

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

Status: Submitted

Last Updated: 08/07/2020 04:20 PM

Technical Review Coversheet

Applicant: University of Southern California (S411B200027)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	10	8
Quality of Project Design		
1. Quality of Project Design	25	20
Sub Total	35	28
Scaling		
Strategy to Scale		
1. Scaling	20	16
Sub Total	20	16
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	25	20
Sub Total	25	20
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	13
Sub Total	20	13
Total	100	77

Technical Review Form

Panel #3 - FY20 EIR Mid Phase - 3: 84.411B

Reader #1: *****

Applicant: University of Southern California (S411B200027)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factor:

Reader's Score: 8

Sub

1. (1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

Strengths:

The goal of the proposed project is to scale Pathways-to-Success (Pathways), a brief, classroom-based, social-psychological intervention for 8th graders that is designed to enhance students' identity-based motivation (IBM), and by doing so, improve their self-regulation, perseverance, and academic outcomes in high school. The focus on preventing high school dropout addresses an important need. By focusing on the development of skills that prepare students to be informed, thoughtful, and productive individuals and citizens in high need schools, this project is well aligned with Absolute Priority 3. Prior research that has met the What Works Clearinghouse (WWC) standards without reservations has demonstrated the efficacy of the Pathways program. The proposed project is thus also well-aligned with Absolute Priority 1.

This project promises to make several contributions to the knowledge base: (1) It promises to yield evidence about whether a brief (6-9 hours), social-psychological intervention can be successful in improving academic outcomes. (2) Pathways has a well-articulated theory of change which has received empirical support in prior studies. The proposed research has the potential to make further contributions to theory by producing evidence that will help us understand why the Pathways program works. (3) The project team has done prior work on scaling and has developed materials to support the implementation of the program by others. The proposed study has the potential to help us learn about how materials need to be designed and refined to support scaling.

Weaknesses:

The proposal could be strengthened by:

- (1) Providing a stronger rationale for why 8th grade is the best time to implement this intervention. Students' academic performance and choices made throughout the middle school years impact their available options for high school. Intervening in 8th grade may be too late.
- (2) Discussing how the intervention might differentially impact different high need student populations, or students who have different reasons for eventually dropping out.

Sub

Reader's Score: 8

Selection Criteria - Quality of Project Design

1. **The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:**

Reader's Score: 20

Sub

1. **(1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.**

Strengths:

The goals, objectives, and outcomes (especially for fidelity of implementation) described on pages 11-16 of the proposal are well-aligned with the purposes of the proposed project, and are detailed and measurable.

Weaknesses:

Exhibit 1 does not include plans for assessing teacher knowledge outcomes or for conducting cost-effectiveness analyses.

Reader's Score: 8

2. **(2) The extent to which the design of the proposed project is appropriate to, and will successfully address, the needs of the target population or other identified needs.**

Strengths:

The proposal makes a strong case for the need for the Pathways intervention in the participating Nevada school districts, as the high school drop-out rate in Nevada is higher than in many other states, particularly among black and Hispanic students, and proficiency rates are low.

Weaknesses:

The drop-out rates and low SES status among the participating school districts vary, as shown in Exhibit I-1. Four of the 13 school districts have high school graduation rates above 90% and one has a graduation rate of 100%. This raises the question if these districts qualify as high need and what can be learned from them if student perseverance at these schools is already high. The proposal could be strengthened by a more nuanced discussion of the reasons for students' disengagement from school and dropping out of high school, especially for different subpopulations of students.

Reader's Score: 3

3. **(3) The extent to which the proposed activities constitute a coherent, sustained program of research and development in the field, including, as appropriate, a substantial addition to an ongoing line of inquiry.**

Sub

Strengths:

This project builds on more than 15 years of research conducted by the principal investigator and others that lend support to the theory of change of the program and that has demonstrated the efficacy of the Pathways program to positively impact student outcomes. The proposed study will add to prior work by studying and refining scale-up strategies, investigating scale up in rural communities, and by examining how to establish a state-wide infrastructure for implementation.

Weaknesses:

None noted.

Reader's Score: 5

4. (4) The extent to which the proposed project will increase efficiency in the use of time, staff, money, or other resources in order to improve results and increase productivity.

Strengths:

Aside from the implementation materials and training provided by the developers, the intervention fits into existing school structures and is being implemented by existing staff (mostly teachers and counselors) and therefore doesn't require schools to invest in a lot of resources on an ongoing basis. Utilizing previously trained teachers to train new teachers contributes to the efficiency of the program. As demonstrated in prior research, Pathways helps to reduce disruptive behavior, which should increase more efficient and productive use of instructional time.

Weaknesses:

Relying on classroom teachers to deliver the intervention in addition to their other responsibilities does not necessarily increase productivity.

Reader's Score: 4

Scaling - Strategy to Scale

1. The Secretary considers the applicant's strategy to scale the proposed project. In determining the applicant's capacity to scale the proposed project, the Secretary considers the following factors:

Reader's Score: 16

Sub

1. (1) The extent to which the applicant identifies a specific strategy or strategies that address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale that is proposed in the application.

Strengths:

The proposal identifies six important barriers (see page 18 of the proposal) to implementation, most of which are shared by other programs that work on scaling up interventions. The proposed strategies are well aligned with the barriers. Learning about the successes or pitfalls of these strategies will not only benefit the Pathways program, but will also make important contributions to the knowledge base and has the potential to benefit other programs as well. Building capacity to have teachers implement the intervention with students and eventually become trainers of

Sub

other teachers is an efficient approach that also helps to ensure that implementation is sensitive to local contexts. The availability of sustainable implementation and teacher preparation materials will help to ensure that the Pathways program will be implemented with a high degree of fidelity.

Weaknesses:

The application could be improved by including plans for engaging and incentivizing teachers to participate.

Reader's Score: 8

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

Strengths:

As specified in Exhibit 1 (page 13) the project intends to develop resources and products for researchers, practitioners, and the general public. Specific products to be produced include publications in peer-reviewed journals, non-technical briefs for educators, news outlets, and conference presentations. In addition, all implementation materials will be made available for free through the Pathways' program website, which will facilitate replication of the program elsewhere.

Weaknesses:

The proposal could be strengthened by providing more information about the products that might be created to support the further development of the Pathways program and the scaling strategies.

Reader's Score: 8

Resources and Quality of Management Plan - Resources and Quality of Management Plan

1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:

Reader's Score: 20

Sub

1. (1) The applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a national or regional level (as defined in 34 CFR 77.1(c)) working directly, or through partners, during the grant period.

Strengths:

As detailed on pp. 23-24 of the proposal, the project team brings prior experience with managing and successfully carrying out large-scale grants. The partnering organizations (USC, Summitlab and AIR) have a history of prior collaboration. The principal investigator brings expertise in social psychology, research on motivation, and program development and implementation, and appears highly qualified to carry out the proposed work. The evaluation team brings a strong expertise in quantitative and qualitative methodology, measurement, statistical modelling, and project management and also appear well qualified to carry out the proposed work. As described on pp. 22-23 of the proposal, the responsibilities of the team members are clearly identified, and there appears to be a clear firewall between the implementation and evaluation teams, which will help to ensure the objectivity of the research.

Letters of support from 13 school districts are included in the proposal, suggesting that the project will have access

Sub

to sufficient numbers of schools, teachers, and students to implement the proposed work. The project leverages existing relationships with the Nevada Department of Education.

Weaknesses:

The principal investigator has many other responsibilities (e.g., currently leading three other RCTs, among other things). Other than the principal investigator, the proposal does not contain any information about other project staff from USC, their qualifications, and what they will be responsible for. This raises some questions about the capacity of the implementation team to carry out the proposed work.

The letters of support from participating school districts demonstrate varying levels of awareness about the details of what their participation will entail. None of the letters explicitly indicate an agreement with randomization into immediate and delayed treatment groups. Schools may not opt to participate if they cannot choose when they will receive the treatment.

