

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

Status: Submitted

Last Updated: 08/15/2013 12:19 PM

Technical Review Coversheet

Applicant: Teachers College, Columbia University (U411B130043)

Reader #1: *****

	Points Possible	Points Scored
Questions		
Summary Statement		
Summary Statement		
1. Summary Statement	0	0
Selection Criteria		
Significance		
1. Significance	20	18
Quality of Project Design		
1. Project Design	20	17
Quality of the Management Plan		
1. Management Plan	20	19
Quality of Project Personnel		
1. Personnel	10	8
Quality of the Project Evaluation		
1. Project Evaluation	30	0
Priority Questions		
Competitive Preference Priority 1		
Competitive Preference Priority 1		
1. CPP 1	1	0
Competitive Preference Priority 2		
Competitive Preference Priority 2		
1. CPP 2	2	0
Invitational Priority		
Invitational Priority		
1. Invitational Priority	0	0
Total	103	62

Technical Review Form

Panel #3 - i3 Validation - 3: 84.411B

Reader #1: *****

Applicant: Teachers College, Columbia University (U411B130043)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional):

General:

STEM Early College Expansion Partnership Project (SECEP), from the Teacher's College in Columbia University addresses Absolute Priority 2, improving science, technology, engineering and mathematics (STEM) education in two states. The project is to meet Competitive preference priority 3--supporting novice i3 applicants because the Teachers College has not received a previous grant under the i3 program. The SECEP proposal clearly addresses these priorities within the project. The SECEP's "Barriers and Solution" page e10, sums up succinctly the rationale for both the STEM problems to be solved and the outcomes to be expected for two underrepresented target groups in education. The project objectives and expected outcomes are reasonable and focused on success. The partnerships identified are varied with careers, another university, and five school districts. Four districts are in one Midwestern state and one in an Eastern state. These diverse locations could provide evaluative data directing how the project could be adjusted for different national locales.

Reader's Score: 0

Selection Criteria - Significance

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

(1) The likelihood that the project will have the estimated impact, including the extent to which the applicant demonstrates that unmet demand for the proposed project or the proposed services will enable the applicant to reach the proposed level of scale.

(2) The feasibility of national expansion if favorable outcomes are achieved.

Strengths:

Project SECEP addresses the unmet demand and needed services through:

- The Early College High School (ECHS) model for professional development strategies which are

documented to increase the rate of success in underrepresented and high-need students in college preparatory programs. In ten years' time, over 100,000 students have been served with ECHS.

- Targeted STEM professional development and coaching for middle and high school teachers.
- Fulfilling a demand for United States' students to enter and be competitive in the global workforce.
- Identifying the same rationale for STEM educational change in their two partnership states. Both states have launched initiatives that align with the project goals.
- Documenting the demand of college and career readiness and research-based data for supportive details.
- Targeting low income students and students with below level proficiency skills.
- Defining the critical need for effective and confident STEM teachers working together with colleges.

Feasibility of future scaling the project has:

- an existing, researched-based platform, the ECHS national network to scale the project.
- an established network learning exchanges established to share best practices.
- research-based data included which demonstrates the positive impact of high-need students and success in college prep classes across many states.

Weaknesses:

Estimated impact of the SECEP Project:

- more information is needed regarding the number of high-need middle and high school students in each district as well as their current rate of success in order to assist in determining the significance of the project.
- should address the need and number of STEM trained teachers and STEM "to be" trained educators in each district.

Reader's Score: 18

Selection Criteria - Quality of Project Design

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

(1) The extent to which the proposed project addresses the national need and priorities the applicant is seeking to meet.

(2) The extent to which the proposed project has a clear set of goals and an explicit plan or actions to achieve the goals, including identification of any elements of the project logic model that require further testing or development.

(3) The extent to which the applicant will use grant funds to address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale proposed in the application.

Strengths:

The Project application addresses an evidence-based design that has ongoing testing with a rigorous academic program, aligned standards, and ongoing reformation of current secondary school and college cultures. Research data provided indicates the success of low income students and college graduation achievement (Page e22). The five school districts chosen will provide more opportunities for ongoing evidence-based data.

The proposed project goals are clearly identified (Pages e23-25) with some broad objectives, activities, and outcomes. The three year instructional leadership, coaching, and trainings have a specific focus--to improve low income students' college readiness and success.

Weaknesses:

The external professional development of teachers in STEM instruction may require a partnership with the teacher group and central office representatives. Both could undermine the availability of teacher time and application of new field practices.

The goals address the barriers stated at the beginning of the proposal, but there is little emphasis on females in STEM even though it was identified first as a target audience overall as stated on Page e10.

There is a lack of specific examples of what the project will present to teachers in the professional development training.

Reader's Score: 17

Selection Criteria - Quality of the Management Plan

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

(1) The extent to which the management plan articulates key responsibilities and well-defined objectives, including the timelines and milestones for completion of major project activities, the metrics that will be used to assess progress on an ongoing basis, and annual performance targets the applicant

will use to monitor whether the project is achieving its goals.

(2) The clarity and coherence of the applicant's multi-year financial and operating model and accompanying plan to operate the project at a national or regional (as defined in the Validation Notice Inviting Applications) during the project period.

