

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

Status: Submitted

Last Updated: 06/14/2019 02:50 PM

Technical Review Coversheet

Applicant: Scott County School District (U411C190173)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	25	25
Quality of Project Design		
1. Project Design	35	31
Adequacy of Resources/Quality of Management Plan		
1. Resources/Management Plan	20	15
Sub Total	80	71
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority		
1. Absolute Priority 3	5	5
Sub Total	5	5
Total	85	76

Technical Review Form

Panel #22 - EIR Early Phase Tier 1 - 25: 84.411C

Reader #2: *****

Applicant: Scott County School District (U411C190173)

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 proposal provides compelling local data (p 3-4) and a rich justification for the importance of the project in addressing specific needs of and contributing to the existing data sets for the region's targeted students (p 6). The proposal provides evidence of the uniqueness of the proposed initiative (p 6) and the impacts that focusing on AP tests as a motivator for STEM impacts can bring (p 5). The project offers a novel way to address rampant teacher shortages in particularly STEM areas (p 4) while acknowledging the challenge of retaining highly trained teachers in rural, impoverished schools (p 12). The project offers a specific opportunity to offer depth to our understanding of hybrid AP course and test taking among rural, underrepresented youth and how to provide access to AP courses and tests in spite of a lack of qualified teachers in their areas. In addition, the proposal offers a cohort-based component that includes residential experiences at IHE partners (p 14), providing a means to support students beyond academic preparation. The cohorts and residential programs provide opportunities to consider students' "achievement-typical" behaviors within a very specific context (p 13). Because the project builds on the existing, widely accepted AP course and testing components and is based on an existing program provided by the Consortium (p 2, 8), it offers an innovative way to address scalability and a solution to a widespread issue.

Because the project builds on the existing, widely accepted AP course and testing components and is based on an existing program provided by the Consortium (p 2, 8), it offers an innovative way to address scalability and a solution to a widespread issue.

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:

A foundational driver of the proposed project is to develop baseline data sets for the targeted student population, so the proposal outlines very clearly the specificity and measurability of its goals and objectives (p 9-10) that are related to course taking, test taking, and participation in project activities. The project acknowledges a potential initial readiness gap (p 10) and structures its target metrics to accommodate that. The bulk of data collected in the project is quantitative and often includes basic counts - such as numbers of students or teachers participating in particular activities - or test scores (p 15).

The project, as depicted by the Logic Model (p 15) and related narrative, are based on a theory of action that suggests that hybrid teaching of AP STEM courses can provide a rich experience for rural, underrepresented students when it is supplemented by physical materials (p 12), qualified teachers and tutors (p 7, 15), and activities that support the development of achievement-typical actions (p 13). The project includes a number of components that align well with its focus on the impacts of peers and the experiences of cohorts, including working with female participants in “office hours” (Budget narrative, p 26) and transitional summer experiences provided by institutions in the state (p 7, Budget narrative).

Weaknesses:

The measurement of qualitative components of the project’s activities, such as the acquisition of achievement-typical behaviors or the impact of cohorts on students’ outcomes are less well-developed as part of the project’s design or primary goals (p 15), although they do appear in the evaluation section (p 21, 24). However, since these lead to some of the anticipated impacts of the project, such as influencing others and serving as role models (p 15), understanding how these components and their measures are conceptualized within the project more broadly could be helpful. The Logic Model and underlying Theory of Action provide an understanding of how strategies produce outcomes, but the conceptualization of how components interact is less apparent. For example, the idea of achievement-typical behaviors (p 13) is obviously important to the rationalization of the residential experiences, but how the project promotes these behaviors or supports students in examining their behavior explicitly in light of cultural or socio-economic contexts is not clear. The project articulates an intentional, but not fully formalized, process for feedback processes, including a direct connection between the evaluation team and the primary leadership of the project (p 16).

The proposal does not yet provide evidence for CS specific expertise in its management description or a CS-focused push – rather than a more broad AP STEM push - in its goals, outputs or outcomes.

Reader's Score: 31

Selection Criteria - Adequacy of Resources/Quality of Management Plan

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

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks.

