

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

Status: Submitted

Last Updated: 10/29/2020 10:06 PM

## Technical Review Coversheet

**Applicant:** Virginia Advanced Study Strategies (S411C200100)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Quality of Project Design	45	42
<b>Sub Total</b>	45	42
<b>Resources and Quality of Management Plan</b>		
<b>Resources and Quality of Management Plan</b>		
1. Resources and Management	30	28
<b>Sub Total</b>	30	28
<b>Selection Criteria</b>		
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	24
<b>Sub Total</b>	25	24
<b>Priority Questions</b>		
<b>CPP</b>		
<b>Competitive Preference Priority 2</b>		
1. SEA Partnership	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	105	99

# Technical Review Form

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

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

Applicant: Virginia Advanced Study Strategies (S411C200100)

## 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: 42

#### 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 significant evidence detailing the professional learning funded through the stipend will replace existing mandatory professional development for participating teachers at 100% level. The applicant's project is supported and approved by the Virginia Department of Education in partnership with LEA, and applicant has unique support of replacement of mandatory professional development with teacher directed appropriate professional development by the state education entity (p4, e94).

#### 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's project adequately ensures the stipends is appropriately used for highly qualified professional learning. The project conditions removes barriers and provides resources. The applicant provides significant citations of the professional development which benefits educators and students. The applicant states the third condition of the project addresses the implementation of professional learning and development. The implementation process moves beyond the professional learning experience and is translated into teaching practice by making adaptations necessary for the local context. The project will provide instructional coaches and mentors to support teachers. These instructional coaches/mentors will use a coaching framework (Virginia New Teacher Support Program, 2020)

The applicant's submission supports the implementation of practices by teachers. The applicant details the support

**Sub**

will include instructive, facilitative, and collaborative coaching around the four key elements of implementation: fidelity to clear and visible learning goals, the necessary dosage of learning experiences that embed the interventions, adaptations for specific needs of learners, and quality delivery in a conducive learning environment (Hattie, Bustamante, Almarode, Fisher, & Frey, 2020) (p.4-8).

**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 applicant provides a streamline service for those who have to need to find professional development beyond the needs of the self-assessment tool. To preserve teacher flexibility and autonomy in selecting professional learning, the applicant has determined a mechanism needs in place when the dashboard of choices does not align with the established professional needs identified by the self-assessment tool. PLCC will leverage the collaboration of the state-level professional organizations in micro-credentialing professional learning experiences that meet the individual's professional need. For example, the commitment expressed by VASCD allows PLCC to utilize the cadre of professionals whose expertise is in developing and assessing the micro-credentialing of professional learning experiences. The applicant believes this is a significant strength of this project – a customized technical assistance approach through the ability to leverage collaborative partnerships to respond to the specific professional needs of the participating science, mathematics, and computer science teachers (p9-10).

**Weaknesses:**

The applicant procedures does not provide a detailed timeline for distribution which significantly impacts the flexibility for teachers.

**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:**

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 the establishment and use of the PLCC dashboard will provide an interactive choice-board containing professional learning experiences that result in micro-credentialing and provide 100% replacement of the LEA's expected professional learning requirements. This dashboard will provide a simplified process for identifying, selecting, and requesting needs-based professional learning experiences with minimal burden. Simplicity is reinforced by using an interactive web-based platform, whereby teachers participating in PLCC will use the formative assessment data generated by the self-assessment tool and instructional coaching/mentoring to reinforce teacher choice of experiences that ensures flexibility and autonomy (p11-12)

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**Weaknesses:**

No weaknesses found.

**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:**

The applicant provides sufficient details through their Logic Model specified goals and objectives to build sustainable teacher effectiveness capacity of secondary mathematics, science, and computer science (STEM) teachers in rural settings across the Commonwealth of Virginia through a systematic, teacher-directed selection of professional learning experiences that increase collective teacher efficacy within a community of practice (CoP). Three core objective are noted in the management plan and timelines table with key tasks for achieving each, guide attainment(1) To enable all teachers to self-evaluate individual learning needs for selecting professional learning experiences, (2) To ensure professional learning options for 95% of teachers to self-select experiences that align with their individual learning needs, and (3) To provide supports for 90% of teachers to participate in CoP as collective efficacy to sustain implementation of the professional learning (p12, e187, Appendix)

**Weaknesses:**

The applicant can strengthen this application with clearer outcomes.