Strengths:

Since the strength of this SECEP Project is a collaboration between secondary schools and colleges- the community of practitioners are from the schools, districts, colleges and partners. The use of webinars and extranet provides opportunities for LEAs to learn more about STEM ECHS expansion and their platform of available services. The three overarching goals and well-defined objectives and activities will help sustain the reforms beyond the grant years. Page e28 addresses clearly the ongoing improvement of the project.

A very important aspect of this project is the identification and implementation of new STEM policies that destroy the barriers to sustainability. This project helps build a STEM ECHS with the same targets as ECHS. The outcomes are clearly stated for the five year grant with specific parameters. The management structure reflects the expertise of all three organizations' past experience with other educational reform projects.

Weaknesses:

It would be important to document more about how change will be addressed and responded to within identified school districts and how responsive the project management will be with other interested districts in using the STEM ECHS design during and after the model's grant years. Mentoring teachers was identified as being a possible "threat" to be overcome, and it and other identified ongoing issues will need to be addressed. It would be beneficial to include information about who will be doing the troubleshooting for the project and how it will be administered.

Reader's Score: 19

Selection Criteria - Quality of Project Personnel

1. In determining the quality and personnel for the proposed project, the Secretary considers the following factor:

(1) The adequacy of the project's staffing plan, particularly for the first year of the project, including the identification of the project director and, in the case of projects with unfilled key personnel positions at the beginning of the project, that the staffing plan identifies how critical work will proceed.

(2) The qualifications and experience of the project director and other key project personnel and the extent to which they have the expertise to accomplish the proposed tasks.

Strengths:

The Project director's role, responsibilities and leadership are identified in the management plan on Page e32. The leadership teams have been planned for and identified for each partner. All qualifications for key personnel are documented in the Appendix F. The project plans to be fully staffed in year 1 of the grant.

The structure of the management team is well-developed and the associates have specific responsibilities with oversight. The reporting chart on Page e 34 demonstrates the detailed thought that has directed this project application. This type of reporting encourages ongoing assessment of data and discussion. The timelines and milestones for the Project's stated model and plan demonstrate the level of detail necessary for a well-run and informed team on a multi-year and multi-state project.

Weaknesses:

The scope and size of this grant will need constant oversight by "full time" staff members that provide information to the project staff on an ongoing basis for the "comprehensive professional development and coaching." (Referencing pages 21-22) There should be evidence of who this staff would be.

Reader's Score: 8

Selection Criteria - Quality of the Project Evaluation

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

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

(2) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse Evidence Standards without reservations.

(3) The extent to which the evaluation will study the project at the proposed level of scale, including, where appropriate, generating information about potential differential effectiveness of the project in diverse settings and for diverse student population groups.

(4) The extent to which the evaluation plan includes a clear and credible analysis plan, including a proposed sample size and minimum detectable effect size that aligns with the expected project impact, and an analytic approach for addressing the research questions.

(5) The extent to which the evaluation plan clearly articulates the key components and outcomes of the project, as well as a measureable threshold for acceptable implementation.

Strengths:

N/A, scored by another reviewer

Weaknesses:

N/A, scored by another reviewer

Reader's Score: 0

Priority Questions

Competitive Preference Priority 1 - Competitive Preference Priority 1

- 1. Under this priority, we provide funding to projects that address one of the following areas:**
 - (a) Substantially improving student outcomes without commensurately increasing per-student costs.**
 - (b) Maintaining student outcomes while substantially decreasing per-student costs.**
 - (c) Substantially improving student outcomes while substantially decreasing per-student costs.**

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Competitive Preference Priority 2 - Competitive Preference Priority 2

- 1. Under this priority, we provide funding to projects that enable broad adoption of effective practices. An application proposing to address this priority must, as part of its application:**
 - (a) Identify the practice or practices that the application proposes to prepare for broad adoption, including formalizing the practice (i.e., establish and define key elements of the practice), codifying (i.e., develop a guide or tools to support the dissemination of information on key elements of the practice), and explaining why there is a need for formalization and codification.**
 - (b) Evaluate different forms of the practice to identify the critical components of the practice that are crucial to its success and sustainability, including the adaptability of critical components to different teaching and learning environments and to diverse learners.**
 - (c) Provide a coherent and comprehensive plan for developing materials, training, toolkits, or other supports that other entities would need in order to implement the practice effectively and with fidelity.**
 - (d) Commit to assessing the replicability and adaptability of the practice by supporting the implementation of the practice in a variety of locations during the project period using the materials,**

training, toolkits, or other supports that were developed for the i3-supported practice.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

Invitational Priority - Invitational Priority

1. The Secretary encourages applicants to propose projects that incorporate high-quality early learning components that are aligned with the early learning, elementary and secondary education systems in participating schools and help ensure that all children, especially those from low-income families, enter kindergarten ready to succeed.

