

SEED Renewal Technical Review Form

US Department of Education

**Division of Effective Educator Development (EED) Grant Review
2021 SEED Renewal
Application Technical Review Form
(CFDA 84.423A)**

Applicant Name: UT Austin	Application Number U423A180139
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Summary Ratings		
	Maximum Points	Score
A. Quality of Evaluation Plan	25	25
B. Quality of the Project Design	25	25
C. Strategy to Scale	25	25
D. Adequacy of Resources	25	25
Selection Criteria Total Score	100	100

A. Quality of Project Evaluation (up to 25 points)

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

- (1) The extent to which the methods of evaluation provide for examining the effectiveness of project implementation strategies.
- (2) The extent to which the methods of evaluation include the use of objective performance measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible.

(Maximum Points 25)

Reader's Score: 25_

Strengths:

- (1) The applicant presents a detailed method of evaluation designed to examine the overall impact and effectiveness of the project's implementation strategies. For example, a formative evaluation of the ongoing implementation, expansion, and refinement of the proposed project is evidenced. A randomized controlled trial methodology that meets What Works Clearinghouse standards with reservations will be used to test the efficacy of a student engagement toolset designed to help teachers monitor and address issues surrounding student engagement, belongingness, and interest in pursuing AP Computer Science (p. 7). The evaluation also includes activities that will focus on measuring and documenting evidence of the effectiveness of the project's objectives (p. 12). Data will be collected to generate a variety of reports that will be provided annually to the project's partners (p. 14). Additionally, the evaluation includes a series of concise research questions that will be used to examine the project's outcomes (p. 17).
- (2) Methods of evaluation inclusive of objective performance measures that are related to the proposal's intended outcomes that are designed to produce quantitative and qualitative data to the extent possible are clearly demonstrated. Evaluation-specific performance measures will be derived from clearly defined data sources. Qualitative and quantitative data will be derived from artifacts including, but not limited to, teacher and student surveys, AP exam scores, student demographics, interviews, and student engagement records, (pp. 17-19).

Weaknesses:

No weaknesses noted.

B. Project Design (25 points).

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

- (1) The extent to which the design for implementing and evaluating the proposed project will result in information to guide possible replication of project activities or strategies, including information about the effectiveness of the approach or strategies employed by the project.
- (2) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.

(Maximum Points 25)

Reader's Score: 25__

Strengths:

- (1) The applicant provides sound evidence that the project's implementation design and evaluation process will result in information to guide possible replication. As a part of the project's design, for example, the applicant proposes the expansion of the project's impact through the scaling of innovative, alternative pathways and student support across the national network of 46 of its partner IHE secondary STEM teacher preparation programs (p. 10). The implementation design and replication also includes the proposal to increase the number of Computer Science teachers who can broaden the participation of underrepresented students in computer science in high-need schools. This includes but is not limited to preparing pre-service candidates pursuing STEM teaching by their taking targeted computer science coursework leading towards STEM certification, strengthening faculty partnerships, and refining and streamlining required coursework (p. 11).
- (2) The applicant provides clear evidence that the project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance. The capacity-building efforts include but are not limited to revising and updating pathway support materials, enhanced curriculum, and online coursework, implementing STEM teacher professional development, providing induction support to new graduates, and creating an alumni network that provides on-going, on-demand support to the partner IHE program graduates (pp.11, 12, Appendix C).

Weaknesses:

No weaknesses noted.

C. Strategy to Scale (up to 25 points).

The Secretary considers the strategy to scale for the proposed project. In determining the strategy to scale for the proposed project, the Secretary considers the following factors:

- (1) The feasibility of successful replication of the proposed project, if favorable results are obtained, in a variety of settings and with a variety of populations.
- (2) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.

(Maximum Points 25)

Reader's Score: 25

Strengths:

- (1) The applicant demonstrates that if favorable results are obtained, the project can be successfully replicated. For example, the applicant anticipates the scaling of curricular enhancements developed as a result of this grant to in-service teachers, including STEM teachers at LEAs served by the four project partners and its partner IHE secondary STEM teacher alumni nationwide. Program implementation experience has occurred at 46 institutions of higher education (IHE) across the country. Additionally, These IHEs are geographically diverse, relative to research levels, size, settings, enrollment profiles, and minority-serving (pp. 21, 22).