The proposal does not specify how many middle schools it will have access to in the 13 participating school districts, so the size of the pool of schools to recruit from is unclear, making it difficult to assess if the project might be successful in recruiting 72 schools.

Reader's Score: 8

2. (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

Strengths:

The budget appears reasonable in relation to the goals and objectives of the project and the number of students served. The budget allocated for the external evaluation (nearly \$3 million) seems appropriate for the proposed scope. Matching funds are provided through in-kind contributions by USC and Summitlab.

Weaknesses:

None noted.

Reader's Score: 5

3. (3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.

Strengths:

The project will utilize several strategies to ensure the sustainability of the Pathways program, including planning with the Nevada Department of Education, utilization of a train-the-trainer approach, and the establishment of an online user network. These strategies are promising to help maintain and establish interest in the program.

Weaknesses:

The proposal could be strengthened by including information about the cost for implementing and sustaining the Pathways program, and where funding for this program might come from after EIR support ends.

Reader's Score: 3

Sub

4. (4) **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.**

Strengths:

The management plan appears appropriate for a project of this size. Exhibit I-3 describes the timeline and responsibilities for implementing various project activities. The responsibilities of the principal investigator and the research team members are described in Exhibit 5.

Weaknesses:

The application could be improved by providing more details about the specific responsibilities of the implementation team members aside from the principal investigator.

Reader's Score: 4

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:**

Reader's Score: 13

Sub

1. (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 without reservations as described in the What Works Clearinghouse Handbook (as defined in this notice).**

Strengths:

The proposed school-level cluster RCT design has the potential to meet WWC standards without reservations. Randomization will be conducted by the external evaluator. Relying on administrative data as the key outcome measures will help keep attrition low and facilitate intent-to-treat analyses. The delayed-treatment design promises to help with school-buy-in and prevention of attrition. The proposal describes strategies for attrition monitoring and establishing baseline equivalence. The study appears to be sufficiently powered for main effects and certain subsample analyses.

Weaknesses:

The proposal could be strengthened by describing the following:

1. Information about parental consent procedures and how the project will ensure a substantial response rate to the IBM student survey. If response rate is low, this study will likely not be able to meet the attrition thresholds required to meet WWC standards without reservations for the confirmatory IBM and social-emotional outcomes.
2. More details about plans for conducting cost- and cost-effectiveness analyses.
3. The project intends to include the delayed treatment group in the impact analyses. It is unclear how it will do so and what would constitute the control group for this specific treatment group.

Reader's Score: 7

Sub

2. (2) 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 logic model on page 15 clearly identifies key student outcomes. FOI is well defined with reference to specific criteria (dosage, adherence, quality, responsiveness, and receipt) and clearly defined thresholds (see pages 11-12 of the proposal) based on prior research.

Weaknesses:

The logic model in Exhibit 3 is not very detailed. The application could be improved by providing more information about specific components of the intervention, specific teacher outcomes, and mediators and moderators.

Reader's Score: 3

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

Strengths:

Most of the measures to be used seem appropriate for assessing the intended outcomes.

Weaknesses:

The proposal could be strengthened by providing more detailed information about the psychometric properties of the measures to be used.

Several of the outcome measures rely on teacher reports/assessments (e.g., grades, disruptive behavior assessment). These do not appear to be very reliable measures of students' academic performance since they tend to be subjective, and treatment teachers might be biased to grade or rate their students higher because of their knowledge of treatment condition.

Obtaining high-quality video recordings from teachers that capture classroom interactions can be challenging.

Reader's Score: 3

Status: Submitted
Last Updated: 08/07/2020 04:20 PM

Status: Submitted

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Technical Review Coversheet

Applicant: University of Southern California (S411B200027)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	10	9
Quality of Project Design		
1. Quality of Project Design	25	23
Sub Total	35	32
Scaling		
Strategy to Scale		
1. Scaling	20	16
Sub Total	20	16
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	25	23
Sub Total	25	23
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	18
Sub Total	20	18
Total	100	89

Technical Review Form

Panel #3 - FY20 EIR Mid Phase - 3: 84.411B

Reader #2: *****

Applicant: University of Southern California (S411B200027)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factor:

Reader's Score: 9

Sub

1. (1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

Strengths:

This project addresses students' transition to high school, which is a well-documented educational problem, and the point at which many students experience declining achievement and engagement. The large, multi-year sample and rigorous research design will provide a significant contribution to the knowledge of how this particular teacher-led strategy impacts students. (p. 3) The applicant provides a comprehensive overview of the research on the risk factors that lead many students to drop out of high school, providing convincing evidence of the importance of addressing this problem through effective interventions in 8th grade. (p. 5-6) The description of the limitations of existing research are well-documented. (p. 7-8) The applicant's assertion that "educators need brief, effective, scalable interventions they can easily implement in the classroom", is accurate and highly relevant in K-12 settings across the country.

Weaknesses:

There are a variety of reasons why students leave high school, and different points at which they begin to disengage from school prior to dropping out. This project's contribution to increased understanding of the effectiveness of Pathways may only be applicable for a subgroup of potential dropouts for whom motivation is a significant issue.

Reader's Score: 9

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:

Reader's Score: 23

Sub

- 1. (1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.**

Strengths:

Factor 1: Exhibit 1 on page 11-12 provides a detailed, complete description of the objectives and outcomes, as well as specific measures and performance targets (e.g. "75% of teachers will implement."). Highly important implementation variables are also included in the outcomes, such as "dosage", "adherence" and "quality", all of which will provide valuable information on the context of implementation.

Weaknesses:

No weaknesses were noted

Reader's Score: 10

- 2. (2) The extent to which the design of the proposed project is appropriate to, and will successfully address, the needs of the target population or other identified needs.**

Strengths:

Factor 2: The strategy to use high-fidelity teachers in one year as teacher-trainers the following year is an excellent strategy to address the need to build the infrastructure for scaling and sustaining the intervention in a district. (p. 11) The applicant cites low proficiency rates as an area of need that can be successfully addressed by this intervention designed to improve student motivation and persistence. (p. 9) Research citations indicate a strong need to intervene in 8th grade in order to reduce school failure and dropouts (p. 5-6) which this project can successfully address given that implementation occurs at the beginning of 8th grade. The description of Pathways sessions described in Appendix I-Exhibit I-2 clearly demonstrates a focus on topics highly relevant and useful to 8th grade students' needs.

Weaknesses:

Factor 2: Page 8 indicates Nevada's graduation rate is 83%, only slightly lower than the national average of 85%. Appendix I - Exhibit I-1 indicates the partner districts have graduation rates ranging from 67% to 100% but 8 of the 13 districts already have graduation rates at or above the national average. In addition, race-based gaps in graduation rates are noted, as are difficulties in providing "equitable educational opportunities" due to the diverse geographic settings (e.g. rural v. urban), but it is not clear how providing this intervention to all 8th grade students in 72 schools will address these particular needs. It would have been helpful if the applicant demonstrated needs of the target population related to potential intermediate outcomes such as grade retention in 9th grade, attendance, and/or discipline incidents in high school.

Reader's Score: 4

- 3. (3) The extent to which the proposed activities constitute a coherent, sustained program of research and development in the field, including, as appropriate, a substantial addition to an ongoing line of inquiry.**

Strengths:

Factor 3: The applicant provides extensive evidence of the coherence of this research, as well as extensive details on the development efforts that have occurred to date. (e.g. IES 3-cycle rapid development grant – p. 2) The applicant has carefully studied and documented the underlying mechanisms through which this intervention can

Sub

result in positive impacts for students. (p. 15) Specific details and outcomes are provided from prior research in this area. (p. 16) The project represents a substantial addition to the line of inquiry not only because of the scope and research design, but also because it provides important information on the strategies for scaling interventions in rural schools, which is often a challenge for many rural districts lacking the human and financial resources necessary to properly scale interventions. (p. 17)

Weaknesses:

No weaknesses were noted.

Reader's Score: 5

4. (4) The extent to which the proposed project will increase efficiency in the use of time, staff, money, or other resources in order to improve results and increase productivity.

