

PFEIFFER UNIVERSITY NARRATIVE TABLE OF CONTENTS

Quality of Project Services..... Pages 1-10

- 1) Services involve collaboration of partners..... 1-4
- 2) Services provided reflect up-to-date knowledge from research and practice 4-9
- 3) Training/Professional development services are sufficient 9-10

Project Design..... Pages 10-31

- 1) Proposed project demonstrates a rationale..... 10-19
- 2) Goals, objectives, and outcomes are clearly specified and measurable..... 19-25
- 3) Project is designed to build capacity and yield extended results 25-26
- 4) Project represents exceptional approach to priorities26-31

Quality of the Management Plan..... Pages 31-40

- 1) Adequacy of Management Plan31-38
- 2) Potential for incorporation 38-39
- 3) Adequacy of support 39-40

Quality of the Project Evaluation..... Pages 40-50

- 1) Extent evaluation methods provide valid and reliable performance data 41-45
- 2) Extent methods are thorough, feasible, and appropriate 45-50

Appendix A: Optional Eligible Partnership and Partner IHE Checklist

Appendix B: Optional Application and General Program Requirements Checklist

Appendix C: Optional Needs Assessment for Application and General Program Requirements

Appendix D: Optional High-Need LEA and High-Need School Checklist

Appendix E: Optional Absolute Priority Checklist

Appendix F: Waiver Request of 100% Match Requirement (Not Applicable)

Appendix G: Demonstrates a Rationale (Logic Model)

Appendix H: Resumes of Key Personnel and Job Descriptions

Appendix I: Memorandum of Understanding from Partners

Appendix J: Current Indirect Cost Rate Agreement and Other Documents

Quality of Project Services

1) Services involve collaboration of partners to maximize effectiveness. State and federal funding cuts, teacher candidate shortages, and high rates of teacher attrition have left school districts across North Carolina struggling to find qualified teachers, particularly in science, math, special education, and bilingual educators.¹ In NC's rural, high-poverty districts, these issues have existed for years. Recent graduates are often uninterested in living in poor or rural communities where they may feel socially isolated. Once in the classroom, they struggle with the realities of teaching in low performing, high-poverty schools and in understanding the culture of their new school and community and are especially challenged by the needs of English Language Learners (ELLs), students with disabilities (SWD) or special needs, or behavioral issues. **REPERTOIRE: Recruiting Educators, Preparing Educators, and Retaining Teachers to Optimize Interest in Rural Education** represents a collaborative partnership between three novice applicants (*Competitive Preference Priority #3*), Pfeiffer University and our Divisions of Education and Arts & Sciences; Montgomery County Schools; and Stanly County Schools, two neighboring high-need, high-poverty local education agencies located in rural NC. **REPERTOIRE** will create a more rigorous and comprehensive pre-baccalaureate preparation model (*Absolute Priority 1: Partnership Grants for Preparation of Teachers*) to recruit, prepare, support, and retain effective teachers, particularly educators who increase diversity (*Competitive Preference Priority #2*) and have the skills needed to promote effective instruction, including STEM, in high-need schools (*Competitive Preference Priority #1*). Current courses will be revised, and new courses offered with the initial clinical experience extended from one semester to one-year plus addition of ongoing support and professional development for beginning teachers. Our recruitment plan will boost teacher prep program enrollment by minorities and mid-career professionals. In-service teachers will also receive ongoing professional development for at least three years to strengthen their ability in meeting the needs of high-risk student populations with an accent on promoting positive classroom culture, aligning instruction with NC and national standards, increasing cultural competencies,

embedding integrated STEM principles in instruction, and implementing literacy instruction across the curriculum. Our partnership qualifications and related responsibilities are described briefly below and in *Appendices A-E and I*. **Partner Eligibility:** ► *Pfeiffer University* (*IHE Partner*) was established in 1885 and is accredited by the Southern Association of Colleges and Schools Commission on Colleges. Pfeiffer’s primary campus is in rural Misenheimer, in Stanly County, approximately 40 miles northeast of Charlotte. *Pfeiffer’s Division of Education* is nationally accredited by the Council for the Accreditation of Educator Preparation (CAPE) . Undergraduate programs include: Comprehensive Science Education (BS), Elementary Education (BA), Health and Physical Education (BS), Secondary Education Certification (minor), Special Education (BA), Athletic Coaching (minor), and an Academically and Gifted Education add-on licensure program. Graduate degrees include Elementary Education and Special Education with four concentrations available in K-6 Science, Technology, Engineering, and Mathematics (STEM); Special Education; and an add-on licensure program for Secondary Educators and Academically and Intellectually Gifted Education (AIG). An online elementary education (BA) program will be added to course offerings through Pfeiffer’s Adult Degree Completion program with the Fall 2018 semester. In 2017-18 NC Department of Public Instruction licensure testing results from Pfeiffer’s graduating class found that 91% of students passed all applicable NC qualification assessments for new teachers, which included each prospective teacher’s subject matter knowledge in the content area in which they intend to teach. Our students far exceed CAPE Standard 3 outlining program teacher education program entry and exit standards. While Pfeiffer Teacher Education Program (TEP) admission requirements are a minimum GPA of 2.75 and a C or higher on introductory courses, plus passing scores on the Praxis I Core Academic Skills and Subject Assessments in their certification area(s) ; the latest data available indicates our teacher candidates’ (TCs’) have an average GPA of 3.58 upon TEP entry and a graduating average of 3.52 , with a 90.9% passage rate on NC licensure exams.² According to NC Department of Public Instruction data indicators compiled on Teacher Education Programs in our state, Pfeiffer students

score at or above all state averages across all indicators. Additionally, NC's Educator Evaluation Standards (NCEES) include a student growth measurement using the SAS Institute's Education Value Added-Assessment System (EVAAS). The most recent data on Pfeiffer TCs' impact on P-12 student learning and teacher effectiveness were rated at the proficient and accomplished performance levels on all measures.³ *REPERTOIRE* partnerships include ► ***Pfeiffer's Division of Arts & Sciences*** to target students pursuing degrees in STEM subject areas to consider teaching as a career and ensure an adequate supply of highly-qualified STEM instructors in public school classrooms. Arts & Sciences faculty will also provide content specific professional development (PD) for TCs, beginning teachers (BTs), and in-service teachers in partnership with Montgomery and Stanly County Schools who will host our TCs and BTs as part of *REPERTOIRE*'s expanded clinical experience. Faculty will also review the requirements and expectations for teacher content preparation for NC State Academic Standards, Advanced Placement (AP), and International Baccalaureate (IB) courses to ensure Pfeiffer's course content aligns with both state standards and AP and IB requirements. They will also serve as mentors to our secondary BTs. ► ***Montgomery County Schools, MCS, (LEA Partner)*** has 12 schools serving approximately 4,124 students. Two-thirds of MCS schools met growth targets in 2016-17, with 22.2% exceeding and 11.1% not meeting.⁴ Nearly 75% of their students are free/reduced lunch eligible with 13% classified as special needs or disabilities and 8.3% as English Language Learners.⁵ ► ***Stanly County Schools, SCS, (LEA Partner)***, serves more than 8,300 students in grades PK-12 and is the largest employer in the county with over 1,350 employees. While 26.3% of SCS' 21 schools exceeded and 42.1% met growth targets in 2016-17 (latest data available), just under a third, 31.6%, did not meet growth standards.⁶ Additionally, 21.2% of students are special needs and 3% are ELL.⁷ *Poverty*: Montgomery County qualifies for the MCS Rural and Low-Income School (RLIS) program with an average percentage of students below poverty at 28.389% (see *Appendix D*). While Stanly County Schools does not qualify for the RLIS program, data from the US Department of Education illustrates that SCS has an average percentage of students below poverty of 23.838%.⁸ *Teacher*

