

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

Status: Submitted

Last Updated: 10/29/2020 07:04 PM

Technical Review Coversheet

Applicant: Computer Science Teachers Association LLC (S411C200115)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of Project Design		
1. Quality of Project Design	45	40
Sub Total	45	40
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	30	27
Sub Total	30	27
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	25	22
Sub Total	25	22
Priority Questions		
CPP		
Competitive Preference Priority 2		
1. SEA Partnership	5	5
Sub Total	5	5
Total	105	94

Technical Review Form

Panel #5 - FY19 EIR Early-phase AP 3- PD - 5: 84.411C

Reader #3: *****

Applicant: Computer Science Teachers Association LLC (S411C200115)

Questions

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project based on the following factors:

Reader's Score: 40

Sub

1. (1) The extent to which professional learning funded through the stipend will replace existing mandatory professional development for participating teachers at the following levels:

Less than 20%- 0 points	20%- 5 points
40%- 10 points	60%- 15 points
80%- 20 points	100%-25 points

Strengths:

The applicant intends to replace 100% of professional development related to computer science in the partnering schools in South Carolina and Indiana (p.e-15). The letters of support from the South Carolina Office of Career and Technical Education (p. e-72) and letters of support from The Citadel (p. e-73) and Indiana Department of Education (p. e-70) verify the intent of the partners to replace 100% of the mandatory professional development.

Weaknesses:

No weaknesses noted.

Reader's Score: 25

2. (2) The adequacy of plans to ensure that stipends are appropriately used for high-quality professional learning.

Strengths:

The applicant describes the process for ensuring the stipends will be paid for high quality professional development. The current application builds off of a pilot series of professional development in computer science that was evaluated and the results of the evaluation are being used to inform the improvement of the proposed professional development series (p. e-18). The pilot was implemented in South Carolina, feedback and evaluation results were reviewed to inform the expansion into Indiana. The applicant states that currently there are no specific PD tracks to match the standards for computer science and they will use the proposed project to build those standards (p. e-21). The applicant provides CS context data summaries in the appendix to demonstrate high quality with which they will align their professional development (pp. e-203-236). The information on the standards for alignment with the professional development is thorough and should lead to high quality professional development.

Sub

Weaknesses:

The application doesn't provide information that the teachers will get reimbursement for their professional development in a timely manner (p. e-25). The applicant describes the process for payment through the local chapters of the CSTA but does not provide a specific turnaround time for the electronic payment to be deposited into the teachers account. The application would be improved by providing the timeline from teacher applying for professional development through payment for the professional development components.

Reader's Score: 4

3. (3) The extent to which the proposed project will offer teachers flexibility and autonomy regarding the extent of the choice teachers have in selecting their professional learning.

Strengths:

The applicant offers multiple tracks for computer science professional development depending on the teacher's self-assessment of skills and grade level of school the teachers teach (p. e-25). The applicant also intends to use teacher participant feedback to guide the development and refinement of the catalog offerings. The teachers have flexibility to choose within the various tracks based on their self-assessment, grades they teach, state standards alignment with professional development sessions and student needs. The Roadmap for Professional learning based on the self-assessment will also provide a tool for teachers to select additional professional development based on their needs (p. e-27).

Weaknesses:

The applicant doesn't provide evidence of flexibility beyond how the teachers can select beyond the pre-determined tracks and catalog. More flexibility for teacher self-directed professional development is needed to improve the application.

Reader's Score: 3

4. (4) The likelihood that the procedures and resources for teachers result in a simple process to select or request professional learning based on their professional learning needs and those identified needs of high-need students.

Strengths:

The applicant aligns the professional development with the teacher assessment and student needs. Additionally, the applicant is developing a catalog of professional development options that align with state standards for computer science simultaneously with developing standardized measures of growth for computer science (p. e-23). The teachers will apply for the professional development through an online registration system that has a catalog of professional development options (p. e-30). The CSTA will pay the vendors directly for the course(s) (p. e-31).

Weaknesses:

Teachers can also request PD through their local CSTA that is not in the catalog. The self-selected PD must go through a curriculum review workgroup to be added to the catalog of options. This additional process will add turnaround time to the registration and participation timeline. Adding details on how the on line registration process will work simply will strengthen the proposal. For example, the applicant states they will use a mechanism similar to a conference registration system but does not provide details about the system steps from start to finish and how long on average it takes to register for a professional development course.