Strengths:

Factor 4: Schools often find it challenging to devote adequate instructional time to interventions designed to support social-emotional learning, and this project clearly describes how the focused, yet relatively brief (e.g. 6-9 hrs) intervention can elicit results comparable to longer, more intensive interventions, which greatly increases efficiency in use of time. (p. 17) The intervention also increases efficiency by utilizing re-usable materials rather than consumable materials, which presents a cost savings. The intervention can potentially improve the productivity of instructional time if it were to result in a substantial decrease in disruptive behavior, which often detracts from instructional time.

Weaknesses:

Relying on classroom teachers to deliver the intervention in addition to their other responsibilities does not necessarily increase productivity. Rather, it may decrease productivity particularly for relatively ineffective teachers or teachers who are novices and struggling to balance the demands of their new position. The teacher workforce, in general, is becoming less experienced, with a higher percentage of novices, based on recent U.S. DOE-sponsored reports.

Reader's Score: 4

Scaling - Strategy to Scale

1. The Secretary considers the applicant's strategy to scale the proposed project. In determining the applicant's capacity to scale the proposed project, the Secretary considers the following factors:

Reader's Score: 16

Sub

1. (1) The extent to which the applicant identifies a specific strategy or strategies that address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale that is proposed in the application.

Strengths:

Factor 1: The applicant cites six barriers to scaling, which are all related to the efficient delivery of the intervention in terms of personnel, training, and materials. "Prior work in Chicago and Detroit" provided important feedback to the applicant on factors that inhibited "high-quality delivery" (p. 18), and the innovative strategies described on pages

Sub

18-19 adequately address the barriers. For example, training teachers to deliver the intervention greatly reduces costs to districts and in the absence of teacher turnover, should not require additional annual follow-up training. Another potential barrier is teacher buy-in, or a lack of teachers' willingness to take on the responsibility of delivering these additional lessons not aligned with their content area of expertise. Training one counselor per school addresses this barrier to some degree, because the teachers would have an additional person on-site to support their delivery, or even co-deliver lessons if they wish. Specifically, the applicant explains the counselor is "an additional trained person who can step in to implement if a trained teacher becomes unavailable", or unwilling. Rural schools who lack a counselor can train a "community member or retired teacher" to fill this role. (p. 19) They are also addressing the training-related barriers by utilizing teachers with the highest fidelity as compensated teacher-trainers the following year.

Weaknesses:

The applicant does not provide detail on the extent to which teacher buy-in and teacher compliance with the intervention has been a barrier in past studies. It would be reasonable to assume there has been variability in the degree to which, and the quality with which, teachers deliver the intervention. While the applicant has a plan for monitoring this through various implementation fidelity instruments and video observations, it would have strengthened the proposal to include more detail on what strategies the applicant will use to elicit and maintain buy-in from teachers.

Reader's Score: 9

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

Strengths:

Utilizing a central website that includes "all materials to support Pathways implementation" is an excellent dissemination strategy that should make the information broadly available to a diverse audience. (p. 20) This access, free of charge, will also facilitate replication. The project staff have an extensive publication and presentation history demonstrating their commitment to dissemination.

Weaknesses:

It would have strengthened the proposal to describe the specific practitioner audiences to which they would conduct outreach or disseminate information on this intervention. For example, presenting information at a conference such as NASSP, ASCA, or ASCD might provide a valuable opportunity to support replication efforts. While the applicant briefly describes the content of the website, it is not clear how practitioners would learn of the intervention or be directed to the website for more information.

Reader's Score: 7

Resources and Quality of Management Plan - Resources and Quality of Management Plan

1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:

Reader's Score: 23

Sub

1. (1) **The applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a national or regional level (as defined in 34 CFR 77.1(c)) working directly, or through partners, during the grant period.**

Strengths:

The personnel leading this project have a significant amount of experience with national projects involving rigorous RCT designs. For example, Exhibit 6 on page 24 lists several well-known interventions such as MTP, which is included in the WWC with strong evidence of effectiveness (established through prior work of some of the applicants). The financial resources described on page 23 are more than adequate to support the scaling of this intervention to a national level. The project directors' experience managing multi-million dollar federal grants demonstrates substantial capacity for scaling.

Weaknesses:

While the proposal mentions 13 participating school districts, it is not clear how many middle schools, or high-need students, are located within them. The evidence the project could be successful in recruiting 72 schools is somewhat lacking.

Reader's Score: 9

2. (2) **The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.**

Strengths:

The applicant presents a compelling argument as to the return on investment of this project, designed to have long-term outcomes improving graduation rates. The benefit-cost ratio is substantial, given that improving graduation rates by even one percentage point will result in significant economic benefits that outweigh the relatively small cost of implementation (estimated at \$182.77 per student). (p. 25)

Weaknesses:

No weaknesses were noted.

Reader's Score: 5

3. (3) **The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

Strengths:

The applicant demonstrates the commitment of their 13 partner districts and the Nevada Dept of Education through letters of support in Appendix C. In addition, Nevada districts already work with AIR on the Nevada School Climate survey (referenced in letters of support) and that familiarity is likely to support sustainability. Given the materials are reproducible, once teachers have been trained the only cost associated with continuing to support implementation will be the cost of copying materials for the students, and training new teachers (which they can do in-house with a current high-quality Pathways teacher or counselor). This means that partner districts are very likely to continue supporting implementation well beyond the life of the grant, especially if they see important positive outcomes among the students.

Sub

Weaknesses:

No weaknesses were noted.

Reader's Score: 5

4. **(4) 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.**

Strengths:

Exhibit I-3 in Appendix I provides a detailed timeline for the five year project, dividing each of the years into quarters, and aligning each objective (included on pgs.11-14) with the responsible party and timeline. The proposal also indicates the project team will meet semi-monthly, which should be sufficient to ensure milestones are met on time and within budget.

Weaknesses:

While the organizational chart on page 21 shows the implementation manager will oversee three particular categories of participants, it would have been helpful to provide details on how specific responsibilities will be divided between the implementation manager and their implementing teachers and trainers. Also, the role of implementation manager is not included in Exhibit 5 "Key Personnel" on page 22.

Reader's Score: 4

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:**

Reader's Score: 18

Sub

1. **(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 without reservations as described in the What Works Clearinghouse Handbook (as defined in this notice).**

Strengths:

The use of a cluster-RCT with a delayed treatment design will allow a rigorous evaluation of the intervention likely to meet WWC standards without reservations, and will also help reduce attrition by including the control group as treatment later in the grant period. The expectation for low attrition is realistic given the large sample and willingness of districts to provide administrative data, which greatly reduces the impact of student mobility on the measurement of outcomes since students who move are likely to enroll in a study district. (p. 27) The plan to track both cluster attrition (e.g. schools) and representativeness of each cluster (e.g. students) is a strong approach and will likely meet WWC standards. State assessment data, along with attendance and course credits are eligible outcome domains according to the WWC Evidence Review protocol for dropout prevention interventions such as this proposed project.

Sub

Weaknesses:

The proposal provides limited detail on how the evaluation will limit the risk of bias due to nonresponse within clusters, specifically related to the student surveys. The student surveys measure several highly relevant, important features of the intervention (e.g. SEL, mindsets, etc.) Strategies to minimize non-response of students (e.g. incentive for teachers who achieve a high enough survey response rate from their students) within classrooms would likely be important to include.

Reader's Score: 9

2. (2) 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 research questions clearly specify the outcomes of interest (e.g. self-regulatory behaviors, academic outcomes). (p. 24) The applicant provides thorough specifications for the implementation fidelity threshold, including a sound argument for the selection of 60% and 70% as breakpoints in order to categorize the threshold as low, moderate, or high. (p.30) The inclusion of interaction terms in the two-level regression is a reasonable approach to analyzing variation in impacts. (p. 30)

Weaknesses:

While the Objectives & Performance Measures table indicates administration of teacher surveys related to perceptions of training and weekly support calls, there is limited detail on how this information may be considered as mediators of treatment outcomes. Generally speaking, when teachers have more negative perceptions of training or feel unsupported regarding implementation, it impacts the fidelity with which they deliver the intervention which could influence student outcomes.

