

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

Status: Submitted

Last Updated: 06/13/2019 12:53 PM

Technical Review Coversheet

Applicant: Education Development Center, Inc. (U411C190275)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	25	24
Quality of Project Design		
1. Project Design	35	35
Adequacy of Resources/Quality of Management Plan		
1. Resources/Management Plan	20	20
	Sub Total	79
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority		
1. Absolute Priority 3	5	5
	Sub Total	5
	Total	84

Technical Review Form

Panel #23 - EIR Early Phase Tier 1 - 20: 84.411C

Reader #1: *****

Applicant: Education Development Center, Inc. (U411C190275)

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 proposes to institute a new computer science curriculum that will become required coursework for 25,000 seventh and eighth-grade students that will be comprised of two consecutive years of computer science instruction. The applicant identifies a demand by superintendents for the proposed project citing limitations of opportunity and access to computer science education (page 24). Also, the applicant notes the creation of a new state teaching license that lacks any coherent standardized program of coursework resulting in poor implementation and inequitable distribution of the availability of certified teachers capable of providing necessary instruction in this area impacting the students with the greatest needs.

2. The applicant argues that there is insufficient research on the best way to implement computer science coursework with necessary supports. Fundamentally, the proposed project is about contributions made toward system change for computer science instruction at the district level for middle school using Code.org's Computer Science (CS) Discoveries curriculum as a foundation. The proposed project would seek to contribute to the creation of a middle school adoption model designed to ultimately extend to K – 12 computer science program integration. So in many ways the proposed project is a first attempt at establishing a uniform framework.

Weaknesses:

1. No weaknesses identified.

2. There is a lack of information regarding any prior attempts to establish a computer science framework either at state or local levels. Such information would provide a better idea of whether the approach is new or an alternative to existing efforts.

Reader's Score: 24

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 presents five goals with stated objectives that have deliverables and activities (drafting the toolkit, convening professional development programs and engaging with stakeholders through summits and meetings) to be completed. Outcomes, for the most part, have measurables (Goals number 2, 3, and 4) to determine the success of the project.

(2) The applicant provides an outline of project goals, objectives, and outcomes that correctly in alignment with and provides sufficient understanding with what the proposed project seeks to achieve namely: seeking district-wide adoption, formulation of a foundation curriculum, providing necessary staff and teacher support, entering into stakeholder partnerships, and building the capacity needed for sustainability through database decision-making.

(3) There are numerous sources for feedback for the proposed program. The applicant proposes the development of District Stakeholder Consuls that include members of communities that are impacted by the implementation of the proposed project to ensure that the proposed project is in alignment with state educational policies and promote long-term sustainability. Meetings with District Stakeholder Consuls will occur through biannual summits and meetings. There will also be a project advisory board (meeting four times a year) and extensive efforts to disseminate information related to the proposed project through presentations, and Internet presence, and presentations made to stakeholders.

Weaknesses:

(1) No weaknesses identified.

(2) No weaknesses identified.

(3) No weaknesses 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:

- (1) The applicant presents a logical outline of activities with related milestones and timeframes for completion. The activities and responsibilities are given to both individuals and organizations to fulfill the responsibilities of systemic reform, professional development, curriculum implementation, academic achievement, promotion of the framework to be instituted, and evaluation.
- (2) The individual designated as the Project Director/Principal Investigator for the proposed project has the education and expertise for management and oversight for its operation. The education and experience attained by the other key personnel are suitable to meet the demands of a project of this type as indicated by requisite experience, educational attainment, and familiarity with technical aspects of computers science instruction. Of particular note, one of the individual's is certified as a What Works Clearinghouse reviewer and another has experienced working directly at the middle school level.
- (3) The applicant proposes a five-point plan for sustainability at the end goal of the establishment of the K-12 computer science pathway. Critical components of their sustainability and growth plan include the use of database decision-making tools and maintaining existing partnerships and attempts at extending them as well. A program toolkit will be created that includes resources, tools, and materials for upscaling as desired.

