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

Technical Review Coversheet

Applicant: Rhode Island Department of Education (U411C190263)
Reader #1: **********

		Points Possible	Points Scored
Questions			
Selection Criteria			
Significance			
1. Significance		25	25
Quality of Project Design			
1. Project Design		35	33
Adequacy of Resources/Quality of Management Plan			
1. Resources/Management Plan		20	16
	Sub Total	80	74
Priority Questions			
Competitive Preference Priority			
Competitive Preference Priority			
1. Absolute Priority 3		5	5
	Sub Total	5	5
	Total	85	79

Technical Review Form

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

Applicant: Rhode Island Department of Education (U411C190263)

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 proposed project has the potential to make a significant contribution to increased knowledge and understanding in the field of computer science education at the secondary level. The RHODE's proposed project: WBL&CS: The Effectiveness of WBL (Worked Based Learning) in Computer Science (CS) Education, is a solid concept with built in resources to serve 20 high school across the state. The applicant proposes to create or augment Computer Science pathways that lead to high quality computer science instruction leading to an AP Computer Principles Course for grade 11. A noted strength is the provision of professional development to teachers in each of the programs. In addition, half of the schools will have an opportunity to participate in a specific industry project to explore CS through a variety of mini projects supervised by local CS experts in the field. E19

   The applicant makes a strong case regarding the extent to which the proposed project involves the development of new strategies that build on existing strategies to expand CS in public high schools. One of the major thrusts of the project is Work Based Learning opportunities. The applicant cites relevant evidence that supports engaging students in school work that connects them to career success as a meaningful tactic to lower dropout rates and promote student engagement. The applicant has clearly defined work-based learning initiatives which include: internships; apprenticeships, service-learning; school-based enterprise; and industry project. Industry project is the most scalable form of WBL and will be used in this project. WBL for this project is designed to be rigorous, relevant, reflective, interactive and integrated in terms of receiving academic credit. E26

   Weaknesses:

   None 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:

1. The goals, objectives and measures for the project are clearly stated. Two goals scope the entire project in clear, concise language that is aligned with the computer science outcomes being projected for their project. Goals are clear: Students, particularly high-need students, will be better able to apply CS concepts and practices; more students, particularly high-need students, enter the CS workforce; and there is National improvement in CS achievement. Objectives and measures are clearly stated as well. RI students with CS WBL will be 10% more likely to intend to enter a career in CS than students without WBL. This will be measured by RITES+C CS career survey results for the treatment group compared to the control group; including breakdown by gender, race, and income demographics. A noted strength is that each school that participates in the project will receive direct funding to establish a classroom for APCSP that meets minimal standards for delivering the course. The proposed activities associated with the project are both detailed and specific. E29

2. The applicant provides a clear conceptual framework with proposed research activities to be implemented with fidelity. The model builds off research (provided in the application) that illustrates work-based learning yields greater student engagement in learning. They further suggest that when paired with traditional CS learning, this heightened engagement can lead to greater student proficiency in the aligned academic content area. The logic model as presented clearly delineates short-term and long-term outcomes. One short-term outcome clearly states, in line with this funding initiative that, "More RI students with CS WBL intend to pursue a CS degree and/or career." Another plus is that professional development will be provided to CS teachers in the participating high schools as part of the resources associated with this project. E79

3. The applicant has a rigorous pre-existing protocol for ensuring continuous improvement which will provide the management team with a research-based structure and tools for organization from its widely used RPP toolkit. In addition, monthly meetings of the core RPP members will take place. An annual retreat of extended RPP members will occur, an annual one-day community gathering and sharing for teachers; formal and informal feedback loops at each PD event and classroom observation. The applicant proposes to conduct an improvement cycle every quarter to analyze project data. E35

Weaknesses:

2.A clearer understanding of the schools' target populations and current student academic levels for high-need students and other eligible student categories for this funding, as well as their academic readiness for an advanced rigorous AP Computer Science course, has not been sufficiently detailed to assess if the applicant's projected outcomes are appropriate for this project.

