

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

Status: Submitted

Last Updated: 07/18/2019 02:55 PM

## Technical Review Coversheet

Applicant: Lumity (U411C190285)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	17
<b>Sub Total</b>	20	17
<b>Total</b>	20	17

# Technical Review Form

Panel #4 - EIR Early Phase Tier 2 - 8: 84.411C

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

Applicant: Lumity (U411C190285)

## 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 evaluation design is likely to meet What Works Clearinghouse standards. The proposed design is a randomized controlled trial, with teachers randomly assigned to treatment and control groups within three schools (p. 22). Further, the design recognizes that students, whose outcomes are essential to both the project and the evaluation, are nested within classrooms and proposes a two-level hierarchical linear model. Such an approach is strong.

Provide evidence The proposed measures of student, teacher, and staff attitudes have been used before and have known reliability and validity (p. 22). In addition, the evaluation includes a validated measure of social and emotional learning (p. 22). This use of existing measures is a positive aspect of the evaluation. Further, the proposed post-graduate questionnaire provides objective information that goes beyond the immediate student beliefs about the effect of participation in the program to longer term outcomes. Such attention is excellent.

The proposed analyses of quantitative data (p. 25) are thorough and offer multiple pathways to determine the latent constructs (p. 25). This is a good way to ensure that any differences between treatment and control teachers are due to the program and not to other contextual issues.

The proposed approach to the evaluation of student outcomes is strong and multi-faceted (p. 26). It includes student achievement data and also hard data that reflect student attitudes—their attendance in school, disciplinary actions, etc. Such data are likely to be better measures of student attitudes than their responses on questionnaires, which high school students may game.

The power analysis (p. e87) is thorough and accounts for the strong possibility of teacher attrition and new students joining the program.

**Weaknesses:**

The evaluation of fidelity of implementation relies heavily on teacher perceptions (p. 24). Such reliance weakens the evaluation because teachers frequently over- or under-estimate the extent to which they are following program guidelines, and there is no triangulation to check on the accuracy of the perceptions (p. 24).

The evaluation provides little data on the extent to which the program is implemented with fidelity, beyond the data about student and teacher attitudes (p. 26). This will hinder both its use for continuous improvement and its value to potential adopters.

The discussion of the power analysis (p. e87) is not convincing on the issue of contamination. Both treatment and control teachers will be in the same schools, and it is very difficult to stop conversations and cross-adoption of particular instructional and curricular practices. The proposed approach of working closely with the schools is weak.

**Reader's Score:** 17

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## Technical Review Coversheet

Applicant: Lumity (U411C190285)

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

	Points Possible	Points Scored
<b>Questions</b>		
<b>Selection Criteria</b>		
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	20	17
<b>Sub Total</b>	20	17
<b>Total</b>	20	17

# Technical Review Form

Panel #4 - EIR Early Phase Tier 2 - 8: 84.411C

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

Applicant: Lumity (U411C190285)

## 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:

1) It is likely that the described methods of evaluation will produce evidence about the project's effectiveness that would meet the What Works Clearinghouse standards with or without reservations. The applicant describes a plan to conduct a mixed-methods randomized control trial using a cluster level random assignment procedure (pg. 21) and a hierarchical linear modeling procedure (pg. 22). A power analysis is provided that indicates the implementation study will have adequate power (first year .85. and year two 90) (pg. e87). A suitable plan to control for attrition and contamination is described (e86-87).

2) The applicant describes a plan to conduct a study in Year 5 between treatment and control groups and between students in different socio-demographic groups (pg. 27) that could provide guidance for testing in other settings. Equations for a two level and three level hierarchical linear model, that could support replication of analyses, are provided (pg. e89).

3) A strong plan to conduct psychometric testing of student questionnaires is described that includes implementing a series of confirmatory factor analyses (CFA) to investigate whether items included in the questionnaires load on expected latent constructs (pg. 26). Use of an existing validated student survey is described on page 22.

4) The applicant articulates specific details regarding the evaluation plan on pages 21-25. Key project components and outcomes are clearly described in a table (e90-e93). Well-designed, measurable thresholds and expectations are described in a table on pages 94-96.

### Weaknesses:

1) No weaknesses noted.

2) Details are limited regarding guidance about effective strategies for replication. For example, it is unclear how the

applicant will generate and articulate guidance about effective strategies that will support testing in other settings.

3) Details are limited regarding evidence of validity and reliability of some student performance data. For example, the applicant does not clearly describe evidence of validity and reliability of student performance data from the Core Social Emotional Learning Index. Evidence of validity and reliability for objective student performance data, such as CPS administrative student outcome data, described on page 24, is not provided. The applicant notes that obtaining this data may be a challenge (pg. 25), which is a concern.

4) The applicant describes a plan to examine mediators in future studies (pg. 24), but does not provide details regarding mediators for this project. It is unclear how mediators will be utilized in the analysis.

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