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

Technical Review Coversheet

Applicant: The University of North Carolina at Greensboro (U336S190046)
Reader #1:   **********

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of Project Design		
1. Project Design	40	30
Adequacy of Resources		
1. Resources	20	20
Quality of the Management Plan		
1. Management Plan	20	16
Quality of the Project Evaluation		
1. Project Evaluation	20	13
Sub Total	100	79
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority 1		
1. STEM/Computer Science	5	5
Sub Total	5	5
Invitational Priority		
Invitational Priority		
1. Promise Zones	0	0
Sub Total	0	0
Total	105	84

Technical Review Form

Panel #8 - Teacher Quality Partnership - 9: 84.336S

Reader #1:   **********
Applicant: The University of North Carolina at Greensboro (U336S190046)

Questions

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:**

   (i) The extent to which the proposed project demonstrates a rationale (as defined in 34 CFR 77.1(c)).

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

   (iii) 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.

   (iv) The extent to which the proposed project represents an exceptional approach for meeting statutory purposes and requirements.

   Strengths:
   •   The applicant demonstrates an appropriate rationale (e23-e43) that is based on providing residents with research-based teaching practices to integrate computational thinking. The logic model (e101) further specifies the details.

   •   The goals, objectives, and outcomes of the project are clearly specified and measurable (e26-e43). As seen in the logic model (e101), most outcomes have clear targets (e.g., percentage of relevant pedagogies used) or are binary success/fail outcomes (e.g., producing curriculum or installing Makerspaces) (e101).

   •   The project is appropriately designed to build capacity in that it draws on established, currently existing, and successful programs already at UNCG (e.g., Clinical Teacher Academy, Making and Design, Gate City Writes; e35-e38) and programs that UNCG is a part of (i.e., NC New Teacher Support Program; e41-e42). The project can yield results that extend beyond funding, in part, because the state of North Carolina is invested in residency programs in the future. The federal funding will be used to refine and create curriculum and practices that the state can later support (e43).

   •   The proposed project represents an exceptional approach. The project combines a residency program (e23), training on research-based teaching practices (e23), a focus on computational thinking (e24), Makerspaces (e32-e33), mentoring (e35), and attention to special populations (such as limited English proficient learners [e32]).

   Weaknesses:
   •   The applicant lists no repayment plan listed for the stipend, which is a basic statutory requirement. In addition, not accounting for or articulating these types of contingencies reduce the chance of long-term results and sustainability.

   •   The partnership appears very top down. The LEAS do not appear to add much to the partnership beyond a source recruitment, which lessens the exceptionality of the partnership and likelihood that the project will yield results beyond the period of federal financial assistance.

- There is insufficient description of available PD properties and induction activities, so it is difficult to determine either how sustainable the activities are or how truly exceptional the project will be.

- The funds to set up the Makerspace seem insufficient for the task. Given that the Makerspaces are an essential component of their project, this does not support the sustainability of the project or add to its likelihood of success.

Reader's Score: 30

Selection Criteria - Adequacy of Resources

1. **The Secretary considers the adequacy of resources for the proposed project. In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:**

    (i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.

    (ii) The relevance and demonstrated commitment of each partner in the proposed project to the implementation and success of the project.

    Strengths:
    - The lead organization presented adequate support including facilities (e.g., Makerspaces, Moss Street Partnership school) and other resources (e43-e46), while the other partners will provide similar levels of financial and in-kind support (e398-e399). Over the course of the project the applicant has budgeted enough partner resources to satisfy the match requirement (e398-e412).

    - The partners are relevant in that they are a university involved in teacher preparation (i.e., UNCG) and two county school systems that have previously established partnership (e46). The lead applicant organization demonstrates commitment in the various departments that are a part of this project (e.g., Office of Research, Department of Teacher Education and Higher education; e45-e46) to successfully implement the project, while the partner LEA demonstrates adequate commitment to the project in the MOU provided (e388).

    Weaknesses:
    - No weaknesses found.