Reader's Score: 33

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:

1.The management plan is strong in terms of the adequacy to achieve the objectives of the proposed project on time, within budget, including clearly defined responsibilities and timelines for accomplishing project tasks. The project is to be managed by RIDE with a full time Project Manager, in conjunction with two leadership subcommittees: an RPP Initiation Team that provides supervision of the project and an RPP Research Team that performs the activities of the project. The RPP Initiation Team will convene quarterly meetings of the RITES-+C RPP. The applicant will hold semi-annual meetings for all stakeholders and interested policymakers on how to proceed with the work of the project. The Research Team will use Design-Based Implementation Research to structure research and to provide future guidance for projects based on their research results for this project. The timeline chart for years 1-5 is provided and tasks are appropriately delineated by the two semesters in each year.

2. The qualifications, including relevant training and experience of key project personnel are succinctly described. Their Table 2: Project Personnel Responsibilities and Qualifications are detailed with the person's name, their responsibility and the qualifications for key staff members. Especially impressive is the Research team lead's background which includes a PhD in computer science. Full resumes indicating education, experience and published work is provided for key staff members. The key staff allocated for the project are portrayed as having the training to lead this CS project as part of the RIDE. 339

3. The applicant provides a strong plan of activities for continued support of the project after federal funding ends. RIDE is committed to funding this initiative after federal funding ends. The state's governor, IHE, industry partners and the Congressional Delegation are committed to the WBL and CS education in the state of Rhode Island. RIDE will seek state transition staff funding for the CS WBL RIDE staff member who is fully funded on the project. This project will help establish the CS WBL as a permanent part of the offerings in the state's high schools which will be transitioned to LEA founding's as the project ends. The project outcomes should also allow scaling the research to a Mid-Phase CS WBL EIR future project.

Weaknesses:

The applicant's proposal would be stronger if they identified which partner or project staff member had the direct responsibility for delivering staff development coaching to teachers of computer science at participant schools. In addition, details on how the professional development coaching provider works with identified CS teachers who may exhibit varying stages of proficiency in computer science AP instruction, would also be beneficial in determining project outcomes for this initiative.
2. The application would be strengthened by including the lead agency's description of the project staff member who will act as the direct liaison to the 20 school leaders and teachers who are carrying out the project components.

Reader's Score: 16

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 will serve at least 50% high need students in their project. The applicant's expected outcomes will include a Computer Science -Work Based Learning AP course that is recognized as having national accreditation standards. Master teachers of CS WBL will be trained in 20 high schools to deliver the course with fidelity. The outcome of the project encourages high school students to enter careers in computer science. The project results allow for replication by other LEAs as it pertains to the CS WBL high school course. The applicant does mention this competitive priority in their abstract.

   Weaknesses:

   None noted.

Reader's Score: 5

Status: Submitted
Last Updated: 06/14/2019 01:12 PM

Technical Review Coversheet

Applicant: Rhode Island Department of Education (U411C190263)
Reader #3: **********

		Points Possible	Points Scored
Questions			
Selection Criteria			
Significance			
1. Significance		25	25
Quality of Project Design			
1. Project Design		35	33
Adequacy of Resources/Quality of Management Plan			
1. Resources/Management Plan		20	18
	Sub Total	80	76
Priority Questions			
Competitive Preference Priority			
Competitive Preference Priority			
1. Absolute Priority 3		5	5
	Sub Total	5	5
	Total	85	81

Technical Review Form

Panel #16 - EIR Early Phase Tier 1 - 16: 84.411C

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

Applicant: Rhode Island Department of Education (U411C190263)

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:

   1.   The applicant provides the significance for the proposed project, including the contribution to an increased understanding of the problems and issues related to Computer Science (CS) education and work-based learning (WBL). The project will focus on the impact of WBL and benefits to CS to underserved student populations (e22). The narrative did provide data on K-12 CS Education in Rhode Island. Prior to 2016, data from the CS area on Rhode Island showed that only 9 public schools offered any form of CS Advanced Placement (AP) courses; 1 percent of the students were enrolled in CS, and 42 Rhode Island students participated in a CS AP exam. After legislation in 2016, CS is taught in every high school and Rhode Island has the highest percentage in the country of high schools offering AP CS courses (e27). There will also be professional development provided for teachers involved in CS.

