

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

Status: Submitted

Last Updated: 06/13/2019 11:29 AM

## Technical Review Coversheet

**Applicant:** Small School Districts' Association (U411C190234)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	25	25
<b>Quality of Project Design</b>		
1. Project Design	35	35
<b>Adequacy of Resources/Quality of Management Plan</b>		
1. Resources/Management Plan	20	18
<b>Sub Total</b>	80	78
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Competitive Preference Priority</b>		
1. Absolute Priority 3	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	85	83

# Technical Review Form

Panel #14 - EIR Early Phase Tier 1 - 14: 84.411C

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

Applicant: Small School Districts' Association (U411C190234)

## Questions

### Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factors:

(1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

### Strengths:

The applicant clearly details a project that has the potential for demonstrating how to prepare teachers and students in high-needs rural areas to help meet the national demands for qualified computer science professionals. The applicant describes the presence of computer science throughout the daily lives of people in our nation and in the world and provides statistics for the number of jobs that need to be filled in the U.S. with few qualified applicants (p. e27). The project provides evidence of the challenges faced by rural schools. For example, geographic isolation and limited access to qualified teachers, equipment and other resources are barriers that limit the abilities of rural schools to implement rigorous computer science programs (pg. e30). This project has the potential to contribute to a national research base about increasing rural student access to computer science instruction through a model of computer science professional delivery practices.

This project involves the development and implementation of a new, evidence-based computer science model in 3rd-8th grade rural schools. The applicant provides relevant research supporting the proposed project to deliver professional development focused on content knowledge as well as pedagogical skills. One of the project partners will deliver the content learning through Teacher Coding Bootcamps, where teachers will be immersed in rigorous coding instruction and increase their own skills in using and teaching computational thinking (p. e32). The project is not a "one-shot" attempt to support teachers in this professional development. For example, teachers will train each year to teach more advanced classes in the following years (pg. e33). The challenges for educators in rural settings will be addressed in a number of ways. For example, multiple options will be offered for teachers completing the professional development in convenient ways, including regional trainings that will reduce travel over long distances, trainings during holiday or vacation periods, and the formation of professional learning communities so that teachers from rural areas can continue learning and share best practices (pg. e33).

### Weaknesses:

None identified.

Reader's Score: 25

### Selection Criteria - Quality of Project Design

**1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:**

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

**(2) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework.**

**(3) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.**

**Strengths:**

The applicant adequately describes five goals for this project. Each of the goals has objectives and measurable outcomes. For example, the goal for providing in-depth teacher professional development has objective 1.B, to building teacher's proficiency in computer science concepts and writing computer code (pg. e41). The objective has two relevant measures: participating teachers will score 75% or better on summative assessments in the computer science courses, and 90% of participating teachers will complete the hands-on, final coding project in the computer science course. There is evidence of these types of specific measures throughout Table 2: Goals, Objectives and Outcomes (pgs. e42-43), and they are repeated in the Project Objectives and Performance Measures information on pages e172-e177).

The applicant describes a strong and convincing rationale for this project. The logic model provides a clear and comprehensive overview of the project (pg. e109). The applicant provides relevant and up-to-date research that demonstrates a strong conceptual framework supporting the key components of the project. For example, the applicant includes research to support the proposed multi-year computer science curriculum pathway sequence, grades 3-12; the integration of math and science into computer science lessons; and, the components of work-based learning that research supports for reaching underserved students (pgs. e38-e39).

The feedback and continuous improvement details provided by the applicant are feasible for informing the operation of the project. The phased implementation, beginning with a planning phase followed by a pilot phase, provides opportunities for evaluation and feedback to inform the next three phases. As described on page e45, evaluation data will be collected and analyzed after the pilot phase, and information from that analysis will allow for revisions to the implementation plan for the next phase. End-of-phase formative evaluations will seek to assure fidelity of implementation as well and barriers to fidelity, informing necessary adjusts to the model (pg. e43).

**Weaknesses:**

None identified.

**Reader's Score: 35**

**Selection Criteria - Adequacy of Resources/Quality of Management Plan**

**1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

**(1) 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.**

**(2) The qualifications, including relevant training and experience, of key project personnel.**

**(3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

**Strengths:**

The applicant provides a thorough management plan that includes timelines and milestones for accomplishing the tasks. An impressive feature of this plan is that it is broken into four distinct phases, each one of which has milestones and persons responsible within each phase (Table 3, pgs. e46-e49). Table 3 identifies the 15 pilot districts for the Pilot Phase of the project, and then identifies the districts to be added in the expansion phases.