Reader's Score: 4

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

Strengths:

The reliability and validity of the surveys are clearly specified on page 29 and have been used in several prior studies. The applicant presents a strong approach to analyzing open-ended responses in a reliable way as well, including a solid plan for establishing interrater agreement for video observations. (p. 29-30) State assessment data typically have high levels of reliability and validity given the extensive documentation SEA's must maintain on assessments used for any accountability or rating purposes.

Weaknesses:

No weaknesses were noted.

Reader's Score: 5

Status: Submitted
Last Updated: 08/07/2020 04:20 PM

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Applicant: University of Southern California (S411B200027)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	10	8
Quality of Project Design		
1. Quality of Project Design	25	20
Sub Total	35	28
Scaling		
Strategy to Scale		
1. Scaling	20	15
Sub Total	20	15
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	25	25
Sub Total	25	25
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	16
Sub Total	20	16
Total	100	84

Technical Review Form

Panel #3 - FY20 EIR Mid Phase - 3: 84.411B

Reader #3: *****

Applicant: University of Southern California (S411B200027)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factor:

Reader's Score: 8

Sub

1. (1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

Strengths:

This project entitled Pathways to Success in the Transition to High School: Testing a Strategy to Scale an Effective Identity-Based Motivation Intervention in Diverse Education Settings has the objective of implementing, testing, and refining a strategy to scale the Pathway-to-Success (Pathways) intervention to 8th grade students in 72 urban, suburban, and rural schools in Nevada (43,000 students). The definition of high-need students is 8th-grade students enrolled in public schools in Nevada, a high-need context given high dropout rates, low proficiency rates, high free/reduced lunch and minority enrollment rates, and a high percentage of rural and/or Title I-eligible schools. The project will train 432 8th-grade teachers and 72 Counselors. Pathways is an effective identity-based motivation (IBM) intervention that helps students see school as the path to connect what they are doing now in school to the person they expect to become in the future. The proposal effectively presents the theory of change. The consequences of dropout are dire and the middle school years offer a critical intervention point for addressing academic disengagement. Intervention that makes the future feel close by focusing students on their future selves and school feel like the path to get there has been shown to improve academic outcomes and reduce disengagement. However, few social behavioral programs have adequately tested their underlying theory to facilitate scalable implementation in culturally diverse, resource-limited contexts. Pathways has undergone extensive usability/feasibility testing in partnership with teachers. The proposed project meets the EIR Mid-Phase requirements of moderate evidence standard while developing innovative education practices and scaling them regionally or nationally. The project promotes the development of skills that prepare high-need students to be informed, thoughtful, and productive individuals and citizens through developing positive personal relationships with others, the ability to overcome obstacles, developing problem-solving skills, and developing self-regulation to work toward long-term goals. Therefore, Absolute Priorities 1 and 3 are well aligned with the proposed project.

Weaknesses:

The proposal would be improved by providing a discussion with a stronger justification for choosing 8th grade for the intervention. If students have struggled through middle school, they might not be able to recover enough in just 8th grade to be able to go on and be successful in high school. Thus, it is possible that the intervention might be more impactful if used earlier than 8th grade.

Reader's Score: 8

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:

Reader's Score: 20

Sub

1. (1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.

Strengths:

On pages 11-14, the goals, objectives, and outcomes to be achieved by the proposed project are mostly specified clearly and are measurable. The objectives logically follow from the goals, and the outcomes logically follow from the objectives. The metrics presented are consistent with the desired outcomes. Page 15 provides a detailed theoretical framework and underlying process model, which is coherent and easy to follow.

Weaknesses:

While the student outcomes are clearly presented, the proposal would be strengthened by including a complete list of desired teacher outcomes that result from the professional development component of the project and measures of the level of teacher buy-in to the program.

Reader's Score: 9

2. (2) The extent to which the design of the proposed project is appropriate to, and will successfully address, the needs of the target population or other identified needs.

Strengths:

Pages 8-9 provide clear information on how the design of the proposed project will successfully address the needs of the target population. Nevada ranks 35th of 50 states in high school graduation rate and 2nd in its rate of young adults without a high school diploma. Dropout rates in Nevada are more than double for Hispanic (13%) and Black (12%) students relative to their White peers (6%).

Weaknesses:

Exhibit I-1 shows that some of the selected schools for the study already have high graduation rates. So, the project would be improved by not including schools that already have high graduation rates to more tightly focus on the needs of the targeted population of students. Also, it would have been helpful if the applicant demonstrated needs of the target population related to potential intermediate outcomes such as grade retention in 9th grade, attendance, and/or discipline incidents in high school.

Reader's Score: 2

3. (3) The extent to which the proposed activities constitute a coherent, sustained program of research and development in the field, including, as appropriate, a substantial addition to an ongoing line of inquiry.

Strengths:

On page 10, proposed activities are presented that constitute a coherent, sustained program of research and development. The project team will recruit 72 schools (34 urban/suburban, 38 rural) serving 8th-grade students (12 Cohort 1 schools in Year 1, 30 Cohort 2 schools in Year 2, 30 Cohort 3 schools in Year 3). This mid-phase grant will extend prior work by providing expanded infrastructure for scaling Pathways to urban, suburban, and rural schools

Sub

in Nevada. In doing so, it will take an important next step by testing and refining the scaling strategy in rural contexts.

Weaknesses:

The proposed project is missing one element that would increase its extent to significantly contribute to research and development in the field. The proposal would be strengthened by including teacher outcomes in addition to student outcomes to allow the full model of change to be evaluated.

Reader's Score: 4

- 4. (4) The extent to which the proposed project will increase efficiency in the use of time, staff, money, or other resources in order to improve results and increase productivity.**

Strengths:

Page 17 indicates in detail how the proposed project will increase efficiency in the use of time, staff, money, or other resources. Pathways is a brief 12-session intervention with a cumulative total of 6 to 9 hours of instructional time to achieve its impacts on students. Materials for implementing Pathways activities are sustainable and can be reused for many years at little- to-no cost and are available on the Pathways website. Also, Pathways reduces disruptive behavior in class, facilitating more efficient use of instructional time. If effects from the prior urban studies in Detroit and Chicago replicate in this project, a 15% reduction in the number of students at risk of not graduating because of chronic absence, a 60% reduction in the number of students retained, a 21% increase in cumulative GPA, and an 8% increase in the number of students attaining proficiency on state standardized tests will result in cost savings and improved efficiencies.

Weaknesses:

No weaknesses noted.

Reader's Score: 5

Scaling - Strategy to Scale

- 1. The Secretary considers the applicant's strategy to scale the proposed project. In determining the applicant's capacity to scale the proposed project, the Secretary considers the following factors:**

Reader's Score: 15

Sub

- 1. (1) The extent to which the applicant identifies a specific strategy or strategies that address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale that is proposed in the application.**

Strengths:

On page 18, the applicant clearly presents specific strategies that address barriers to scaling based on prior work in Detroit and Chicago: 1) it is not financially or technically feasible to continuously train enough individuals each year to support scalable delivery, 2) the implementation manual was not structured optimally to facilitate efficient prep and high-quality delivery for teachers working alone in their classrooms, and 3) delivery and prep supports were not provided. The applicant has identified specific strategies to address these barriers using feedback from teachers to optimize usability, feasibility, fidelity, and sustainability of implementation.

Sub

Weaknesses:

The project cannot be successful and sustainable without teacher buy-in. So, the proposal would be strengthened by specifically stating this as a barrier and providing more concrete and explicit ideas for how it can be obtained.

Reader's Score: 8

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

Strengths:

Page 20 provides a general description on presenting at conferences and publishing in journals relevant to the project. Relevant research and all materials to support Pathways implementation are housed on a central website. Based on these plans, it is likely that the applicant will be able to further develop their program through dissemination to practitioners.

