

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

Status: Submitted

Last Updated: 08/08/2018 03:23 PM

Technical Review Coversheet

Applicant: Urban Arts Partnership (U411C180192)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	30	28
Quality of the Project Design and Management Plan		
1. Project Design/Management	50	46
Total	80	74

Technical Review Form

Panel #17 - EIR Early Phase Tier 1 (Content) - 17: 84.411C

Reader #1: *****

Applicant: Urban Arts Partnership (U411C180192)

Questions

Selection Criteria - Significance

1. In determining the significance of the project, the Secretary considers the following factors:

- (1) The national significance of the proposed project.
- (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.
- (3) The extent to which the proposed project demonstrates a rationale (as defined in the NIA).
- (4) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

Strengths:

- (1) The narrative explains in general terms the current national needs in regards to the computer science field. Specifically, the project emphasizes on increasing stakeholders' capacity to create and implement a more efficient curriculum. Such approach is congruent with recent nationwide efforts to increase the development and implementation of STEM programs across the schools, in order to primarily combat the shortage of STEM graduates. The project portrays a creative way to teach and expand computer science curriculum.
- (2) The proposed strategies and plans are provided with a variety of details and build on an existing computer science curriculum model focused on game design. The curriculum and instruction components are substantially described. Student engagement and learning is an important component of the project. The data collection system is mostly self-sustainable. There is an alignment between the proposed curriculum and national standards such as computer science AP test and high school credits. The curriculum has a career and college readiness approach allowing students to be employable at the end of the program. There are curriculum adjustments based on a continuous improvement approach (pg. e33). Professional Learning Communities are implemented within the implementation of the project.
- (3) The narrative addressed the generalities of the project rationale as defined in the NIA. It provides considerable data to support the claims of the project (pg. e34 and e35). The narrative based a potential success of the project on former data. It highlights a career and college readiness path for students.
- (4) The narrative addresses how the project meets the pre-established priorities. For example, on pg. e36 it elaborates on how to align the curriculum with an entrepreneurial approach considering current project strategic partners. The narrative elaborates on the curriculum extensively and approaches the role of professional learning communities, specifically with strategic current partners, within the development of the project.
- This criterion was thoroughly discussed and my score reflects my professional assessment of this section.

Weaknesses:

- (1) More citations may be needed to corroborate the validity of the narrative. Not enough data to contextualize the national importance of the project.

Reader's Score: 28

Selection Criteria - Quality of the Project Design and Management Plan

1. In determining the quality of the proposed project design, 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 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.

(3) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.

(4) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.

Strengths:

- (1) Goals and objectives are clearly stated. The measurement tools are clearly specified: student achievement data, high school credits, and participation rate. The proposed project provided a detailed logic model in the appendix. The narrative presented several adjustments and progressions within professional developments throughout specific timeframes.
- (2) The provided details of the management plan were comprehensive with key personnel, responsibility, and timelines. The project progression was clearly explained (pg. e41). The specifics about the personnel and consequential dynamics were clearly explained.
- (3) The narrative provides a variety of details in regards to assessments and constant improvement through data collection at different venues (Pg. e44). The role of professional learning communities is clearly explained and it includes campus administrators (Pg. e45).
- (4) The narrative presents plenty of details on how to disseminate and replicate the project. Potential presentations at different venues together with the expansion of current strategic partnerships seem to have a good platform to contribute with the dissemination process (pg. e46).
- This criterion was thoroughly discussed and my score reflects my professional assessment of this section.

Weaknesses:

- (1) The data collection and measurement tools could have been expanded more by providing specific examples: standardized testing, benchmarks, pre and posttests.
- (2) The professional learning communities' concept could have been expanded by including school administrators. Research shows that school administrators are critical to implement educational programs effectively. Providing details on how school leaders would be involved within the project implementation would help expanding on this matter.
- (4) One component of the dissemination process seems hard to be measured: 10% of the Project Director's time (pg. e46). This may have been addressed by stating specifically the frequency that the director would be meeting to monitor the project progress.

Reader's Score: 46

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Technical Review Coversheet

Applicant: Urban Arts Partnership (U411C180192)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	30	25
Quality of the Project Design and Management Plan		
1. Project Design/Management	50	45
Total	80	70

Technical Review Form

Panel #17 - EIR Early Phase Tier 1 (Content) - 17: 84.411C

Reader #2: *****

Applicant: Urban Arts Partnership (U411C180192)

Questions

Selection Criteria - Significance

1. In determining the significance of the project, the Secretary considers the following factors:

- (1) The national significance of the proposed project.
- (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.
- (3) The extent to which the proposed project demonstrates a rationale (as defined in the NIA).
- (4) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

Strengths:

The application provided some details to show national significance by stating that computer programming is one of the most important skills in the 21st Century, and yet computer science (CS) education is still in its infancy due to a lack of qualified teachers, engaging curriculum, and classroom infrastructure for teaching this highly specific and complex skill. (1 – e28 to e29)

