

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

Status: Submitted

Last Updated: 07/15/2019 06:49 PM

## Technical Review Coversheet

**Applicant:** Sacred Heart University (U411C190254)

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

|  | Points Possible | Points Scored |
|--|-----------------|---------------|
| <b>Questions</b>                         |                 |               |
| <b>Selection Criteria</b>                |                 |               |
| <b>Quality of the Project Evaluation</b> |                 |               |
| 1. Project Evaluation                    | 20              | 16            |
| <b>Sub Total</b>                         | 20              | 16            |
| <b>Total</b>                             | 20              | 16            |

# Technical Review Form

Panel #10 - EIR Early Phase Tier 2 - 7: 84.411C

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

Applicant: Sacred Heart University (U411C190254)

## Questions

### Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the evaluation to be conducted of the proposed project. In determining the quality of the evaluation, the Secretary considers the following factors:

(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 this notice).

(2) The extent to which the evaluation will provide guidance about effective strategies suitable for replication or testing in other settings.

(3) The extent to which the methods of evaluation will provide valid and reliable performance data on relevant outcomes.

(4) 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 indicated a quasi-experimental design to produce information about the effectiveness of the proposed project (pg.e40) by collecting data on the control and experimental (pg.e30) groups. The applicant provided protocols to mitigate attrition among students in the treatment and control groups and ensure continued equivalency (pg.e43). The applicant clearly noted a propensity score matching (PSM) to determine the equivalency of the groups through baseline measures (pg.e42). This information is important because the applicant clearly explained components that the WWC standards utilized to rate the study such as the methodology design (QED), the strategy (PSM) to determine the equivalence of the control and experimental groups, and the protocols to mitigate attrition or participants leaving either group that would impact data analysis and interpretation of results.

The applicant clearly listed the sources of the data to be analyzed for implementation process such as observation data; focus group and interview data; program documentation and teacher implementation logs; workshop impact data; and student demographics and attendance data (pg.e43). Other standardized tests were the Teacher Attitudes and Beliefs about Computer science (T-ABC), Smarter Balanced Assessment Consortium (SBAC), and the Forward Exam to be utilized in the proposed project (pg.e44). The applicant indicated the data collection strategies (e.g., standardized tests, interviews, and focus groups). The methods of evaluation would produce information about effective strategies regarding professional learning and embedded curriculum on teacher and student outcomes.

The applicant clearly indicated the use of valid and reliable standardized tests such as Teacher Attitudes and Beliefs about Computer science (T-ABC), Smarter Balanced Assessment Consortium (SBAC), and the Forward Exam to collect data on students and teachers (pg.e44). The applicant also indicated the collection of qualitative data to triangulate findings on performance data on relevant outcomes. The standardized test would provide reliable and valid information because the same questions would be answered by the participants (control and treatment) of the proposed project and the instruments are scored in a consistent manner allowing comparisons. The use of qualitative would support the findings from the qualitative data and it would also provide in-depth information about the implementation process and progress. The applicant provided a logic model to show the connection between key components and outcomes (pg.e83). The applicant clearly stated the project activities relating the Outreach & Development thread and the Research & Analysis Thread by the goal to demonstrate the implementation process of the different activities and metrics from each of the activities (pg.e36-e38). The applicant acknowledged that the threshold for implementation would be produced in the first

year of the proposed program (pg.e45). The applicant identified as a significant mediator of student access to the target content the lack of teachers' expectations (pg.e24) and the (as moderators and mediators) effects of the program by school context and teacher participant (pg.e44 ). The provided information articulated the different components of the proposed project to guide the data collection and data analysis.

**Weaknesses:**

The applicant did not describe how the control group would be selected from the partnering schools and how the assignment to each of the groups (control/experimental) would occur (pg.e41). The applicant did not clearly state the parameters to conduct the propensity score matching. Due to the lack of information on the control group, it is unclear how the What Works Clearinghouse standards would be met.

The applicant did not clearly provide replication protocols including how the different sources of data would inform the replication protocols of the proposed project.