**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: 28**

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's replacement of a significant portion of existing mandatory professional development for participating teachers. The overall funding of 4.2 million provides 40% to the development of teachers. It replaces the current professional development with flexible and autonomous training. The existing mandatory professional development requires funds for the travel expenses and cost of materials for teachers. The allotment for the professional development is \$1,000 which is \$500 more than the allotment of the rural areas (e35-e36).

**Sub**

**Weaknesses:**

No weaknesses found.

**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:**

In relation to the objectives, design and the potential of the project, the applicant provides a sufficient connection to a reasonable cost. The applicant correlates the extent to which the costs are reasonable by examining the estimated costs per teacher of \$1,500 and the ability to significantly impact all secondary level math, science, and computer science educators in rural areas of the state (p13-p14).

**Weaknesses:**

The applicant could strengthen their project with consideration of extraction from the heavily funded project leadership to the teacher's stipend. While the selected team is quite qualified, the change in funding would support the applicant's goal to have an impact among the secondary level of math, science, and computer science educators throughout the selected rural areas.

**Reader's Score: 4**

**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 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 utilizes the Canvas platform which has 24/7 service with no upfront cost or miscellaneous tax for the educators. An example of this efficiency is noted by the applicant in stating they are not budgeting the funds as stipends, they emphasize that Virginia Ed Strategies chose not to budget these funds as stipends based on over their 12 years of experience working with teachers and providing such funds for training and other related professional activities.

The applicant cites stipends are taxable income and must be reported as such, even when used to offset eligible expenses. In lieu of providing "stipends" to teachers which would have caused a tax burden for each individual, the applicant is proposing to ensure the same teacher choice while also giving ease of access to the funds through an online system that allows the teachers to access funds for training, travel, and supplies according to his/her individual professional learning needs.

It is anticipated the majority of teachers will select the training that is offered virtually rather than training that requires them to travel; however, travel monies are budgeted at the rate of \$300 per teacher starting with the pilot group of 100 teachers in year 1 and following through both cohorts of 1000 in years 2, 3, 4, and 5. Funds not utilized for travel will be moved to supplies or to training to ensure they are spent on teacher-selected training and not on other project activities or costs (e36, Budget Narrative).

**Weaknesses:**

No weaknesses found.

**Reader's Score: 5**

Sub

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

**Strengths:**

This project provides substantial evidence of the qualifications of the key personnel including their relevant training and experience. The Principal Investigator and Project Director have over 45 years of experience as an educator. The Principal Investigator has 25 years as a K-12 educator. This skilled member of the key personnel secured a \$13.2 million grant from the National Math and Science Initiative to start the nonprofit corporation, Virginia Advanced Study Strategies and is a faculty member of JMU's College of Education and the Office of Professional & Continuing Education. The PLCC Project Manager will supervise the fiscal manager and assist the project director in coordinating the activities of the PLCC, particularly for teachers. With a background in finance and almost 20 years of experience as a math educator, the team has a wealth of knowledge and experience in their key personnel ( Appendix B pt.6)

**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 a sufficiently adequate management plan to achieve the objective of the proposed project on time within budget. The applicant provides a logic model which shows how the project follows a strong theory of research-based evidence as rationale to achieve its intended outcomes. They are used to conduct specific activities which will produce outputs necessary to achieve essential short-term outcomes. Achievement of short-term outcomes result in achievement of intermediate outcomes potentially producing long-term outcomes. The attainment of long-term outcomes produces an impact on the sustainability of teacher directed professional development choices and effectiveness of STEM teachers in the rural communities across the state (e187, Appendix I pt6).

**Weaknesses:**

No weaknesses noted.

**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 procedures for the proposed project is substantially adequate for leveraging the stipend to inform continuous improvement and systemic changes to learning. The applicant plans for professional organizations to continuously create and promote teacher-directed PD opportunities. They envision the VDOE and professional organizations providing key opportunities for teachers to share their success stories. The Virginia Association of School Superintendents, the Virginia Association of Secondary School Principals, and the Coalition of Small and Rural Schools in VA provide strong linkages for informing other LEA leaders and state policymakers of the project's success. The applicant expresses the belief that the customized and collaborative model of teacher-directed professional growth will inevitably replace the "teacher needs improvement" deficit model approach across the state (e18).

