Quality of the Project Evaluation

1. In determining the quality of the evaluation, the Secretary considers:

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

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

**Strengths:**

(i) The proposal provides excellent details surrounding the proposed hiring of an external evaluator. This company has widespread experience in conducting educational evaluations. The evaluation will be a mixed model approach which will measure both qualitative and quantitative data. Some of these include: surveys and interviews; data measuring results from participant observations and test results measured against national results, and student results. The numerous mixed types of data collection will produce highly reliable and valid data to provide evidence as to whether the program has improved student achievement (e58-60; e150-153).

(ii) The applicant has provided extensive detail about the multiple methods of evaluation, which have been matched to the goals, objectives, and outcomes of the project. In addition, some of these evaluations will be formative, and used to amend the program as needed (e 57-60).

**Weaknesses:**

(i) The evaluation will largely consist of a Quasi-Experimental Design (QED). Data from cohorts from the final year of the grant will be analyzed to see whether the program had a better effect on teacher preparation than traditional clinical experiences. However, some necessary data may not be available such as student success. The initial year of the grant will be spent on planning, so the first cohort of the Citizen Science Residency will not have finished their entire program - making it difficult to appropriately measure the effect on teacher preparation needed to measure student success due to student achievement data unavailable until the following year. (e64-65).

**Reader's Score: 18**

**Priority Questions****Competitive Preference Priority - Promoting STEM ED w/a focus on Computer Science**

- 1. Projects designed to improve student achievement or other educational outcomes in one or more of the following areas: science, technology, engineering, math, or computer science. These projects must address the following priority area:**

**Increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based (as defined in 34 CFR 77.1) professional development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subjects to STEM fields.**

**NOTE:**

**How does an applicant demonstrate that its proposed strategy for professional development and retention strategy for current STEM educators is evidence-based?**

- 1. Submitting a citation of a study that is (1) focused on a STEM-focused professional development or retraining strategies, (2) relevant to the proposed project, and meets at least the design standards set forth in the "Promising Evidence" definition; OR**
- 2. Submitting a "Logic Model" that (1) identifies the STEM professional development or retraining strategy of the project and (2) is informed by research or evaluation findings that suggest the project component is likely to improve "Relevant Outcomes."**

**Strengths:**

The applicant has provided adequate evidence that the program aims to increase STEM-C teachers through the development of a STEM – C residency with an integrated computer/civics emphasis. This is based on Ruble (2007) addressing the need for fully credentialed teachers; low relative numbers of underrepresented groups (National Science Foundation, 2017); mismatch between teacher and student characteristics (Department of Education, 2006); and low student achievement in STEM-C/ civics (Kahne, et. al, 2012). (e20-21). Partners will work together to deliver high-quality prolonged professional development, coaching, mentoring, and other activities designed to produce diverse, well qualified teachers. Recruitment will focus on high need schools and under-represented groups (e78-79)

**Weaknesses:**

The application failed to include the baseline numbers for all trained teachers in a five-year period. The proposal indicates the target number of teacher candidates completing the new program (240+240) but does not provide an explanation as to how those numbers were derived so it is difficult to see the effect of the program on increasing the number of fully trained teachers. (e94)

**Reader's Score: 2**

**Competitive Preference Priority - Promoting Effective Instr. in Classrooms & Schools**

- 1. Projects that are designed to support the recruitment or retention of educators who are effective and increase diversity (including, but not limited to, racial and ethnic diversity).**

**Strengths:**

The project supplies evidence that recruitment is intended to increase diversity and retain teachers from under-represented groups Recruitment efforts will focus on attracting teacher candidates who mirror the characteristics of the diverse IHE as well as the community in which they will serve. Grant planners will use information from three existing high school residency programs in the LEA to help them provide a program that addresses high-quality teacher recruitment/retention as well as increase diversity Additionally, the grant includes use of experts in the fields of STEM, computer science, and civics education to help plan the program. Some activities provided will be the implementation of a summer residency program, year-long STEM-C coaching – with a focus on urban and rural community issues, a STEM-C digital civics unit, and a literacy training program. (e23-25, 32-33, 87)

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 3**

**Competitive Preference Priority - Novice Applicant**

- 1. Projects submitted by applicants that meet the definition of novice applicant at the time they submit their application.**

**NOTE:**

The lead applicant must meet all three requirements to earn CPP 3 points:

- 1. Has never received a grant or sub-grant under the TQP program; and**
- 2. Has never been a member of a group application (i.e. in a TQP eligible partnership); and**
- 3. Has not had an active discretionary grant from the Federal Government in the five years before the deadline date for applications under the program.**

**Strengths:**

n/a

**Weaknesses:**

n/a

**Reader's Score:** 0

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**Status:** Submitted

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