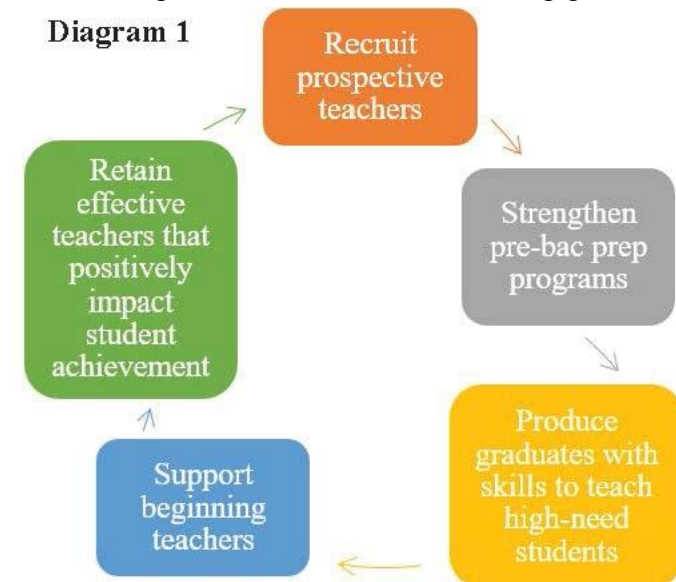
Qualifications and Characteristics: The percentage of teachers without appropriate licensure and certification in MCS averages 12.4% and 10.3% in SCS, far exceeding the 1.4% TQP eligibility threshold. Annual teacher turnover averages 13.7% for Montgomery and 10.3% for Stanly but is 23.2% for teachers with provisional contracts.⁹ ► **Target Schools:** MCS and SCS have identified the following TQP target schools. Further eligibility details are noted in *Appendix D*.

Table 1. High-Need Schools and Free/Reduced Lunch Percentages
<p>Montgomery County Schools: Elementary: Candor (93.7%), Green Ridge (82.6%), Mount Gilead (79.9%), Star (73.9%), Troy (66.2%), Page Street (64.2%); Middle: East (85.2%), West (61.7%), High: East (75.9%), West (57.1%), Montgomery Learning Academy (82.8%), and Montgomery Early College (52.4%).</p>
<p>Stanly County Schools: Central Elementary (100%), East Albemarle Elementary (100%), Albemarle Middle (81.8%), South Stanly Middle (52.5%), and Albemarle High (70.8%)</p>

Additionally, Candor Elementary and East and West Montgomery Middle Schools in MCS and East Albemarle Elementary and Albemarle Middle in SCS have been identified by the NC Department of Public Instruction as among the lowest-performing schools in NC.¹⁰

2) Services provided reflect up-to-date knowledge from research and effective practice. As

seen in Diagram 1, below, our overarching goal is to embed a continuous process by which TCs’



skills and knowledge meet the needs of high-need school districts and our TCs graduate with the skills and knowledge to teach in high-need schools, to high-need students, in high-need subject areas to positively impact student achievement. Our logic model (*Appendix G*) is supported by current research of effective

practice, strongly aligning with our program components and their associated strategies and activities and anticipated short-and long-term outcomes (*Competitive Preference Priority #1*) and described in the following sections. **●Teacher Recruitment:** Montgomery and Stanly County Schools will implement a “grow our own” *Teacher Cadet program*.¹¹ Originally piloted in neighboring SC, the program provides junior and senior high school students with an insight into teaching, combined with internship experiences. The curriculum features 40 standards correlated with the National Council for Accreditation of Teacher Education, Association of Teacher Educators, and National Board for Professional Teaching Standards. Montgomery and Stanly will identify high-achieving students, particularly minority and bilingual students, within their target high-need high schools to encourage enrollment in this credit-bearing course to explore future career possibilities in teaching with the ultimate goal of having students return to their hometown communities to live and work once they complete our Teacher Education Program (TEP).¹² Pfeiffer faculty will provide an opportunity for Cadets to earn additional college course credits through an intro course focused on the common and diverse cognitive, affective, and physical characteristics of the K-12 learner. Pfeiffer will also host Cadets on campus, and offer internship positions, strategies particularly impactful in recruiting first-generation college students.¹³ Evaluation data from the program found that nearly a third of participants chose to enter a TEP upon completion of the Cadet program, with 67.4% indicating their Cadet experience influenced their decision to pursue a teaching career.¹⁴ Other recruitment strategies will follow best practices in teacher recruitment.¹⁵ This includes holding orientations about Pfeiffer’s TEP at Montgomery and Stanly high schools, making presentations at local community college campuses to encourage potential transfer students to consider teaching, and recruiting minorities to teaching from all sectors, including business and the military.¹⁶ **►Alternative Pathways to Teaching** will support recruitment of *mid-career professionals* with a bachelor’s degree and a combination of coursework in education or 5 years of related work experience and passing scores on relevant exams to take a *lateral entry pathway* into teaching. Alternatively certified teachers tend to have stronger

preservice qualifications than education majors and are more likely to remain in schools because they have made a conscious choice to transition into teaching.¹⁷ Pfeiffer's Division of Arts & Sciences will work to recruit current and recent graduates in STEM subject areas to consider pursuit of a teaching credential as this strategy can help increase the supply of highly-qualified STEM teachers, a high-need priority area for our partner districts.¹⁸ Pfeiffer will also create a preparatory program to assist lateral entry candidates in attaining their initial lateral licensure and ensure they complete an NC approved education program and pass appropriate licensure exams to attain their Standard Professional One Educator's licensure within the state mandated three-year time limit. ► *Paraprofessionals*: Montgomery and Stanly will also focus on recruitment of *paraprofessionals and support staff* in their schools in attaining a teaching credential, identified as an effective means in addressing teacher shortages and increasing teacher diversity.¹⁹ Teacher workforce diversity is important as minority teachers may be perceived more favorably by minority students as they can serve as role models and are particularly attuned to the cultural climate and needs of students.²⁰ Since paraprofessional and support staff live and work within the local community, they are more apt to be reflective of a community's demographics and can provide students with more diverse role models.²¹ To assist paraprofessionals in overcoming barriers in degree attainment, such as the need to work full-time and afford the cost of college, Pfeiffer will offer an Educator Scholarship (equivalent to 49% of tuition) for those who pursue a teaching credential. Additionally, Pfeiffer offers both online and evening courses.