General:

N/A

Reader's Score: 0

Status: Submitted

Last Updated: 08/15/2013 12:19 PM

Status: Submitted

Last Updated: 08/12/2013 09:59 AM

Technical Review Coversheet

Applicant: Teachers College, Columbia University (U411B130043)

Reader #2: *****

	Points Possible	Points Scored
Questions		
Summary Statement		
Summary Statement		
1. Summary Statement	0	0
Selection Criteria		
Significance		
1. Significance	20	18
Quality of Project Design		
1. Project Design	20	19
Quality of the Management Plan		
1. Management Plan	20	18
Quality of Project Personnel		
1. Personnel	10	9
Quality of the Project Evaluation		
1. Project Evaluation	30	0
Priority Questions		
Competitive Preference Priority 1		
Competitive Preference Priority 1		
1. CPP 1	1	0
Competitive Preference Priority 2		
Competitive Preference Priority 2		
1. CPP 2	2	0
Invitational Priority		
Invitational Priority		
1. Invitational Priority	0	0
Total	103	64

Technical Review Form

Panel #3 - i3 Validation - 3: 84.411B

Reader #2: *****

Applicant: Teachers College, Columbia University (U411B130043)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional):

General:

An organization called the STEM Early College Expansion Partnership (SECEP) will work to increase the number of girls and English language learners in science and math classes at the college level by using an Early College High School model. This proposal is well written and presented. In many places throughout the document, statements are backed up by data.

Reader's Score: 0

Selection Criteria - Significance

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

(1) The likelihood that the project will have the estimated impact, including the extent to which the applicant demonstrates that unmet demand for the proposed project or the proposed services will enable the applicant to reach the proposed level of scale.

(2) The feasibility of national expansion if favorable outcomes are achieved.

Strengths:

The suggested project is clearly explained. The applicant cites current statistics regarding job needs within the country, current enrollment in post-secondary STEM classes, and demographics of current STEM majors. Additionally, facts are given regarding the success of Early College High Schools (ECHS) in improving the performance of underrepresented groups in college prep coursework. Using one of the partners, ECHS national network, the applicant will be able to impact 250 schools across 28 states if the project is successful (p. e20). This is one example of how the project could be scaled-up in the future. The applicant also explains why school districts in Connecticut and Michigan have been chosen to participate in the program, and it is interesting that the partnerships include urban and rural settings.

Weaknesses:

Jobs for the Future (JFF) is mentioned frequently in this section without data indicating its success. A more thorough description of Middle College National Consortium (MCNC) and their capacity to aid in scaling up the project is missing. Finally, information about students in the partner district in Connecticut is given, but similar information from the Michigan districts is lacking.

Reader's Score: 18

Selection Criteria - Quality of Project Design

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

- (1) The extent to which the proposed project addresses the national need and priorities the applicant is seeking to meet.
- (2) The extent to which the proposed project has a clear set of goals and an explicit plan or actions to achieve the goals, including identification of any elements of the project logic model that require further testing or development.
- (3) The extent to which the applicant will use grant funds to address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale proposed in the application.

Strengths:

The proposed project addresses two national needs: improving STEM instruction and increasing success of underrepresented groups in STEM college preparatory courses. The applicant is focused and clear when describing the goals. Including specific objects for each goal increases clarity. Specific, measureable outcomes of the proposed program, such as a 10% point higher rate of graduation than comparison students for example, are given. A few barriers are identified and explained thoroughly with clarity.

Weaknesses:

On page e22, "comprehensive wraparound student supports" are mentioned as one of four ECHS design elements, but examples of these are not provided. It also is not clear what steps have been taken, or will be taken, to ensure that teachers and principals at the school level are invested in this project.

Reader's Score: 19

Selection Criteria - Quality of the Management Plan

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

- (1) The extent to which the management plan articulates key responsibilities and well-defined objectives, including the timelines and milestones for completion of major project activities, the metrics that will be used to assess progress on an ongoing basis, and annual performance targets the applicant will use to monitor whether the project is achieving its goals.
- (2) The clarity and coherence of the applicant's multi-year financial and operating model and accompanying plan to operate the project at a national or regional (as defined in the Validation Notice Inviting Applications) during the project period.

Strengths:

The management plan is clearly articulated narratively and graphically. All stakeholders will use software (Basecamp) to keep the proposed project on track, and there is a plan for increasing the collaboration between participating high schools and colleges. The timeline and milestones are clearly explained including parties that will be involved in each step. The financial model is explained clearly. Finally, the plan highlights the strengths and vast experiences of each member of the management team.

Weaknesses:

The applicant does not explain if the school districts are creating new schools that will follow the ECHS model or if the model will be used in existing schools. There is no indication of how or when teachers will be recruited for the professional development and coaching.

Reader's Score: 18

Selection Criteria - Quality of Project Personnel

1. In determining the quality and personnel for the proposed project, the Secretary considers the following factor:

(1) The adequacy of the project's staffing plan, particularly for the first year of the project, including the identification of the project director and, in the case of projects with unfilled key personnel positions at the beginning of the project, that the staffing plan identifies how critical work will proceed.

(2) The qualifications and experience of the project director and other key project personnel and the extent to which they have the expertise to accomplish the proposed tasks.

Strengths:

The proposed project will be housed in an existing organization that has a history of success managing projects of this scale. Each of the key players, including the superintendents of the districts that will be partnering in the project, are introduced, and their expertise is highlighted.

Weaknesses:

On page e121, the identified Project Director is giving 26% of her time to the project. This seems inadequate for the large scope of this project despite the number of people working under her.

Reader's Score: 9

Selection Criteria - Quality of the Project Evaluation

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

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

(2) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse Evidence Standards without reservations.

(3) The extent to which the evaluation will study the project at the proposed level of scale, including, where appropriate, generating information about potential differential effectiveness of the project in diverse settings and for diverse student population groups.

(4) The extent to which the evaluation plan includes a clear and credible analysis plan, including a proposed sample size and minimum detectable effect size that aligns with the expected project impact, and an analytic approach for addressing the research questions.