Weaknesses:

- (1) No weaknesses identified.
- (2) No weaknesses identified.
- (3) No weaknesses identified.

Reader's Score: 20

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 presents a proposal for the establishment of a framework for computer science coursework, CS Discoveries, created by Code.org, an organization that promotes the expansion of the study of computer science.

Weaknesses:

No weaknesses identified.

Reader's Score: 5

Status: Submitted

Last Updated: 06/13/2019 12:53 PM

Status: Submitted

Last Updated: 06/13/2019 06:36 PM

Technical Review Coversheet

Applicant: Education Development Center, Inc. (U411C190275)

Reader #2: *****

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

Technical Review Form

Panel #23 - EIR Early Phase Tier 1 - 20: 84.411C

Reader #2: *****

Applicant: Education Development Center, Inc. (U411C190275)

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 outlines the barriers they must face with potential solutions. They present a course called Equity Methods that will focus on evidence based strategies and barriers that underserved populations face.

This project is innovative as it seeks to approach the root of the issue concerning diversity in STEM Fields. It looks to reach and teach instructors through the Equity Methods course that can potentially remove potential barriers for teachers by improving relationships with students. Positive student teacher relationships are essential for effective student growth and this project addresses that necessity.

Many districts currently employ STEM programs but do not address the important issue of training teachers to embrace equity and diversity.

The intervention program will implement a comprehensive district wide change model that embeds computer science coursework.

The pace framework uses a proven inquiry based inquiry-based curriculum associated with professional development from code.org

Weaknesses:

N/A

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 goals and objectives of the project are clearly outlined utilizing the pace framework for 7th and 8th grade. They are clearly identified with respective outcomes.

The 8-point plan for feedback in continuous improvement ensures that the framework is followed utilizing Google Drive or other work systems and counsels to examine and evaluate the activities that are going to take place for this program.

The paste tool kit has dissemination strategies for presentations and utilization throughout the program.

Weaknesses:

Evaluation activities are not specific to what the activities will be carried out. However, the leadership team will conduct monthly updates with SageFox.

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 management plan includes bi weekly checks as well as careful monitoring of tasks and deliverables by the leadership team and frequent communication with the evaluator.

The lead team members for the program have all significant experience with stem STEM programs related to secondary schools. Clearly defined tasks and responsibilities for all stakeholders is outlined. (e35)

The applicant has a clearly defined plan for sustainability and replication along with the resources to ensure its success.

Weaknesses:

Although the applicant did not outline the staffing for project implementation outright, they do identify key personnel who have significant training in staffing and evaluation.

Reader's Score: 20

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 project provides for the expansion of rigorous computer science courses with clearly defined assessments.

Weaknesses:

N/A

Reader's Score: 5

Status: Submitted
Last Updated: 06/13/2019 06:36 PM

Status: Submitted

Last Updated: 06/13/2019 04:38 PM

Technical Review Coversheet

Applicant: Education Development Center, Inc. (U411C190275)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	25	25
Quality of Project Design		
1. Project Design	35	35
Adequacy of Resources/Quality of Management Plan		
1. Resources/Management Plan	20	18
Sub Total	80	78
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority		
1. Absolute Priority 3	5	3
Sub Total	5	3
Total	85	81

Technical Review Form

Panel #23 - EIR Early Phase Tier 1 - 20: 84.411C

Reader #3: *****

Applicant: Education Development Center, Inc. (U411C190275)

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 aims to support the implementation, and evaluation of a systemic district reconfiguration model for computer science instruction. This model is supposed to serve 15 districts (urban and rural) and 10,000 students in middle schools. The district model goal is to prepare all students with the computer skills necessary for academic and professional achievement (p. 1).

The proposed project has the potential to increased understanding of effective strategies to increase and better prepare under-served students to pursue in computer science education. It will target 7th and 8th grade students over two years of computer science coursework and will engage all teachers in professional development about culturally responsive and equitable teaching.