Weaknesses:

The proposal presents general plans for publishing research papers and dissemination to practitioners. While use of a website is described as a mechanism for dissemination to practitioners, the proposal would be strengthened by providing a strategy of how users will be made aware of, or attracted to, the website (e.g. presentation at practitioner conferences). Also, the outreach to researchers would be improved by providing well-developed plans for research dissemination that include specific possible journals and topics for papers.

Reader's Score: 7

Resources and Quality of Management Plan - Resources and Quality of Management Plan

1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:

Reader's Score: 25

Sub

1. (1) The applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a national or regional level (as defined in 34 CFR 77.1(c)) working directly, or through partners, during the grant period.

Strengths:

Page 22 clearly provides the applicant's capacity in terms of qualified personnel, financial resources, and management capacity to bring the proposed project to scale. As one of the world's leading private nonprofit research universities, USC has the infrastructure and institutional resources to support this work. The PI has led or is currently leading three federally funded educational intervention RCTs. Summitlab Corporation (Summitlab) in collaboration with the American Institutes for Research (AIR) will conduct an independent evaluation that meets What Works Clearinghouse standards without reservations to test the impact of Pathways on student outcomes in grades 8 and 9. AIR is one of the largest not-for-profit organizations engaged in independent research, development, and evaluation in the behavioral and social sciences. As summarized in the table on page 24, based on working together in the past on several successful projects, both the project and evaluation teams are well equipped based on past performance to successfully carry out the project.

Sub

Weaknesses:

No weaknesses identified.

Reader's Score: 10

2. (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

Strengths:

The project intends to provide intervention to 8th grade students in 72 urban, suburban, and rural schools in Nevada (43,000 students) serving 86% of all students in the state of Nevada. Therefore, the scale of the project is consistent with the \$8,839,059 budget. Additionally, the per-student project cost is only \$183. Without the program, of the 43,758 students in the program, 7,439 are expected to drop out of high school (17%) and earn substantially less than their peers who earn a high school diploma, between \$260,000 and \$550,000 less in lifetime earnings. If just an additional 1% of those 7,439 Nevada students persist to graduation, they will earn nearly \$20M more in combined lifetime earnings and will save taxpayers \$22M (e.g., in lower tax revenue), resulting in a more than five-fold return on investment from this project.

Weaknesses:

No weaknesses identified.

Reader's Score: 5

3. (3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.

Strengths:

Pages 24-25 address the potential for continued support of the project after Federal funding ends. Nevada schools will likely continue scaling and sustaining Pathways after the grant as demonstrated through their letters of support (Appendix C) since Pathways is well-aligned to Nevada's education improvement goals. When the project ends in 2025, Pathways will have become a regular part of the 8th-grade student experience in most districts, which will facilitate sustainability. The strategy to scale will result in a local/regional team of teachers qualified to train their peers to implement Pathways, facilitating continued scaling of Pathways with minimal support. Lastly, a network on the Pathways website will have been established dedicated to connecting the Nevada community of users and trainers, which will be maintained beyond the grant period.

Weaknesses:

No weaknesses identified.

Reader's Score: 5

4. (4) 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.

Strengths:

The reporting structure shown in Exhibit 4 on page 21 and five-year timeline (see Exhibit I-3 in Appendix I) provide a detailed project management plan with defined responsibilities, timelines, and milestones for executing the project to achieve the objectives of the proposed project on time and within budget. The accountability for achieving each task is clear. The timelines provide sufficient time for accomplishment of activities and indicate the month or quarter when tasks plan to be achieved.

Sub

Weaknesses:

No weaknesses identified.

Reader's Score: 5

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:**

Reader's Score: 16

Sub

- 1. (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 without reservations as described in the What Works Clearinghouse Handbook (as defined in this notice).**

Strengths:

The methods of evaluation and research questions on page 27 will likely produce evidence using a cluster (school-level) RCT about the project's effectiveness to meet the What Works Clearinghouse standards without reservations. Schools will be blocked by urbanicity (urban, suburban, rural) and pair-matched (matching on percent FRPL, percent minority, prior cohort percent 8th-grade proficient, and prior cohort average 8th-grade GPA). The study's blocked, pair-matched random assignment procedure will ensure baseline equivalence on the blocking variable (urbanicity) between treatment and control schools. The impact of school attrition is expected to be low because outcome (Grades 8 and 9) and baseline measures (Grade 7) will be obtained from district administrative data, allowing for analyses of all students who remain in the districts, even if they leave study schools. The applicant has strong partnerships with the Nevada Department of Education and LEA partners such that LEAs have committed to provide the needed administrative data for both treatment and control schools in the data sharing agreement.

Weaknesses:

The proposal would be improved by including teacher outcomes in the logic model as teacher buy-in will be critical to the success of the project.

Reader's Score: 8

- 2. (2) 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 plan on page 30 clearly articulates the key project components, mediators, and outcomes. Summitlab/AIR will conduct an independent evaluation to answer eight research questions (RQs) about Pathways' impact (RQs 1–4) and implementation (RQs 5–8) as shown in Exhibit 7, which is mapped onto the Pathways logic model (Exhibit 3). Clear thresholds are established for low, moderate, and high implementation. Per page 28 and Appendix I, the study's proposed sample size is 72 schools with a conservatively estimated 35 students per school. The study is designed to detect a minimal detectable effect size (MDES)=0.13—an effect size smaller than the smallest effect size observed in the prior efficacy study (0.17). The MDES is 0.19 for subsample analyses of 38 rural and 36 urban/suburban schools. In its introduction, the proposal does a nice job of clarifying "difficulty" as a motivational force in the project: "Discriminate validity analyses show that interpretation of difficulty as a motivational

Sub

force is distinct from other related constructs such as efficacy (“If I try, then I can succeed”), growth mindset (“If I try, then I can change”), grit (“I am the kind of person who keeps trying”), and locus of control (“Whether or not I succeed is in my own control”). Rather than answering a question of whether trying will work, interpretation of difficulty as importance answers the question: “Why should I try?””

Weaknesses:

No weaknesses noted.

Reader's Score: 5

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

Strengths:

Pages 28-29 demonstrate that the methods of evaluation will likely provide valid and reliable performance data on relevant outcomes. Measures and timeline of data collection activities are in Appendix I, Exhibit I-4. As required by WWC, student measures are face valid and reliable including district administrative data for student outcomes—attendance, course grades, state assessment test scores, course credits, enrollment indicators. The proposed measures of social and emotional competencies and depression have been used widely in countless other studies. To assess fidelity of implementation, video-observations of a random sample of 6 of 12 sessions will be coded for each treatment teacher, obtaining video using the strategy the applicant successfully employed in other studies. Impacts for students will be estimated using a two-level regression (RQs 1-4), adjusting for clustering of students within schools (see Appendix I). The model adjusts for matched-pair, student prior performance and characteristics. Models assessing variation in impacts for school/student subgroups will incorporate the appropriate interaction term between treatment status and relevant school or student characteristic. The cost analysis will appropriately use the Resource Cost Model and CostOut tool to generate cost-effectiveness estimates based on cost and impact.

Weaknesses:

The applicant proposes to use grades to measure performance. Course grades have been shown to not be the most reliable measures of student performance. The project evaluation would be improved by using validated rubrics on specific assignments. As disruptive behavior is often subjective and difficult to measure, this will likely be a challenge for the project.

Reader's Score: 3

Status: Submitted
Last Updated: 08/07/2020 04:20 PM

Status: Submitted

Last Updated: 08/07/2020 04:20 PM

Technical Review Coversheet

Applicant: University of Southern California (S411B200027)

Reader #4: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	10	7
Quality of Project Design		
1. Quality of Project Design	25	21
Sub Total	35	28
Scaling		
Strategy to Scale		
1. Scaling	20	15
Sub Total	20	15
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	25	20
Sub Total	25	20
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	16
Sub Total	20	16
Total	100	79

Technical Review Form

Panel #3 - FY20 EIR Mid Phase - 3: 84.411B

Reader #4: *****

Applicant: University of Southern California (S411B200027)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factor:

Reader's Score: 7

Sub

1. (1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

Strengths:

The proposal demonstrates that the project has the potential to increase knowledge and understanding of how to increase educational attainment (or prevent students from dropping out of school). The proposal makes a compelling case for the cost of students dropping out, both to them and the community. (p. 4-5). The proposal also demonstrates that intervening in the middle school years can be crucial for impacting students' success and their pathway to graduation. (p. 5-6). Ultimately, the project is scaling a middle school intervention that makes the future feel close for students. This is done by having students focus on their future selves. In turn, school might feel like the path to get there (their future self). This has been shown to improve academic outcomes and reduce disengagement with the ultimate goal of increasing school completion. (p. 6).