🔗 **Teacher Preparation:** *REPERTOIRE* will lead to improvements in Pfeiffer's pre-bac teacher preparation program as we better align our teacher prep programs to meet the needs of Montgomery and Stanly County Schools. TCs and BTs will receive revised curricula, clinical experiences, ongoing professional development, and induction to increase their content knowledge, pedagogical skills, and cultural competency, based on the use of empirically-based practices and scientifically valid research on teaching and learning particularly as it pertains to the needs of high-poverty, rural, ELLs, and Special Education students. Content and methods courses

will include reviews of current scientifically-based research in core content areas including STEM and literacy, to assist in implementation of state standards-based instruction and interventions to improve student achievement. TCs will participate in preparatory practicum rotations in high-need classrooms (i.e., Special Education, English Language Learners) before their rigorous, year-long pre-bac clinical experience, and when feasible, within the same high-need school or district. These field placements tightly align course work with classroom curricula to further TC's ability to understand the linkage between research-based curricula content and its application in the classroom. Beginning teachers will benefit from the addition of a year-long induction period to further develop in-depth understanding and competency in meeting the needs of at-risk student populations. Similar approaches have cut teacher attrition rates in half and helped increase teacher effectiveness and student learning gains.²² Other teacher preparation strategies include: ► ***New and Revised Teacher Prep Concentration Areas***. Currently, Pfeiffer offers concentrations in Special Education, Elementary, and STEM education and add-on licensures in Secondary Education and Academically/Intellectually Gifted Education. We will revise existing curricula and introduce new courses designed to create an additional concentration, *Teaching Students in Poverty*, so TCs learn to apply a culturally responsive lens to their instructional practice. Curricula will delve into how poverty negatively impacts socio-emotional development, how it is often intertwined with traumatic stress, how it manifests in classroom behaviors, and the significant barriers it presents to student learning. TCs will learn how-to assist their students' in overcoming these barriers by building critical socio-emotional skills and promoting development of cognitive and problem-solving skills using the multiple-tiered system of supports framework, required in all NC public schools.^{23,24} Because children in poverty often lag far behind their more advantaged peers in attainment of *foundational literacy skill development*, Pfeiffer will revise our current curricula to place a stronger emphasis on explicit, systematic instruction in all five research-based foundational literacy skills areas: phonemic awareness, phonics, fluency, vocabulary, and comprehension.^{25,26} *REPERTOIRE* will also expand our current K-6 concentration to include *PreK*

to ensure that prospective TCs receive specialized education and training in development and education of young children from birth until kindergarten entry that aligns with NC learning standards for early childhood education programs. This includes knowledge and use of appropriate early childhood theory and pedagogy to promote optimum development of children’s cognitive, socio-emotional, language development and communication, and health and physical development. Pfeiffer’s Division of Arts & Sciences will work to ensure up-to-date content and related instructional approaches are infused in our teacher prep curricula. We will rewrite current required methods courses to accent integration of cross-cutting STEM content and build TCs’ understanding of STEM inquiry-based and active learning approaches. Currently, Pfeiffer requires all teacher candidates to enroll in “Technological Applications for Educators” to provide them with a strong foundation in using technology to provide meaningful, engaging instruction to students, including ELLs and those with special needs and disabilities, using Universal Design for Learning (UDL) principles and adaptive technologies to accommodate students. Technology integration is included in all methods courses, with a required culminating portfolio to document successful technology inclusion in instruction. We will review and revise current courses and alignment of methods courses to incorporate technology-based instruction and interventions.

➊ **Teacher Retention and Support:** Once our BTs enter the classroom, they’ll be assigned to a *dual-mentorship program* with a mentor from their assigned school and a second mentor from Pfeiffer faculty. Mentors will serve as professional and personal resources and provide information, advice, support, and feedback to enhance the development of skills BTs need to be successful in the classroom.²⁷ Combining comprehensive induction and mentoring new teachers has been found to cut attrition rates by as much as 26% in one study.²⁸ Pfeiffer will expand the interdisciplinary *Pfeiffer Life* program which requires all students to explore their local community as they develop appreciation of the arts, global and cultural awareness, mental and physical wellness, develop purpose and career prep, and demonstrate servant leadership in their communities. This will strengthen students’ understanding of the communities in which they

undergo their clinical preparation and boost their sense of belonging and connectedness. Our partner districts will also create a *Peer and Community Network*, designed to build BT's professional and social networks, further helping BTs to acclimate to their new communities.

3) Training/professional development services are of sufficient quality, intensity, and duration that lead to improvements in practice. *REPERTOIRE's* overarching vision is to equip teachers with preparation and ongoing professional development drawing on current research and observational and hands-on experiences in applying appropriate pedagogy in the classroom. This includes developing cultural competencies to work with diverse learners, instructional planning aligned with the NC Standard Course of Study which encompasses the Common Core Standards, and delivering high-quality instruction grounded in research-based practices to ensure academic achievement gains for all students.²⁹ We will strongly encourage our TCs to choose a high-need concentration area add-on such as our planned *Teaching Students in Poverty* our expanded PK-6 concentration, or our existing STEM or Special Education concentrations. This will improve the competency and confidence in the classroom and exponentially increase their potential hiring value to Montgomery and Stanly County Schools. Once in the classroom, BTs will receive *ongoing professional development and instructional support* focused on strategies to increase their capacity in working with high-risk student populations (i.e., ELL, SWD) and in high-need subject areas (STEM, Special Education). Systematic induction support aids in retention and allows teachers to further develop their professional skill sets, leading to increased effectiveness³⁰. Through in-person, on-campus, and via live or taped webinars, Pfeiffer faculty will provide BTs and in-service teachers in Montgomery and Stanly with professional development (PD) featuring a continuation of relevant topics, including guidance in aligning NC Curriculum standards with the multi-tiered systems of support (MTSS). MTSS is a hybrid model combining the well-researched *Response to Intervention* framework used to identify learning difficulties and implement multi-tiered interventions while also addressing students' socio-emotional and behavioral needs through the Positive Behavioral Interventions and Supports (PBIS) framework.³¹ Other topics will include