Sub

**Weaknesses:**

The applicant could strengthen the application by increasing teacher inclusion in pay decisions.

**Reader's Score:** 4

**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:** 24

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 clearly details an impact study as the selected method which will be utilized. The applicant also provides justifiable examples of the application of this model to the current project. In the Research Design, the applicant provides Questions 1-5 which are designed to measure the project's impact on student and teacher outcomes. For Q1 (confirmatory), they will employ a quasi-experimental design to examine the project's impact on student outcomes. A comparison group of matched teachers will be identified, using propensity score matching on relevant teacher and student-level variables within the schools and divisions participating in the project. Treatment teachers will be provided with PD options; comparison teachers will be business-as-usual (BAU) and participating in regular division-required PD during the years when their outcomes will be compared to the treatment group. For Q2, they will compare teacher outcomes using the same quasi-experimental design. For Q3, we will compare student achievement between teachers who select various PD options. Q4 is designed to measure changes in students' attitudes toward STEM, to determine whether this serves as a preliminary indicator for subsequent changes in student achievement outcomes. Q5 will explore whether the project leads to differing teacher and student outcomes by rurality (rural compared to non-rural). Q6 is an implementation study designed to measure fidelity and provide feedback for continuous program improvement. The applicant believes the data collected during the pilot study will inform changes to the various instruments and protocols to be used to answer Questions 1-6. (e19-20).

**Weaknesses:**

No weaknesses noted.



Sub

Reader's Score: 15

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 evaluation plan provides exceptionally clear articulation of the key components, mediators and outcomes as well as measurable threshold for acceptable implementation. The project identifies the key project components, inputs, activities, outputs, and outcomes (short-term, intermediate, and long-term), as well as overall impact. Each of the key project components will be operationally defined, measured, and weighted. This measurement

scheme will allows the applicant to calculate a quantifiable score for key components by school and overall.

The project logic model identifies key components, and associated measures and thresholds for acceptable implementation will be identified. Individual scores are expected to be calculated and coded (low, medium, or high) based on level of implementation for each teacher, then summed for a total school implementation score. The applicant plans to calculate the percentage of treatment schools meeting the criteria for high implementation for each component and compare this to an established threshold for high fidelity (> 80%) to determine whether the project meets its fidelity of implementation threshold. Student academic outcomes (RQ 1, 3, 5) will be modeled using the multilevel framework to account for the clustering of students within teacher and schools (e21-22).

**Weaknesses:**

No weaknesses found.

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 methods of evaluation have the potential to provide data sufficient to clearly articulate performance feedback and permit periodic assessment towards outcomes. Examples of these methods of evaluation are the applicant's use of the data dashboard to receive and respond in real time to educators plans and requests (e22).

**Weaknesses:**

The applicant could strengthen this project with clear action steps to form feedback from teachers which will result in actual reporting to the leadership team. The data gathering and reporting appears to only occur once a year. A planned meeting with quarterly feedback would provide a more timely framework to obtain data, conduct appropriate and efficient evaluation then apply changes deemed necessary by the leadership team.

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 applicant has substantially demonstrated an established partnership between an eligible entity and SEA to support the proposed project. The Collaboration with the Coalition of Small and Rural schools of Virginia, the Virginia Department of Education and 88 eligible LEA's are partnering with the applicant to support this proposed project.

The Virginia Department of Education has officially replaced the mandatory professional development expectation with the proposed project of the applicant (Appendix C, Abstract).

### Weaknesses:

No weaknesses found.