The application adequately shows that the proposal involves the demonstration of promising new strategies by stating that the School of Interactive Arts will provide a curriculum that is delivered through a scalable, online personalized learning platform. The application states that the curriculum is essentially, an interactive and “gamified” virtual classroom called Ghost School. (2 – e29 to e30)

The application adequately shows support for their promising new project strategy and curriculum by classroom teachers having support by remotely located CS experts to create new content and provide targeted support to students when they run into roadblocks in their programming. (2 – e29 to e30)

The application provides details to show their rationale by stating that the School of Interactive Arts is based on a combination of evidence-based pedagogical concepts such as the mastery approach, personalized learning, PD followed by coaching, culturally responsive pedagogy, and multi-faceted differentiation combined within their curriculum. (3 – e34 to e36)

To provide clear evidence of project rationale the application states that an internal 2018 study of SIA's effectiveness found that students in both SIA Classrooms and SIA Advanced demonstrated mastery of key CS skills, learned through the SIA curriculum. For example, 90.8% of students successfully applied a creative development process when creating an artifact, 80.5% mastered the skill of expressing an algorithm in a language, and knowledge, and 92.4% used models and simulations. (3 – e34 to e35)

The application provides details to clearly show that the proposed project has an exceptional approach by stating that the project involves implementing, replicating, and taking to scale an entrepreneurial, evidence-based, field-initiated innovation to improve student achievement among high needs students. To further provide a strong exceptional approach the program will build partnerships between schools, LEAs, non-profits, institutions of higher education, and businesses to help students access opportunities for hands-on experiences in STEM. In addition, the application states that UAP has provided current SIA students with work-based experiences in partnership with Facebook, Hearst Media, Kate Spade, Kickstarter, Topos Design, LivePeer and AT&T, and will continue to offer these to future students. (4 – e36 to e37)

This criterion was thoroughly discussed and my score reflects my professional assessment of this section.

Weaknesses:

The application provided minimal details to show research to support statements about under representation of certain populations in CS professions. Data presented would be strengthened with the addition of where this data came from. (1 – e28)

The application stated that math or technology teachers often end up teaching Computer Science but minimal details were provided to show the research to support this statement. The application would be strengthened with citations of their research. (1 – 28 to e29)

The applicant did not provide details to show how the promising new strategy of using gamified virtual classroom called Ghost School would impact computer science learning for students. The application would be strengthened by providing details about expected program impact using Ghost School. (2 – e29)

This criterion was thoroughly discussed and my score reflects my professional assessment of this section.

Reader's Score: 25

Selection Criteria - Quality of the Project Design and Management Plan

1. In determining the quality of the proposed project design, 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 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.**
- (3) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.**
- (4) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.**

Strengths:

The number of teachers offering CS classes at partner schools will increase, compared to a peer group. The applicant provides adequate details to show their goals, objectives and outcomes are clearly measurable by stating their goal of using personalized learning, student-centered pedagogy, and partnership- building to address the lack of qualified teachers in CS. To support this goal the application states that the number of teachers offering CS classes at partner schools will increase, compared to a peer group. (1 – e38 to e41)

The applicant provides clear details to show program evaluation for each goal. For example the applicant stated that project will use teacher surveys and Ghost School data to assess the effectiveness of PD, and will also include an analysis of teacher and student data in Ghost School, changes in teacher attitudes towards game design and CS, and teacher comfort with implementing the curriculum. (1 – e39)

The application provides clearly defined responsibilities such as a Chief Executive Officer having oversight of program, industry and other partnerships along with finances. (2 – e43)

The application provides clearly defined responsibilities such as a Chief Executive Officer having oversight of program,

industry and other partnerships along with finances. (2 – e43)

The application clearly shows a table with timelines and milestones. For example, the applicant wrote that in Fall and Spring 2018 to 2019 in person PD will be offered to teachers. In addition, to clearly show project milestones the applicant stated that SIA classrooms will be expected to implement pilot testing of Ghost School with further partnerships confirmed for year (Y) 2 implementation.

(2 – e41 to e42)

The application clearly shows a table with timelines and milestones. For example, the applicant wrote that in Fall and Spring 2018 to 2019 in person PD will be offered to teachers. In addition, to clearly show project milestones the applicant stated that SIA classrooms will be expected to implement pilot testing of Ghost School with further partnerships confirmed for year (Y) 2 implementation.

(2 – e41 to e42)

The application provided clear details to show continuous improvement by stating that feedback will be obtained directly in Ghost School. In addition to this feedback method, there will also be digital analogues in the Ghost School, users of the platform will have access to a Suggestion Box where they can provide input as Ghost School is further refined and developed. Additionally, all users will be directed to short feedback surveys twice per unit. (3 – e44 to e45)

The applicant also provided evidence for obtaining feedback by stating that there will be an external evaluator who will be a critical partner for ensuring that data is effectively used for continuous quality improvement. The applicant also stated that evaluation data collected will also include interviews, teacher surveys, information on credit accumulation from participating and peer schools, and AP exam performance from participating and peer schools. (3 – e45)

The application provides clear details to show their plans to disseminate project information by stating that staff from UAP will present at conferences such as SXSWedu, SXSWInteractive, Adobe CS Education Roundtable, EdSurge, and the American Evaluation Association Conference. UAP will also support staff in writing further white papers on CS education, building on the most recent white paper by Project Director. (4 – e46)

This criterion was thoroughly discussed and my score reflects my professional assessment of this section.