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

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

Strengths:

The proposal describes a management team that includes a primary director (p 18), a variety of experts in AP and STEM areas (p 19), and a combination of superintendents across partnering districts (p 18), which is vital for maintaining the leadership and high level decision making that is necessary to make significant shifts in course taking. Staff demonstrate ample experience and expertise for the roles that they play in the project (p 19, resumes). The proposal is presented by an existing Consortium that has a long record of collaboration in initiatives, communication, budgeting, and staffing (p 19). The proposal points to decreasing costs over time and initial expenses in set up as a component of planning for sustainability (p 19-20).

Weaknesses:

A consulting group, the Global Teaching Project, is listed as a primary producer of curriculum materials and significant liaison to the project's various stakeholders (budget narrative, p 15). However, the management plan does not characterize the role of this group in the functioning of the project management or feedback processes. Because of the impact of the Global Teaching Project on a variety of high-leverage components of the project, better understanding their role within it is necessary. Further, in the presentation of management team information, a person with expertise in Computer Science or Computer Science Education is not included. Because the project seeks to build upon its success with AP Physics to introduce AP CS courses, more specificity is needed in how the project will supplement the expertise of its team with this content.

Reader's Score: 15

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 seeks to increase access of underrepresented students in Computer Science through wider availability of AP CS courses as part of its broader initiative in increasing access to AP STEM courses. Its impact area is well-selected to reach underrepresented students served by rural school districts.

Weaknesses:

None noted.

Reader's Score: 5

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Technical Review Coversheet

Applicant: Scott County School District (U411C190173)

Reader #1: *****

	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	18
Sub Total	80	75
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority		
1. Absolute Priority 3	5	5
Sub Total	5	5
Total	85	80

Technical Review Form

Panel #22 - EIR Early Phase Tier 1 - 25: 84.411C

Reader #1: *****

Applicant: Scott County School District (U411C190173)

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. Based on the published literature and local data from Mississippi, this application focuses on an understanding of a critical impediment to the educational achievement of promising secondary students from rural, high-poverty communities—the lack of access to rigorous courses in computer science. This application focuses on the unique severity of disparate access to AP courses in Mississippi, and the unique attributes of the school districts and students. The applicant has provided sufficient literature to acknowledge the gaps.

2. The project builds on existing innovative strategies such as having a lead instructor, on-site teacher, AP certified teachers, tutoring, implementing online modules, etc. These strategies will empower students from underrepresented and disadvantaged backgrounds so they can succeed academically in STEM and computer science. Additionally, the beneficial effects of the AP access initiative have been evident in the students' schools and communities, which have taken great pride in their work and have been successful in the serving area of this proposal.

Weaknesses:

1. None noted.

2. 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 Project's goal is to significantly expand access for high-need students—that is, promising public high school students from rural, high-poverty communities—to rigorous AP STEM curricula, and to help them succeed in those courses, so they may achieve their full potential and realize the positive outcomes that are concomitants of participation in AP classes and strong performance on AP exam. The overarching goal is specific, measurable, relevant and timely for the serving area.
2. The conceptual framework is based upon a blended delivery model for AP content such as high-quality research, expert and stakeholder input, and field observations made in the AP course curriculum. This also takes advantage of a well-designed logic model that explains the key components, their outputs and outcomes and overall impact of the proposal on students, teachers, and schools.
3. The applicant has a plan for data-driven adjustments of the program components that will be based on receiving the feedback from students, teachers, and stakeholders. They will routinely seek formal feedback from students, teachers, tutors, and other stakeholders on all program elements.

Weaknesses:

1. None noted.
2. None noted.
3. Although the applicant has provided the feedback plan, it is not well-developed. For example, there is no clear indication of how the feedback will be received and what instruments will be used to receive feedback.

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:

1. The applicant of this proposal clearly developed a robust Management Plan, that will achieve the Project's objectives on time and within budget, and has established clearly defined responsibilities, timelines, and milestones for accomplishing Project tasks. Figure 2 clearly captures the management plan in detail.
2. This project will be governed by a consortium of school districts. School superintendents will lead the effort along with support personnel. The qualification and expertise of the listed personnel are appropriate.
3. The continued plan to sustain the activities after the project focuses on the track record of funding and they believe they will get funds either from federal grants or private sector to sustain the activities. There is on hand marching funds available only during the project period (appendix H).