Key personnel are identified in Table 3 for their responsibility in each component of the project, and then they are clearly described through short biographies on pages e50-e53 and again through resumes included in the appendices (pgs. e61-e89). The project will be conducted by people with a mixture of skills and knowledge that will contribute to the project. For example, the industry partner TechSmart, who will be delivering the coding Bootcamp Experiences, will provide a lead trainer who also works on curriculum development. Her educational background is in engineering and computer science (pg. 50-51).

**Weaknesses:**

The applicant provides little evidence of continued financial support for the project after the Federal funding ends. The project is structured to build sustainability to support comprehensive coding and CS education through training and professional development of teachers as stated on page e53. The model will not sustain itself indefinitely without ongoing training of teachers new to the schools and ongoing professional development to maintain teacher skill levels. There is a statement on page e53 referring the reader to letters of support for information about continued support but no evidence of support beyond the project is provided.

**Reader's Score: 18**

**Priority Questions**

**Competitive Preference Priority - Competitive Preference Priority**

**1. Within Absolute Priority 3, we give competitive preference to applications that address the following priority:**

**Projects designed to improve student achievement or other educational outcomes in computer science (as defined in the notice). These projects must address the following priority area:**

**Expanding access to and participation in rigorous computer science (as defined in the notice) coursework for traditionally underrepresented students such as racial or ethnic minorities, women, students in communities served by rural local educational agencies (as defined in the notice), children or students with disabilities (as defined in the notice), or low-income individuals (as defined under section 312(g) of the Higher Education Act of 1965, as amended).**

**Note: Projects addressing this priority must be administered in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws.**

**Strengths:**

The applicant provides details about how this project addresses the Competitive Preference Priority. The project will be piloted and further implemented among high-needs, low socioeconomic, 3rd through 12th grade students in rural areas of California (pg. e23). As stated in the application, 52% of the students impacted by this student are eligible to receive free and reduced meals (pg. 39). The project provides training over time for more than 250 teachers and will reach more than 8000 students by the end of the project. The model proposed includes training teachers over multiple years in preparation

for teaching more rigorous curriculum throughout the project. This supports the Competitive Preference Priority for expanding access to computer science instruction in addition to serving low socioeconomic students in rural schools.

**Weaknesses:**

None identified.

**Reader's Score:** 5

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**Status:** Submitted

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## Technical Review Coversheet

**Applicant:** Small School Districts' Association (U411C190234)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	25	22
<b>Quality of Project Design</b>		
1. Project Design	35	35
<b>Adequacy of Resources/Quality of Management Plan</b>		
1. Resources/Management Plan	20	18
<b>Sub Total</b>	80	75
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Competitive Preference Priority</b>		
1. Absolute Priority 3	5	4
<b>Sub Total</b>	5	4
<b>Total</b>	85	79

# Technical Review Form

Panel #14 - EIR Early Phase Tier 1 - 14: 84.411C

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

Applicant: Small School Districts' Association (U411C190234)

## Questions

### Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factors:

(1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

### Strengths:

The applicant (p.e37) makes the connection between their CS-Rural Implementation Model and how their proposal would successfully build upon the research cited in the chart on p. e37 – e39. The abstract is clear and includes a rationale, the specific rural sites and districts included, as well as how many students and teachers are involved, and includes information about how the program will expand access to computer science education (p. e23). It provides a an overview of the “Computer Science Rural Implementation Model” project, (p. e26) which provides a sense of what they wish to accomplish in conjunction with Absolutely Priorities 1 and 3. (p. e23)

The applicant (p.e35) includes a description with the articulation of computer science (CS) as rigorous and differentiated (and evidence they would accomplish this).

### Weaknesses:

Although the computer science curriculum and teacher professional development is included, it is not clear what the specific innovation is for this program. It is not clear how the differentiated approach for different level teachers involves innovation. Social media is referenced as part of the proposal, which begins to add innovative elements, but the learning innovation that makes the program unique from normal coding programs isn't clear. (p.e44).

Reader's Score: 22

### Selection Criteria - Quality of Project Design

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

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

(2) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework.