(5) The extent to which the evaluation plan clearly articulates the key components and outcomes of the project, as well as a measureable threshold for acceptable implementation.

Strengths:

N/A, scored by another reviewer

Weaknesses:

N/A, scored by another reviewer

Reader's Score: 0

Priority Questions

Competitive Preference Priority 1 - Competitive Preference Priority 1

1. Under this priority, we provide funding to projects that address one of the following areas:
 - (a) Substantially improving student outcomes without commensurately increasing per-student costs.
 - (b) Maintaining student outcomes while substantially decreasing per-student costs.
 - (c) Substantially improving student outcomes while substantially decreasing per-student costs.

Strengths:

Not addressed

Weaknesses:

Not addressed

Reader's Score: 0

Competitive Preference Priority 2 - Competitive Preference Priority 2

1. Under this priority, we provide funding to projects that enable broad adoption of effective practices. An application proposing to address this priority must, as part of its application:
 - (a) Identify the practice or practices that the application proposes to prepare for broad adoption, including formalizing the practice (i.e., establish and define key elements of the practice), codifying (i.e., develop a guide or tools to support the dissemination of information on key elements of the practice), and explaining why there is a need for formalization and codification.
 - (b) Evaluate different forms of the practice to identify the critical components of the practice that are crucial to its success and sustainability, including the adaptability of critical components to different teaching and learning environments and to diverse learners.
 - (c) Provide a coherent and comprehensive plan for developing materials, training, toolkits, or other supports that other entities would need in order to implement the practice effectively and with fidelity.
 - (d) Commit to assessing the replicability and adaptability of the practice by supporting the implementation of the practice in a variety of locations during the project period using the materials, training, toolkits, or other supports that were developed for the i3-supported practice.

Strengths:

Not addressed

Weaknesses:

Not addressed

Reader's Score: 0

Invitational Priority - Invitational Priority

1. The Secretary encourages applicants to propose projects that incorporate high-quality early learning components that are aligned with the early learning, elementary and secondary education systems in participating schools and help ensure that all children, especially those from low-income families, enter kindergarten ready to succeed.

General:

Not addressed

Reader's Score: 0

Status: Submitted

Last Updated: 08/12/2013 09:59 AM

Status: Submitted

Last Updated: 08/16/2013 02:40 PM

Technical Review Coversheet

Applicant: Teachers College, Columbia University (U411B130043)

Reader #3: *****

	Points Possible	Points Scored
Questions		
Summary Statement		
Summary Statement		
1. Summary Statement	0	
Selection Criteria		
Significance		
1. Significance	20	19
Quality of Project Design		
1. Project Design	20	19
Quality of the Management Plan		
1. Management Plan	20	19
Quality of Project Personnel		
1. Personnel	10	8
Quality of the Project Evaluation		
1. Project Evaluation	30	0
Priority Questions		
Competitive Preference Priority 1		
Competitive Preference Priority 1		
1. CPP 1	1	0
Competitive Preference Priority 2		
Competitive Preference Priority 2		
1. CPP 2	2	0
Invitational Priority		
Invitational Priority		
1. Invitational Priority	0	
Total	103	65

Technical Review Form

Panel #3 - i3 Validation - 3: 84.411B

Reader #3: *****

Applicant: Teachers College, Columbia University (U411B130043)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional):

General:

Reader's Score:

Selection Criteria - Significance

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

(1) The likelihood that the project will have the estimated impact, including the extent to which the applicant demonstrates that unmet demand for the proposed project or the proposed services will enable the applicant to reach the proposed level of scale.

(2) The feasibility of national expansion if favorable outcomes are achieved.

Strengths:

This is a very well written proposal and the applicant adequately demonstrates that they have the capacity to reach the proposed level of scale through strong partnerships with three well know organizations. The Middle College National Consortium (MCNC) appears to have the capacity and willingness to lead the expansion of the proposed model in the states of Michigan and Connecticut.

The applicant proposes to impact a significant number of students (22,000) and increase their graduation rate by at least 10 percentage points. In addition, the applicant proposes that at least 60% of the participating high school students will complete two STEM courses before leaving high school (page e13).

Weaknesses:

The applicant states on page e20 that MCNC is positioned to scale the project. The applicant does not provide information about MCNC and its experience with scaling similar projects. Providing a brief description of MCNC and examples of their experience with scale up models would give the reader a better sense of their capacity to carry out this task.

Reader's Score: 19

Selection Criteria - Quality of Project Design

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

(1) The extent to which the proposed project addresses the national need and priorities the applicant is seeking to meet.

(2) The extent to which the proposed project has a clear set of goals and an explicit plan or actions to achieve the goals, including identification of any elements of the project logic model that require further testing or development.

(3) The extent to which the applicant will use grant funds to address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale proposed in the application.

Strengths:

The applicant addresses all aspects of Absolute Priority 2 Improving STEM and Competitive Preference Priority 3-Supporting Novice i3 Applicants.

The proposed project has a clear set of goals and an explicit and thorough action plan to achieve these goals. The applicant provides a list of reasonable outcomes that they anticipate to achieve on page e29.