Reader's Score: 20

Selection Criteria - Quality of the Management Plan

1. **The Secretary considers the quality of the management plan for the proposed project. In determining the quality of the management plan for the proposed project, the Secretary considers:**

    (i) 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 already has some leadership structures in place (e.g., the Collaborative for Educator Preparation) that can aid the project in meeting its goals (e49).
•	Project personnel are experienced in this type of work and have assigned responsibilities (e49-e54).
•	Objectives, and activities are directly tied to project goals (e54-e59).
•	Appropriately, timelines for completion are specified for every objective (e54-e59).

Weaknesses:

•	There is no evidence that any of the project personnel has expertise with Makerspace or computational literacy.
•	The plan for communication within the project is unclear (e.g., between the evaluator and faculty). Providing more detail and/or explicitness about how different portions of the project will communicate and collaborate would have provided better evidence that the management plan was adequate to achieve the objectives on time and within budget. The project milestones are unclear. The applicant could have made them clearer by explicitly stating them, and then connecting them to responsible parties, and times or dates for completion.

**Reader's Score:	16**

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:**

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

	(ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

	Strengths:

•	Much of the data collected for the evaluation will come from reliable and valid sources such as school records or state mandated tests (e67-e69).

•	The cooperation of internal and external evaluators increases the resources available for the evaluation, increasing its feasibility (e60).

•	The use of formative and summative assessment is appropriate for this program because program goals address both implementation outcomes as well as the impact assessment (e60-e61).

	Weaknesses:

•	Since some measures (e.g., professional development surveys) have not been developed, their reliability and validity cannot be determined.

•	One of the applicant's research questions focuses on the impact of the intervention on student computational thinking, however the applicant did not mention collecting baseline data (to determine whether student knowledge changed from before the intervention) or a comparison group (to offer a comparison to show that any changes that happen in time are in fact due to the intervention).

Reader's Score: 13

Priority Questions

Competitive Preference Priority - Competitive Preference Priority 1

1. Projects designed to improve student achievement or other educational outcomes in computer science by increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based professional development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subjects to STEM fields.

   Strengths:

   Appropriate to this priority, the applicant intends to focus on improving teacher's computational thinking (e17) and computer science. Appropriate to the priority, the applicant will convert its current Master of Teaching program to be a residency program to fully integrate computational thinking into the teaching of all subject areas.

   Weaknesses:

   No weaknesses found.

Reader's Score: 5

Invitational Priority - Invitational Priority

1. An applicant may address one or both of the following priority areas:

   Propose to serve children or students who reside, or attend TQP project schools, in a qualified opportunity zone as designated by the Secretary of the Treasury under section 1400Z-1 of the Internal Revenue Code, as amended by the Tax Cuts and Jobs Act (Pub. L. 115-97). In addressing this priority, an applicant must provide the census tract number of the qualified opportunity zone for which it proposes to serve children or students and describe the extent to which the applicant will serve individuals in the Qualified Opportunity Zone(s). OR

   Demonstrate in its application that it has received or will receive financial assistance from a qualified opportunity fund under section 1400Z-2 of the Internal Revenue Code, as amended by the Tax Cuts and Jobs Act, for a purpose directly related to its proposed project. In addressing this priority, an applicant must identify the qualified opportunity fund from which it has received or will receive financial assistance and describe the extent to which the applicant will use the financial assistance for its proposed project.

   Strengths:

   N/A

   Weaknesses:

   N/A

Reader's Score: 0

Status: Submitted

Last Updated: 06/18/2019 08:48 PM

Status: Submitted
Last Updated: 06/14/2019 04:38 PM

Technical Review Coversheet

Applicant: The University of North Carolina at Greensboro (U336S190046)
Reader #2:   **********

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of Project Design		
1. Project Design	40	38
Adequacy of Resources		
1. Resources	20	15
Quality of the Management Plan		
1. Management Plan	20	16
Quality of the Project Evaluation		
1. Project Evaluation	20	17
Sub Total	100	86
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority 1		
1. STEM/Computer Science	5	3
Sub Total	5	3
Invitational Priority		
Invitational Priority		
1. Promise Zones	0	
Sub Total	0	
Total	105	89

Technical Review Form

Panel #8 - Teacher Quality Partnership - 9: 84.336S

Reader #2:   **********
Applicant: The University of North Carolina at Greensboro (U336S190046)

Questions

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:**

   (i) The extent to which the proposed project demonstrates a rationale (as defined in 34 CFR 77.1(c)).