Weaknesses:

The proposal does not make clear why eighth grade is the best time to implement this intervention. It is not evident if students' academic performance and choices made through the middle school years would impact their available options for high school. Thus, intervening in eighth grade might be too late.

Reader's Score: 7

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:

Reader's Score: 21

Sub

1. (1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.

Sub

Strengths:

Factor 1: The proposal communicates goals, objectives and outcomes for the project that are specific and measurable. For example, the proposal provides four goals that guide the project (p. 11-14). For example, the first goal is to maximize impacts on student outcomes (identity-based motivation, self-regulatory behaviors, social and emotional competencies and well-being, and academic outcomes) by implementing Pathways with fidelity. (p. 11). The goals are aligned to multiple objectives that further clarify the goals. In turn, the objectives are aligned to outcomes and specific measures for those outcomes. (p. 11-14). For instance, the objective that states Teachers implement Pathways as a universal intervention with 8th grade students at the start of the school year includes a measurement description of: Based on video-recorded observations for each treatment teacher (who provides video recordings), 90% of teachers implement all 12 sessions within the first 10 weeks of the school year and attempt to implement 80% or more of all activities—based on analyses of 6 coded observations for each teacher using a structured activity checklist for each session. (p. 11).

Weaknesses:

No weaknesses noted.

Reader's Score: 10

2. (2) The extent to which the design of the proposed project is appropriate to, and will successfully address, the needs of the target population or other identified needs.

Strengths:

The proposal articulates some of the needs of Nevada students, which suggest that the intervention is appropriate. For example, the proposal states that the graduation rate in Nevada is 83%. (p. 8). Dropout rates in Nevada are more than double for Hispanic (13%) and Black (12%) students relative to their White peers (6%). (p. 9). More generally, the Rural School and Community Trust (Showalter et al., 2019) found that Nevada's rural students are the least college-ready of rural students nationwide. (p. 9). Further evidence of needs being addressed by this project is the fact that the project received letters of support from participating school districts stating a need and desire to work with the Pathways program. (appendix).

Weaknesses:

Some of the schools that the project will work with have very high graduation rates (even one with 100%). It is not clear if the project is focusing on high needs schools that the project team is hoping to address.

Reader's Score: 3

3. (3) The extent to which the proposed activities constitute a coherent, sustained program of research and development in the field, including, as appropriate, a substantial addition to an ongoing line of inquiry.

Strengths:

The applicant clearly demonstrates that the proposed activities constitute a coherent, sustained program of research and development in the field. For example, the proposal shows that the project is building upon previous research that has gradually refined the Pathways intervention. (p. 15-16). The proposal also articulates a theoretical framework to make visible the processes that contribute to academic outcomes and social/emotional well-being. (p. 15). This proposed project, thus, will extend the prior work by providing expanded infrastructure for scaling Pathways to urban, suburban, and rural schools in Nevada. In doing so, it will take an important next step by testing and refining the scaling strategy in rural contexts. (p. 17).

Sub

Weaknesses:

No weaknesses noted.

Reader's Score: 5

- 4. (4) The extent to which the proposed project will increase efficiency in the use of time, staff, money, or other resources in order to improve results and increase productivity.**

Strengths:

The proposal addresses how the project is likely to increase efficiency in the use of resources in two ways. The web site that the project will use can potentially lessen teacher prep time. (p. 18). Also, the proposal states that Pathways reduces disruptive behavior in class, facilitating more efficient use of instructional time. (p. 18).

Weaknesses:

The proposal only minimally addresses how the project is likely to increase efficiency in the use of resources in order to improve results for students. Instead, the proposal addresses how the project will efficiently use the resources that they are utilizing.

Reader's Score: 3

Scaling - Strategy to Scale

- 1. The Secretary considers the applicant's strategy to scale the proposed project. In determining the applicant's capacity to scale the proposed project, the Secretary considers the following factors:**

Reader's Score: 15

Sub

- 1. (1) The extent to which the applicant identifies a specific strategy or strategies that address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale that is proposed in the application.**

Strengths:

The proposal cites four six barriers to scaling that the applicant has identified from previous work. (p. 18). For example, the proposal notes the large number of outside trainers needed to implement Pathways at scale each year in the first six weeks of the school year, which would be cost prohibitive. (p. 18). In addition, for each of these barriers, the project describes how they will address the barriers. (p. 18-20). For instance, for the barrier about outside trainers, the proposal will implement a teacher-led model with a counselor serving as a backup facilitator. (p. 18-19.)

Weaknesses:

The proposal does not make clear how the project will address teacher buy-in and teacher compliance. These factors were identified as two barriers that the applicant mentioned were encountered in previous program implementations.

Reader's Score: 8

Sub

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

Strengths:

The proposal includes several mechanisms to broadly disseminate the findings of the project. For example, research and all materials to support Pathways implementation are housed on a central website designed to support high-volume traffic. (p. 20). All resources are available for free. Also, the PI and the Co-PI have had great success publishing and presenting their work in journals and conferences, which suggest that they are likely to continue to do so. (p. 20).

Weaknesses:

While the PI and Co-PI have been successful at publishing and presenting at conferences, the proposal does not make clear what their plans are to continue and where to ensure broad reach to both academic and professional audiences. It is also not clear how the members of the field will learn about the web site to access the project resources.

Reader's Score: 7

Resources and Quality of Management Plan - Resources and Quality of Management Plan

- The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

Reader's Score: 20

Sub

- (1) The applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a national or regional level (as defined in 34 CFR 77.1(c)) working directly, or through partners, during the grant period.**

Strengths:

The PI and partners on this project are well-qualified and have much of the capacity to bring this project to scale with extensive experience leading projects of similar size and scope. (p. 21-23 and CVs in the appendix). The proposal also highlights the capability of the lead organization as well as previous experience specifically leading federal grants of this size by the project team. (p. 23-24).

Weaknesses:

The proposal does not make clear how other project staff from USC will support the project and how qualified they are to carry out the work.

Reader's Score: 8

- (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.**

Sub

Strengths:

The proposal communicates that the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project. For example, the proposal makes a mathematical argument for the costs of the project. It states that the per-student project cost for the project \$182.77. Of the 43,758 students served by the project, 7,439 are expected to drop out of high school (17%) and earn substantially less than their peers who earn a high school diploma, between \$260,000 and \$550,00 less in lifetime earnings (Belfield & Levin, 2007). If just an additional 1% of those 7,439 Nevada students persist to graduation, they will earn nearly \$20M more in combined lifetime earnings and will save taxpayers \$22M (e.g., in lower tax revenue), resulting in a more than five-fold return on investment from this project. (p. 25).

Weaknesses:

No weaknesses noted.

Reader's Score: 5

3. (3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.

Strengths:

The proposal conveys that there is potential for continued support of the project after Federal funding ends. For example, sustainability planning will be integrated into an annual feedback cycle with NDE. Each year, the project team will solicit feedback from teacher-trainers, implementing teachers, schools, and districts regarding potential facilitators and challenges to long-term sustainability, and will help NDE strategize to support its districts to mitigate potential barriers. (p. 24). This suggests that sustaining the work is a key focus on the project. Also, the project's strategy to scale will result in a local/regional team of teachers qualified to train their peers to implement Pathways, facilitating continued scaling of Pathways with minimal support. (p. 24).

Weaknesses:

No weaknesses noted.