Reader's Score: 4

Sub

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

Strengths:

The applicant focuses on five (5) goals associated with their professional development activities (). The applicant presents two (2) logic models that depict overall path to student outcomes and paths to teacher outcomes. The logic models show clear alignment between activities, outputs and outcomes (p. e-569). The table on pp. e-27-28 outlines each of the project goals and the associated objectives, measurement and time point for each measurement administration.

Weaknesses:

Logic models do not include the percentage of change expected change. The details are missing in the outcomes as there are no numeration associated with the increase.

Reader's Score: 4

Resources and Quality of Management Plan - Resources and Quality of Management Plan

1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project based on the following factors:

Reader's Score: 27

Sub

1. (1) The sufficiency of the stipend amount to enable professional learning funded through the stipend to replace a significant portion of existing mandatory professional development for participating teachers.

Strengths:

The applicant intends to provide [REDACTED] to each of the teachers to pay for the 52 hours of professional development. The applicant also includes travel and housing for the week of professional development (p. e-29). This amount appears to be sufficient to cover the costs of the teacher's time, travel and housing. The professional development costs of [REDACTED] will be paid directly to the vendors. The current state requirement for PD is X hours and the applicant is supporting up to 52 hours of the 30 professional development hours, which is above the mandatory number required for teachers (p. e-22).

Weaknesses:

No weaknesses noted.

Reader's Score: 5

2. (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

Strengths:

The applicant breaks down the costs [REDACTED]. The budget narrative clearly aligns the components of the project and gives the percentage of cost for each of the cost categories (p. e-639-644). The applicant overhead cost is very reasonable for achieving the program goals. The cost share will offset the overall cost of the project. The overall outcomes of the project include developing a standardized curriculum for computer science education in K-12 schools. The contribution of this project to achieving this goal have implications across

Sub

the country and appear realistic to achieving this goal. This application is very evaluation heavy and the costs for the evaluation align with the scope of work expected from the evaluation team.

Weaknesses:

No weaknesses noted.

Reader's Score: 5

3. (3) The extent to which the proposed payment structure will enable teachers to have an opportunity to apply for and use the stipend with minimal burden.

Strengths:

The applicant proposes an online registration system that directly pays the vendors for the professional development. The teacher stipend portion has several steps to ensure the funding is being used for high quality professional development and the teachers are participating in the professional development. The budget narrative states that teachers will receive stipends in two payments: (1) upon successful completion of the summer CSPDWeek, participants will receive their first stipend of [REDACTED] and (2) the following June after completion of 8 PLC meetings (a total of 16 hours) throughout the school year. This process is used to ensure the teachers complete the professional development for computer science with a degree of fidelity to the program model (p. e-22).

Weaknesses:

There are several components to the teacher applying for and using the funds. The teachers are required to apply through the web-based professional development week application system. Once they are selected they will be contacted about their acceptance into the PD and then upon completion of the PD they will be paid \$ [REDACTED] for their attendance once their attendance is verified. The second part of their stipend will be paid once they attend the follow up sessions that are intended to support their learning for the weekly PD. In that payment they will earn an additional [REDACTED]. This seems to be a bit of a cumbersome process for the teachers to get paid. There is no information about the turnaround time from verification to payment. There is also no information on how long it will take for the teachers to be reimbursed for their travel

Reader's Score: 4

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

Strengths:

The four (4) member project team has strong experience in K-12 computer science education and a broad reach across the country. The evaluation team has a long and strong work history of K-12 education evaluation.

Weaknesses:

The application would be improved by providing the names of the people in the table on p. e-31 who are responsible for each of the components. The only person listed in the table is Joe Baskin. The resumes of the staff also lack experience managing this large of federal funding. Although the organization manages a portfolio of over [REDACTED] dollars this is one large project for over [REDACTED].

Reader's Score: 4

5. (5) 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.

Sub

Strengths:

The table on p. e-33 presents the milestones, time line for implementation and persons responsible for the management plan. The steps involved in the management plan to achieve the milestones appear to be reasonable and achievable based on the budget.

Weaknesses:

The project management table that includes the milestones does not align with the objectives and outcomes. The application would be improved by including the objectives and outcomes in the milestone table.

Reader's Score: 4

6. (6) The adequacy of procedures for leveraging the stipend program to inform continuous improvement and systematic changes to professional learning.