content specific PD, literacy interventions, and use of trauma-informed practices in the classroom. All PD will be coordinated with that of Montgomery and Stanly County Schools including PD funded by federal IDEA and ESEA programs so BTs receive an aligned PD approach. PD will be led and delivered by district Instructional Facilitators (IFs), Pfeiffer faculty, and through weekly Professional Learning Communities in each school. IFs will also provide BTs with weekly observation and instructional support, in addition to the BT's Cooperating Teacher and School Administrator. Similar approaches have helped increase beginning teacher self-efficacy and effectiveness and reduced attrition rates.³² PD will use collaborative inquiry, study of scientifically-based research articles, and case studies employing both an outside-of-school perspective (i.e., community, geography, community resources, outside agencies, etc.) and inside-of-school perspectives (i.e., subject matter, curriculum delivery) to develop possible solutions, plus cover goal-setting, formative and summative assessment, progress monitoring, personalization and instructional delivery techniques, and use of data-based decision-making.³³ PD delivery will include demonstration, modeling, discussion, and direct teaching of techniques with hands-on practice and feedback including peer coaching and review.³⁴ Additional PD for BTs and teachers in Montgomery and Stanly conducted in conjunction with Pfeiffer, will include an annual two-day 1) *Summer Institute* to provide practical, research-based information on teaching in rural communities and/or poverty with an orientation towards interventional approaches and effective instructional practices; 2) a *Fall Workshop* series featuring nationally-recognized speakers offered to teachers, TCs, BTs, school leaders, researchers, and other key stakeholders; and 3) an annual *Spring Research Consortium*, to facilitate researcher collaboration and disseminate best practices.

Project Design

1) Proposed project demonstrates a rationale. As seen in our project logic model in *Appendix G*, our project approach is based on three primary program components as detailed below.

① *Teacher Recruitment:* Our theory is that local students and current residents, with local

Both Montgomery and Stanly County Schools have persistent job openings for English Language Learners and minority instructors and will target bilingual and minority high school students to consider a teaching career through establishment of a *Teacher Cadet* program in their high-poverty high schools. Academically talented, high-achieving minority students will be identified and recruited for enrollment and will earn dual credit accrual through the course. The curriculum is activity based and uses observation and reflection, student choice, projects, and study of scientifically-based research and best practices to effectively engage students as they learn about learning science, the role of the learner, professional expectations and responsibilities of the teacher, and a global perspective of educational systems past, present, and future. Students take part in observation and assistance in actual elementary, middle, and high school classrooms with field placement 3-4 days per week for 3-4 weeks and spend the other days in class with their cadet instructor. Pfeiffer will provide cadets with on-campus internships and college campus tours. The University will also provide an overview of scholarship and support programs available to help students overcome any financial obstacles to enrollment. Pfeiffer will conduct recruitment activities in Montgomery and Stanly County High Schools and at local two-year junior colleges. Unencumbered articulation agreements with community college partners and the Regional Alternative Licensure Center (RALC) make Pfeiffer's programs especially user-friendly to students who transfer from the community college system and to lateral entry teachers.³⁵ Pfeiffer and our partner LEAs will also work to recruit paraprofessionals already employed by the districts to encourage them to attain their teaching credentials. We will enlist the aid of community and business partners to identify and recruit mid-career professionals, former military personnel, and recent college graduates with strong academic histories into Pfeiffer's TEP, which is highly

accessible to nontraditional students through instructional delivery at satellite locations and at distance learning locations within Montgomery and Stanly counties. Academic scholarships and scholastic awards for targeted students as well as an Educator Scholarship (equivalent to 49% of tuition) for those who pursue a teaching credential to showcase Pfeiffer’s commitment to preparing teachers for NC public schools.³⁶

●Teacher Preparation: Our theory is providing high levels of support and training to teacher

Increasing the capacity of our TCs, BTs, and in-service teachers in working with culturally diverse and high-need student populations will improve teacher self-efficacy, leading to greater impacts on student achievement, and increased teacher retention rates in high-need schools. *Field*

Placements: Currently, Pfeiffer requires TCs to complete field experiences within public school classrooms each semester they are enrolled in the TEP. Placements align with the course competencies they are studying in-class. Level 1 experiences are general classroom observations ranging from 5 to 15 hours of classroom hours per course. Level 2 incorporates both observation and engaged learning experiences where TCs gain experience in practicing implementation of content specific knowledge and pedagogical skills, with Level 3 encompassing the student teaching clinical experience. Field experiences include rotations through special needs, English Language Learner, and reading classes, with placements in high-poverty/high-need classrooms. Pfeiffer requires all candidates applying for their final clinical experience (i.e., student teaching) to meet qualifying scores on all required content licensure exams of the NC Department of Public Instruction. *REPERTOIRE* will implement a *two-year induction* including a year of pre-bac clinical preparation and extended support in the teacher’s first year in the classroom . TCs will be placed in high-need schools within Montgomery and Stanly County Schools. Throughout the two-year induction program, TCs and BTs will be evaluated during field experiences by University faculty

and the district's cooperating teachers and administrators. Weekly and midterm evaluations are used as diagnostic appraisals to evaluate the personal and professional growth of TCs and document their progress in developing effective instructional skills and present level of performance, plus identify any needed remediation. Evaluation forms align with Danielson's Conceptual Framework across four domains: 1) Planning and Preparation; 2) Establishing a Respectful Environment; and 3) Instructing Effectively and Professional Responsibilities and the NC Educator Evaluation Standards for Beginning Teachers whose 5 standards include: Leadership, Establishing a Respectful Learning Environment for Diverse Students, Content Knowledge, Ability to Facilitate Student Learning, and Teacher Reflection.³⁸ Informal reflections are also evaluated by the University Supervisor and used to inform remediation needs or supports

► ***Redesign and Additions to Teacher Prep Curricula*** The need for educators who can teach diverse student populations is backed by NC Department of Public Instruction data which shows that 52.1% of students in NC in 2017-18 were minorities. In our target schools, just 19.5% of teachers were male, 12% African-American and 1% Hispanic, in sharp contrast to a student enrollment that is 16.8% Hispanic, 14.5% Black, 4.5% Mixed Race, and 3.1% Indian, Asian or Pacific Islander.³⁹ Additionally, approximately 61.8% of students with an identified disability spend 80% of their school day in a general education classroom, underscoring the need to ensure that TCs are properly prepared to work with diverse students and those with special academic needs.⁴⁰ All TCs will learn to use student data, such as diagnostic, formative, and summative assessments, to identify areas of student weaknesses or need and deliver differentiated educational experiences to boost academic achievement of diverse, high-risk student populations, including ELL and SWDs. This will include how-to use Individual Education Plans (IEPs) to design appropriate learning experiences for students, plus participation in IEP conferences with parents and district personnel. Pfeiffer will further increase pre-service teachers' capacity in working with high-need, diverse students by creating a new concentration for *Teaching Students in Poverty* to integrate issues of race, ethnicity, and culture and reduce disproportionality to ensure that