   2.   The narrative clearly describes the focus of the project. Students will engage directly with industry mentors and real-world problems. Connecting schoolwork with career success promotes student engagement, reduces dropouts, help students establish positive relationships with teachers and peers, and increases attendance (e24). Rhode Island has established statewide standards that govern all WBL including a set of definition of terms such as apprenticeship, service-learning and other terms. Success for WBL has been demonstrated in the Career and Technical Education (CTE) programs.

   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:

1.   The applicant listed three goals and at least one objective for each one. There is also a measurement component included for each objective (e28). Some of the objectives include measures to determine growth such as RI Students with CS WBL will score 10% higher on the APCSP exam than students without WBL. These measures support the effort on the part of the applicant to identify the impact of the project on high needs students. The narrative describes three major activities that the applicant includes in the outcomes. The first is to establish high-quality CS course In high schools; the second is to establish uniform WBL programs, and the third activity is ensuring support for underrepresented groups. There is also a chart on e84-85 that lists the outcomes and performance targets. This chart provides measurable indicators that will be used to determine the effectiveness of the project.

2.   The applicant provided a comprehensive logic model that identifies a key component and provides the conceptual framework of the project. The logic mode includes the goals, objectives, evaluation questions, short term and long-term outcomes, resources, and activities (e33 and e79). The model describes the theoretical and operational relationships among the key project components and relevant outcomes.

3.   The project is designed to ensure continuous improvement and feedback. The Researcher Practitioner Partnerships (RPPs) will promote the involvement of personnel from the beginning, benefit all parties, and support the use of what is learned from the research (e34). Researchers will partner with practitioners to gain a better understanding of the process and gain insights into the local context and answering questions about the project activities (e34). There will be a monthly meeting of the key staff, an annual retreat, an annual, one-day community gathering and sharing for teachers; and formal and informal feedback at each PD event and classroom observation. Semi-annual meetings will be held for all stakeholders and interested policymakers, to be informed about RPP's activities and achievements (e36).

Weaknesses:

1.   No weaknesses noted.

2.   The project would be strengthened if the applicant provided information on the prerequisite skills and preparedness of the students who will enroll in the CS course. Insufficient information was provided on how the students would be prepared to enroll in and successfully complete the CS course.

3.   The formal feedback on a monthly basis appears to be insufficient to provide input into project outcomes. While there are informal approaches to feedback, these sessions should be formalized on a more regular basis – perhaps on a weekly or biweekly basis.

Reader's Score: 33

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:

1.	The narrative includes an adequate chart that provides the formation and implementation of the project. The applicant describes the various activities that will be implemented such as RPP Initiation Team and the three major tasks that include building a cohesive team, building engagement, and using tools to identify a problem and propose some action(s) to solve it (e36). The applicant included a list of the RPPs team members and areas of responsibility. The budget narrative provides details on salaries, contractual services and other expenditures related to project outcomes.

2.	There is a comprehensive table on e38-39 that delineates the person, area of responsibility and qualifications. This chart provides information on the specific qualifications of the person identified for an area of responsibility. The resumes in the appendix provide additional information on the backgrounds and training of the staff (e56-71).

3.	The evidence presented in the proposed project plan supports the fact that there is a reasonable plan for financial sustainability beyond the grant period. The applicant has demonstrated its sustainability plan beyond the funding cycle that includes state and local sources. There are commitment letters and one indicating that CTE funds can be used to sustain the project

Weaknesses:

1.	The project did not provide sufficient information and charts on milestones, specific timelines and specific tasks. The narrative provided major areas of responsibility but lacked specific tasks and the timeline for accomplishing these tasks.

2.	No weaknesses noted.

3.	No weaknesses noted.

**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 described the Computer Science pathways in 20 RI schools leading to an AP Computer Science Principles Course in grade 11. Professional development will be provided to teachers. Half of the schools will also participate in an industry project which allows them to explore CS through a variety of mini-projects in the field. The project also includes a focus on providing AP CS courses to underrepresented students.

