

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

Status: Submitted

Last Updated: 09/18/2015 11:56 AM

Technical Review Coversheet

Applicant: McREL International (U411C150011)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	35	0
Quality of the Project Design and Management Plan		
1. Project Design/Mgmt. Plan	45	0
Quality of the Project Evaluation		
1. Project Evaluation	20	19
Sub Total	100	19
Total	100	19

Technical Review Form

Panel #9 - i3 Development Panel - 9: 84.411C

Reader #1: *****

Applicant: McREL International (U411C150011)

Questions

Selection Criteria - Significance

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

(1) 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.

(2) The national significance of the proposed project.

(3) The potential replicability of the proposed project or strategies, including, as appropriate, the potential for implementation in a variety of settings.

Strengths:

n/a

Weaknesses:

n/a

Reader's Score: 0

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 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 adequacy of procedures for ensuring feedback and continuous improvement in the operation 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:

n/a

Weaknesses:

n/a

Reader's Score: 0

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 clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.

(2) 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 Evidence Standards with reservations.

(3) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Strengths:

The proposal includes a Block Randomized Design with a clearly defined active control condition (alternative digital game, p. 19). This design directly addresses potential threats to internal validity and tests two conditions that differ only in the type of game played by the students. The design sufficiently addresses issues related to nesting within the data (e.g., students within schools).

The exploratory and confirmatory research questions (p. 18) and timeline related to the iterative development and evaluation of the digital game over time are appropriate. Research questions address fidelity of implementation, impact, and effectiveness of the digital game. The sample (including power analysis), qualitative and quantitative measures, and analysis plan (e.g., growth modeling and mediation) are well described and sufficient/appropriate to address the research questions (p. 19-22). The proposal includes formative and summative evaluation that will facilitate regular feedback to the developer throughout the study.

The proposal meets the What Works Clearinghouse Standards with reservations.

The evaluator has the necessary training and experience to conduct the proposed evaluation and the budget appears to include sufficient resources for the evaluation (budget for evaluator and other staff, p. e124).

The evaluator is qualified and the budget appears to include sufficient resources for the evaluation (budget for evaluator and other staff, p. e124).

Weaknesses:

The proposal would benefit from additional details related to evaluating the fidelity of implementation of the current project and a plan for identifying benchmarks for fidelity for replication studies utilizing this technology.

Reader's Score: 19

Status: Submitted
Last Updated: 09/18/2015 11:56 AM

Status: Submitted

Last Updated: 09/14/2015 02:06 PM

Technical Review Coversheet

Applicant: McREL International (U411C150011)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	35	35
Quality of the Project Design and Management Plan		
1. Project Design/Mgmt. Plan	45	40
Quality of the Project Evaluation		
1. Project Evaluation	20	0
Sub Total	100	75
Total	100	75

Technical Review Form

Panel #9 - i3 Development Panel - 9: 84.411C

Reader #2: *****

Applicant: McREL International (U411C150011)

Questions

Selection Criteria - Significance

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

(1) 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.

(2) The national significance of the proposed project.

(3) The potential replicability of the proposed project or strategies, including, as appropriate, the potential for implementation in a variety of settings.

Strengths:

The applicant presents a strong plan to develop a digital serious game, Identity-Based Motivation (IBM) Journey that builds upon the project team leader [REDACTED] research and existing work in developing non-cognitive skills through the Schools-to-Jobs intervention (p. 2). The applicant clearly demonstrates that the development of a video game to develop non-cognitive skills in high school students is a new and innovative strategy, as opposed to the existing "face to face" classroom based intervention model (p. 2, 6).

The applicant clearly demonstrates that research supports the methodology of the project and the development of a digital serious game to deliver the proposed intervention, using the research generated from their previous initiatives and the Schools-to-Jobs program (p. 5-6). It is particularly relevant that the applicant is looking to develop a means to deliver the proven intervention without the cost of facilitators to deliver the content in a classroom setting.

The applicant presents national statistics and research that demonstrate that there is a disconnect between student higher education aspirations and the numbers of students who are successful at entering college and obtaining a degree (p. 7). The applicant presents a compelling case that the proposed project will develop student non-cognitive skills that will help address this disconnect through the development of a digital serious game that will build non-cognitive skills that have been proven to increase student achievement and college readiness.

The applicant clearly demonstrates that the development of a digital serious game and rigorous testing will provide a replicable vehicle for future implementation in schools nationwide, as well as other settings. The applicants plan for the delivery of this intervention will allow for implementation in a variety of settings, without the high cost of a facilitated classroom model (p. 8). The applicant also presents a strong case that the proposed project will test the applicability of the final product across different grade levels, so that it can be replicated with a high degree of fidelity.

Weaknesses:

None identified.

Reader's Score: 35

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 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 adequacy of procedures for ensuring feedback and continuous improvement in the operation 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 applicant clearly demonstrates that the goal of the proposed project to develop a digital serious game that will improve student non-cognitive skills and that the proposed project objectives of creating the game, testing its implementation and applicability at a variety of grade levels, and the games ability to improve student academic achievement and student engagement (p. 9) are measurable and reasonable given the plan presented.