On pages e29 and e30, the applicant provides an explanation for why the SECEP partners have not yet expanded STEM-ECHS strategies at a broader scale due to resource and policy constraints. If successfully funded, the applicant will have the financial resources in place to expand and test STEM-ECHS strategies in two different states with similar groups of underserved students. The applicant provides evidence on page e30 that two of its partners JFF (Jobs for the Future) and the Middle College National Consortium (MCNC) have experience in state capacity building and will utilize this experience to address the policy constraints in Michigan and Connecticut.

Weaknesses:

The application lacks specific examples of the types of professional development activities that participating teachers will be subjected too and examples of comprehensive wraparound student supports, despite there being sufficient data that the STEM-MCHS has been successful with previous implementation sites (see page e22).

Reader's Score: 19

Selection Criteria - Quality of the Management Plan

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

(1) The extent to which the management plan articulates key responsibilities and well-defined objectives, including the timelines and milestones for completion of major project activities, the metrics that will be used to assess progress on an ongoing basis, and annual performance targets the applicant will use to monitor whether the project is achieving its goals.

(2) The clarity and coherence of the applicant's multi-year financial and operating model and accompanying plan to operate the project at a national or regional (as defined in the Validation Notice Inviting Applications) during the project period.

Strengths:

The applicant's management plan articulates the responsibilities, timelines and milestones to be completed by key personnel on pages e35 – e38. This detailed management plan will make it easy to assess the project's progress on its goals and objectives.

The applicant proposes to build data and assessment systems that track student progress to college readiness to support

continuous improvements to the project (see page e28).

The applicant articulates how they will address the need to expand the project to additional states on page e29. The applicant's plan to provide design briefs and case studies focused on critical topics of implementation and sustainability will be useful for decision makers who want to adopt the STEM ECHS model.

Weaknesses:

The applicant does not explain how teachers will be recruited to participate in the project.

Reader's Score: 19

Selection Criteria - Quality of Project Personnel

1. In determining the quality and personnel for the proposed project, the Secretary considers the following factor:

(1) The adequacy of the project's staffing plan, particularly for the first year of the project, including the identification of the project director and, in the case of projects with unfilled key personnel positions at the beginning of the project, that the staffing plan identifies how critical work will proceed.

(2) The qualifications and experience of the project director and other key project personnel and the extent to which they have the expertise to accomplish the proposed tasks.

Strengths:

The applicant has assembled a highly qualified project team with the documented experience needed to manage a project of this scope and magnitude.

Weaknesses:

The applicant proposes to conduct the activities for this project without any full-time staff positions. While those on staff are highly qualified and experienced, a project of this size, duration, and importance may warrant a full-time project director to oversee the complexity of this multi-year, multi-state project.

Reader's Score: 8

Selection Criteria - Quality of the Project Evaluation

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

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

(2) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse Evidence Standards without reservations.

(3) The extent to which the evaluation will study the project at the proposed level of scale, including, where appropriate, generating information about potential differential effectiveness of the project in diverse settings and for diverse student population groups.

(4) The extent to which the evaluation plan includes a clear and credible analysis plan, including a proposed sample size and minimum detectable effect size that aligns with the expected project impact, and an analytic approach for addressing the research questions.

(5) The extent to which the evaluation plan clearly articulates the key components and outcomes of the project, as well as a measureable threshold for acceptable implementation.

Strengths:

NA

Weaknesses:

NA

Reader's Score: 0

Priority Questions

Competitive Preference Priority 1 - Competitive Preference Priority 1

1. Under this priority, we provide funding to projects that address one of the following areas:
 - (a) Substantially improving student outcomes without commensurately increasing per-student costs.
 - (b) Maintaining student outcomes while substantially decreasing per-student costs.
 - (c) Substantially improving student outcomes while substantially decreasing per-student costs.

Strengths:

Weaknesses:

Reader's Score: 0

Competitive Preference Priority 2 - Competitive Preference Priority 2

1. Under this priority, we provide funding to projects that enable broad adoption of effective practices. An application proposing to address this priority must, as part of its application:
 - (a) Identify the practice or practices that the application proposes to prepare for broad adoption, including formalizing the practice (i.e., establish and define key elements of the practice), codifying (i.e., develop a guide or tools to support the dissemination of information on key elements of the practice), and explaining why there is a need for formalization and codification.
 - (b) Evaluate different forms of the practice to identify the critical components of the practice that are crucial to its success and sustainability, including the adaptability of critical components to different teaching and learning environments and to diverse learners.
 - (c) Provide a coherent and comprehensive plan for developing materials, training, toolkits, or other

supports that other entities would need in order to implement the practice effectively and with fidelity.

(d) Commit to assessing the replicability and adaptability of the practice by supporting the implementation of the practice in a variety of locations during the project period using the materials, training, toolkits, or other supports that were developed for the i3-supported practice.