Strengths:

This application presents an opportunity for widespread leveraging of what is learned about computer science professional development that can inform the rest of the country. The applicant is extending what was learned during the pilot phase of the project to two states and aligning state standards and computer science curriculum to build teacher competency in computer science education. The program offers an opportunity to create a professional development menu that can be used more broadly for computer science education. The continuous quality improvement processes include teacher driven improvements and evaluation from an external evaluator. The applicant intends to build a feedback loop that they will use to continuously improve course offerings and inform the alignment of the courses with state standards (p. e-32). The team will have monthly meetings to review all sources of data and continue to use the data to inform practices (p. e-39).

Weaknesses:

No weaknesses noted.

Reader's Score: 5

Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the evaluation to be conducted of the proposed project based on the following factors:

Reader's Score: 22

Sub

1. (1) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse standards with or without reservations as described in the What Works Clearinghouse Handbook (as defined in 34 CFR 77.1(c)).

Strengths:

The applicant intends to use a quasi-experimental design that assigns teachers who register for the professional development into treatment and comparison groups. The evaluation design includes propensity score matching of teachers to ensure equivalency of the treatment and comparison group (p. e-37). This design will meet the What Works Clearinghouse Standards with reservations. The evaluation design includes 3 distinct studies to determine the program effects. The applicant provides a thorough discussion of selection, effect size, group sizes and

Sub

estimated statistical power.

Weaknesses:

The applicant does not discuss attrition and how attrition may impact the project outcomes.

Reader's Score: 13

- 2. (2) The extent to which the evaluation plan clearly articulates the key project components, mediators, and outcomes, as well as a measurable threshold for acceptable implementation.**

Strengths:

The applicant provides a strong discussion on the evaluation plan that includes the key components that will be included in the project evaluation, the mediators for both teachers, students and schools that participate and the anticipated outcomes of the project. The acceptable thresholds for participation are also discussed (p.e-38).

Weaknesses:

The measurable outcomes are not included in the evaluation model. There is not enough information in the application about the content of the teacher surveys or the classroom observation tool that will be used to inform the evaluation. There is also no information about the training for the people who will be doing the classroom observations.

Reader's Score: 4

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

Strengths:

The evaluation plan includes monthly meetings with the project staff. The evaluation team include both formative and summative evaluation components that will provide the project staff with performance feedback throughout the project (pp. e-38-39).

Weaknesses:

No weaknesses noted.

Reader's Score: 5

Priority Questions

CPP - Competitive Preference Priority 2

1. Competitive Preference Priority 2: SEA Partnership

Under this priority, an applicant must demonstrate it has established a partnership between an eligible entity and an SEA (with either member of the partnership serving as the applicant) to support the proposed project.

Strengths:

The South Carolina Department of Education is the SEA partner working with the applicant. The applicant has established partnerships with CSTAs in South Carolina and Illinois that will liaison with the school districts. The applicant will also partner with UC San Diego as the evaluation partner. The application includes letters of support from the South Carolina Department of Education, The Indiana Department of Education and the Citadel.

Weaknesses:

No weaknesses noted.

Reader's Score: 5

Status: Submitted

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Last Updated: 10/29/2020 04:38 AM

Technical Review Coversheet

Applicant: Computer Science Teachers Association LLC (S411C200115)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of Project Design		
1. Quality of Project Design	45	39
Sub Total	45	39
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	30	23
Sub Total	30	23
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	25	23
Sub Total	25	23
Priority Questions		
CPP		
Competitive Preference Priority 2		
1. SEA Partnership	5	5
Sub Total	5	5
Total	105	90

Technical Review Form

Panel #5 - FY19 EIR Early-phase AP 3- PD - 5: 84.411C

Reader #2: *****

Applicant: Computer Science Teachers Association LLC (S411C200115)

Questions

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project based on the following factors:

Reader's Score: 39

Sub

1. (1) The extent to which professional learning funded through the stipend will replace existing mandatory professional development for participating teachers at the following levels:

Less than 20%- 0 points	20%- 5 points
40%- 10 points	60%- 15 points
80%- 20 points	100%-25 points

Strengths:

Building off prior work between the South Carolina Department of Education and the Computer Science Teachers Associate, South Carolina Chapter, the proposal provides evidence that it will organize a teacher-directed professional development (PD) sequence that satisfies 100% of continuing education credits as required by South Carolina's State Department of Education and then build upon that work to do the same in Indiana (p. e20).

Weaknesses:

N/A

Reader's Score: 25

2. (2) The adequacy of plans to ensure that stipends are appropriately used for high-quality professional learning.