The applicant presents a strong management plan for the proposed project, including the roles and responsibilities of the key personnel and leadership team (p. 16), and milestones and time lines for all proposed project activities (p. 17). The plan is cohesive, it is easy to understand of the major program activities and how they will lead to the goals and outcomes identified.

The applicant sufficiently addresses how students and teachers will provide feedback through the development stage of the project and how key staff and the advisory team will use ongoing data analysis to ensure that the project will meet the stated program goals and objectives.

The applicant details a strong plan to disseminate the results of the proposed project, including the results of the evaluation being published in academic journals and presented at regional and national conferences (p. 15). The applicant also states that they will distribute the results of the proposed project and the game that is developed through their McREL Solutions Portal with nominal cost to future users, which seems like a strong motivation for future implementation and replication of the initiative.

Weaknesses:

The applicant does not provide sufficient detail to determine if the timeline for the development and initial implementation of the proposed digital serious game is sufficient to meeting the stated project goals and objectives. The Memorandum of understanding with the game developer Filament Games states that "scheduling of the project will depend on Filament Games availability at the time the award is made" (appendix G), which makes it difficult to determine if the stated timeline will be met.

Reader's Score: 40

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 clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.

(2) 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 Evidence Standards with reservations.

(3) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Strengths:

NA

Weaknesses:

NA

Reader's Score: 0

Status: Submitted

Last Updated: 09/14/2015 02:06 PM

Status: Submitted

Last Updated: 09/16/2015 12:02 AM

Technical Review Coversheet

Applicant: McREL International (U411C150011)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	35	35
Quality of the Project Design and Management Plan		
1. Project Design/Mgmt. Plan	45	45
Quality of the Project Evaluation		
1. Project Evaluation	20	0
Sub Total	100	80
Total	100	80

Technical Review Form

Panel #9 - i3 Development Panel - 9: 84.411C

Reader #3: *****

Applicant: McREL International (U411C150011)

Questions

Selection Criteria - Significance

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

(1) 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.

(2) The national significance of the proposed project.

(3) The potential replicability of the proposed project or strategies, including, as appropriate, the potential for implementation in a variety of settings.

Strengths:

Thorough details are evident that the applicant's proposal of The Identity-Based Motivation Journey to Academic Success (IBM Journey) project has a quality process in place that will improve middle and high school students' identity-based motivation (IBM) to be successful, and to improve their school engagement and achievement. The proposal appears to be a new strategy for improving school engagement and achievement as an alternative to existing strategies (p. 14).

This project will be nationally significant because the IBM Journey game will address the national need for intervention to improve non-cognitive factors that can be used with middle and high school students (p. 23).

Concise criteria are appropriately detailed demonstrating the replicability factors of the proposed project that is based on IBM Journey game: teachers do not need to be trained, the program does not take long to implement, and it has low cost to put into practice (p. 24).

Weaknesses:

None noted.

Reader's Score: 35

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 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 adequacy of procedures for ensuring feedback and continuous improvement in the operation 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 applicant clearly identified the goals of the proposed project would be to obtain a final product of IBM Journey and implement it. It was also noted that by doing so, it will result in an increase 7th-11th grade IBM and, resultantly, student achievement by developing and implementing a serious digital game (p. 24).

Convincing and reasonable plans are presented for how the IBM Journey game will build on the School-to-Jobs interventions that were developed using student, teacher, and expert gaming feedback. Identified outcomes include increased student IBM for academic success, increased school engagement, and increased academic success (p 14). The applicant provides extensive examples of identified key personnel and their responsibilities (e.g. project co- director will supervise and manage the implementation of the development project and dissemination of findings) (p. 32). Details are evident within a chart that provided timelines and milestones for events with stated responsibilities that includes events in quarters over a five year span (e.g. create storyboard of game March 2016) (p. 33).

The applicant thoroughly outlines how students and teachers would provide feedback twice and that the serious game advisory boards would also provide feedback that will be used as a basis for refinements of the game (p. 33).

Weaknesses:

None noted.

Reader's Score: 45

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 clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.

(2) 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 Evidence Standards with reservations.

(3) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Strengths:

Not applicable.

Weaknesses:

Not applicable.

Reader's Score: 0

Status: Submitted

Last Updated: 09/16/2015 12:02 AM

Status: Submitted

Last Updated: 09/17/2015 06:01 PM

Technical Review Coversheet

Applicant: McREL International (U411C150011)

Reader #4: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	35	35
Quality of the Project Design and Management Plan		
1. Project Design/Mgmt. Plan	45	45
Quality of the Project Evaluation		
1. Project Evaluation	20	0
Sub Total	100	80
Total	100	80

Technical Review Form

Panel #9 - i3 Development Panel - 9: 84.411C

Reader #4: *****

Applicant: McREL International (U411C150011)

Questions

Selection Criteria - Significance

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

(1) 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.