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

   (iii) 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.

   (iv) The extent to which the proposed project represents an exceptional approach for meeting statutory purposes and requirements.

   Strengths:

   The area has high need LEA(s) and rural schools which are in desperate need of attracting and retaining quality teachers to reach their population of under-represented, low-income students.

   The project narrative provides adequate evidence that all partners are working together to solve this issue, so that quality teachers can help improve student achievement for all students, especially in the area of computer literacy. Many of these students have issues with access to technology and also opportunities to work with technology. Computational thinking also includes problem solving, engineering, and the design of systems. This project will help students to have access to educational settings that will help to develop their computational literacy. (e21) The project will help to prepare students for future advancements in the field of technology. The teacher educator plays a vital role in broadening the ways in which computational literacy is integrated across the content area. This project will train teachers in the area of computational literacy.

   This project will help to train new teachers and retain quality teachers for these low-income, rural areas due to the support and professional development they will get through the residential cohort process. In turn, these teachers will understand the student population they are serving and will be taught methods that will help them to better reach this group of students. Research shows that when students know that their teachers understand them and their cultural backgrounds, academic scores improve.

   The narrative details how these new resident teachers will be selected for this project. Rigorous criteria for the resident candidates was clearly stated on page (e40). Because the criteria is rigorous there is a good likelihood that the residents will be able to accomplish the goals of taking courses and teaching students each day.

   The narrative describes the opportunities that these resident teachers will be exposed to concerning computational technology. Some opportunities include makerspaces, problem solving and designing projects. (e22) Research states that these methods are a much more robust methods compared to the traditional methods of predefined problems and simple games. The project will also teach pre-service teachers how to creatively weave engineering into existing curriculum structures. This is a great way to engage young learners who might be inspired to take more math and science

in upper level grades.

There is a clear marketing strategy to find these special residency candidates. The marketing plan is located on page (e21). It is very innovative. One example is to host weekend recruitment events, which in the past has provided a great number of applicants for the master's program for students of minority backgrounds.

Teachers need access to material resources to make this project come alive. The narrative describes many resources these residents will have access to. Some include a rigorous framework of courses, core teaching practices, and also access to Makerspace technology. It highlights social resources such as content and instructional coaches, and also experiential learning opportunities. All of these resources help to ensure that these teachers are well qualified to teach this particular population, this particular topic, and that they have the necessary resources to make it happen. Because these new teachers will be learning math and science through methods other than lecture, there is great likelihood that they will emulate those new, hands-on practices back in their own classrooms.

The narrative provides some background concerning a previous pathway program which lead to initial certification. (e26) This new project is a restructure of that old pathway. There is also an overhaul of the existing Pathway to Alternative Initial Licensure program. The narrative also states that UNCG established a Makerspace in the School of Education as part of a previous TQP grant which was focused on the integration of emergent technologies in undergraduate education programs. This new project will extend and scale up that previous work. (e33) Because this proposal is built on several successful previous ventures, there is a better chance of success for this grant.

The narrative described very specific selection criteria for the mentors. The list was extensive and can be found on page (e35). Because research shows that a mentor is one of the most important factors in whether the resident teacher is successful, it is important to make sure that these teachers have the skills and knowledge to move the resident teachers forward throughout the term. Research does show that mentors have a significant impact on the success rate for these teachers.

The narrative describes a training program called the Clinical Teacher Academy to help mentors have a greater understanding of the role they play and to help them develop mentoring skills. This will help mentors to better understand areas such as inquiry, formative assessment and problem-solving skills. They will also receive additional training in Makerspace and STEM through the UNCO STEM Teacher Leader Collaborative. (e37) These activities will help the mentors to be successful, which in turn will impact the residents in this cohort.