Weaknesses:

1. None noted.
2. None noted.
3. There was no evidence such as a support letter articulating how this program will be sustained beyond the project period.

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 has been responsive to this priority and they have plans for student achievements and teacher's development in computer science, This project will serve a total of 1,014 high-need students in Grades 10-12 over 3 years.

Weaknesses:

None noted.

Reader's Score: 5

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Technical Review Coversheet

Applicant: Scott County School District (U411C190173)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	25	24
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	73
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority		
1. Absolute Priority 3	5	5
Sub Total	5	5
Total	85	78

Technical Review Form

Panel #22 - EIR Early Phase Tier 1 - 25: 84.411C

Reader #3: *****

Applicant: Scott County School District (U411C190173)

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 Scott County provides a statement of validation from the College Board to support the application's status as a unique in the absence of research findings. Specifically, Scott County has solicited feedback and review of their initial AP Physics program from the College Board and concluded that the program was unique in scope (Page e31). This conclusion establishes the initial strategies as new. The project seeks to build upon those strategies with by adding new options for the AP test, including AP Computer Science Course Options.

(2) The proposal establishes rationale for their project, stating that by implementing their blended AP program achievement gaps and access issues to STEM curricula for underrepresented students in rural areas will decrease, as demonstrated in the previous Consortium's AP Access initiative which reported most students as "black and female" (Page e28) Additionally, the proposal also recognizes "improved longitudinal outcomes" (Page e28) as a result of underrepresented students successfully completing AP curriculum that was previously unattainable. Specifically, the applicant correlates that participation and success in the program will "catalyze broader achievement" (Page e28). The addition of a positive student learning environment that includes high achieving peers has had an additional positive impact on student achievement. The applicant states that "students seek to emulate high-achieving peers, an outcome aided by the social dynamics of rural communities" (Page e28). These additional impacts in student positive student achievement further strengthens the significance of the proposal.

(3) The proposal clearly states that the national significance of the project is to develop an "innovative, scalable, field-initiated, blended instructional model" (Page e21) to high-need students. The project included regional data to highlight the shocking low number of all students who took AP exams across the state. The applicant provides validation for their unique program with data correlating the likelihood of students who take an AP exam as 42% more likely to complete college in four years. The data provided highlights the robust gains of high-needs students that participate in the project. If successful, the application provides a comprehensive solution to challenges faced by rural districts, as well as any district lacking certified content area teachers.

(4) The program provides clear justification for the decisions encountered during the consortium's inaugural course. Specifically, the narrative identified and supported the decisions to choose AP Physics 1 based on the lack of teacher available for the course paired with the accessibility to prerequisite math courses (Page e32). The clear logic offered provides insight into the incubation and execution of the initial program design that will be iterated in by this proposal.

Weaknesses:

(1) The definition of "high-needs" students is narrowly focused on only students whose grade point average is in the top quartile in their schools. This definition risks excluding a large population of students and minimizing capacity for the project. Additionally, the exclusive criteria based on GPA does not consider the completion of prerequisite classes

necessary for success in the AP course work. The narrow focus on GPA without mention these course risks setting students up for failure in classes they do not have the prior knowledge necessary to succeed.

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 primary goal is to significantly expand access for high-need students resulting in high student achievement. The applicant includes consideration of demographics, and other secondary factors to acknowledge performance variations between schools with differing socioeconomic populations (Page e36). Measurements are clearly listed in the appendix of the applications. This awareness signifies culturally relevant measurements are in place and expectations are appropriate for high-needs populations.

(2) The proposal includes "thrice-yearly attendance IHE-based residential programs" for students and in-class teachers" (Page e33). Current residential programs are active in the local state. Local colleges and universities have committed support to expanding to include the applicant program. The applicant includes stories of student success and preparedness as a result of these residential programs (Page e40), specifically stating that, "at the end of the program, the summer program participants were more prepared than most other such students." (Page 40). The inclusion of this successful residential based program supports the project goal to expand access of high-need students. Multiple opportunities a year to participate in the residential program further support the established goal and provide educational experiences to bridge the performance gap between high-needs students and their counterparts.