**Reader's Score:** 5

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## Technical Review Coversheet

Applicant: Virginia Advanced Study Strategies (S411C200100)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Quality of Project Design	45	42
<b>Sub Total</b>	45	42
<b>Resources and Quality of Management Plan</b>		
<b>Resources and Quality of Management Plan</b>		
1. Resources and Management	30	26
<b>Sub Total</b>	30	26
<b>Selection Criteria</b>		
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	21
<b>Sub Total</b>	25	21
<b>Priority Questions</b>		
<b>CPP</b>		
<b>Competitive Preference Priority 2</b>		
1. SEA Partnership	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	105	94

# Technical Review Form

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

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

Applicant: Virginia Advanced Study Strategies (S411C200100)

## 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: 42

#### 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 Project MOU's that Virginia Advanced Study Strategies has secured from participating Local Education Agencies provides evidence that the establishment of the Professional Learning by Choice Community (PLCC) will replace 100% of mandatory professional development for secondary science, mathematics and computer science teachers for local teachers. The proposal is further strengthened by the inclusion of an MOU from the State Department of Education also acknowledging that the stipend will replace 100% of mandatory professional development (p. e139-140).

#### 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 application details a process which provides evidence that professional learning will be of high quality. For example, senior project personnel will work in conjunction with professional organizations to ensure all LEA's provide optimal conditions for professional learning and that all STEM professional learnings opportunities include effective design elements (p. 4-5). The fact that the State Department of Education will review all financial transactions of Virginia Ed Strategies to make sure they are audited annually by an external accounting firm provides further evidence that funds will be used in an appropriate manner (p. 4-5).

Sub

**Weaknesses:**

N/A

**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 partnership with LEA's depicts autonomy as teachers will allowed to select various options via micro-credentialing within the PLCC Dashbord. In addition, teachers also have the option to select professional development outside of those provided by PLCC, the application states the process for doing this (p. 4). For example, the teacher provides information to project staff, whom in turn assure alignment to professional standards (p. 4).

**Weaknesses:**

The narrative states that PLCC Staff will meet with local LEA Officials to ensure that teachers know about the teacher-directed professional learning opportunities; however, it lacks specific detail regarding how teachers will be informed or selected (p. 10). Logic Model, found on p. e187, provides possible ways of the plan's dissemination (e. g. web site, project articles, etc.) but does not outline a specific timeline.

**Reader's Score: 4**

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 application describes a straightforward process for teachers to select their learning through the PLCC dashboard which triggers a system of direct payment. In addition, the applications states teachers may select learning opportunities not identified by the PLCC, request the opportunity be accepted and if approved direct billing will occur (p. 4). In addition, teachers will submit an on-line expense report for all costs not linked to PD Vendors with reimbursement issued within 10 days (p.15). All processes provide evidence that the applicant will strive to remove financial burden from teachers. During the initial phase of the grant, PLCC will work to develop processes and tools for teacher self-assessment/selection of professional development (p.12).

**Weaknesses:**

N/A

**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:**

The application provides convincing and well-supported documentation for the possibility of the project to build a program that is able to sustain teacher effectiveness capacity in rural settings that will increase collective teacher efficacy (p. 12 -13). The narrative (p.12-13) and Appendix I, which includes the Logic Model, provides evidence that the project should increase the teacher efficacy which in turn impacts student achievement (p. e186-192). For example, processes and tools will be developed to increase teachers' ability to self-assess their needs and then based upon those needs select Professional Development suited them (p. e187). Another example of how the management plan would create a positive impact on teacher efficacy would come from the intent to train

**Sub**

administrators which would in turn increase administrators' ability to recognize and support the individual needs of teachers (p. 187).

**Weaknesses:**

The application does not set specific timelines or explain how baseline data will be determined. The Logic Model describes PLCC's measurement outputs but lacks specific timelines (p. e187)

**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: 26**

**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 provides reasoning for why the stipend amount is only \$30,000. The applicants proposed system of paying for teachers' professional development directly through the dashboard will eliminate that expense for teachers. The application is transparent in its reasoning for providing the cohort teachers \$100 for each year of the impact study. (Budget Narrative Section p.e195, sixth page)

**Weaknesses:**

N/A

**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 proposal's Budget Narrative Section, beginning on p. e195, is transparent in regard to how the costs were determined. Given the outcome to offer professional learning to all 2,100 teachers (p. 13) and the intent to provide the 75 teachers in cohorts 1 & 2 who will be in the control/comparison groups with stipends the costs seem reasonable (Budget Narrative Section beginning on p. e195, sixth page). The first page after the Budget Narrative section (p. e195), features a key personnel chart that outlines positions, FTE percentages and annual salaries are supported by descriptions of each position. For example, current employees will fill the roles of Project Director, Project Manager, Communication/Technology Specialist, and Community of Practice Facilitator, their proposed salaries are based on their qualifications and experiences. A more specific example is that the Project Director, a .70 FTE, will receive an annual salary of \$111,000.