Reader's Score: 5

4. (4) 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.

Strengths:

The proposal provides an adequate management plan to achieve the objectives of the proposed project on time and within budget. For example, the proposal includes an organizational chart, which communicates the relationship different staff people have to each other in the project. (p. 21). Moreover, the proposal includes a timeline for accomplishing the project objectives. (appendix). These objectives are assigned to a partner organization or three, who will be responsible for objectives.

Weaknesses:

The project timeline provided is organized around objectives rather than project activities. (p. 21). This makes it unclear how the actual work of the project would be organized and allocated. Moreover, the timeline does not provide specific milestones, which would suggest when a particular project activity is completed. Finally, when more than one organization is assigned responsibility for an objective, it is not clear who is really responsible for addressing the objective.

Sub

Reader's Score: 2

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:

Reader's Score: 16

Sub

1. (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 without reservations as described in the What Works Clearinghouse Handbook (as defined in this notice).

Strengths:

The proposal provides an evaluation plan that is likely to produce evidence about the project's effectiveness that would meet the What Works Clearinghouse standards without reservations. The design for the impact evaluation is a cluster (school-level) RCT. (p. 26). The evaluator will conduct random assignment in three cohorts of schools. Schools will be blocked by urbanicity (urban, suburban, rural) and pair-matched (matching on percent FRPL, percent minority, prior cohort percent 8th-grade proficient, and prior cohort average 8th-grade GPA). This suggests that the cohorts will be comparable. (p. 26). Moreover, the impact evaluation explains why they expect attrition to be low (p. 26) and articulates procedures to ensure baseline equivalence (p. 28). All these components suggest that the impact evaluation is designed to meet WWC standards without reservations.

Weaknesses:

There are some aspects of the evaluation plan that are unclear. For example, the proposal does not make clear the cost-effectiveness plan. Moreover, more information about the parental consent procedures for the student surveys would be helpful and would be important in relation to potential attrition in the study.

Reader's Score: 8

2. (2) 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 proposal communicates that the evaluation plan clearly articulates the key project components, mediators, and outcomes, as well as a measurable threshold for acceptable implementation. For example, student measures are face valid and reliable including district administrative data for student outcomes—attendance, state assessment test scores, course credits, enrollment indicators. (p. 28). IBM student survey measures (open-ended expected/feared selves, linked strategies, difficulty mindsets) have demonstrated validity and reliability in previously funded projects. (p. 29). To assess students' disruptive behavior and classroom initiative, a core-subject teacher in treatment and control schools will report on each 8th-grader's in-class behavior in the spring using the 4-item Finn Disruptive Behavior Scale ($\alpha=0.79-0.81$) and the 4-item Finn Initiative Scale ($\alpha=0.75-0.85$). (p. 29). The project team establishes clear thresholds for low, moderate and high implementation following previous research where interventions delivered in the field by non-researchers are unlikely to attain fidelity above 80% and, if delivered below 60% fidelity, are unlikely to yield impacts. (p. 30). And the evaluation plan aligns with the theoretical framework that is guiding the research that indicate mediators of impact. (p. 15).

Sub

Weaknesses:

It is unclear if the use of course grades will serve as a valid measure. While this is just one of the measures that will be used, it seems like it is not a standardized measure and instead subjective and variable depending on the teacher.

Reader's Score: 4

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

Strengths:

As stated above, the evaluation plan is guided by several validated measures. Student measures are face valid and reliable including district administrative data for student outcomes—attendance, course grades, state assessment test scores, course credits, enrollment indicators. (p. 28). IBM student survey measures (open-ended expected/feared selves, linked strategies, difficulty mindsets) have demonstrate validity and reliability in previously funded projects. (p. 29). The assessment of students' disruptive behavior and classroom initiative has also been validated. (p. 29).

Weaknesses:

There are some aspects of the validity and reliability of the studies measures that are unclear. For example, it is not clear how validity of grades or disruptive behavior assessments will be established. These measures seem to be linked to cultural norms that might impact validity and reliability.

Reader's Score: 4

Status: Submitted
Last Updated: 08/07/2020 04:20 PM

Status: Submitted

Last Updated: 08/17/2020 06:42 PM

Technical Review Coversheet

Applicant: University of Southern California (S411B200027)

Reader #6: *****

	Points Possible	Points Scored
Questions		
Selection Criteria		
Significance		
1. Significance	10	8
Quality of Project Design		
1. Quality of Project Design	25	23
Sub Total	35	31
Scaling		
Strategy to Scale		
1. Scaling	20	16
Sub Total	20	16
Resources and Quality of Management Plan		
Resources and Quality of Management Plan		
1. Resources and Management	25	24
Sub Total	25	24
Selection Criteria		
Quality of the Project Evaluation		
1. Project Evaluation	20	16
Sub Total	20	16
Total	100	87

Technical Review Form

Panel #3 - FY20 EIR Mid Phase - 3: 84.411B

Reader #6: *****

Applicant: University of Southern California (S411B200027)

Questions

Selection Criteria - Significance

1. The Secretary considers the significance of the proposed project. In determining the significance of the proposed project, the Secretary considers the following factor:

Reader's Score: 8

Sub

1. (1) The potential contribution of the proposed project to increased knowledge or understanding of educational problems, issues, or effective strategies.

Strengths:

The applicant clearly described the issues with dropout students not only about the implications to their financial future but also the impact on society (pg.5). Successfully transitioning from middle school to high school is critical to support students staying in school and continuing onto a college education. The applicant proposes to implement, test, and further refine a strategy to scale the Pathways-to-Success (Pathways) intervention in 72 urban, suburban, and rural schools in Nevada including 8th-grade level students (pg. 1). The potential contribution would allow the scalability of the proposed intervention due to randomization evidence, theoretical rationale, and testing to be produced by the proposed project (pg.7).

Weaknesses:

The applicant did not clearly address the issue of students disengaging at different points of school; thus, the intervention implemented at 8th grade may be late for some students. The applicant did not clearly explain how 8th grade level students were selected to be part of the proposed project or the adequacy of the selected grade level in terms of the effectiveness of influencing dropout issues.

Reader's Score: 8

Selection Criteria - Quality of Project Design

1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the design of the proposed project, the Secretary considers the following factors:

Reader's Score: 23

Sub

1. (1) The extent to which the goals, objectives, and outcomes to be achieved by the proposed project are clearly specified and measurable.

Sub

Strengths:

The applicant provided aligned goals, objectives, outcomes, and measures that are measurable for the proposed project (pg.11-14). For example, "Measure 1.1...90% of teachers implement all 12 sessions within the first 10 weeks of the school year and attempt to implement 80% or more of all activities..." (pg.11) and "Measure 2.5.b. 75% or higher response rate on teacher implementation surveys" (pg.12).

Weaknesses:

None noted

Reader's Score: 10

2. (2) The extent to which the design of the proposed project is appropriate to, and will successfully address, the needs of the target population or other identified needs.

Strengths:

The applicant clearly indicated the strategies to be used in the design to address the needs of the target population. The strategies would include (1) Teacher-led: Once trained, a teacher could lead Pathways with each successive cohort of their 8th-grade students; (2) Infrastructure for scaling: teacher trainers help to train future teachers; (3) Sustainability: materials could be re-used; and (4) High-quality supports for implementation: Supports include implementation manual, teacher-trainer manual, video of high-quality Pathways implementation, PowerPoint for structured delivery, and video tips from teacher trainers (pg.2). The applicant clearly provided statistics to show the needs of the target population (pg.16).

Weaknesses:

Although the applicant provided graduation rates for the LEA partners (pg.1), it is not clear how the proposed project would increase graduation rates when the schools are already experiencing high graduation rates (67-100%) such as Eureka with 100% graduation rate and others with graduation rates at or above the national average.

Reader's Score: 4

3. (3) The extent to which the proposed activities constitute a coherent, sustained program of research and development in the field, including, as appropriate, a substantial addition to an ongoing line of inquiry.