**(3) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.**

**Strengths:**

The section that included specific lesson ideas, assessments (i.e. rubrics, etc.), syllabi and Tech Smart Standards Alignment on pp. e117 – e143 were extremely comprehensive and detailed. I am confident that all aspects of the specific goals and outcomes are achievable and measurable. The examples included are very strong. The table of goals, objectives and outcomes on p. e41 clearly articulates the steps with very measurable benchmarks with examples of rubrics (p. 41). More detail regarding measurement and how district leadership will “demonstrate a greater awareness of CS education” would help, but it is still strong without it. (p. e41)

A logic model was also included (on p. e109) and described in appropriate detail. This facilitates understanding the steps and processes that would help to assess how the goals, objectives and outcomes would be carried out by the partners and teachers. Of particular strength were the teacher steps that included very clear details.

The school districts and partners are included on p. e144 – e149 and provides evidence for how comprehensive the list is and alludes to how it would be successful in including them, while also speaking to the impact of the project.

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 35**

**Selection Criteria - Adequacy of Resources/Quality of Management Plan**

**1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

**(1) 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.**

**(2) The qualifications, including relevant training and experience, of key project personnel.**

**(3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

**Strengths:**

The proposal included a very detailed table of timelines, milestones and responsibilities (p. e46 – e49), which offers enough evidence that it will be timely, and within the budget scope. The salaries reflected in the budget narrative appeared very reasonable given the scope of the work and I was impressed by the number of students that would be impacted, regarding the other budget items that I could see. (p. e160 – p. e171) This section also provided evidence of how teachers would receive necessary professional development (p. e53)

The personnel responsible for carrying out activities and goals related to the proposed program were included in the resume section (p. e61 – e90). There were a range of talents, experiences, trainings and expertise reflected, and I also noted that at least two of them had advanced PhD training, along with several that had terminal masters' of arts education degrees, which can be an important indicator of scholarly process and the connection to research through the project by

including their level of educational attainment. Their combined experience demonstrates that they would be able to implement this project based through the evidence of their work records. This is also reflected in a very detailed table of key staff outlined on pp. e50 – e52.

**Weaknesses:**

Feedback evidence is to be done on an annual basis. This is insufficient and needs to be more frequent. (p. 43) Several letters of support are referenced on p. e26 and appear on pp. e150 – e155, and provide adequate evidence for sustained administrative support, although I did not see any letters that referenced the financial support that would provide sustainability beyond the project.

**Reader's Score: 18**

**Priority Questions**

**Competitive Preference Priority - Competitive Preference Priority**

**1. Within Absolute Priority 3, we give competitive preference to applications that address the following priority:**

**Projects designed to improve student achievement or other educational outcomes in computer science (as defined in the notice). These projects must address the following priority area:**

**Expanding access to and participation in rigorous computer science (as defined in the notice) coursework for traditionally underrepresented students such as racial or ethnic minorities, women, students in communities served by rural local educational agencies (as defined in the notice), children or students with disabilities (as defined in the notice), or low-income individuals (as defined under section 312(g) of the Higher Education Act of 1965, as amended).**

**Note: Projects addressing this priority must be administered in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws.**

**Strengths:**

Computer science was identified, and the application provides evidence that the proposal will improve student achievement related to CS, as well as expanding access to students who are in rural areas. (p. e23) Free and reduced lunch is mentioned on p. e153.

**Weaknesses:**

I was not able to find evidence in this section for what percentage of the students were low-income, ethnically diverse. etc. This would help assess how many would benefit with free and reduced lunch.

**Reader's Score: 4**

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**Status:** Submitted  
**Last Updated:** 06/13/2019 02:28 PM



Status: Submitted

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## Technical Review Coversheet

Applicant: Small School Districts' Association (U411C190234)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Significance</b>		
1. Significance	25	25
<b>Quality of Project Design</b>		
1. Project Design	35	29
<b>Adequacy of Resources/Quality of Management Plan</b>		
1. Resources/Management Plan	20	18
<b>Sub Total</b>	80	72
<b>Priority Questions</b>		
<b>Competitive Preference Priority</b>		
<b>Competitive Preference Priority</b>		
1. Absolute Priority 3	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	85	77

# Technical Review Form

Panel #14 - EIR Early Phase Tier 1 - 14: 84.411C

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

Applicant: Small School Districts' Association (U411C190234)

## Questions

### Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factors:

(1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

(2) The extent to which the proposed project involves the development or demonstration of promising new strategies that build on, or are alternatives to, existing strategies.