Weaknesses:

No weaknesses noted.

Reader's Score: 5

Status: Submitted
Last Updated: 06/14/2019 04:30 PM

Technical Review Coversheet

Applicant: Rhode Island Department of Education (U411C190263)
Reader #2: **********

		Points Possible	**Points Scored**
Questions			
Selection Criteria			
Significance			
1. Significance		25	25
Quality of Project Design			
1. Project Design		35	32
Adequacy of Resources/Quality of Management Plan			
1. Resources/Management Plan		20	17
	Sub Total	80	74
Priority Questions			
Competitive Preference Priority			
Competitive Preference Priority			
1. Absolute Priority 3		5	5
	Sub Total	5	5
	Total	85	79

Technical Review Form

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

Applicant: Rhode Island Department of Education (U411C190263)

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 WBL4CS program proposes to address on page 1 or e22 an educational issue such as the lack of Computer Science trained students from high need schools through a Work-Based Learning approach.

   WBL4CS proposes to provide strategies that build upon a previous initiative. For example, on page 3 or e24, the use of content knowledge, WBL, computer science, real world projects, and industry mentors, collectively, supports the potential to make an impact on young people by building self-confidence which ultimately can lead to success.

   Weaknesses:

   WBL4CS provided limited research to demonstrate that it does indeed have an educational problem that warrants the need to be addresses as proposed on page 5 or e26.

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 identifies goals, objectives, and measures as stated on page 7 or e28 that are clear and measurable. For example, the goal to have more students, particularly high-need students, enter the Computer Science Workforce has as its objective that RI students with Computer Science WBL will be 10% more likely to intend to enter a career in CS than students without WBL as measured by RITES+C Computer Science intent surveys is well thought out design and appropriate based on the intent of the project as written.

The applicant provided a graphic conceptual framework in the appendix of the proposal with resources, activities, outputs and outcomes to position a greater number of students to enter the Computer Science workforce as noted on page e79.

As stated on page 13 or e33, the applicant will ensure feedback and continuous improvement throughout the grant project. Participants will participate in monthly meetings, annual retreats, informal feedback loops, and classroom observations. Quarterly, continuous communication will provide the mechanism needed to make adjustments that will help ensure the success of the project.

Weaknesses:

The applicant did not show how its conceptual framework will lead to the anticipated results on page e33 nor does the logic model describe the actual framework. In fact, the details explaining the concept were minimal in this proposal.

Reader's Score: **32**

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:

According to the proposal, on page 14 or e35, WBL4CS proposes a management plan directed by RIDE that includes activities, responsible parties and timelines describing the applicant's efforts to achieve the proposed outcomes through the assistance of an Initiation Team and a Research Team.

The applicant clearly identifies the qualifications and experience of one key project personnel on page 17 or e38. Key project personnel have experience in College and Career Readiness, Higher Ed Computer Science Faculty, Budgeting and Logistics, LEA Administrators and Teachers, and Research. Likewise, all key personnel have at least a B.S Degree with multiple years of experience in a variety of areas of expertise.

The applicant provided evidence of specific funding beyond the end of the grant as stated on page 19 or e40 in the form of State funding that could be used as well as Perkins V plan funding. Likewise, the applicant provides a letter of

commitment specifically stating future funding support for a portion of the $300,000 allocation.

Weaknesses:

The applicant did not include milestones in the proposal as stated on page 14 or e35.

Reader's Score: 17

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:

   The applicant proposes to provide several courses in computer science instruction as identified on page 11 or e32 as part of its pre-service curriculum for participants. Students will have access to courses such as Introduction to Computer and AP Computer Science Principles. Therefore, students from underrepresented groups will have opportunities to broaden their participation and knowledge in the Computer Science field of study.

   Weaknesses:

   There are no weaknesses noted in this section.

Reader's Score: 5

Status: Submitted
Last Updated: 06/14/2019 08:12 PM