The rationale for the proposed project is established through the research applicants have done on the barriers that are created during the systemic implementation of new curriculum, models or strategies. They have also looked at the disparities existing in computer science education, explained most of the time by the lack of interest, and consequently of career choices and opportunities for under-served populations, and the workforce needs for the national economy. They have analyzed the initiatives and programs that have targeted the specific problem of the lack of interest of students and look at the barriers that often slow down systemic plan implementation and improvement.

From this research they have pulled out the misinformation or the lack of concerns of some school and district administrations as a possible barrier to have qualified computer science teachers and the lack of cultural responsiveness and equitability in the classrooms as possible reasons why underrepresented students do not feel engaged in traditional classroom (p. 2).

The proposed project involves the demonstration of promising new strategies that build on existing strategies: the project aims to develop 7th - 8th grade students' interest for computer science education by preparing teachers to teach, using an established well-known curriculum, in culturally responsive and equitable classrooms, a strategy that has shown success in many different environments (p. 4). These teachers will also benefit from an intensive district-wide support from the professional leaning community. The approach will be studied and scaled up to support statewide replication (p. 6)

Weaknesses:

None observed

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 overarching goal of the project is to facilitate the refinement, implementation and evaluation of a district-wide systemic effort to encourage middle school student participation and interest in pursuing coursework in CS and CS-enabled careers.

Goals, objectives and outcomes are clearly presented in table 2 (p. 8-11) and are aligned to the overarching goal. The plan aims to achieve 5 goals, each of them listed with aligned objectives and measurable outcomes. Goal 2, for example, is to provide professional development and support using equity methods to all teachers at the school level in the different districts part of the project. Among the objectives figure the design of a summer institute focused on equity and diversity teaching methods for computer science to build teacher skills and capacity to engage students from diverse backgrounds in computer science education. One of the outcomes for this goal is 100% of targeted educators will participate in the summer institute and 80% of them will do the quarterly follow-up professional development sessions.

The logic model is presented in appendix (p. 100) and identifies the project key components (inputs, activities, outputs) and describe the relationships among them and with the outcomes and impact at the teacher, district and student level.

Among the inputs figure partnerships with the public and private sectors for support, with the association of superintendents and the commitment of districts and schools to computer science instruction adoption and sustainability. One of the impacts of the project would be to establish a stronger middle school computer science pathway for high school student and advanced placement computer science.

The procedures for continuous improvement in the operation of the proposed project seem adequate to the purpose of ensuring future implementation of the program. Goal 4 is about the evaluating of impact of the interventions on students and participating teachers through data collection and analysis. The feedback and program refinement plan is described in eight points (p. 11-12), one of the most important being the creation of District Stakeholder Councils (DSCs) to lead the change efforts in each district. These councils will be trained in and use data-based decision-making for implementation decisions and involved in the continuous improvement activities.

Weaknesses:

None observed

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:

Key personnel seem well qualified and their responsibilities are listed in table 4 (p. 15). The leadership team includes a principal investigator/project director and a STEM integration specialist, both with experience in grant administration and expertise with developing and implementing career pathways and partnerships. Other members of the teams include experts in developing and validating assessments and programs that will help district councils in their tasks.

The management plan to achieve the objectives of the proposed project on time seems adequate: the project management plan is clearly presented in table 5 (p. 16-17) with responsibilities, activities and milestones established annually over five years. The frequency of annual meetings and the number of hours of each professional development are clearly indicated.

The potential for continued support is evidenced in the five-point plan for sustainability and growth presented in table 6 (p. 18) and built on creating interest of stakeholders, developing and building partnerships, raising visibility through dissemination (dissemination plan detailed p. 12-14).

Weaknesses:

The timeline could have been more detailed for example, by presenting monthly or bi-monthly listing of activities and responsibilities.

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:

A project based on integrating culturally responsive and equitable practices in the classroom has the potential to expand access to and participation in rigorous computer science coursework for traditionally underrepresented students.

Weaknesses:

A demographic of the districts involved in the project would have given a clearer idea of the percentage of the underserved population that would be part of the study.

Reader's Score: 3

Status: Submitted
Last Updated: 06/13/2019 04:38 PM