The applicant did not clearly explain the protocols to match the teachers for the control and treatment groups. Thus, it is not clear how valid and reliable performance data would be collected on teachers.

**Reader's Score:**     **16**

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## Technical Review Coversheet

**Applicant:** Sacred Heart University (U411C190254)

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

|  | Points Possible | Points Scored |
|--|-----------------|---------------|
| <b>Questions</b>                         |                 |               |
| <b>Selection Criteria</b>                |                 |               |
| <b>Quality of the Project Evaluation</b> |                 |               |
| 1. Project Evaluation                    | 20              | 16            |
| <b>Sub Total</b>                         | 20              | 16            |
| <b>Total</b>                             | 20              | 16            |

# Technical Review Form

Panel #10 - EIR Early Phase Tier 2 - 7: 84.411C

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

Applicant: Sacred Heart University (U411C190254)

## Questions

### Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the evaluation to be conducted of the proposed project. In determining the quality of the evaluation, the Secretary considers the following factors:

(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 this notice).

(2) The extent to which the evaluation will provide guidance about effective strategies suitable for replication or testing in other settings.

(3) The extent to which the methods of evaluation will provide valid and reliable performance data on relevant outcomes.

(4) 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 project evaluation proposes a mixed method multi-step research design (quasi-experimental group design), along with a heterogeneous selection of students into two conditions (a treatment condition using FUTURE or a control condition that uses the school's business-as-usual program) meeting the WWC standards with reservations requirements (pg. 22-23). This is a strength because the research design is clearly defined.

The project evaluation provides clearly articulated confirmatory and exploratory evaluation questions to address program impact and implementation (pg. 20-21). Additionally, the project evaluation lists the project's outcomes to be measured in the provided Logic Model (pg. 21 and 25). This dynamic is a strength because it provides a sense of focus to the entire evaluation.

The project evaluation proposes to recruit 100 to 750 trained and supported elementary teachers within 30 classrooms across two states: Connecticut and Wisconsin, impacting 2,500 students. Each treatment group will be paired with a non-participant group (Pg. 22). Additionally, the project evaluation proposes exploring whether the intervention has differential effectiveness across subgroups: demographic, attendance rate, and other relevant academic variables (pg. 23). The sample in this particular case is substantial and well defined.

The project evaluation proposes a detailed description of "how" attrition issues will be minimized to ensure the accurate measurement of program impact (p. 24).

The project evaluation provides detailed results of a power analysis which produced reasonably high results to detect measurable impact using the proposed sample sizes (p. 23).

The project evaluation provides detailed information on the psychometrics of the instrumentation to be used to collect teacher and student data that will provide valid and reliable data on relevant outcomes to the project: T-ABC, SBAC, and Forward Exam, portrayed within the Logic Model and the Overview Chart (pg. 25). This is definitely a strength because the potential outcomes of the evaluation are reliable. The state education agencies from Connecticut and Wisconsin will

provide validity to the achievement instruments as well (pg. 25).

The project evaluation provides a detailed description of the data analysis plan for quantitative and qualitative data to support the assessment of project impact and implementation: workshop surveys, code.org, embedded assessments, standardized testing, classroom assessment data, interviews, and observations (pg. 26). This provides a more accurate evaluation in terms of data reliability and variety of sources.

The project evaluation proposes “how” replicability and sustainability of the program will be assessed in school settings by analyzing additional sources of implementation data such as observation data, focus group and interview data, program documentation and teacher implementation logs, workshop impact data, student demographic, and attendance data (pg. 24).

**Weaknesses:**

Sampling of the project on phase one is not sufficiently clear. The teacher and student selection is not clearly explained.

It is not totally clear on “how” the evaluators will address the sustainability of the project. It would be useful to provide specific guidelines and desired outcomes.

It is not clear how the match sample will be constructed, specifically teachers. It is unclear what variable the evaluation team plan to use to create the match sample, such as socioeconomic status, race/ethnicity, gender, grade level, and more (pg. 22).

**Reader's Score: 16**

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