Strengths:

The fact that offerings during E_CSPD_Wk will be aligned to the Computer Standards Teacher Association (CSTA) Standards for Computer Science Teachers and vetted by either the CSTA Professional Development Committee or the elected CSTA Chapter in each state describes the intent of the proposal to ensure high quality professional development (p. e22). The fact that CSTA's independent committee of experts evaluates submissions from teachers and professional development providers through the use of a rubric aligned to indicators of quality Computer Science Professional Development (Vallanincourt & Schanzer, 2018) and elements of effective teacher PD (Darling-Hammond, Hyler, & Gardner, 2017) also provides evidence of high quality professional learning.

Sub

Weaknesses:

The proposal fails to provide detailed information in regard to the reimbursement to teachers taking place in a timely manner.

Reader's Score: 4

3. (3) The extent to which the proposed project will offer teachers flexibility and autonomy regarding the extent of the choice teachers have in selecting their professional learning.

Strengths:

Teachers are provided flexibility and autonomy in being able to choose their professional learning during the local CSPD Week from a provided catalog. The fact that the involved CSTA Chapters will develop the catalog based on the prior year's feedback forms and surveys provide evidence that teacher input is valued (p. e25).

Weaknesses:

The proposal does not provided evidence of how teachers can select computer science professional development outside of the E_CSPD_Wk.

Reader's Score: 3

4. (4) The likelihood that the procedures and resources for teachers result in a simple process to select or request professional learning based on their professional learning needs and those identified needs of high-need students.

Strengths:

The proposal provides evidence of need in regard to Computer Science Professional Development. For example, 75% of Computer Science Teachers do not hold an education degree in a specific area of Computer Science (Banilower et al., 2018), coupled with both state's policy frameworks, demonstrates the need for this type of professional development. In addition, the proposal's claim that students/schools in marginalized communities are disproportionately impacted because they are less likely to have access to Computer Science Classes is validated. (p. e19 and p. e21).

Weaknesses:

The proposal would be strengthened by providing specific detail in regard to how the process for selecting professional development through an on-line registration system will be simple for teachers.

Reader's Score: 4

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

Strengths:

The Objective/Measurement Chart (p. e27-28) identify the proposal's five goals. The proposal's intent to follow up with summer professional development through the establishment of Professional Learning Communities is feasible in creating a specialized network of support geared towards specific collaboration and pedagogy (p. e20).

Weaknesses:

The proposal would be strengthened by establishing clear timelines in relationship to the Objective/Measurement Chart (p. e27-28)

Reader's Score: 3

Resources and Quality of Management Plan - Resources and Quality of Management Plan

1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project based on the following factors:

Reader's Score: 23

Sub

1. (1) The sufficiency of the stipend amount to enable professional learning funded through the stipend to replace a significant portion of existing mandatory professional development for participating teachers.

Strengths:

The proposal details the stipend amounts and related professional development expenses. For example, teachers will receive a stipend payment of [REDACTED] upon successful completion of 36 hours of summer professional development and another \$ [REDACTED] the following June after proof of participation in Professional Learning Community Meetings/Teacher Led Professional Development throughout the school year (p. e22-23). Another example is that teachers will receive additional stipends to cover the cost of travel and housing to attend professional development week (p. e13).

Weaknesses:

The strength of the proposal would be enhanced if an explanation was included for how the amount of [REDACTED] was determined. Another factor that would strengthen the proposal would be a comparison of the proposed stipend in relationship to the current amount.

Reader's Score: 4

2. (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

Strengths:

The proposal provides justification of the reasonableness of the budget through the narrative (p. e30) and the Budget Narrative (p.e640-644). For example, the proposal states an approximate cost of [REDACTED] for each of the 2,100 teachers estimated to participate. Another example is the proposal's explanation how it determined an investment per student of [REDACTED] (p. e30).

Weaknesses:

N/A

Reader's Score: 5

3. (3) The extent to which the proposed payment structure will enable teachers to have an opportunity to apply for and use the stipend with minimal burden.

Strengths:

The proposal provides justification of the reasonableness of the budget through the narrative (p. e30) and the Budget Narrative (p.e640-644). For example, the proposal states an approximate cost of [REDACTED] for each of the 2,100 teachers estimated to participate. Another example is the proposal's explanation how it determined an investment per student of [REDACTED] (p. e30).

Sub

Weaknesses:

The proposal would be improved by including specifics in relationship to the teachers' role in receiving payment for the stipend amount (p. e23-24). Additional information that would strengthen the proposal would be to include an explanation of how teachers apply and receive additional stipends to cover the cost of travel and housing to attend the professional development week (p. e13).