(2) The project presents a concise process for sharing its results and findings. The dissemination mechanisms for sharing its findings and results include the partner IHE serving as the hub to this network and maintaining a central repository of all operational and instructional materials accessed by the network; facilitating ongoing partner engagement in continuous improvement of the program model through an active professional association that supports online communities of practice; working groups, workshops, meetings, and events; conference presentations and the development of publications, including an annual conference (p. 21).

Weaknesses:

No weaknesses noted.

D. Adequacy of Resources (up to 25 points).

The Secretary considers the adequacy of resources to be conducted of the proposed project. In determining the adequacy of resources, the Secretary considers the following factors:

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

(2) The potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding.

(Maximum Points 25) Reader's Score: 25 ____

Strengths:

(1) The applicant provides a concise process for the continued support of the project's initiatives after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support. For example, project partners continue to introduce refinements designed to sustain their alternative pathway models (p. 23). Additionally, fundraising for student support is a standard component of the model, and programs all offer a variety of scholarships from private and public sources (p. 24).

(2) The incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding is well demonstrated. Incorporation efforts include but are not limited to, successful curricular enhancements, the development of online courses and new streamlined courses, and the development of guides for adapting coursework for remote instruction (p. 24).

Weaknesses:

No weaknesses noted.

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Applicant Name: UT Austin	Application Number U423A180139
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Summary Ratings		
	Maximum Points	Score
A. Quality of Evaluation Plan	25	25
B. Quality of the Project Design	25	25
C. Strategy to Scale	25	24
D. Adequacy of Resources	25	25
Selection Criteria Total Score	100	99

A. Quality of Project Evaluation (up to 25 points)

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

- (1) The extent to which the methods of evaluation provide for examining the effectiveness of project implementation strategies.
- (2) The extent to which the methods of evaluation include the use of objective performance measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible.

(Maximum Points 25)

Reader's Score: 25

Strengths:

1. The project will have quantitative and qualitative methods of evaluation. The qualitative methods will use interviews and focus groups to gather data. The Institute will conduct annual interviews with the four program sites to collect information about students' experiences in taking courses, the students' field experiences, student support elements, the alternative certification and innovative computer science (CS) pathways and in-service teacher participants. Surveys of alternative teacher certification pathway students will be conducted twice, first at their program entry and then again at end of the program. Cohort students will be surveyed about their experiences in the program, satisfaction levels, and reasons for enrolling. (pg.13,14) The quantitative data will consist of administrative data which is school district, university, program, and teacher data including enrollment, certification, and student demographic and academic information. (pg.15) The use of baseline and exit data as well as administrative data are effective evaluation measures for this project.

2. The proposal presents a table with data types, collection times, and research questions which will investigate teacher outcomes, student outcomes, the use of dashboards, participation, and engagement trainings. The project asks seven research questions that examine the intended outcomes through the lens of both quantitative and qualitative data. (pg.15, 18) The mixed methods approach will develop an understanding of the implemented strategy successes. (pg.19) AIR will construct a survey by adapting three validated scales: the math sense of belongingness scale, the math and science student engagement scales, and the CS attitudes and identity survey, to further guide project performance. (pg.18)

Weaknesses:

1. None noted.

2. none noted.

B. Project Design (25 points).

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

(1) The extent to which the design for implementing and evaluating the proposed project will result in information to guide possible replication of project activities or strategies, including information about the effectiveness of the approach or strategies employed by the project.

(2) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.

(Maximum Points 25)

Reader's Score: 25

Strengths:

1. The program has already been replicated in three other partnering schools using the UTeach system. The project proposes to enhance the UTeach program through the addition of a pre-service STEM teacher pipeline. The focus will be on broadening participation in high school computer science and increasing the number of CS teachers by providing in-service training. (pg.3) The strategies are related to the need for CS teachers in the field which is being experienced nationwide and this model can be used by other colleges to fill that need. (pg.9)

2. The UTeach program is developing new pathways of teacher certification which are expected to be sustained. There are letters of commitment included in the application towards sustaining the pathways developed by the project. The project is expected to continue to evolve based on the research which will create refinements designed to sustain alternative pathway models. As more is learned about the demand for certification programs and needs of teachers and career changers, programs will be adjusted. Student support funds have been critical to getting these pathways established, as has recruiting new students to the program, which will build capacity beyond the funding period. (pg.11, 12, 24, 26)

Weaknesses:

1. None noted.

2. None noted.

C. Strategy to Scale (up to 25 points).

The Secretary considers the strategy to scale for the proposed project. In determining the strategy to scale for the proposed project, the Secretary considers the following factors:

(1) The feasibility of successful replication of the proposed project, if favorable results are obtained, in a variety of settings and with a variety of populations.