instructional activities and academic outcomes equally benefit all students. This will include examination of the underlying issues that often affect teachers' expectations and perceptions of student performance and introduction of cultural responsiveness training to raise consciousness and change behavior without blame. Implicit or explicit biases and the central role that income and race play in the PK-12 educational system can result in students from culturally and linguistically diverse backgrounds being disproportionately under or over-represented in special education and disciplinary programs.⁴¹ Our approach will address factors such as content relevant to diverse students' lives; compatibility between the behavioral norms of schools and students' home cultures; inclusion of the students' home language; and a connection between pedagogy used in classrooms and teaching methods familiar to students.⁴² By making classroom instruction and the classroom environment more congruent with the cultural value systems of student populations, teachers can build on cultural experiences to make learning more relevant. This will develop teachers who believe in the potential of all students to learn and succeed and who communicate their beliefs through their professional practices; producing students who believe they can succeed. While culturally responsive teaching and culturally relevant pedagogy are still relatively new areas in education, research has identified five domains central to the approach, developed by Brown-Jeffy and Cooper (2011) which place an emphasis on personalized learning and individualized instruction for racial, cultural, and linguistic diverse students including those with disabilities. These domains include: 1) identity and achievement; 2) equity and excellence; 3) developmental appropriateness; 4) teaching the whole child; and 5) student-teacher relationships.⁴³ ► **Trauma-Informed Educators:** Curricula revisions will accent trauma-informed practices as recent research has focused on trauma's long-lasting on classroom behaviors and student achievement. Trauma can happen to students from all races, ages, or socioeconomic status and includes exposure to physical, psychological, or sexual abuse; physical or emotional neglect; parental separation or divorce; natural disasters; crime victimization; home or community violence; living with family members who are mentally ill, suicidal, or substance abusers; or a family history of poverty or

incarceration.⁴⁴ Repeated exposure alters brain development and functioning and impacts the body's stress-related physiological systems, compromising the stress-response systems, which, long-term, can damage their mental, physical, social, and emotional well-being.⁴⁵ Cognitive impacts can hinder academic success and attainment and increase likelihood of long-term mental and physical health issues in adulthood.⁴⁶ Impacted students typically present with chronic coping strategies and behaviors such as hypervigilance, distrust, indifference, eating disorders, self-harm substance abuse, or violent acts.⁴⁷ They have lower GPAs, higher rates of office referrals, suspensions, and expulsions, and are at a greater risk of special education referrals.⁴⁸ As noted in one study, while not every student in a classroom has a significant trauma history, the needs of those who do defines and limits the academic success of all.⁴⁹ *REPERTOIRE* will provide our TCs, BTs, and school staff with comprehensive PD to build their organizational competencies to understand and recognize the widespread impacts of trauma, its signs and symptoms, and how to create trauma-informed schools and classrooms.⁵⁰ Methods will focus on building students' socio-emotional skills and their cognitive and problem-solving skills, critical to academic achievement and positive life outcomes.⁵¹ ► **PreK:** Pfeiffer currently offers concentrations in Special Education, K-6, and STEM with add-on licensures in Academically and Intellectually Gifted and Secondary Education. We will revise curricula in our current K-6 program to include a PreK component to ensure that graduates are considered to be highly competent in the early childhood classroom.⁵² ► **STEM:** Pfeiffer currently offers a STEM concentration for graduate teachers in grades K-6 but will update our pre-service curricula to ensure alignment to the NC Science Essential Standards which encompass the National Research Council's Next Generation Science Standards. This approach intertwines 1) *Practices* such as scientific inquiry and investigation to design and build models and systems; 2) *Crosscutting Concepts* applicable across all domains of science such as patterns, similarity, cause and effect, energy and matter, structure and function, stability and change; and 3) *Disciplinary Core* ideas in physical sciences, life sciences, earth and space sciences; engineering, technology, and science applications.⁵³ Lesson planning will

encompass the use of the 5E model (engagement, exploration, explanation, elaboration and extension, and evaluation) to better integrate cross-cutting STEM education principles across the curriculum.⁵⁴ ► **Teaching Literacy Skills Development:** In addition to the five essential components of reading instruction (i.e, phonemic awareness, phonics, fluency, vocabulary, comprehension), educators need training that prepares them to teach listening comprehension, reading comprehension, and learning content through reading. Pfeiffer currently requires TCs in our K-6 and Special Education programs take specific reading coursework and supplemental courses in language arts and children’s literature to further their understanding of the reading process. Our Special Ed candidates take supplemental courses devoted to teaching reading to special needs students. Content stresses diagnostic and corrective reading and differentiated instruction. Curricula revisions will accent literacy instruction across the curriculum to place a stronger emphasis on research-based best practices plus the use of diagnostic and interventional practices including corrective reading and differentiated instruction for all grade levels. TCs will learn to explicitly model strategies using step-by-step demonstrations and carefully sequenced instruction and pacing to provide students sufficient time to gain mastery.⁵⁵ They will learn to activate students’ prior knowledge, draw inferences, predict, retell, and summarize, plus build student vocabulary, particularly in content areas.^{56,57} ► **Ongoing Professional Learning:** *REPERTOIRE* will provide ongoing PD for BTs and in-service teachers throughout Montgomery and Stanly counties delivered by Pfeiffer faculty and nationally-known experts on high-risk student populations via 1) an annual two-day *Summer Institute* which will provide participants with practical, research-based information on teaching living in rural communities and/or poverty with an orientation towards interventional approaches and effective instructional practices; 2) a *Fall Workshop* series featuring nationally-recognized speakers which will be offered to teachers, teacher candidates, school leaders, researchers, and other key stakeholders; and 3) an annual *Spring Research Consortium*, designed to facilitate collaboration and disseminate best practices among research scholars, school district leaders, and practitioners. Teachers will learn hands-on

strategies designed to create a greater understanding of the contexts of living in poverty, effective instructional strategies including improvements in the classroom environment, building stronger family and community partnerships, and how to identify and adapt curricula, assessment and instructional practices for high-risk student populations. Equipping teachers with knowledge and skills to effectively integrate culturally responsive instruction into their classroom will result in greater achievement gains for high-risk student subgroups while increasing teachers' confidence in working with diverse learners which can also positively impact teacher retention.⁵⁸

► **University-School District Partnerships:** Pfeiffer University will expand our *Teacher Education Board* which meets each semester to administer and develop regulations governing the admissions, selection, and retention of TCs in the Division of Education to keep programs consistent with the latest guidelines governing teacher licensure and ensure coordination with the Division of Arts & Sciences. We will expand the Board to include representatives from Montgomery and Stanly County Schools. Additionally, Pfeiffer's Partner Advisory Committee (PAC), meets each semester with faculty and administration as part of our continuous improvement cycle which analyzes assessment data on TCs, collected each semester to review the need for curricula or programmatic revisions to the TEP. This includes student-level indicators and BT's effectiveness in improving student achievement. Our LEA partners will provide information to help evaluate the effectiveness of our TEP as we expand our efforts from K-6 to encompass high-quality PreK programming. Review of student and TC data help ensure that general education preparation and content preparation coursework aligns with the hiring needs of our two rural partnering districts and with state and national standards. Education faculty also discuss course outcomes and products during regular department and division meetings to make needed course adjustments, inform faculty development, budgeting, and related initiatives.