(3) The program addresses gender disparities by providing unique opportunities for female participants. Specifically, a portion of the grant money within year 1 will be dedicated to female outreach including activities such as small group "office hours" and female mentorship. This dedicated funding and support initiative target to female participants add strength to the comprehensiveness of the application.

(4) The applicant provides a very detailed logic model broken down by target population of students, teachers, and schools. The components of the logic model show continuity and progression across the stages of output, outcomes, and impacts. For example, the progression of teacher training outputs to teacher impact across the logic model shows a well-designed flow of expectations for the project.

Weaknesses:

(1) While the project goals and objectives are qualitative and achievement driven supported by metrics compiled by the College Board, they do not include the full spectrum of the program. Specifically, the goals and objectives strongly capture the performance component, but do not describe the influencers in place to increase participation. The logic model includes components such as tutoring, mentorship, and other incentives (Page e41) to increase student participation and help students persist in the course. However those components are absent in the described goals and objectives. The goals and objects maintain a broad level of simplicity by using College Board provided metrics and College Board provided data reports. This reliance on College Board AP Framework and reporting overlooks potential

opportunities for qualitative data.

(2) The procedure for ensuring feedback and continuous improvement included represents a very standard model. The application lacks depth in innovation of strategies to collect feedback and offer continuous improvement. The narrative references several opportunities to collect data, however it does not address how the data is to be used or how a feedback loop will occur toward implementing change based upon the data collected.

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:

(1) The management plan is sustainable in getting varied stakeholders involved, through the intentional establishment and coordination of activities and responsibilities of each member with explicit timelines. (Page e42-43). Specifically, all schools and districts have previously consented to a formally established "Cooperative Agreement" (Page e42) that sets the responsibilities and tasks of each member. As a result of this agreement the consortium leaders are integrated into the management plan through cross over activities such as the implementation of the blended model. The organization of the management chart is strengthened by the linking between established program goals and objectives and more specific activities and milestones, thus providing a method to track the completion of every objective. Additionally, the proposal includes a clear and thorough budget, with additional narratives to provide further explanation of funds as they relate to the project.

(2) The management structure proposes a unique Consortium Governing (Page e44) body with representatives from each district. This management structure delegates the implementation of the project to each district. The district representatives making up the Consortium Governing body includes experienced district superintendents with skills necessary to implement the proposed project, as supported with individual resumes. In addition to the Consortium Governing body, the management plan addresses the roles and responsibilities of the Executive Director, specifically tasked with the overall program coordination. This unique management structure adds multiple levels of verification of objective completion, thus adding to the sustainability of the project.

Weaknesses:

(1) The budget includes a high dollar reoccurring line item for a consulting group, the Global Teaching Project (Page e109), however the role of this consulting group was not conceptualized within the management plan. The significant amount of this commitment justifies further description that the application fails to provide. The budget narrative clarifies the role of the consulting group to develop content and course materials. The responsibility of the Global Teaching Project to fulfill an essential task within the project combined with the high dollar value of the services suggests they will be a key player in the overall success of the project. The management plan is weakened by failing to include the Global Teacher Project within the hierarchy of the management and neglecting to provide a plan to incorporate this group into a feedback loop.

(2) While the applicant provides the positions and personnel in detail, the personnel list does not include a Computer Science Educator from either K-12 or the university level. A computer science educator is essential to providing insight into the project implementation and data analysis. The absence of a computer science educator weakens the sustainability of the program to be able to successfully implement their blended AP Computer Science initiative.

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:

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:

(1) The program provides a detailed plan to integrate and sustain the involvement of high-needs students within College Board AP Computer Science and STEM curriculum. The program supplements enrollment in an AP course with unique program opportunities such as female mentorship and office hours and along with residential programs to bridge the achievement gap between high-needs students and their counterparts. This program is projected to reach 540 students by end of year 3. (Page e19)

Weaknesses:

None.

Reader's Score: 5

Status: Submitted

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