Sub

**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 strong evidence on minimal teacher burden. For example, the fact that the PLCC Dashboard will be available for teachers to select their classes 24/7 and that upon that selection, vendors will be direct billed removes all payment stress from the teacher (p. 14-15). In addition, teachers may choose professional development not available within the Dashboard and follow the process where that vendor will be direct billed also (p. 15). Teacher may submit an on-line expense report for all costs not linked to PD Vendors with reimbursement issued within 10 days (p.15).

**Weaknesses:**

N/A

**Reader's Score: 5**

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

**Strengths:**

The extensive resumes for key personnel (Appendix B, ep. 22-88) provide strong evidence that key project personnel have extensive experience in STEM Education, research, finance, administration and technology. These experiences add strength to the proposal. Dr. Almarode, lead project consultant, has exhaustive educational experiences, he serves as an Associate Professor of Mathematics at James Madison University and is the Executive Director of Teaching and Learning. Dr. Almarode has authored 11 books, written many scholarly articles and worked with school districts/teachers in the United States and abroad (p. 16 and p. e26-92). Dr. Amanda Adams' background lends itself to her proposed position of Communications/Technology Specialist (p. e-16-17). A final example of the proposal's intent to employ quality management personnel is Jennifer Stevens; her 25 plus years of experience at all levels of education, coupled with the fact she is the current Project Director for the Rural Math Innovation Network, provide solid evidence that she would be an effective Project Director (p. e15-16).

**Weaknesses:**

N/A

**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 Logic Model (Appendix I, p. 2) identifies key project activities. In addition, throughout the narrative activities are discussed. For example, the second half on Year 1 a pilot study will be conducted (p.19). The Budget Narrative discusses key personnel and provides detail on each person's role (Budget Narrative Section, starting on p. e195).

**Sub**

**Weaknesses:**

The proposal lacks specific detail in defining roles, responsibilities and timelines of tasks for key personnel. The narrative directs the reader to the Logic Model in Appendix I (p. 187), however specific detail in regard to defining responsibilities associated with the roles of management team and specific timelines for tasks cannot be found.

**Reader's Score: 3**

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

**Strengths:**

The proposal provides solid to create a professional learning model that meets the professional development needs of STEM teachers resulting in increased teacher efficacy. It demonstrates a plan to improve, refine and scale the model with the input of local voices through the inclusion of participating teachers and principals on the Advisory Leadership Team (p. 17). Furthermore, activities and outputs are defined in the Logical Model which lead to short-term and long-term outcomes which impact teaching. The plan states that a teacher self-assessment will be developed and taken by 100% of teachers. The self-assessment will assist teachers in choosing their professional learning (Appendix I, p. e187). The proposal is based on a 2017 policy recommendation from researchers Darlin-Hammond, Hyler, & Gardner to conduct needs assessments that identify areas of professional learning most needed and desired by teachers.p.2). Providing the stipend each year will provide an incentive to the proposed cohorts.

**Weaknesses:**

The proposal does not include specific timelines and detail in regard to data collection and review. It is also not clear how cohort teachers will be selected (p. e187).

**Reader's Score: 3**

**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: 21**

**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 an extensive plan grounded in research that addresses six research questions (p.19-20). The fact the lead project consultant has solid experiences grounded with research (p. 16 and p. e26-92)., coupled with the fact that project evaluation will be conducted by an external evaluator with 14 years of experience in working with the What Works Clearinghouse (p. 18) provides reasonable evidence that project's effectiveness would meet What's Works Clearinghouse standards.