Reader's Score: 3

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

Strengths:

The proposal identifies key project personnel. Jake Baskin's experiences, especially his ability to network with educators and policy makers, lend themselves to the Project Director position (p. e31-32) and (p. e53-54). Dr. Jennifer Albert, Director of STEM Center of Excellence at the Citadel, will dedicate 20% of her time to the project in efforts to meet the match component of the grant application. Her experience in writing Digital Literacy and Computer Science Standards (p.31-32 and p. e46-52) would provide strong guidance and leadership to the project.

Weaknesses:

The proposal lacks detail in regard to specific qualifications of key personnel as written into the Budget Narrative (p. e640).

Reader's Score: 4

5. (5) 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.

Strengths:

The proposal states the applicant's intent to use the first year to work with State Education Associations in order to develop a detailed plan with each partner (p. e32). The project milestones provide an outline of tasks (p. e33).

Weaknesses:

The proposal would be strengthened by adding specific information in regard to clearly defined responsibilities, timelines and milestones for accomplishing project tasks.

Reader's Score: 2

6. (6) The adequacy of procedures for leveraging the stipend program to inform continuous improvement and systematic changes to professional learning.

Strengths:

The fact that key project personnel will work with CSTA SC during the first year of the project to build a "formative feedback loop" with CSTA SC to gather information shows the projects intent to create continuous improvement. For example, after the initial feedback loop, evaluation team members will inform continuous improvement processes via monthly and quarterly/annual formal updates (p. e32). The projects development of Professional Learning Communities, as well as its intent to secure funding to replicate the work of E_CSPD_Wk, provide evidence of the project's desire to allow more teachers the opportunity to engage in self-selected professional development (p. e40).

Sub

Weaknesses:

N/A

Reader's Score: 5

Selection Criteria - Quality of the Project Evaluation

1. **The Secretary considers the quality of the evaluation to be conducted of the proposed project based on the following factors:**

Reader's Score: 23

Sub

1. **(1) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse standards with or without reservations as described in the What Works Clearinghouse Handbook (as defined in 34 CFR 77.1(c)).**

Strengths:

The proposal provides detail in regard to how it will employ a quasi-experimental design, with teachers as the unit of selection, to meet WWC standards with reservation. In addition, propensity-score matching will be used with CSP and CPA project teachers in the student impact study. (p. e37)

Weaknesses:

The proposal does not address attrition.

Reader's Score: 14

2. **(2) The extent to which the evaluation plan clearly articulates the key project components, mediators, and outcomes, as well as a measurable threshold for acceptable implementation.**

Strengths:

The proposal clearly articulates key components, mediators and outcomes, as well as a measurable threshold of acceptable implementation. For example, the logic model (p. e569) presents a visual of key project components - CS PD Work and Virtual PLCs/Follow Up PD during the school year. In addition, the logic model also identifies mediators (p. e35) and states that minimum acceptable thresholds will be set in Years 1 & 2 (p. e38).

Weaknesses:

NA

Reader's Score: 5

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

Strengths:

The project's evaluation team will report findings to project leads during monthly meetings. This process will allow key project personnel an opportunity to make data-driven decisions to drive the continuous improvement (p. e38).

Sub

The Objective and Measurement Chart (p. e27) lists the types of data that will be collected. For example, participant surveys, classroom observations, endorsement data, and student surveys.

Weaknesses:

Specific details are not provided in regard to how process/formative assessment data will be shared with all stakeholders which is important in relationship to continuous improvement designed to achieve intended outcomes. For example, it is not clear how the analysis of Teacher Surveys or Classroom Observations will be shared with respective stakeholders (p. e27-28).

Reader's Score: 4

Priority Questions

CPP - Competitive Preference Priority 2

1. Competitive Preference Priority 2: SEA Partnership

Under this priority, an applicant must demonstrate it has established a partnership between an eligible entity and an SEA (with either member of the partnership serving as the applicant) to support the proposed project.

Strengths:

The application includes a letter of support from South Carolina's Department of Education that assures a partnership with the Computer Science Teachers Association – South Carolina Chapter to organize a teacher-directed professional development sequence that satisfies 100% of the state required continuing education credits, as well as offering a stipend for 20 additional hours (p. e 71-72). The proposal also includes a letter of partnership from the Indiana Department of Education (p. e70).