Strengths:

Weaknesses:

Reader's Score: 0

Invitational Priority - Invitational Priority

- 1. The Secretary encourages applicants to propose projects that incorporate high-quality early learning components that are aligned with the early learning, elementary and secondary education systems in participating schools and help ensure that all children, especially those from low-income families, enter kindergarten ready to succeed.**

General:

Reader's Score:

Status: Submitted
Last Updated: 08/16/2013 02:40 PM

Status: Submitted

Last Updated: 08/13/2013 10:52 AM

Technical Review Coversheet

Applicant: Teachers College, Columbia University (U411B130043)

Reader #4: *****

	Points Possible	Points Scored
Questions		
Summary Statement		
Summary Statement		
1. Summary Statement	0	0
Selection Criteria		
Significance		
1. Significance	20	0
Quality of Project Design		
1. Project Design	20	0
Quality of the Management Plan		
1. Management Plan	20	0
Quality of Project Personnel		
1. Personnel	10	0
Quality of the Project Evaluation		
1. Project Evaluation	30	18
Priority Questions		
Competitive Preference Priority 1		
Competitive Preference Priority 1		
1. CPP 1	1	0
Competitive Preference Priority 2		
Competitive Preference Priority 2		
1. CPP 2	2	0
Invitational Priority		
Invitational Priority		
1. Invitational Priority	0	0
Total	103	18

Technical Review Form

Panel #3 - i3 Validation - 3: 84.411B

Reader #4: *****

Applicant: Teachers College, Columbia University (U411B130043)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional):

General:

NA scored by another reviewer

Reader's Score: 0

Selection Criteria - Significance

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

(1) The likelihood that the project will have the estimated impact, including the extent to which the applicant demonstrates that unmet demand for the proposed project or the proposed services will enable the applicant to reach the proposed level of scale.

(2) The feasibility of national expansion if favorable outcomes are achieved.

Strengths:

NA scored by another reviewer

Weaknesses:

NA scored by another reviewer

Reader's Score: 0

Selection Criteria - Quality of Project Design

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

(1) The extent to which the proposed project addresses the national need and priorities the applicant is seeking to meet.

(2) The extent to which the proposed project has a clear set of goals and an explicit plan or actions to achieve the goals, including identification of any elements of the project logic model that require further testing or development.

(3) The extent to which the applicant will use grant funds to address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale proposed in the application.

Strengths:

NA scored by another reviewer

Weaknesses:

NA scored by another reviewer

Reader's Score: 0

Selection Criteria - Quality of the Management Plan

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

(1) The extent to which the management plan articulates key responsibilities and well-defined objectives, including the timelines and milestones for completion of major project activities, the metrics that will be used to assess progress on an ongoing basis, and annual performance targets the applicant will use to monitor whether the project is achieving its goals.

(2) The clarity and coherence of the applicant's multi-year financial and operating model and accompanying plan to operate the project at a national or regional (as defined in the Validation Notice Inviting Applications) during the project period.

Strengths:

NA scored by another reviewer

Weaknesses:

NA scored by another reviewer

Reader's Score: 0

Selection Criteria - Quality of Project Personnel

1. In determining the quality and personnel for the proposed project, the Secretary considers the following factor:

(1) The adequacy of the project's staffing plan, particularly for the first year of the project, including the identification of the project director and, in the case of projects with unfilled key personnel positions at the beginning of the project, that the staffing plan identifies how critical work will proceed.

(2) The qualifications and experience of the project director and other key project personnel and the extent to which they have the expertise to accomplish the proposed tasks.

Strengths:

NA scored by another reviewer

Weaknesses:

NA scored by another reviewer

Selection Criteria - Quality of the Project Evaluation

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

- (1) The clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.
- (2) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse Evidence Standards without reservations.
- (3) The extent to which the evaluation will study the project at the proposed level of scale, including, where appropriate, generating information about potential differential effectiveness of the project in diverse settings and for diverse student population groups.
- (4) The extent to which the evaluation plan includes a clear and credible analysis plan, including a proposed sample size and minimum detectable effect size that aligns with the expected project impact, and an analytic approach for addressing the research questions.
- (5) The extent to which the evaluation plan clearly articulates the key components and outcomes of the project, as well as a measureable threshold for acceptable implementation.

Strengths:

The proposal includes a well specified logic model that provides specific outcomes for educators and students (p. 9).

The budget seems adequate for the outlined tasks and the evaluation staff seems well-qualified (p. 35).

The evaluation plan specifies a quasi-experimental design (p. 28-29) which should provide data for conclusions to be made about the impact of the project on student outcomes.

The applicant provides information regarding the anticipated sample size. This will allow the evaluation with a sufficient number of schools and students to provide adequate power for detecting effect sizes (p. 29).

The applicant clearly specifies a set of evaluation questions that will focus the evaluation on collecting important formative and summative information (p. 28).

The applicant plans to use HLM to analyze the data for the impact evaluation (p. 31). HLM provides a strong methodology given the evaluation design and questions. The data for inclusion in the model are clearly identified and described on page 31.

The evaluation plan includes a rationale and a reasonable strategy for handling missing data in the impact phase of the evaluation (p. 31).

The evaluation plan identifies threats to validity and discusses a reasonable approach for addressing these (p. 32).

Weaknesses:

It is unclear how the applicant will provide incentives to ensure school participation for matching schools or how they will handle potential attrition of schools (p. 29).

The applicant discusses using a student survey (p. 30 and p. 31). It would strengthen the application if there is a more detailed description of the items on these surveys, how they will cover the content, and how students will be recruited for

the surveys (e.g., incentives).

It is unclear how student survey data will be analyzed and if these data will be included in the HLM analysis (p. 31). If so, a low survey response rate and the associated missing data might be problematic.

The evaluation specifies a series of qualitative (e.g., observations, interviews) and quantitative (e.g., surveys) data collection efforts for the implementation evaluation (p. 32-34). There is no detail provided on how these data will be analyzed.