**Sub**

**Weaknesses:**

The application does not address the topic of attrition. Specific details are not included for the selection process of teachers (p. e185)

**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 proposal clearly articulates how the key components will be measured, provides a detailed plan for evaluation and describes the methods to be used. ). The plan states that a pilot study will be conducted during the second half of Year 1 and the first half of Year 2 to test evaluation instruments/procedures and provide formative feedback to assist with project refinement (p. e19). The intent to refine should lead to reliable instruments and procedures for remaining grant years (p. e19). In addition, the table that begins on p. 19 identifies the research questions, data sources and design/analysis. The establishment of measurable thresholds for acceptable implementation of key components is also well documented (p. 21-22). For example, the percentage of treatment schools meeting the criteria for high implementation for each component will be calculated and compared to an established threshold for high fidelity (>80%) to determine if the project meets its fidelity of implementation threshold (p.21)

**Weaknesses:**

N/A

**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 Logic Model (p. e187), along with p. 19-20 of the narrative, describe that types of data that will be collected. For example, National Teacher Questionnaire and Self-Efficacy Surveys, staff interviews, Student Attitudes Toward STEM Survey, Virginia Standards of Learning Math and Science Scores will all serve as data sources to answer the project's impacts on teacher self-efficacy and practicees (p.19-20). Another performance measure is that, 80% of cohort teachers will complete their chose professional development (p. e187). An exploratory measure will also be implemented that investigates students' attitude toward STEM (p. 23).

**Weaknesses:**

The application lacks specific timeline for tasks, assessments and performance feedback. They are not included in Goals, Objectives and Outcomes (p. 12) nor in the Logic Model (Appendix I p. 2).

**Reader's Score: 3**

**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 Memorandum of Understanding (MOU) with the Virginia Department of Education that assures a partnership with Virginia Advanced Study Strategies, Inc (p. 139-140). In addition, an MOU has been secured from the Coalition of Small and Rural Schools of Virginia, along with MOU's from seven LEA's (p. e155-156).

**Weaknesses:**

N/A

**Reader's Score:**     **5**

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## Technical Review Coversheet

**Applicant:** Virginia Advanced Study Strategies (S411C200100)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Quality of Project Design	45	41
<b>Sub Total</b>	45	41
<b>Resources and Quality of Management Plan</b>		
<b>Resources and Quality of Management Plan</b>		
1. Resources and Management	30	27
<b>Sub Total</b>	30	27
<b>Selection Criteria</b>		
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	21
<b>Sub Total</b>	25	21
<b>Priority Questions</b>		
<b>CPP</b>		
<b>Competitive Preference Priority 2</b>		
1. SEA Partnership	5	5
<b>Sub Total</b>	5	5
<b>Total</b>	105	94

# Technical Review Form

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

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

Applicant: Virginia Advanced Study Strategies (S411C200100)

## 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: 41

#### 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 proposes they will replace 100% of mandatory professional development with student score driven, teacher selected options (p-15). The applicant will offer a menu of micro-learnings and also include the option of the teacher requesting to participate in professional development outside the set menu (p.9). The process for external professional development offerings also has a planned verification process to ensure the external offerings are evidence based (p.10). This plan is robust and provides teachers with a coach and community of practice to share enhance and share their professional development experiences.

#### 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 includes descriptions of the menu of professional development micro-learnings and the rubric that will be developed to ensure the external requests are evidence based and align with teacher professional development and student needs (p. 10). The stipend payment process includes the mechanisms to ensure the funds are spent on high-quality professional development. The non-menu (dashboard) options include a verification process with the PLCC and the fiscal staff prior to payment being made to the vendor (p.234 of 243).

**Sub**

**Weaknesses:**

No weaknesses noted.

**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 describes in detail the two options that will be in place for professional development opportunities. The first option is a database dashboard that includes a menu of professional development opportunities that have been vetted by the applicant and partners (pp. 9-11). The second source is a teacher request to attend an external professional development opportunity. The applicant states they will create a rubric to determine the evidence base of the external opportunities and the professional development coach will work with the teachers to ensure alignment with professional development and student needs (p.12).

**Weaknesses:**

No weaknesses noted.

**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:**

The applicant describes the steps in the process for securing professional development from both the menu driven option and the external request option (p.9). The internal menu option is relatively simple and each of the steps of the process can be done using a computer/laptop. The payment for the professional development is automated and direct to the vendor so the teacher will not be responsible for tax burden of the professional development cost (p. 14). The applicant also includes a process for reimbursement of travel and other supplies for the teachers' professional development activities. Automating the process from request through payment will reduce the burden on teachers and minimize paperwork that needs to be completed (p. 15).