Weaknesses:

N/A

Reader's Score: 5

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Status: Submitted

Last Updated: 10/29/2020 10:13 PM

Technical Review Coversheet

Applicant: Computer Science Teachers Association LLC (S411C200115)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of Project Design		
1. Quality of Project Design	45	43
Sub Total	45	43
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	30	27
Sub Total	30	27
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	25	23
Sub Total	25	23
Priority Questions		
CPP		
Competitive Preference Priority 2		
1. SEA Partnership	5	5
Sub Total	5	5
Total	105	98

Technical Review Form

Panel #5 - FY19 EIR Early-phase AP 3- PD - 5: 84.411C

Reader #1: *****

Applicant: Computer Science Teachers Association LLC (S411C200115)

Questions

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project based on the following factors:

Reader's Score: 43

Sub

1. (1) The extent to which professional learning funded through the stipend will replace existing mandatory professional development for participating teachers at the following levels:

Less than 20%- 0 points	20%- 5 points
40%- 10 points	60%- 15 points
80%- 20 points	100%-25 points

Strengths:

The applicant has provided sufficient evidence detailing the professional learning funded through the stipend will provide professional development for participating computer science teachers at 100%. The applicant explains the state does not currently have a standard or mandate for professional development in the area of computer science. The program will be inaugural professional development which fulfill the need with a new initiative by 100% (e21, e29).

Weaknesses:

No weaknesses found.

Reader's Score: 25

2. (2) The adequacy of plans to ensure that stipends are appropriately used for high-quality professional learning.

Strengths:

The applicant adequately identifies the plans to ensure the stipends are appropriately used for high-quality professional learning. The applicant provides substantial details of how the stipend will support high-quality professional learning through the CSTA standards. The applicant has provided evidence to show as a national credentialing and teacher membership organization, the CSTA develops the national standard for computer science which includes a vast history of evidence-based research. It provides a reflective teacher component which ensures the program is influenced by teachers with expertise in the field (e21,e23,e29,e203).

Sub

Weaknesses:

No weaknesses found.

Reader's Score: 5

3. (3) The extent to which the proposed project will offer teachers flexibility and autonomy regarding the extent of the choice teachers have in selecting their professional learning.

Strengths:

The applicant's proposed project adequately offers teachers flexibility and autonomy in the choice of professional learning. The program has multiple options for the selection of training in computer science. The project also provides teacher sufficient control over their course selection (e25-e27).

Teachers will have control to develop the menu of options offered at their local CSPDWeek by leveraging the following: (1) CSTA Chapter Leadership will review the prior year's offerings, feedback forms, and related surveys, with an eye toward the following questions: what was missing, was that PD quality did the PD address specific teacher needs.; (2) CSTA Chapter Leadership, in partnership with the state department of education, will solicit requests from local teachers with the quality PD listing as a starting point, and use this to make the initial K-12 options available during the CSPDWeek; (3) CSTA Chapter Leadership will identify gaps based on requests for the region and develop additional offerings; (4) Teachers will select the content that is most relevant to them during the registration process. Teachers will be provided a Catalog with descriptions of each offering, including a comparison table clearly identifying the target audience, state standards alignment, and key concepts/skills covered in each workshop; and (5) CSTA Chapter Leadership and SEA staff will be available to talk teachers through selecting a workshop (e25-e27).

Weaknesses:

No weakness found.

Reader's Score: 5

4. (4) The likelihood that the procedures and resources for teachers result in a simple process to select or request professional learning based on their professional learning needs and those identified needs of high-need students.

Strengths:

It is highly likely procedures and resources for teachers presented by the applicant will result in a simplified process to meet their professional needs and the needs of high need students. Examples are provided by the applicant through a Self-Reflection Checklist to analyze individual strengths and improvement areas aligned to the CSTA Standards for CS Teachers, and use of the Roadmap for Professional Learning to identify areas of focus and begin planning activities to support the development of these target knowledge and skills, regardless of the CS teacher's entry point to the profession. Teachers will be able to chart their progress and select instructional relevant content at the E CSPD workshop over multiple years(e27).

Weaknesses:

No weaknesses found.

Sub

Reader's Score: 5

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

Strengths:

This applicant has sufficiently provided the goals, objectives and proposed measurables for the project. Examples provided include Goal 3: Increase the number of high-need students showing proficiency in CS. Objective 3.1 Increase the number of high-need students that pass a CS-related course and the measurement noted is the official transcripts of the students (e28).

Weaknesses:

The applicant has not provided expected outcomes for this project. The applicant does not provide a clear timeline for this project. The applicant notes an expectation of increase, but the applicant has not numerated the expected increase in the noted measurables of the project.

Reader's Score: 3

Resources and Quality of Management Plan - Resources and Quality of Management Plan

1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project based on the following factors:

Reader's Score: 27

Sub

1. (1) The sufficiency of the stipend amount to enable professional learning funded through the stipend to replace a significant portion of existing mandatory professional development for participating teachers.