Strengths:

The applicant clearly explained that the proposed project would expand the knowledge base of the intervention to rural areas (pg.17). The applicant also explained that the promising results from a previous study could produce "a 60% increase in homework time; a 15% reduction of students at risk of not graduating, a 13% reduction in students clinically depressed, a 21% increase in cumulative GPA, and an 8% increase in students attaining proficiency on state standardized tests" (pg.16).

Weaknesses:

None noted.

Reader's Score: 5

4. (4) The extent to which the proposed project will increase efficiency in the use of time, staff, money, or other resources in order to improve results and increase productivity.

Sub

Strengths:

The applicant clearly stated the increased efficiency in the use of time, staff, money, or other resources by indicating that the pathways are a 12-session intervention with a total of 6-9 hours of instructional time, the limited number of materials for the implementation, reusable materials, and online accessibility to materials decreasing teacher's prep time and decreasing students behavioral issues in the classroom (pg.17-18).

Weaknesses:

The applicant did not clearly address the increase of efficiency in the classroom regarding time and resources by the proposed intervention because the teachers would be implemented the proposed activities in addition to their other responsibilities. Thus, the proposed project may minimally increase the use of time and resources to improve results for students.

Reader's Score: 4

Scaling - Strategy to Scale

- 1. The Secretary considers the applicant's strategy to scale the proposed project. In determining the applicant's capacity to scale the proposed project, the Secretary considers the following factors:**

Reader's Score: 16

Sub

- 1. (1) The extent to which the applicant identifies a specific strategy or strategies that address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale that is proposed in the application.**

Strengths:

The applicant stated six barriers to be addressed based on previous work (pg.18). Barriers consisted of the number of outside trainers needed to implement Pathways, financial limitations to train individuals to scale-up, materials, implementation manual for implementation, manuals for training, and supports. Teachers provided feedback to eliminate the barriers by optimizing usability, feasibility, fidelity, and sustainability of implementation. The strategies developed based on teachers' feedback were: (1) Teacher-led: teacher could lead Pathways implementation in the future; (2) infrastructure for scaling: teacher trainers help to train future teachers; (3) sustainability: materials could be re-used; and (4) high-quality supports for implementation: implementation manual, teacher-trainer manual, video of high-quality Pathways implementation, PowerPoint for structured delivery, and video tips from teacher trainers (pg.18-20).

Weaknesses:

The applicant did not clearly address the issue of teacher's busy schedules so it is not clear how adding the intervention would increase, rather than reduce, the efficiency and effectiveness of teaching.

Reader's Score: 8

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

Sub

Strengths:

The applicant explained the different mechanisms to disseminate the information to be generated by the proposed project (pg.20). The applicant will house all the Pathways implementation on a central website (www.pathwaysintervention.com) designed to support high-volume traffic. The applicant also would publish articles and present the information at conferences (pg.21).

Weaknesses:

The applicant did not clearly explain the process to disseminate information to researchers and practitioners. In addition, the applicant did not provide information about content to be housed in the website and how practitioners and researchers would know about the information presented in the website.

Reader's Score: 8

Resources and Quality of Management Plan - Resources and Quality of Management Plan

- 1. The Secretary considers the adequacy of resources and the quality of the management plan for the proposed project. In determining the adequacy of resources and quality of the management plan for the proposed project, the Secretary considers the following factors:**

Reader's Score: 24

Sub

- 1. (1) The applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a national or regional level (as defined in 34 CFR 77.1(c)) working directly, or through partners, during the grant period.**

Strengths:

The applicant clearly provided an organization chart to show the reporting structure to meet the desired goals and objectives (pg.21). The applicant provided a bio-sketch of the key personnel to demonstrate their knowledge and skills to implement the proposed project (pg.22-23). The applicant clearly stated the capacity to manage the proposed project by indicating the research funding received in 2018 (pg.25). Moreover, the applicant provided a list of projects, descriptions, funder, and the number of sites served to demonstrate the capacity and knowledge to implement the proposed project (pg.26).

Weaknesses:

None noted.

Reader's Score: 10

- 2. (2) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.**

Strengths:

The applicant clearly stated that the cost per student is \$182.77 while the implications for their financial future are detrimental (pg.25). The applicant also provided a budget narrative to detail the costs included in the proposed project to achieve the desired outcomes of the proposed project (pg.Budget Narrative). The cost per student is reasonable in relation to the desired goals and objectives.

Sub

Weaknesses:

None noted.

Reader's Score: 5

- 3. (3) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.**

Strengths:

The applicant demonstrated the commitment of the partners to the proposed project by providing letters of support (Appendix C). In addition, Pathways is aligned with Nevada's educational goals; thus, an annual feedback cycle with the Nevada Department of Education would likely solicit feedback from teacher-trainers, implementing teachers, schools, and districts regarding challenges to long-term sustainability as a means to strategize and support districts to mitigate barriers (pg.26).

Weaknesses:

Although the applicant indicated that an annual feedback cycle with the Nevada Department of Education would be implemented, it was not clearly stated what funds would be necessary to support the annual feedback process.

Reader's Score: 4

- 4. (4) 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.**

Strengths:

The applicant clearly provided a timeline including the objective, the group responsible, years divided in quarters, and milestones (Exhibit I-3). The responsibilities of each of the parties were provided by key personnel (pg.24-25) to demonstrate the adequacy of the management plan to achieve the objectives of the proposed project on time and within budget.

Weaknesses:

None noted.

Reader's Score: 5

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:**

Reader's Score: 16

Sub

- 1. (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 without reservations as described in the What Works Clearinghouse Handbook (as defined in this notice).**

Sub

Strengths:

The applicant clearly indicated that a cluster randomized controlled trial would be implemented to assess the impact of the intervention and to meet WWC standards without reservations. The applicant provided the criteria (allocate at least 45 minutes of instructional time twice for 12 sessions and the school is not implementing a conflicting program) to select schools to participate in the proposed project and the selected schools would be randomly assigned in three cohorts. Intervention and control school would be matched based on school characteristics (e.g., FRPL, minority, 8th-grade proficient, and 8th-grade GPA) to determine baseline equivalence (pg.27-28). School attrition issues were also addressed and it is expected to be low due to prior work with NDE. The sample size to detect a minimum detectable effect size (MDES)=0.13 was also provided (MDES would be of 0.19 for subsample analyses of 38 rural and 36 urban/suburban schools) (pg.28 and Technical Details About Project Evaluation Plan).

Weaknesses:

Although the applicant provided Human Subject Research Narrative information, the applicant did not clearly specify the parental consent procedures needed to collect information from students such as student survey data to be collected at the beginning and the end of the school years (pg.2). The parental consent forms could impact the number of students participating or dropping during the proposed project.

Reader's Score: 8

2. (2) **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 clearly indicated the key components of the proposed project in the theoretical framework (pg.15). The applicant clearly aligned the key components to the objectives and desired outcomes. The applicant provided thresholds of the fidelity of implementation as low if fidelity is under 60%, moderate if it ranges between 60-70% and high if it is over 70% (pg.30).

Weaknesses:

The applicant did not clearly indicate the mediators of the proposed project (pg.26), self-regulatory behavior, and IBM core ingredients (pg.16).

Reader's Score: 4

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

Strengths:

The applicant stated the validity and reliability of the information to be collected such as district administrative data and student data (e.g., attendance, state assessment test scores, course credits, and enrollment indicators) (pg.28). The applicant provided a timeline including the measure, the research question, the data source, and the time of the year for the data collection. Information on the validity of each survey was provided (pg.Exhibit I-4). For example, "Interpretation of difficulty as importance and impossibility as measured by two orthogonal 6-item scales and validated by Fisher and Oyserman, 2017" and "Social and emotional competencies as measured by the 15-item scale and validated by Bailey and Halloran, 2014" (pg. Exhibit I-4).

Weaknesses:

The applicant indicated that course grades (pg.28) would be used to measure academic outcomes (pg.28); however, grades are unstable measures affecting the results of the relevant outcomes.

Sub

Reader's Score: 4

Status: Submitted

Last Updated: 08/17/2020 06:42 PM