There is evidence of sustainability for this project beyond the funding period. The work plan shows funding from PTRP will grow and sustain this network of STEM teacher leaders. This organization will provide one half of the funding necessary to support teacher residents in their first two years as teacher of record. The other half of the funding will come from NC NTSP which is a well-established program that receives funding from the state of North Carolina. (e36) The revision of the MAT curriculum will also create a sustainable model for post-baccalaureate teacher preparation at UNCG.

The project narrative details the importance of supporting these new teachers through an induction program. (e40) The narrative provides evidence that there will be a smooth transition from resident to new teacher of record. There is a rigorous induction program planned for these new teachers. It includes an intensive boot camp, individualized classroom coaching, and professional development sessions. Research demonstrates that beginning teachers' participation in induction programs leads to increased retention, higher satisfaction, and greater commitment.(e41) Teachers who are involved with high quality induction programs also are more effective in specific instructional practices, such as lesson planning, classroom management, and creating a positive classroom climate conducive to learning. (e41)

Because the narrative does provide a logic model which is informed by research and a work plan to help identify the key project components there is likelihood that relevant outcomes will be successful. (e101) The work plan has goals, objectives, and outcomes that are specific and measurable. Each has associated timelines, responsible parties, and milestones which will help ensure that all components will be completed on time and within budget. The logic plan also includes SMART Goals which will help the evaluators to know if the project is working as planned.

The narrative provides detailed information on why this model is considered an exceptional approach. It is based on

research and practice. It also integrates STEM and technology in a K-12 rural, low-income setting.

The narrative does supply adequate information on the one-year living wage. This is important because the residents do not have to find another part-time job after going to school and teaching every day. The living wage will help to remove a factor of stress from these teacher's lives. (e26)

Weaknesses:

No repayment plan was listed for the "living wage."

The narrative does supply a dollar amount for Makerspaces. The reader is not sure that amount will be adequate for the number of people using that space.

Reader's Score: 38

Selection Criteria - Adequacy of Resources

1. **The Secretary considers the adequacy of resources for the proposed project. In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:**

   (i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.

   (ii) The relevance and demonstrated commitment of each partner in the proposed project to the implementation and success of the project.

   Strengths:

   As a mechanism to support residents and their mentor teachers to leverage students' developing computational literacy and engineering design, a Makerspace will be provided at each partner school. (e32)

   The narrative describes many resources to which these residents will have access. Some include a rigorous framework of courses, core teaching practices, and also access to Makerspace technology. It highlights social resources such as content and instructional coaches, and also experiential learning opportunities.

Weaknesses:

There is no clear chart which details the goals, resources needed and equipment), and no detail as to which person or entity is responsible. The narrative is unclear whether they will be able to meet the match as a whole.

As a STEM project, there should be a list of resources that are needed for Makerspaces and/or computer technology. The narrative did not supply that information.

Though the letters from the partners state they are invested in the goals of this project, the narrative does not supply adequate evidence that all partners are making relevant contributions.

Reader's Score: 15

Selection Criteria - Quality of the Management Plan

1. **The Secretary considers the quality of the management plan for the proposed project. In determining the quality of the management plan for the proposed project, the Secretary considers:**

   (i) 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 narrative provides evidence of clearly defined roles for all parties and clearly delineated responsibilities. The chart on pages e55 to e60 specify the project objectives, correlated activities, a timeline, and the person responsible. This will help so that the milestones and the goals will be accomplished on time and within budget.

   All programs involved have a personal representative on the CEP Council of Program Coordinators. This is the policy-making body for the programs at UNCG. This is important because all stakeholders will have a voice in the project development and input if revisions are necessary.

   The qualifications of the PI and other key personnel shows they are very qualified to administer a grant of this magnitude. Many of the key players have decades of experience with executive grant funding. This is extremely important because they have previous experience with all aspects of the projects.

   The PI for this project has served as the Project Director for two previous Teacher Quality Partnership Projects. She has the experience to lead a grant of this magnitude.