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

(Maximum Points 25)

Reader's Score: 24

Strengths:

1. The applicant has partnered with other school districts in different areas that also have a UTeach program which demonstrates the project can be successful in other settings. (pg21) The other UTeach partners are geographically diverse and range in enrollment profiles, size, and settings. The UTeach Institute will collaborate with other project partners to further expand the opportunity to train and support STEM in-service teachers nationwide (pg. 15) The plan for replication also includes an invitation for ten more schools into this community of learning.

2. The applicant will disseminate the project information by sharing with project partners, presenting in online webinars, online communities of practice, workshops, meetings, events, and conferences. The applicant has a well-established network which will support the dissemination of project information, program materials, and professional development content. (pg. 23)

Weaknesses:

1. None noted.
2. The plan to disseminate project information did not explain the titles of the publications where the study will be published nor where it where it might be presented so as to ascertain whether these are appropriate forums for those that would benefit from the information presented in the study.

D. Adequacy of Resources (up to 25 points).

The Secretary considers the adequacy of resources to be conducted of the proposed project. In determining the adequacy of resources, the Secretary considers the following factors:

- (1) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.
- (2) The potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding.

(Maximum Points 25)

Reader's Score: 25

Strengths:

1. The project aim is to have a lasting effect on teacher curriculum and teacher supports for project-based and equity centered high school computer science coursework. UTeach course materials and teacher professional development will be available to schools beyond the federal funding period using a fee-based services model. During the project additional course materials will be developed around strengthening instruction on equity and inclusive teaching practices, and culturally relevant pedagogies. (pg25)
2. The case for incorporation after the funding period ends is strong due to the updates in alternative pathway models which will become a common teaching practice. Programs updates will also apply strategies to reduce costs and be more flexible in coursework for working candidates. For example, streamlining coursework into fewer days or evenings makes the pathways accessible to working pre-service candidates who are going for certification. The changes made to the program that reflect current teaching practices and certification requirements will facilitate program activities and allow program benefits to continue. (pg.24)

Weaknesses:

1. None noted.
2. None noted.

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Applicant Name: University of Texas-Austin

Application Number
U423A180139

Summary Ratings		
	Maximum Points	Score
A. Quality of Evaluation Plan	25	25
B. Quality of the Project Design	25	25
C. Strategy to Scale	25	23
D. Adequacy of Resources	25	25
Selection Criteria Total Score	100	98

A. Quality of Project Evaluation (up to 25 points)

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

- (1) The extent to which the methods of evaluation provide for examining the effectiveness of project implementation strategies.
- (2) The extent to which the methods of evaluation include the use of objective performance measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible.

(Maximum Points 25)

Reader's Score: 25

Strengths:

1. The methods of evaluation are appropriate for examining the effectiveness of the implementation strategies. The evaluation plan is guided by impact as well as formative evaluation questions. (p. 12-13). This suggests that the evaluation will be able to capture both implementation data as well as project effectiveness. In addition, the evaluation plan is articulated in a timeline describing what data will be collected to address each of the evaluation questions and when the data will be collected. (p. 12-13). This suggests that the plan is intentionally built around the project activities.
2. The proposal notes that the evaluation plan will rely on objective performance measures as well as utilizing quantitative and qualitative data. For example, the proposal states that the evaluation will collect administrative data, such as student enrollment and teacher placement as well as AP exam scores. (p. 17). In addition, the proposal communicates that the evaluation will also collect teacher interviews and conduct focus groups. (p. 17). This suggests that the evaluation will gather holistic information about the project implementation.

Weaknesses:

No weaknesses noted.

B. Project Design (25 points).

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

(1) The extent to which the design for implementing and evaluating the proposed project will result in information to guide possible replication of project activities or strategies, including information about the effectiveness of the approach or strategies employed by the project.