Weaknesses:

The applicant did not provide sufficient details to show who will be responsible for monitoring project outcomes. The application could be strengthened by denoting who will be responsible for project monitoring. (1 – e39-e41)

The applicant provided minimal details to show how outcomes would be measured. For example, the applicant stated that an outcome would be the percentage of students earning HS and AP CS credit, compared to comparison schools. The application could be strengthened by providing specific measurement to show an expected increase that is quantifiable.

(1 – e39)

This criterion was thoroughly discussed and my score reflects my professional assessment of this section.

Reader's Score: 45

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Technical Review Form

Panel #17 - EIR Early Phase Tier 1 (Content) - 17: 84.411C

Reader #3: *****

Applicant: Urban Arts Partnership (U411C180192)

Questions

Selection Criteria - Significance

1. In determining the significance of the project, the Secretary considers the following factors:

- (1) The national significance of the proposed project.
- (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.
- (3) The extent to which the proposed project demonstrates a rationale (as defined in the NIA).
- (4) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

Strengths:

1) The significance of building capacity includes positive information regarding high school youth being known as digital natives, however, they lack opportunities to become creators instead of simply consumers. The national significance of this project includes the need to better prepare students as STEM learners that have fully developed as STEM thinkers, not simply consumers of STEM products.

2) The project will utilize computer science curriculum that includes personalized learning through gaming with Ghost School. This is already developed with games designed by students. This project will provide PD for teachers and they will then develop new lessons, assignments within the virtual classroom environment. This project offers personalized learning to students and can ensure differentiation. It is also aligned to the Advanced Placement Computer Science principles. As an alternative to PD with computer science experts coming in the Ghost School program will allow students and teachers access to these individuals through the program as guides and coaches as they progress in skill and work on independent projects.

3) This project is taking SIA and Ghost School to the next level based on the following components that rationalize the resource: culturally responsive pedagogy, data driven differentiation and hands-on approach to professional learning. This project includes a six-unit curriculum, which was developed with NYU's Game Center. Multiple examples of student success from the pilot study were provided.

4) This proposal is exceptional because it addresses Absolute Priorities by providing multiple pedagogical approaches through a field-based innovative design that promotes STEM learning for both students and teachers. Work-based learning is incorporated for students to see the direct correlation of computer science to the outside world. Teachers will engage students in personalized learning experiences that ensure differentiation is being met. The programming will make sure students step out as developers through coding, not just consuming the program, which takes the learning to the next level.

Weaknesses:

1) It would have been stronger if this information were supported by evidence and citations. "There is an under-representation of certain population groups in CS professions..." The significance doesn't seem as compelling without support.

The use of a real person quote from administration (bottom of p. 1/e28) supports the significance but is only one individual example.

2) There are no weaknesses here.

3) There are no weaknesses here.

4) There are no weaknesses here.

Reader's Score: 27

Selection Criteria - Quality of the Project Design and Management Plan

1. In determining the quality of the proposed project design, 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 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.

(3) The extent to which performance feedback and continuous improvement are integral to the design of the proposed project.

(4) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.

Strengths:

1) The project's main extensive goal is clear, "schools can easily offer differentiated computer science (CS) to students, for credit, regardless of their ability to attract a qualified CS teacher, moving from in-person classes to a hybrid in-person/digital format, to an all digital scalable model" (p. 11/e38). Objectives are clear and concise.

2) The project addresses how it will involve creating tools, knowledge and experience that can be used for long after the life of the grant for teachers and students. This ensures sustainability of the work. The roles and responsibilities are clear and include a strong team that will provide support around each of the areas of the project. Budget is clearly addressed. Ghost School has been completely developed in-house by SIA and will continue to be, therefore, no additional outside costs will be ensued by an outside developer.

3) Diverse amounts of real time data will be collected from within the Ghost School platform. This can be shared out through the dashboard with teachers. Input will be collected from teachers and students as they engage with the programming, for example, p. 17/e44, "this includes asking students to identify challenges and roadblocks at the end of each session."

Another big positive, "Every keystroke is captured in Ghost School, meaning that the online platform will provide a data rich source for both pedagogical purposes and to support continuous quality improvement" (p. 18/e45). In other words, students thinking will clearly be seen as they progress daily and this can analyzed by the platform.

4) Dissemination includes partnership with NY's mayoral initiative CS4ALL. Additional partnerships will be built to share out programming and continue learning with broader audiences (NYU, University of Southern California, Hearst Media). The team will share at professional conferences.

Weaknesses:

- 1) There are no weaknesses here.
- 2) There are no weaknesses here.
- 3) There are no weaknesses here.
- 4) There are no weaknesses here.

Reader's Score: **50**

Status: Submitted
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