   There is evidence that this management team will use communication through various meetings throughout the year to provide continuous improvement to the process. This will help so that the grant will be successful and will be completed within budget. An example from the chart states, "regular review of data regarding revises curriculum. Make improvements as indicated by data review." (e56)

   The meetings planned by this management team will be informed through data and will engage in data-driven planning to keep the project moving forward.

Weaknesses:

The project deals with Makerspaces. There is no person specifically mentioned that has the qualifications to lead these activities and professional development in this area.

The narrative mentions several other persons in the budget. There is no clear detail on what they will do or what their purpose is in this project.

The narrative does not mention if the selected mentors will be part of the Clinical Academy and professional development for Makerspaces.

Reader's Score: 16

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:**

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

   (ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

   Strengths:

   Throughout the narrative a theme emerged concerning evaluation. It stated that each year the activities would be reviewed and evaluated by focus groups, surveys, and other assessment. By doing this, they can change what is not working and move forward in a more successful fashion.

   The narrative supplied a chart which elaborates on the goals, objectives, outcomes and impacts which form the basis for the project's evaluation plan. (e62-e69)

   The narrative states the aim of the project evaluation is to provide both formative and summative feedback in a useful and timely manner. This is important because by using the data for key evaluation, stakeholders can make informed decisions in the planning and management concerning this project. If revisions and reforms need to be made, they can be completed within the project timeline and budget. (e60)

   Program monitoring will remain a focus throughout the term of the project. The formative feedback will help with short-term measurement of benchmarks and project metrics.

   The summative assessments will help the team to know how close they are to meeting major goals. This chart will help to keep the grant on track and the team working to make those continuous improvements. (e62-e69)

   There is evidence that the stakeholders will review the data and evaluation findings throughout the project and will provide input and advice into both the project's activities and the evaluation process. This will help so that the project will finish on time and within budget.

   The grant does have an independent external evaluator. (EPRE Consulting LLC). This will help to eliminate bias in the evaluation of the project.

Weaknesses:

The measurements are not fully developed. Without those evaluations the reliability and the validity cannot be determined.

The evaluation mentioned student impact. However, since no baseline data was provided, it is impossible to determine what the actual impact is.

Reader's Score: 17

Priority Questions

Competitive Preference Priority - Competitive Preference Priority 1

1. **Projects designed to improve student achievement or other educational outcomes in computer science by increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based professional development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subjects to STEM fields.**

   Strengths:

   The narrative provided thorough evidence that this project is designed to improve student achievement or other educational outcomes in computer science by increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based professional development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subject areas to STEM fields.

   Weaknesses:

   The narrative mentions evidenced-based strategies, but no specifics concerning those strategies are listed.

   The narrative lists retraining teachers to teach STEM in this project. However, there is no clear plan concerning the professional development for this group to be retrained in the STEM discipline.

Reader's Score: 3

Invitational Priority - Invitational Priority

1. **An applicant may address one or both of the following priority areas:**

   Propose to serve children or students who reside, or attend TQP project schools, in a qualified opportunity zone as designated by the Secretary of the Treasury under section 1400Z-1 of the Internal Revenue Code, as amended by the Tax Cuts and Jobs Act (Pub. L. 115-97). In

addressing this priority, an applicant must provide the census tract number of the qualified opportunity zone for which it proposes to serve children or students and describe the extent to which the applicant will serve individuals in the Qualified Opportunity Zone(s). OR

Demonstrate in its application that it has received or will receive financial assistance from a qualified opportunity fund under section 1400Z-2 of the Internal Revenue Code, as amended by the Tax Cuts and Jobs Act, for a purpose directly related to its proposed project. In addressing this priority, an applicant must identify the qualified opportunity fund from which it has received or will receive financial assistance and describe the extent to which the applicant will use the financial assistance for its proposed project.