**Weaknesses:**

The teacher chosen external options for professional development does include additional steps for the teacher to participate and the vendor to receive payment (pp 4-5). This additional step allows for teacher autonomy, but will increase the invoicing process for the applicant and also the verification burden for the teachers participating in the professional development (p. 5).

**Reader's Score: 3**

- 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 includes a Gantt chart in Appendix 6 that specifies each of the activities and objectives to be achieved over the life of the grant (pp. e-193-194). The chart presents a quarterly schedule that aligns with the activities and objectives of the project. The applicant outlines three primary objectives in the text that supports the overall program goal (p.12) and provides the specifics of the goals, activities and outputs in the project logic model (pp. e-186-192).

**Sub**

**Weaknesses:**

The logic model and description of the underlying theory of change presented in the appendix does not include the measurement indicators or expected amount of change (pe-187). For example, it is not specified in the logic model how much of an increase can be expected in the administrators' knowledge and skills related to supporting teachers. It is also not specified how much of an increase in teacher self-efficacy can be expected as a result of participating in the program. Including the expected percentage of change for each of the outcomes including the intermediate, long-term and impact outcomes along with the measurement indicators (assessment tools) would improve the application.

**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:**

Forty percent (40%) of the budget requested by the applicant will directly support the teachers' professional development. The applicant is choosing not to use a stipend based approach due to the tax implications for the teachers. The amount allocated for the 2,100 teachers is sufficient for replacing the existing mandatory professional development and allows for teacher selected opportunities that fit the teachers needs and schedules. Teachers will each have \$500 for their annual professional development selections. There is additional \$500 for travel (\$300) and incidentals (\$200) per teacher participant (p. 232). The total of \$1,000 per teacher per year is double of the usual annual amount allotted in Virginia for teacher professional development and should be sufficient for the teachers to meet their annual professional development requirements.

**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 majority of the applicant costs are allocated for the teacher stipends. The remaining costs are operational and supplies that align with the goals, objectives and outcomes of the project. The cost for the evaluation is about 10% of the budget which is reasonable based on the proposed scope of work (p. 233).

**Sub**

**Weaknesses:**

The application budgets 40% for the teacher professional development but does not give clear amounts for the professional development costs per micro-credential. Therefore, it is difficult to determine how many micro-credentials the allotted \$1,000 will purchase for the teachers. The cost per student is not specified in the application and therefore the overall financial impact cannot be determined. Including a cost per student will improve the application.

**Reader's Score:** 4

**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 clearly describes the process for applying for professional development funds by the teachers and the use of the funds for both professional development options. The professional development provided by the PLCC platform will be automated and therefore the teachers will only need to go on-line to determine the professional development opportunities that match their needs assessment results (p.11). The description includes the mechanisms for screening non-menu options and the turnaround time for payment to vendors and teachers for ancillary costs incurred (p.15).

**Weaknesses:**

No weaknesses noted.

**Reader's Score:** 5

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

**Strengths:**

The key project personnel have the requisite experience for supporting the scope of work proposed by the applicant. The project lead has over 25 years in education and has served as the PI on several DoE federally funded projects. She has experience in STEM research and funding which lead to the development of the current organization that she leads (pp. 15-16 and resume pp. e-22-25). Each of the positions includes the percentage of FTEs that will be contributed to the proposed project (budget narrative table p. 230). The personnel contributions align with the goals, objectives and proposed work to be completed during the project funding period.

**Weaknesses:**

No weaknesses noted.

**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 a detailed management plan and GANTT table in Appendix 6. The table includes each of the project activities, responsible party, timeline and milestones (pp. e.193-194). The responsibilities of each project staff is also described on pp. 15-17. The project manager has experience with federal grants and fiscal reporting for large federal grants (p. 16). Key to the project are the fiscal staff and the professional learning coordinator and instructional coach. These are newly created positions and the job descriptions for each of these positions will be developed when funding is awarded (p. 231). Brief descriptions of their responsibilities are in the

**Sub**

budget narrative (p. 231).

**Weaknesses:**

No weaknesses noted.