With regard to the observation data, it is unclear who will conduct the observations, if a protocol will be used, and what will be observed. It would also strengthen the evaluation if there was a discussion regarding any training the observers will receive before conducting the observation and how reliability will be established.

It is unclear how and the frequency of which the evaluation team will provide important formative information to the project staff. This information is critical to inform modifications to the intervention, identify barriers to implementation, and to monitor progress to the final outcomes.

Reader's Score: 18

Priority Questions

Competitive Preference Priority 1 - Competitive Preference Priority 1

- 1. Under this priority, we provide funding to projects that address one of the following areas:**
 - (a) Substantially improving student outcomes without commensurately increasing per-student costs.**
 - (b) Maintaining student outcomes while substantially decreasing per-student costs.**
 - (c) Substantially improving student outcomes while substantially decreasing per-student costs.**

Strengths:

NA scored by another reviewer

Weaknesses:

NA scored by another reviewer

Reader's Score: 0

Competitive Preference Priority 2 - Competitive Preference Priority 2

- 1. Under this priority, we provide funding to projects that enable broad adoption of effective practices. An application proposing to address this priority must, as part of its application:**
 - (a) Identify the practice or practices that the application proposes to prepare for broad adoption, including formalizing the practice (i.e., establish and define key elements of the practice), codifying (i.e., develop a guide or tools to support the dissemination of information on key elements of the practice), and explaining why there is a need for formalization and codification.**
 - (b) Evaluate different forms of the practice to identify the critical components of the practice that are crucial to its success and sustainability, including the adaptability of critical components to different teaching and learning environments and to diverse learners.**

(c) Provide a coherent and comprehensive plan for developing materials, training, toolkits, or other supports that other entities would need in order to implement the practice effectively and with fidelity.

(d) Commit to assessing the replicability and adaptability of the practice by supporting the implementation of the practice in a variety of locations during the project period using the materials, training, toolkits, or other supports that were developed for the i3-supported practice.

Strengths:

NA scored by another reviewer

Weaknesses:

NA scored by another reviewer

Reader's Score: 0

Invitational Priority - Invitational Priority

- 1. The Secretary encourages applicants to propose projects that incorporate high-quality early learning components that are aligned with the early learning, elementary and secondary education systems in participating schools and help ensure that all children, especially those from low-income families, enter kindergarten ready to succeed.**

General:

NA scored by another reviewer

Reader's Score: 0

Status: Submitted

Last Updated: 08/13/2013 10:52 AM

Status: Submitted

Last Updated: 08/15/2013 10:47 AM

Technical Review Coversheet

Applicant: Teachers College, Columbia University (U411B130043)

Reader #5: *****

	Points Possible	Points Scored
Questions		
Summary Statement		
Summary Statement		
1. Summary Statement	0	0
Selection Criteria		
Significance		
1. Significance	20	0
Quality of Project Design		
1. Project Design	20	0
Quality of the Management Plan		
1. Management Plan	20	0
Quality of Project Personnel		
1. Personnel	10	0
Quality of the Project Evaluation		
1. Project Evaluation	30	22
Priority Questions		
Competitive Preference Priority 1		
Competitive Preference Priority 1		
1. CPP 1	1	
Competitive Preference Priority 2		
Competitive Preference Priority 2		
1. CPP 2	2	
Invitational Priority		
Invitational Priority		
1. Invitational Priority	0	
Total	103	22

Technical Review Form

Panel #3 - i3 Validation - 3: 84.411B

Reader #5: *****

Applicant: Teachers College, Columbia University (U411B130043)

Questions

Summary Statement - Summary Statement

1. Summary Statement (Optional):

General:

N/A, scored by another reviewer

Reader's Score: 0

Selection Criteria - Significance

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

(1) The likelihood that the project will have the estimated impact, including the extent to which the applicant demonstrates that unmet demand for the proposed project or the proposed services will enable the applicant to reach the proposed level of scale.

(2) The feasibility of national expansion if favorable outcomes are achieved.

Strengths:

N/A, scored by another reviewer

Weaknesses:

N/A, scored by another reviewer

Reader's Score: 0

Selection Criteria - Quality of Project Design

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

(1) The extent to which the proposed project addresses the national need and priorities the applicant is seeking to meet.

(2) The extent to which the proposed project has a clear set of goals and an explicit plan or actions to achieve the goals, including identification of any elements of the project logic model that require further testing or development.

(3) The extent to which the applicant will use grant funds to address a particular barrier or barriers that prevented the applicant, in the past, from reaching the level of scale proposed in the application.

Strengths:

N/A, scored by another reviewer

Weaknesses:

N/A, scored by another reviewer

Reader's Score: 0

Selection Criteria - Quality of the Management Plan

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

(1) The extent to which the management plan articulates key responsibilities and well-defined objectives, including the timelines and milestones for completion of major project activities, the metrics that will be used to assess progress on an ongoing basis, and annual performance targets the applicant will use to monitor whether the project is achieving its goals.

(2) The clarity and coherence of the applicant's multi-year financial and operating model and accompanying plan to operate the project at a national or regional (as defined in the Validation Notice Inviting Applications) during the project period.

Strengths:

N/A, scored by another reviewer

Weaknesses:

N/A, scored by another reviewer

Reader's Score: 0

Selection Criteria - Quality of Project Personnel

1. In determining the quality and personnel for the proposed project, the Secretary considers the following factor:

(1) The adequacy of the project's staffing plan, particularly for the first year of the project, including the identification of the project director and, in the case of projects with unfilled key personnel positions at the beginning of the project, that the staffing plan identifies how critical work will proceed.

