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

Technical Review Coversheet

Applicant: SRI International (U411C180070)
Reader #2:   **********

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	13
Total	20	13

Technical Review Form

Panel #8 - Early Phase Tier 2 - 8: 84.411C

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

Applicant: SRI International (U411C180070)

Questions

Selection Criteria - Quality of the Project Evaluation

1. **In determining the quality of the project evaluation to be conducted, 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 the NIA).

   (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 evaluation uses a quasi-experimental design with a comparison condition meeting the WWC standards with reservations. The evaluator will use a propensity score matching approach to establish baseline equivalency. Using WWC standards, a priori power of the study has been investigated and indicates that the sample size is sufficient to produce evidence regarding outputs and outcomes. The research design provides goals, objectives and outcomes with measurable thresholds. Data collection tools include Mathematical Knowledge for Teaching Assessment, Purdue Spatial Visualization Test and Smarter Balanced Assessments. These tools are valid and reliable providing relevant outcome data. The research design is clear and provides enough detail for possible replication in other settings.

   Weaknesses:

   Sample attrition is not addressed, though the sample size appears to be large enough such that attrition would not be a major issue. Qualitative measures such as interviews and focus groups are not included and may provide additional insight into contextual factors. Though multi-level HLM regression methods will be used, specific methods of detecting and assessing mediators are not provided.

Reader's Score: 13

Status: Submitted
Last Updated: 09/04/2018 11:29 AM

Technical Review Coversheet

Applicant: SRI International (U411C180070)
Reader #1:   **********

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	15
Total	20	15

Technical Review Form

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

Applicant: SRI International (U411C180070)

Questions

Selection Criteria - Quality of the Project Evaluation

1. **In determining the quality of the project evaluation to be conducted, 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 the NIA).

   (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:

   1)   The use of already established instruments from research (MKT, Purdue Spatial Visualization Test) will provide valid and reliable data as they have already been tested for validity and reliability in the field.
   2)   The plan to establish baseline equivalency with the propensity-score matching approach adheres to the baseline equivalence threshold established under the WWC standards with reservations. The details provided in the section describing characteristics used to establish the matched sample includes specific qualifications that will be used to ensure baseline equivalency (within .25 SD of each other). This step to establish and ensure equivalency means that the design as a whole would likely meet WWC standards with reservations.
   3)   The reporting of the minimum detectable effect size (pp. 24-25) and power calculations (p. 25) are appropriate evaluation techniques to provide evidence about program effectiveness.
   4)   The development of an implementation index for replication will provide guidance about how to use MPACT in other settings.

   Weaknesses:

   1)   There is mention that AIR has co-constructed implementation indices that indicate relevant thresholds of use (p. 21), yet the application does not identify what the thresholds for acceptable implementation will be for MPACT. This previous experience will be useful for developing the implementation index used for replication (p. 25), but not the actual thresholds for acceptable implementation for this pilot program.
   2)   The implementation measures will be evaluated based on observation protocols, yet the process for analysis (e. g., coding of data, identification of themes, etc.) is absent and there is no mention of how the qualitative data will be checked for validity and/or reliability. The evaluation also solely relies on observation to inform the implementation evaluation without using other forms of qualitative data that might be valuable and informative such as interviews and focus groups.
   3)   The application does not discuss attrition or how the evaluation will correct for attrition bias in the final analysis. Additionally, there is no discussion of mediators and the connection between them and the outcomes, specifically related to how they will change or impact the effectiveness of the program.

Reader's Score: **15**

Status: Submitted
Last Updated: 09/03/2018 12:07 AM