**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 proposes a system to replace the burdensome stipend based professional development system that currently creates tax ramifications for teachers in Virginia (p. 5). The proposed system will be a direct payment to vendors providing the professional development micro-credentialing opportunities based on a teacher self-assessment and student needs (p. 9). The applicant proposes a reframing of the approach to teacher professional development from a deficit approach to a more expansive career long learner approach that includes a community of practice for leveraging the lessons learned and diffusing the knowledge and skills gained throughout the teachers in Virginia (p. 18). The applicant also describes the involvement of school administrators and teachers as part of the advisory team that will be the early adapters of the new framework and help disseminate the lessons learned through their networks (p. 17).

**Weaknesses:**

Measuring the impact of the CoP in STEM is not included in the discussion on continuous quality improvement and informing systematic changes to professional learning. The application would be improved by discussing how what is learned in the Community of Practice will be leveraged to inform continuous quality improvement and changes in professional development strategies.

**Reader's Score: 3**

**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: 21**

**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 proposes a quasi-experimental designed with a matched comparison group based on propensity score matching (p.20). This design should meet the What Works Clearinghouse standards with reservations given the groups will include 75 teachers per comparison and treatment groups (p. 21). The evaluation plan includes six (6) evaluation questions ranging from process to impact questions (pp.19-20). The applicant will employ a pilot study to test the measures and evaluation design in the first year of the project that will inform changes to the evaluation items and tools needed for the full implementation of the evaluation (p.20). The research design



**Sub**

includes HLM with students nested within classrooms. This design should yield results that will inform practice on the effectiveness of the program (p.21-22).

**Weaknesses:**

The applicant does not clearly describe the group selection and assignment for the comparison and treatment groups beyond the propensity matching. On page 23, the applicant states that the teachers will self-select to participate in the project (p.23). The self-selection adds an aspect of self-selection bias in the outcomes. Some control will occur with the propensity score matching. Another issue with the design is since no outcome targets are included in the short, intermediate and long-term outcomes, it will be difficult to determine if outcomes are met (logic model p.e-185). The applicant also does not address attrition in the evaluation design and how they will address attrition. Differential attrition of teachers in the treatment and comparison groups will have consequences for the strength of the design. The application would be improved by including discussion on how attrition will be addressed.

**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 clear discussion on the key components of the evaluation and the thresholds for fidelity to be met in relation to the impact evaluation (p.21). The evaluation plan includes comparison by student attitudes towards STEM, teacher professional development selection and urban/rural school sites as mediators for the outcome evaluation on program effectiveness. The applicant describes the threshold weighting development process for the evaluation that will sort the schools into categories for the comparative analysis (p. 21).

**Weaknesses:**

No weaknesses noted.

**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 inclusion of a pilot study to ensure the tests and measures are valid and reliable strengthens the evaluation design. The feedback received from those in the pilot phase of the program to the evaluation and project teams will help in fine-tuning the project. The GANTT chart in the appendix that presents the implementation activities and timeline also includes the biweekly project team meetings, annual project reports and developing a data tracking system (p. e-193).

**Weaknesses:**

Other than the pilot phase data, much of the data reporting is annually (p.19). The applicant states bi-weekly meetings will be held of the project team, but does not indicate if performance data from the teachers and students will be reviewed during those meetings or if implementation processes and issues will be the focus of the meetings (p.e-193). The application would be improved by providing more information about the specific time points for data collection and feedback on all of the data that will be collected. Likewise, more information is needed on the items to be included in the interviews of teachers, principals and staff to determine utility of the assessments in supporting program performance (p. 22).

Sub

Reader's Score: 3

**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 a long-standing partnership with the Virginia school systems as it has worked with the school system on several DOE funded projects. The applicant has included a MOU with the Virginia Department of Education to partner on the project described in the application for funding (p. e-139-140) The MOU details the roles, responsibilities and contributions of each of the partners for the project. The applicant also includes an MOU with the Coalition for Small and Rural Schools of Virginia who will partner with the applicant to support the project (p.e-142). The project team has many years of working with the Virginia Department of Education on rural initiatives in STEM education (Resumes of Stevens p. e-22 and Almarode pp.e. 28-32).

**Weaknesses:**

No weaknesses noted.

Reader's Score: 5

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