(2) The qualifications and experience of the project director and other key project personnel and the extent to which they have the expertise to accomplish the proposed tasks.

Strengths:

N/A, scored by another reviewer

Weaknesses:

N/A, scored by another reviewer

Selection Criteria - Quality of the Project Evaluation

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

- (1) The clarity and importance of the key questions to be addressed by the project evaluation, and the appropriateness of the methods for how each question will be addressed.
- (2) The extent to which the methods of evaluation will, if well implemented, produce evidence about the project's effectiveness that would meet the What Works Clearinghouse Evidence Standards without reservations.
- (3) The extent to which the evaluation will study the project at the proposed level of scale, including, where appropriate, generating information about potential differential effectiveness of the project in diverse settings and for diverse student population groups.
- (4) The extent to which the evaluation plan includes a clear and credible analysis plan, including a proposed sample size and minimum detectable effect size that aligns with the expected project impact, and an analytic approach for addressing the research questions.
- (5) The extent to which the evaluation plan clearly articulates the key components and outcomes of the project, as well as a measureable threshold for acceptable implementation.

Strengths:

The research design is thorough. As befitting a robust research and evaluation plan, both formative and summative evaluations are proposed, along with program evaluation/success measures. More than enough resources have been set aside to conduct the study outlined here. The applicant provides a rationale for the present research in the context of past studies and existing gaps. The research team has appropriate experience with earlier similar research, as exemplified in the clarity and detail provided in the research plan.

The four research questions on page 28 are appropriate. The study has clear, measureable, realistic, sound hypotheses about the outcomes to be expected. The methodology is robust enough to provide the kind of high-quality data and feedback the applicant seeks to obtain.

The researchers have thought out how to have an appropriate scale and how to evaluate impact among differing populations. The variables of interest are both teacher-level and student level and are relevant to the larger body of literature in these areas. Both qualitative and quantitative approaches are being used appropriately and at student, teacher, and school level. The use of hierarchical linear modeling is to be commended.

The applicant provides a sound rationale for an appropriate sample size and effect size.

The evaluation plan describes key components and outcomes of the project, and provides some basis for a measureable threshold for acceptable implementation.

Weaknesses:

Although middle school students and teachers are included, the primary thrust of the dependent measures is at the high school level. There should have been more elaboration on this dynamic.

In the list of student outcomes on page 30, and all other dependent measures, it is unclear to what degree the control groups will be tracked on these. It is not entirely clear which measures need to be developed and validated, including whether student achievement measures and surveys have been standardized and already developed. One of the

important dependent measures is graduation rate and the applicant states this, " If feasible within the evaluation's time frame, the study will examine the impact of the model on the number of students graduating on time." This statement should have been explained more fully. The discussion on the College Headstart (pages 33-34) survey scales could have elaborated more on its relevance and integration into the research plan.

Although attrition and other confounding factors are not expected to be an issue, it is not clear how these will be tracked and verified periodically. For example, one confounding factor for the control groups could be the presence of other STEM professional development initiatives (especially in light of the new standards and the prevalence of STEM funding across the country).

On page 33, an annual survey for teacher implementation is discussed. There is little discussion providing a rationale for annual data collection as opposed to each grading period.

There is little discussion on how qualitative data will be analyzed and reported back to the stakeholders for on-going quality improvement.

Reader's Score: 22

Priority Questions

Competitive Preference Priority 1 - Competitive Preference Priority 1

1. Under this priority, we provide funding to projects that address one of the following areas:

- (a) Substantially improving student outcomes without commensurately increasing per-student costs.**
- (b) Maintaining student outcomes while substantially decreasing per-student costs.**
- (c) Substantially improving student outcomes while substantially decreasing per-student costs.**

Strengths:

Weaknesses:

Reader's Score:

Competitive Preference Priority 2 - Competitive Preference Priority 2

1. Under this priority, we provide funding to projects that enable broad adoption of effective practices. An application proposing to address this priority must, as part of its application:

- (a) Identify the practice or practices that the application proposes to prepare for broad adoption, including formalizing the practice (i.e., establish and define key elements of the practice), codifying (i.e., develop a guide or tools to support the dissemination of information on key elements of the practice), and explaining why there is a need for formalization and codification.**
- (b) Evaluate different forms of the practice to identify the critical components of the practice that are crucial to its success and sustainability, including the adaptability of critical components to different teaching and learning environments and to diverse learners.**

(c) Provide a coherent and comprehensive plan for developing materials, training, toolkits, or other supports that other entities would need in order to implement the practice effectively and with fidelity.

(d) Commit to assessing the replicability and adaptability of the practice by supporting the implementation of the practice in a variety of locations during the project period using the materials, training, toolkits, or other supports that were developed for the i3-supported practice.

Strengths:

Weaknesses:

Reader's Score:

Invitational Priority - Invitational Priority

1. The Secretary encourages applicants to propose projects that incorporate high-quality early learning components that are aligned with the early learning, elementary and secondary education systems in participating schools and help ensure that all children, especially those from low-income families, enter kindergarten ready to succeed.

General:

Reader's Score:

Status: Submitted
Last Updated: 08/15/2013 10:47 AM