Strengths:

Weaknesses:

Reader's Score:

_____

Status: Submitted
Last Updated: 06/14/2019 04:38 PM

Technical Review Coversheet

Applicant: The University of North Carolina at Greensboro (U336S190046)
Reader #3:   **********

	Points Possible	Points Scored
Questions		
Selection Criteria		
Quality of Project Design		
1. Project Design	40	30
Adequacy of Resources		
1. Resources	20	12
Quality of the Management Plan		
1. Management Plan	20	11
Quality of the Project Evaluation		
1. Project Evaluation	20	11
Sub Total	100	64
Priority Questions		
Competitive Preference Priority		
Competitive Preference Priority 1		
1. STEM/Computer Science	5	3
Sub Total	5	3
Invitational Priority		
Invitational Priority		
1. Promise Zones	0	0
Sub Total	0	0
Total	105	67

Technical Review Form

Reader #3:   **********
Applicant: The University of North Carolina at Greensboro (U336S190046)

Questions

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:**

    (i) The extent to which the proposed project demonstrates a rationale (as defined in 34 CFR 77.1(c)).

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

    (iii) 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.

    (iv) The extent to which the proposed project represents an exceptional approach for meeting statutory purposes and requirements.

    Strengths:

    (i)   Rationale compellingly builds on previously funded TQP project
    (ii)   The applicant outlines some clear goals.
    (iii)   The applicant considers the sustainability of aspects of the program, for example the induction support.
    (iv)   The proposed project is built around a novel idea – integrating "computational literacy" through integration of MakerSpaces.

    Weaknesses:

    (i)   Rationale does not seem to build on needs of the partner LEAs other than recruitment and retention of teachers; little evidence that partner LEAs actively contributed to design and proposed project.
    (ii)   The restructuring of current MAT options and addition of new areas to MAT seems to be primary focus of proposed project with primary responsibilities falling on UNCG faculty; only the second goal seems to engage two partner districts and specific activities and outcomes often lack detail and description; three goals identified are not written as SMART goals which are specific and measurable; does not clearly specify how partner school mentor teachers and residents will be prepared to integrate makerspaces into learning or how the Clinical Teacher Academy for "selected mentors" will focus on computational literacy or leadership.
    (iii)   While sustainability of induction support is addressed, the sustainability of living wage, instructional coaches, and faculty engagement is not addressed; Unclear how capacity building will be continued when funding cycle ends; no clear description of how instructional coaches will be imbedded to work with school leaders as mentioned in abstract or how supports or content learning in computational literacy or computer science will be sustained; numerous mentions of professional development opportunities with little description of how often this would be delivered, by whom, and on what topics for partner districts
    (iv)   It is unclear how Makerspaces in schools will be equipped with only $5,000 or how educational outcomes in computer science will be imbedded in proposed revision of MAT programs

Reader's Score: **30**

Selection Criteria - Adequacy of Resources

1. **The Secretary considers the adequacy of resources for the proposed project. In determining the adequacy of resources for the proposed project, the Secretary considers the following factors:**

   (i) The adequacy of support, including facilities, equipment, supplies, and other resources, from the applicant organization or the lead applicant organization.

   (ii) The relevance and demonstrated commitment of each partner in the proposed project to the implementation and success of the project.

   Strengths:

   (i)   It clearly identifies strengths and units of the School of Education, including its SELF Design Studio (a University-based MakerSpace funded by the most recent TQP grant) and over 75 faculty across 6 departments who can contribute to and inform the proposed project. (p. 1)

   (ii)   Two partnering LEAs have committed to the project, including Rockingham County Schools (2 high schools, 2 middle schools, and 2 elementary schools) and Surry County Schools (1 high school, 1 middle school and 2 elementary schools). (pp. 25-29)

   Weaknesses:

   (i)   There is very little information about the supports and resources to be offered by the College of Arts and Sciences faculty who would provide math and science content; it is unclear if they would provide content expertise on computational literacy and computer science or how this would be achieved; Limited information is provided on School of Education facilities and resources for proposed project; finally, it is unclear how 2.5 instructional coaches will be able to support 20 residents per year across two LEAs and 11 schools.

   (ii)   There are letters of support from each of the two partner districts, but very little information is provided on how each was selected, their relevance, and their demonstrated commitment including resources; They are boilerplate letters with the exact wording from each district.