Strengths:

This applicant provides sufficient evidence of the stipend amount's ability to enable professional learning funded through the stipend to replace a significant portion of existing mandatory professional development for participating teachers. The applicant clearly details how the stipend will pay for the staff/leadership which will be utilized to develop and implement professional learning (e29).

Weaknesses:

The resources are not detailed. The question of how the applicant will replace mandatory professional development currently in place had not been answered, this missing component does impact the ability to address the criteria fully.

Reader's Score: 4

2. (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

Sub

Strengths:

In relation to the objectives, design and the potential of the project, the applicant provides a sufficient connection to a reasonable cost. The applicant details the extent to which the costs are reasonable through several examples. CSTA requests ██████████ 63 in EIR federal funding to build off the success of a teacher-led, -designed, and -directed pilot of CSPDWeek held in July 2020 in order to offer a variety of options for both beginner and experienced CS teachers to choose their own pathways to meet their diverse needs that satisfies 100% of continuing education required by the SEAs in SC and IN. Across the two states, this grant will enable a total of seven E_CSPD_Wk events, each 52-hours in length over the course of an academic year. This represents an investment of approximately \$████████ per teacher (2,100 teachers trained over the grant period). Each of these teachers will reach at least 25 students, thus impacting a total of 52,500 students; the investment per student is only \$200. The main cost drivers for E_CSPD_Wk are stipends for participating ██████████ (██████████), teacher-led, -designed, -delivered PD via CSTA SC and IN ██████████ respectively), and the third-party evaluation (e30).

Weaknesses:

No weaknesses found.

Reader's Score: 5

3. (3) The extent to which the proposed payment structure will enable teachers to have an opportunity to apply for and use the stipend with minimal burden.

Strengths:

This applicant sufficiently provided evidence of a proposed payment structure with the potential to enable teachers to apply and use the stipend with minimal burden. The applicant cites an easy payment structure that enables teachers to apply for and use the stipend CSTA will use an online registration system to manage teacher applications for each CSPDWeek. This system will be built off of CSTA's registration system used by 300 teachers to attend its annual conference and will ensure that participation is easily accessible to all teachers. During the registration process we will collect information about each applicant's school and CS class demographics in order to prioritize teachers who reach high-need students within the state if demand surpasses the stipends available.

Weaknesses:

The applicant does not provide sufficient explanations of the steps for payment.

Reader's Score: 3

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

Strengths:

This project provides substantial evidence of the qualifications of key personal including their relevant training and experience. Jake Baskin (Project Director) is the Executive Director of CSTA, the world's leading association for K-12 CS teachers. He is a former high school CS teacher, department chair, and PD provider with the Chicago Public Schools. Prior to joining CSTA, Jake was Director of State Government Affairs for Code.org, where he worked with educators and policymakers to advocate for policies that expand access to high-quality CS education. He helped build a nationwide network of regional partners that worked with over 100 districts to implement comprehensive CS

Sub

programs
(e31-e32).

Weaknesses:

No weaknesses found.

Reader's Score: 5

- 5. (5) 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.**

Strengths:

The applicant provides adequate management In Year 1, E_CSPD_Wk personnel will build a formative feedback loop with CSTA SC leaders to collect and analyze data about marketing, recruitment, course offerings, and accessibility of the pilot program, as well as teacher feedback on how they experienced and used each program element. This data will be used to identify challenges and opportunities in the pilot, which will inform future PD design and implementation. After the initial formative feedback loop, evaluation team members will inform continuous improvement processes via monthly informal and quarterly/annual formal updates. to achieve the objective of the proposed project on time within budget (e39-e43).

Weaknesses:

No weaknesses found.

Reader's Score: 5

- 6. (6) The adequacy of procedures for leveraging the stipend program to inform continuous improvement and systematic changes to professional learning.**

Strengths:

The applicant provides adequate management In Year 1, E_CSPD_Wk personnel will build a formative feedback loop with CSTA SC leaders to collect and analyze data about marketing, recruitment, course offerings, and accessibility of the pilot program, as well as teacher feedback on how they experienced and used each program element. This data will be used to identify challenges and opportunities in the pilot, which will inform future PD design and implementation. After the initial formative feedback loop, evaluation team members will inform continuous improvement processes via monthly informal and quarterly/annual formal updates. to achieve the objective of the proposed project on time within budget (e39-e43).

Weaknesses:

No weaknesses noted.