### Strengths:

Strong data from the national, state and local levels is provided to support the problem the applicant seeks to address. The proposed project has significance nationwide as it will address computer science professional development delivery practices in rural communities (p. e30) as an issue that exists nationwide. The applicant proposes a strategy, sufficiently supported in research (p.e26-28), that addresses the problem of teacher preparedness in computer science. This further limits student preparation in computer science. The proposed project will also address the needs of the workforce by adequately preparing students for careers in computer science. (p.e29) The proposed project has a wide impact with 54 districts across nine counties in northern California participating. (p. e39)

Details of the project activities are specific and give a picture of how the project will work within the entities participating school districts to take a promising new strategy that is an alternative to existing strategies. (p. e30-37)  
The project's innovative approach to the lack of interest and the inadequate preparation of students in computer science includes introducing computer science (CS) in 3rd grade with activities to continue the CS instruction in middle and high school.

Table 1 (p. e37-39) clearly links research findings to proposed project components using evidence to support each component. The table provides a strong rationale for implementing the components as a new strategy for rural school districts.

### Weaknesses:

No weaknesses noted.

Reader's Score: 25

### Selection Criteria - Quality of Project Design

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

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

**(2) The extent to which there is a conceptual framework underlying the proposed research or demonstration activities and the quality of that framework.**

**(3) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.**

**Strengths:**

Table 2 shows a clear correlation between the goals, objectives, and expected outcomes. (p. e 41-43) The goals and what they will achieve is outlined, in detail, on p. e40.

A logic model is included on p. e109. The design of the model shows what the applicant will do and who will be reached through the activities as well as the specific outcomes (short and long term) for specific groups (teachers, students, schools). The logic model provides a clear picture of the conceptual framework and how it will address the problem.

**Weaknesses:**

Baseline data is not included in Table 2 (p. e41) or e172-177. The inclusion of baseline data would strengthen the applicant's objectives by providing comparison data to demonstrate how the proposed percentages are significant and will prove the project strategies are effective.

While the applicant plans to have an evaluation at the end of each phase of the expansion, there are no details regarding how the feedback is obtained, who will consider the feedback, and how the feedback will be used to improve the project. (p. e43)

**Reader's Score: 29**

**Selection Criteria - Adequacy of Resources/Quality of Management Plan**

**1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

**(1) 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.**

**(2) The qualifications, including relevant training and experience, of key project personnel.**

**(3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

**Strengths:**

The timeline is very detailed and includes all the schools, counties, teachers and students participating in the project. The applicant clearly shows the details of each phase including the specific activities to take place during that phase and who will be served. Budget is reasonably allocated to the proposed project and supports the project activities.

Key personnel is highly qualified for different aspects of the proposed project. Table 4 sufficiently names each person/organization working on the project and provides their relevant experience and credentials. (p. e. 50-52) The detail provided indicates the inclusion of county superintendents as key personnel (p. e52) along with letters of support (p. e94-

108). Their inclusion as key personnel shows buy-in from the districts where the strategies will be implemented and will ensure there is a strong school district voice throughout the project.

**Weaknesses:**

Letters did not indicate strong financial support of the project after funding ends. The applicant should consider how to continue pieces of the project that require financial support such as the teacher professional development, substitute pay, access to the curriculum from TechSmart, and teacher stipends. (p. e162-165)

**Reader's Score: 18**

**Priority Questions**

**Competitive Preference Priority - Competitive Preference Priority**

1. Within Absolute Priority 3, we give competitive preference to applications that address the following priority:

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**Expanding access to and participation in rigorous computer science (as defined in the notice) coursework for traditionally underrepresented students such as racial or ethnic minorities, women, students in communities served by rural local educational agencies (as defined in the notice), children or students with disabilities (as defined in the notice), or low-income individuals (as defined under section 312(g) of the Higher Education Act of 1965, as amended).**

**Note: Projects addressing this priority must be administered in a manner consistent with nondiscrimination requirements contained in the U.S. Constitution and Federal civil rights laws.**

**Strengths:**

Students in rural schools will receive lessons through integrated instruction in grades 3-5, live virtual connections with industry experts, and the ability to earn certifications for all levels showing they are proficient in Computer Science Teachers Association standards. (p. e40) This approach expands access by rural students to computer science in multiple ways that are rigorous and high-quality given the partners involved in this project.

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 5**

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**Status:** Submitted  
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