📍 *Teacher Retention and Support: Our theory is providing supports in the first year of*

teachers to succeed in these challenging environments, reducing teacher turnover, leading to improved student academic achievement.^{59,60}

► ***Dual-Mentoring and Supervision:*** During the TC’s clinical experience, they will receive weekly supervision by their faculty supervisor and their cooperating teacher, additional guidance and support from experienced teachers, principals, and other school and administration leaders within their assigned school. This supervision includes evaluations by their university supervisor, cooperating teachers, and cooperating administrators using a formal observation instrument aligned with the NC Educator Evaluation Standards. Faculty will be given appropriate release time by their district to provide training and support for TCs to include either course workload credits or stipend compensation for time teaching and evaluating TCs and BTs. *Mentors:* Each BT will be assigned dual mentors including a university faculty member (including content faculty from Pfeiffer’s Division of Arts & Sciences and a cooperating teacher from the school’s faculty). University and school mentors will serve as professional and personal resources for BTs, meeting with them weekly throughout their first year in the classroom and biweekly in Year 2. Mentors will provide information, advice, support, and feedback to enhance their development of skills needed to be successful.⁶¹ School-based mentors will receive foundational training provided by NC’s Department of Public Instruction’s 21st Century Mentoring module and ongoing support and technical assistance from Pfeiffer.⁶² The module is aligned with the NC’s Professional Teaching Standards and provides guidance in supporting BTs in each of the NC Educator Evaluation Standards (NCEES). School-based mentors will help communicate district and school goals, policies, and procedures, and provide resources for BTs such as curriculum guides. University mentors will conduct regular check-ins, either in-person, by phone, or video conference, to talk about classroom challenges and to identify instructional strategies which would help them address these identified issues. Ongoing observations and weekly reflections outlining BT’s reactions, questions, successes, and challenges encountered in the classroom will be used as a basis for discussion and to identify the need for any additional supports or professional learning. The

REPertoire: Narrative *Page 18 of 50*

opportunity to engage in professional discourse helps provide relevant learning opportunities regarding content, pedagogy, behavior management, and the opportunity to engage in reflective practice, all essential to ongoing improvements in educator effectiveness.⁶³ Both informal and formal observation reports for TCs and BTs will align with NCEES and include instructional planning, lesson design, instructional presentation, classroom management, technology application, and assessment. One study found 92% of teachers assigned a mentor in their first year returned the next year and 86% were still on the job five years later, compared to 84% and 71% for those not assigned a mentor.⁶⁴ ► **Ongoing Professional Learning and Instructional Support** Montgomery and Stanly will align their PD activities with Pfeiffer to focus on culturally responsive teaching, restorative justice, and understanding poverty. Induction programs that include mentoring and continual support from school leaders produce teachers who are more satisfied with their jobs, are more highly rated on evaluations, and have students with greater academic outcomes.⁶⁵ ► **Peer and Community Networks:** Our partner districts will help BTs build professional and social networks and serve as community guides to further acclimate new teachers into their communities. While our high-poverty, rural districts are somewhat limited in the financial incentives they can offer new teachers, they’ll work to leverage business partnerships to sponsor Open Houses and other special events for teachers new to their districts to introduce them to community leaders and further integrate them into their new communities and provide local business discounts.⁶⁶ *REPERTOIRE* will also create a social media group so current and former students can share information about their experiences and engage with other beginning teachers.

.Table 2 below details our goals and objectives which align with our logic model outcomes as seen in *Appendix G*.

Table 2. <i>REPERTOIRE</i> Goals and Objectives
Goal 1: Pfeiffer University and partner LEAs will work to increase the number of students who enter teacher education programs with an emphasis on high-need areas of math, science, early

childhood, ELL, special education, elementary grades, IB, and AP courses.
1.1 The number of teacher candidates (TCs) recruited into the teacher education program at Pfeiffer University will increase 35% over baseline each year. <i>Measure:</i> Administrative enrollment records. <i>Baseline:</i> Graduating class of 2017-18, N=11.
1.2 The number of non-traditional, minority, and under-represented TCs will increase by 35% from baseline each year (CPP #2). <i>Measure:</i> Administrative enrollment records. <i>Baseline:</i> Graduating class of 2017-18, N=2/11 (18.2%).
1.3 The number of TCs majoring in high-need areas (i.e., math, science, early childhood, ELL, special education, elementary grades, and IB and AP courses) will increase by 50% from baseline each year (CPP #1). <i>Measure:</i> Administrative enrollment records. <i>Baseline:</i> Graduating class of 2017-18, N N=6/11 (54.5%).
1.4 High schools in each district will develop and implement a <i>Teacher Cadet</i> program with a minimum enrollment of 50 students in Year 1. Program enrollment will increase by 20% annually. <i>Measure:</i> Enrollment records. <i>Baseline:</i> Year 1 enrollment of at least 50 students.
Goal 2: Pfeiffer University will prepare highly-qualified TCs who pass all certification and licensure requirements. Students will be certified/licensed with an emphasis on high-need areas (math, science, early childhood, ELL, special education, elementary grades, IB, and AP).
2.1 Performance Measure 1 (GPRA 1): The percentage of program graduates who have attained initial State certification/licensure by passing all necessary licensure/certification assessments within 1 year of program completion. <i>Measure:</i> NC certification and licensure pass rates and scaled scores. <i>Baseline:</i> Percent of graduating students from SY 2017-18 who passed all certification and licensure requirements, N=90.1%.
2.2 Performance Measure 2 (GPRA 2) The percentage of math/science program graduates that attain initial certification/licensure by passing all necessary licensure/certification assessments within 1 year of program completion (CPP #1). <i>Measure:</i> NC certification and

licensure pass rates and scaled scores. *Baseline:* Percent of graduating students from SY 2017-18 who passed all certification and licensure requirements.

2.3 The percentage of non-traditional, minority, and under-represented TCs that pass all certification and licensure requirements will increase by 25% over baseline for each year of the grant (**CPP #2**). *Measure:* Certification and licensure records. *Baseline:* Percent of graduating students from the 2017-18 class who passed all certification and licensure requirements.

2.4 Performance Measure 3 (GPRA 3) The percentage of program participants who were enrolled in the postsecondary program in the previous grant reporting period, did not graduate, and persisted in the postsecondary program in the current grant reporting period. *Measure:* IHE administrative enrollment records. *Baseline:* Average retention rate from year to year for the past five years, N=98.8%.

2.5 Increase the percentage of TCs, by 50% annually, who are trained to be able to integrate and use technology, data-based research, and differentiated instruction effectively to support the academic achievement of their students. *Measure:* Transcripts; course grades; codified classroom observation results, and student, mentor, Pfeiffer faculty, school administrator, TC, and BT survey results. *Baseline:* Percent of graduating students from 2017-18 class trained in use of technology, research, student achievement data, and differentiated instruction.