Reader's Score: 5

Selection Criteria - Quality of the Project Evaluation

- 1. The Secretary considers the quality of the evaluation to be conducted of the proposed project based on the following factors:**

Reader's Score: 23

Sub

1. (1) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse standards with or without reservations as described in the What Works Clearinghouse Handbook (as defined in 34 CFR 77.1(c)).

Strengths:

The applicant sufficiently provides methods of evaluation about the project's effectiveness that would meet the What Works Clearinghouse standards with or without reservations as described in the WWC Handbook. The applicant provides examples from the WWC Handbook to show alignment with program and WWC expectations. The applicant's evaluation will employ a quasi-experimental design, with teachers as the unit of selection, to meet WWC standards with reservations. Comparison group teachers will be selected to match CSP and CSA project teachers in the student impact study (Years 3-4); matches will be made using propensity scores (Austin, 2011; Rosenbaum & Rubin, 1983, 1984) derived from teacher-level variables such as credential, years teaching (all and CS), CS background, and gender, and school-level variables such as school SES and URM %, and urban/rural. This set of WWC-approved analyses will be used to determine magnitude and significance of E_CSPD_Wk versus comparison teacher-based differences in student outcomes. CSP and CSA outcome analysis will be conducted separately. In addition to these main analyses of student impact, a series of comparative interrupted time series analyses (CITS, or difference-in-differences) analyses will be conducted for teachers with prior CSP/CSA experience, using student outcome data from past years as a baseline to assess magnitude and significance of change, and more specifically, differential change across project versus comparison groups (e37).

Weaknesses:

The applicant could strengthen this project by discussing attrition.

Reader's Score: 14

2. (2) The extent to which the evaluation plan clearly articulates the key project components, mediators, and outcomes, as well as a measurable threshold for acceptable implementation.

Strengths:

The applicant's project has key project components, mediators, and outcomes clearly defined, calculated, and presented a threshold of acceptable implementation. The designs of SS1-SS3 define all variables of interest, including how and when data will be collected. The designs also detail the specific analysis plans for each sub-study, which include qualitative and quantitative means of assessing the project's nature and magnitude as well as mediating and moderating factors on both teacher and student outcomes of interest. The applicant cited the SS2 of the hypothesized paths of E_CSPD_Wk influence how the project elements act as mediators of change in teacher outcomes, and SS3 considers the influence of E_CSPD_Wk on student outcomes as a function of the mediating effects of teacher outcomes, and the impact of both teacher/school level and student-level moderating factors on these relationships. SS3 also contains methods to allow for WWC-approved standards of producing evidence of impact on students. SS1 details a more qualitative and descriptive study of the fidelity of implementation, with determinations of minimum acceptable thresholds to be set in Years

Sub

1- 2. The applicant notes to start an acceptable implementation will include 80% of participating teachers attending all 48 PD hours and teachers demonstrating statistically significant increases in performance on the to-be-developed assessment of CS teaching standards(e38).

Weaknesses:

The applicant could strengthen this project by including outcome measures.

Reader's Score: 4

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

Strengths:

The applicant's evaluation plan provides exceptionally clear articulation of the key components, mediators and outcomes as well as measurable threshold for acceptable implementation. The applicant's methods provide performance feedback and periodic assessment of progress for the project. Examples provided by the applicant cite the evaluation team will conduct all analyses in a timely manner, reporting informally back to project leads for formative purposes during monthly meeting. The SS1 analysis will be conducted and reporting will occur after the summer intensive PD and at the end of the school year (when teachers have completed follow-up PD), to allow for: a) data-driven decisions based on actionable recommendations from project leadership and b) project iterations for the next implementation year. The SS2 results will be used for formative and summative purposes. The applicant cites with the projected number of AP CSP/CSA teachers in the pool of available teachers and projected number of teachers participating in the project per year, these teacher sample sizes should be achievable (e38-39).

Weaknesses:

No weaknesses found.

Reader's Score: 5

Priority Questions

CPP - Competitive Preference Priority 2

1. Competitive Preference Priority 2: SEA Partnership

Under this priority, an applicant must demonstrate it has established a partnership between an eligible entity and an SEA (with either member of the partnership serving as the applicant) to support the proposed project.

Strengths:

The applicant has demonstrated it has an established partnership between an eligible entity and SEA to support the proposed project. The applicant is collaborative working together with CSTA, chapters of CSTA from South Carolina and Indiana, and the South Carolina Board of Education.

Weaknesses:

No weaknesses found.

Reader's Score: 5

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