Reader's Score: **12**

Selection Criteria - Quality of the Management Plan

1. **The Secretary considers the quality of the management plan for the proposed project. In determining the quality of the management plan for the proposed project, the Secretary considers:**

   (i) 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 identifies project management personnel, including multiple co-principal investigators representing a variety of STEM and educational areas of expertise (e.g., science education, English education, math education, middle grades education, elementary education and special education), 2.5 instructional coaches, and a part-time program assistant. A project coordinator has been identified in each partnering LEA. A well-developed and detailed budget is

included to support the proposed project. (pp. 30-35)

Weaknesses:

Additional personnel in the budget are not included in narrative and responsibilities are not clear (e.g., graduate assistants)

No organizational chart is included. Further, there is no plan for communication/coordination across different groups working on the project.

Unclear how the multiple co-PIs will interface with the project coordinator in each LEA or with internal and external evaluator; activities and outcomes aligned with Goal 2 are broad in nature and do not provide details such as the type of PD opportunities to be offered, by whom, topics

The applicant does not make a strong and compelling case it can realistically and effectively redesign and create residencies and new MAT programs in two academic semesters given the personnel, resources, and plan presented.

It is unclear who has expertise in computational literacy, MakerSpaces, and how such content expertise will be imbedded in and across multiple MAT pathways.

The applicant does not describe how mentors will be selected to participate in the Clinical Teacher Academy, compensated or encouraged to participate in youth summer programming at UNCG, and work with novice teachers or engage in professional development in Year 1/Planning phase.

Reader's Score: 11

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:**

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

   (ii) The extent to which the methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the proposed project.

   Strengths:

   (i)   A table presents research questions aligned to the three stated goals.

   Weaknesses:

   (i)   Assessment methods not yet determined for proposed focus groups, interviews, observations and surveys

   (ii)   Mentions an annual implementation review, but no detail given concerning who will convene meeting, purpose/function of meeting, how LEAs will be engaged in evaluation plan; unclear how student measures are related to computer science or computational literacy; The applicant does not address how the teaching practices of residents, novice teachers during induction phase or mentor teachers will be observed or assessed to determine the efficacy of MakerSpaces or how computational literacy content expertise is demonstrated in practice.

Reader's Score: 11

Priority Questions

Competitive Preference Priority - Competitive Preference Priority 1

1. **Projects designed to improve student achievement or other educational outcomes in computer science by increasing the number of educators adequately prepared to deliver rigorous instruction in STEM fields, including computer science, through recruitment, evidence-based professional development strategies for current STEM educators, or evidence-based retraining strategies for current educators seeking to transition from other subjects to STEM fields.**

   Strengths:

   The proposal focuses on computational literacy and integration of MakerSpaces; further, it states a goal is to improve educational outcomes in computer science.

   Weaknesses:

   While the applicant proposes to focus on computational literacy and integration of MakerSpaces, it does not present a detailed or compelling plan to assure this outcome is achieved with the personnel, resources, and plan presented.

Reader's Score: 3

Invitational Priority - Invitational Priority

1. **An applicant may address one or both of the following priority areas:**

   Propose to serve children or students who reside, or attend TQP project schools, in a qualified opportunity zone as designated by the Secretary of the Treasury under section 1400Z-1 of the Internal Revenue Code, as amended by the Tax Cuts and Jobs Act (Pub. L. 115-97). In addressing this priority, an applicant must provide the census tract number of the qualified opportunity zone for which it proposes to serve children or students and describe the extent to which the applicant will serve individuals in the Qualified Opportunity Zone(s). OR

   Demonstrate in its application that it has received or will receive financial assistance from a qualified opportunity fund under section 1400Z-2 of the Internal Revenue Code, as amended by the Tax Cuts and Jobs Act, for a purpose directly related to its proposed project. In addressing this priority, an applicant must identify the qualified opportunity fund from which it has received or will receive financial assistance and describe the extent to which the applicant will use the financial assistance for its proposed project.

   Strengths:

   not applicable

   Weaknesses:

   not applicable

Reader's Score: 0

Status: Submitted

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