2.6 Provide all teacher education students with induction support through regularly scheduled clinical learning experiences in classrooms of partner LEAs and through mentoring with experienced teachers and faculty within the teacher education program. At least 85% of TCs will complete all induction program requirements. *Measure:* Administrative records of hours in classroom practicums and mentor contact hours; codified classroom observation results; and mentor, Pfeiffer faculty, school administrator, TC, and BT survey results. *Baseline:* Percent of teacher education students from 2017-18 class who are receiving practicums in partner LEAs and mentoring by experienced teachers and Pfeiffer faculty.

Goal 3: LEAs will hire, support, and retain highly-qualified teachers with an emphasis on high-need areas (math, science, early childhood, ELL, special education, K-6, IB, and AP courses).

3.1 The percentage of teachers who meet the applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes to certification, or, with regard to special education teachers, the qualifications described in section 612(a)(14)(C) of the IDEA (20 U.S.C. 1412(a)(14)(C)), hired by the high-need LEA participating in the eligible partnership will increase by 25% over baseline for each year of the grant. *Measure:* Partner LEAs' hiring records. *Baseline:* Percent of teacher education graduates who passed all certification and licensure requirements hired by high-need LEA partners from SY 2017-18.

3.2 The percentage of teachers who meet the applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes to certification, or, with regard to special education teachers, the qualifications described in section 612(a)(14)(C) of the IDEA (20 U.S.C. 1412(a)(14)(C)), hired by the high-need LEA who are members of underrepresented groups will increase by 25% over baseline for each year of the grant (**CPP #2**). *Measure:* Certification and licensure records. *Baseline:* Percent of teacher education graduates who are members of underrepresented groups who passed all certification and licensure requirements hired by high-need LEA partners from SY 2017-18.

3.3 The percentage of teachers who meet the applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes to certification, or, with regard to special education teachers, the qualifications described in section 612(a)(14)(C) of the IDEA (20 U.S.C. 1412(a)(14)(C)), hired by the high-need LEA who teach high-need academic subject areas (such as reading, mathematics, science, and foreign language, including less commonly taught languages and critical foreign languages) will increase by 25% over baseline for each year of the grant (**CPP #1**). *Measure:* Partner LEAs' hiring records.

Baseline: Percent of teacher education graduates who passed all certification and licensure requirements hired by high-need LEA partners who teach high-need academic subject areas from SY 2017-18.

3.4 The percentage of teachers who meet the applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes to certification, or, with regard to special education teachers, the qualifications described in section 612(a)(14)(C) of the IDEA (20 U.S.C. 1412(a)(14)(C)), hired by the high-need LEA who teach in high-need areas (including special education, language instruction educational programs for limited English proficient students, and early childhood education) will increase by 25% over baseline for each year of the grant. *Measure:* Certification and licensure records. *Baseline:* Percent of teacher education graduates who passed all certification and licensure requirements hired by high-need LEA partners and teaching in high-need areas from SY 2017-18.

3.5 The percentage of teachers who meet the applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes to certification, or, with regard to special education teachers, the qualifications described in section 612(a)(14)(C) of the IDEA (20 U.S.C. 1412(a)(14)(C)), hired by the high-need LEA who teach in high-need schools, disaggregated by the elementary school and secondary school levels will increase by 25% over baseline for each year of the grant. *Measure:* Certification and licensure records. *Baseline:* Percent of teacher education graduates who passed all certification and licensure requirements hired by high-need LEA partners and teaching in high-need schools (disaggregated by elementary and secondary school levels) from SY 2017 -18.

3.6 Performance Measure 4 (GPRA 4). The percentage of program completers who were employed for the first time as teachers of record in the preceding year by the partner high-need LEA or ECE program and were retained for the current school year. *Measure:* Partner LEAs'

hiring records. *Baseline:* Average percentage of first-year teachers (from across the past five school years) who continue to teach into their second year of employment.

3.7 Performance Measure 5 (GPRA 5). The percentage of program completers who were employed by the partner high-need LEA for three consecutive years after initial employment. *Measure:* Partner LEAs' hiring records. *Baseline:* Average percentage of first-year teachers (from across the past five school years) who continue to teach for three consecutive school years after initial employment.

3.8 The number of emergency and provisional teachers employed by partner LEAs will decrease by 50% annually. *Measure:* Partner LEAs' hiring records. *Baseline:* Percent of teachers from SY 2017-18 teaching with provisional or emergency certification.

3.9 Provide all new teachers with a high-quality induction program including mentoring relationships with experienced teachers for the first two years of employment. At least 85% of BTs will complete all induction program requirements. *Measure:* Administrative records documenting induction professional development and mentoring contact hours; codified classroom observation results; and mentor, Pfeiffer faculty, school administrator, TC, and BT survey results. *Baseline:* Percent of new teachers from SY 2017-18 who are receiving mentoring by experienced teachers or induction support.

3.10 Provide all new teachers with comprehensive, continuous professional development opportunities through Professional Learning Communities. STEM-related professional development opportunities will be provided as a priority for all new teachers (**CPP #1**). At least 85% of BTs will complete all available professional development opportunities each year. *Measure:* Professional development agendas and sign-in sheets; student, mentor, Pfeiffer faculty, school administrator, TC, and BT survey results. *Baseline:* Percent of new teachers from SY 2017-18 receiving mentoring by experienced teachers.

3.11 Performance Measure 6 (GPRA 6). The percentage of grantees that report improved aggregate learning outcomes of students taught by new teachers. These data can be calculated using student growth, a teacher evaluation measure, or both. *Measure:* NC’s End-of-Grade (NC EOG) assessments in reading, math, science, English II, and Math 1; rubric scores for each of the five teaching standards from the NC Educator Evaluation Standards (NCEES); student, mentor, Pfeiffer faculty, school administrator, TC, and BT survey results.

3.12 Increase teacher effectiveness as measured by the percent of students with scale score increases of at least 5 points on NC EOG assessments in reading, math, science, English II, and Math 1 (**GPRA 6**). *Measure:* NC EOG assessment scale scores in reading, math, science, English II, and Math 1 for students being taught by participating teachers. *Baseline:* NC EOG and End-of-Course (EOC) scores for relevant students from SY 2017-18.

3.13 Increase teacher effectiveness as measured by the percent of teachers who improve their proficiency on at least 10 of the 25 elements of teaching standards from the NCEES (**GPRA 6**). *Measure:* Rubric scores for each of the five teaching standards from the NCEES for participating teachers. *Baseline:* Year 1 rubric scores for each of the five teaching standards from NCEES for participating teachers.

3) Project is designed to build capacity and yield results beyond Federal financial assistance.