(2) The national significance of the proposed project.

(3) The potential replicability of the proposed project or strategies, including, as appropriate, the potential for implementation in a variety of settings.

Strengths:

The applicant has provided a fully developed proposal for a project designed to build upon previous research. The plan includes development of a digital serious game known as IBM Journey to be used in 7th through 11th grades. They will then test the game's impact on student academic engagement, academic achievement, and the mediating effect of non-cognitive factors. Non-Cognitive factors to be addressed including academic perseverance, mindsets, and learning strategies are clearly specified (p. 1). The theory of how the proposed project impacts non-cognitive factors is clearly explained (p.3). The applicant has cited research in Appendix D providing strong basis and support for both the Identity-Based Motivation (IBM) theory as well as the use of digital games in improving student outcomes. This proposal represents a promising new strategy because the applicant is proposing to address non-cognitive factors through the use of a digital game which is novel. The game is based on a theory already supported by research.

The applicant has presented data highlighting the disparity between the percentage of students who want to go to college as compared to those who drop out of high school, and those who do not finish high school (p. 7). The game to be developed in the proposed project would be available for use in schools across the country making it nationally significant. The intervention described in this proposal is easily replicable. The intervention is delivered through a computer game rather than by teachers or other individuals who have to be trained to implement it significantly reducing fidelity of implementation problems. The intervention is also brief and can be used in many different types of classroom settings.

Weaknesses:

No weaknesses noted.

Reader's Score: 35

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 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 adequacy of procedures for ensuring feedback and continuous improvement in the operation 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 applicant has provided a fully developed management plan and design for the proposed project. Goals and objectives are clearly stated and measurable (p. 8-9). Validity and reliability data for identified measures is presented. Responsibilities of key personnel are clearly described in Table 2. Project milestones are clearly presented in Table 3 and an overall timeline is presented in Table 4. This management plan is clearly presented and well organized and should be sufficient for carrying out the project within budget and on schedule.

Development of the proposed game involves an iterative process which includes soliciting feedback from multiple sources including teachers and students, game advisors, and content experts for use in improvement. This plan is also strengthened by the plan to involve cognitive interviewing with students as they play the game in solicit additional information for improvement. The applicant intends to disseminate information about the project through multiple sources including publications in academic journals, presentations, a website, and by making the final product (i.e., computerized game) available online (p. 15).

Weaknesses:

No weaknesses noted.

Reader's Score: 45

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 clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.

(2) 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 Evidence Standards with reservations.

(3) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Strengths:

Not applicable.

Weaknesses:

Not applicable.

Reader's Score: **0**

Status: Submitted

Last Updated: 09/17/2015 06:01 PM

Status: Submitted

Last Updated: 09/15/2015 11:25 AM

Technical Review Coversheet

Applicant: McREL International (U411C150011)

Reader #5: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	35	0
Quality of the Project Design and Management Plan		
1. Project Design/Mgmt. Plan	45	0
Quality of the Project Evaluation		
1. Project Evaluation	20	19
Sub Total	100	19
Total	100	19

Technical Review Form

Panel #9 - i3 Development Panel - 9: 84.411C

Reader #5: *****

Applicant: McREL International (U411C150011)

Questions

Selection Criteria - Significance

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

(1) 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.

(2) The national significance of the proposed project.

(3) The potential replicability of the proposed project or strategies, including, as appropriate, the potential for implementation in a variety of settings.

Strengths:

NA

Weaknesses:

NA

Reader's Score: 0

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 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 adequacy of procedures for ensuring feedback and continuous improvement in the operation 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:

NA

Weaknesses:

NA

Reader's Score: 0

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 clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.

(2) 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 Evidence Standards with reservations.

(3) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

Strengths:

The evaluation is based on a sound logic model that connects the activities to the desired outcomes (pg. 9). The research questions outlined in the evaluation align to the proposed activities and appear to provide sufficient evidence of project impact (pg. 18-19). The sample (pg. 19), data collection measures (pg. 20) and data analysis activities will produce evidence that would meet the What Works Clearinghouse Evidence Standards without reservations. The evaluation uses a variety of measures, some that include reliability and validity information (e.g., Finn Initiative Scale, pg. 20). The analysis includes a strong discussion of activities to prevent attrition (pg. 23) and sufficient detail on their power analysis. The LGCA and SEM outlined in the evaluation appear to be sufficient to identify impact. The qualifications of the identified evaluator and the budget for her services appear to be sufficient to complete the evaluation activities.

Weaknesses:

The evaluation notes that the first 18 months of funding will be evaluated through feedback from advisory boards and quarterly calls (pg. 17-18). There is little evidence that the activities will be closely scrutinized during the 18 months. Many of the activities that could lead to overall success of the project will occur during the 18 months. There was some consideration provided on pgs. 24-25 but additional details related to analysis, monitoring and expected outcomes are needed.

Reader's Score: 19

Status: Submitted
Last Updated: 09/15/2015 11:25 AM