(2) The extent to which the proposed project is designed to build capacity and yield results that will extend beyond the period of Federal financial assistance.

(Maximum Points 25)

Reader's Score: 25

Strengths:

1. The proposal demonstrates the information from the evaluation can inform replication of project activities and strategies. For instance, the evaluator will carry out a randomized control trial to assess the impact of the project. (p. 16). Moreover, the evaluation will assess the impact both on the participating teachers as well as the student achievement. (p. 16-18). This suggests the information from the evaluation can assess broad impact of the project.
2. The proposal provides some description of how the project will build capacity to carry on beyond the term of financial assistance. As a teacher education effort, the project demonstrates some level of capacity building of the pre-service teachers, especially to provide computer science courses. (p. 8). In addition, the proposal notes that high needs schools will have more teachers in STEM fields. This program is important since they have demonstrated an 80% retention rate at the five-year mark. (p. 2).

Weaknesses:

1. No weaknesses noted.
2. No weaknesses noted.

C. Strategy to Scale (up to 25 points).

The Secretary considers the strategy to scale for the proposed project. In determining the strategy to scale for the proposed project, the Secretary considers the following factors:

- (1) The feasibility of successful replication of the proposed project, if favorable results are obtained, in a variety of settings and with a variety of populations.
- (2) The mechanisms the applicant will use to broadly disseminate information on its project so as to support further development or replication.

(Maximum Points 25)

Reader's Score: 23

Strengths:

1. The proposal communicates a feasible approach to replication. For example, the project is partnering with universities to carry out the project. (p. 21). Each of these partners will work with school districts and, in turn, receive feedback on their program of work. (p. 21). These school districts represent different contexts within which to test the intervention. (p. 9). In addition, the applicant maintains a network that supports UTeach teacher implementation, which would serve as a platform for scaling the work of this project. (p. 20).

2. The proposal conveys several strategies to disseminate broadly what is learned from the project. For example, directors from ten other UTeach programs will be invited to join the current program partners that build the existing community of practice. A series of five virtual workshops are also planned beginning in Fall 2021 to introduce programs to pathway components, including student recruitment and support, and to provide faculty professional development on curricular enhancements and implementation of new, streamlined and online courses. An in-person convening of the networked improvement community is planned in conjunction with both the 2022 and 2023 annual UTeach conferences. (p. 22). In addition, the proposal states that the project will communicate the work through conference presentations and publications developed by four UTeach partner programs, and a dedicated public website. (p. 22).

Weaknesses:

1. No weaknesses noted.
2. The proposal does not make clear some elements of the dissemination process. For example, the proposal does not make evident what conferences or publications the project will target, which would suggest the audiences the project is trying to reach to share lessons learned from the project.

D. Adequacy of Resources (up to 25 points).

The Secretary considers the adequacy of resources to be conducted of the proposed project. In determining the adequacy of resources, the Secretary considers the following factors:

- (1) The potential for continued support of the project after Federal funding ends, including, as appropriate, the demonstrated commitment of appropriate entities to such support.
- (2) The potential for the incorporation of project purposes, activities, or benefits into the ongoing program of the agency or organization at the end of Federal funding.

(Maximum Points 25)

Reader's Score: 25

Strengths:

1. The proposal provides some evidence that the project has the potential for continued support beyond the term of the grant. For instance, the educational pathways for teachers developed through this project are built on existing programs. (p. 23). The support of these teacher education programs is evident in the letters of support. (Appendix). In addition, the partner school districts are introducing refinements to the program, such as streamlining coursework, adding a master's degree or changing the

financial commitments of the districts. (p. 24). These changes suggest that the project will match the needs of the districts to continue in the future. Also, UTeach CS course curricula and teacher professional development will continue to be available to districts and schools beyond this grant through an established licensing and fee-based services model. The UTeach CS initiative receives significant financial support and operating infrastructure provided by the University of Texas at Austin. (p. 24).

2. The proposal notes that there is the potential for the incorporation of project components beyond the term of the grant. For example, the project plan specifically addresses the work of project refinement to support sustainability in their partner school districts. (Appendix). In addition to the refinements that school districts are testing to the program, the curricular materials created by the program are also changing to align to the school districts' needs for culturally responsive and inclusive pedagogies. (p. 24). This suggests that the program is incorporating the needs of the school districts.

Weaknesses:

No weaknesses noted.