Pfeiffer will establish an additional concentration in *Teaching Students in Poverty* designed to provide intensive clinical experiences, and induction programs within high-poverty schools to increase TC capacity and effectiveness in working with high-poverty, under-resourced learners. This program will serve as a model for other universities throughout North Carolina and the nation that serve high-poverty, high-need student populations. Pfeiffer will further disseminate lessons learned and best practices through our planned Summer Institute, Fall Workshop series, and Spring Research Consortium. The Spring Research Consortium, in particular, was designed to facilitate collaboration among and across university divisions, research scholars, school district leaders, and

practitioners. *REPERTOIRE* will increase capacity within our partner school districts as in-service teachers and BTs take part in regularly scheduled professional learning centered on subject area content and strategies for working with high-need student populations led by Pfeiffer faculty and each districts' existing Instructional Facilitators. This collaborative approach will focus on engagement in case studies, inquiry, and research activities to assist our partner LEAs in building educator capacity to enhance the knowledge, skills, and content necessary to promote increases in student achievement, focused on the needs of high-risk student populations including ELLs, SWDs, and high-poverty students. Building capacity of school educators will in turn lead to long-term improvements in school climate and culture and increased student achievement which will last beyond the initial funding period. Pfeiffer will benefit through revision of course curricula, addition of new courses, and new concentrations which will also last beyond the TQP grant.

4) Project represents an exceptional approach to the priority or priorities. *REPERTOIRE* addresses *Absolute Priority 1: Partnership Grants for the Preparation of Teachers (Pre-Bac Model)*. Pfeiffer requires all TCs to meet all applicable state certification and licensure requirements including those obtained through alternative routes or lateral entry programs. Our research-based preparation model includes a two-year induction model including a full-year prep program for TCs followed by ongoing guidance and support to BTs provided through a dual mentorship program conducted by Pfeiffer University faculty and partner school districts in Montgomery and Stanly counties. To address the urgent staffing needs of these our two rural partner LEAs, our project will make curricula changes and add new coursework to ensure our graduates are prepared to meet the needs of high-poverty, ELL, special education, STEM, and PreK-6 staffing needs. Once in the classroom, teachers will receive support from Pfeiffer's Divisions of Education and Arts & Sciences faculty as we take a multi-disciplinary approach to connect education faculty with content faculty to support beginning teachers. Throughout the preparation and support periods, TCs, BTs, and current faculty within these districts, will learn to understand and use research-based informed instructional techniques in their professional practice.

in the classroom. This will include the ability to analyze student achievement data and other measures of student learning to inform use of appropriate instructional strategies and curricula across all applicable content areas including special education and early childhood programs. Our overarching goal is to prepare educators to meet the learning needs for all students, by developing their ability to deliver data-informed, differentiated instruction, for a wide range of high-need student populations including SWDs, ELLs, and students in gifted and talented and early childhood programs. We also aim to strengthen curricula to promote greater alignment of true STEM content across multiple subject areas, as well as the use of high-quality, scientifically-based research practices in reading and literacy development across the curriculum. New prep course curricula will include an emphasis on the special needs of high-poverty students, with a special focus on meeting the socio-emotional needs of students whose lives have been negatively impacted by trauma. Please see *Appendix E* for further alignment with this priority.

Competitive Preference Priority 1: Promoting Science, Technology, Engineering, and/or Math (STEM) Education with a particular focus on Computer Science. We will increase the number of educators prepared to deliver rigorous instruction in STEM beginning with recruitment of students into Pfeiffer’s existing Bachelor of Science in Comprehensive Science Education in Elementary Education or our Secondary Teaching Licensure Certificate program. TCs will also be encouraged to enroll in the NC Department of Public Instruction’s (NC DPI) existing 3/2 program which allows students to earn a Master’s in Science in elementary education within five-years. This makes graduates eligible to earn their advanced licensure from the NC DPI and are considered highly qualified for employment in the elementary school setting. Montgomery and Stanly County Schools will also work to recruit current K-12 teachers within their districts in attaining a Master of Science in Education (MSE) through Pfeiffer, which has had a STEM concentration area since 2016. This program is available online and allows teachers to remain in the classroom while pursuing their MSE. The STEM concentration provides six STEM-focused courses which include using technology to enhance STEM education, science and engineering in inquiry settings,

mathematics and interdisciplinary topics, current issues and trends in STEM education, problem-based learning in classrooms and schools, plus a required clinical experience within a STEM classroom. ► ***Evidence-based PD Strategies for Current STEM Educators***: Our project will also provide TCs, BTs, and in-service teachers with ongoing professional development to deepen their STEM content knowledge, led by Pfeiffer’s Divisions of Education and Arts & Sciences faculty including those in computer and information sciences, engineering, biology, environmental science, and kinesiology so target teachers can better incorporate STEM principles in classroom instruction.⁶⁷ Pfeiffer content experts and current, highly qualified STEM educators within partner LEAs, including Instructional Facilitators, will provide PD on how to infuse key STEM learning principles through project-based learning activities to build student knowledge across the STEM content areas, including coding, programming, and engineering. A *What Works Clearinghouse Intervention Report*⁶⁸ found that providing ongoing professional development and coaching of beginning teachers to have positive effects on mathematics achievement⁶⁹ and potentially positive effects on science achievement for students in grades 6-12. ► ***Improving Student Achievement in STEM and Computer Science***. Research into STEM achievement has found that STEM education delivered at the secondary level is “too little, too late” particularly for minority and economically disadvantaged students such as those our project will serve.⁷⁰ Our project will place a special emphasis on teaching students coding and programming principles in the early grades (PreK-2), using free apps such as ScratchJr, created by researchers at MIT.^{71,72} Beyond the primary level, classroom instruction will focus on integration of cross-cutting STEM principles using hands-on activities centered in real-world problem-solving that require use of coding and algorithms debugging, and modularity, applicable to a wide range of diverse future professions such as data analysis, web development, and marketing.⁷³ Research has embraced the idea of coding and computer science and development of associated computational skills to be as important to literacy as reading and writing in the 21st Century.⁷⁴ Like literacy, coding builds upon the use of increasing complexity of information representation and communication.⁷⁵ By implementing STEM

instruction in the very early grades, our students will have hands-on experiences designed to build their computational skills through coding and programming activities such as the use of KIBO, a robotic kit developed by MIT researchers which allows students to construct a robot using a character or object from a favorite storybook. The design and build process will also allow our youngest students to begin learning about the principles of scientific inquiry.⁷⁶ A *What Works Clearinghouse Practice Guide*⁷⁷ found strong evidence for problem-based learning that used or created visual representations and required students to monitor and reflect on the problem-solving process. These strategies are particularly impactful as they require students to think about what they are doing, why they are doing it, evaluate the steps necessary to problem-solve, and require connecting new concepts to what they already know.⁷⁸ Educators will also learn how to design Makerspaces to increase student interest and engagement and draw upon their STEM knowledge, skills, and creativity to experiment, problem-solve, investigate, and build their own products using tech tools such as 3-D printers.⁷⁹ Motivation, interest, and attitudes toward science classes have been identified as predictive of students' course enrollment and success inSTEM at the secondary and postsecondary levels.^{80,81}

Competitive Preference Priority 2: Promoting Effective Instruction in Schools

► **Recruitment:** As described earlier, *REPERTOIRE* provides a comprehensive approach to teacher recruitment and retention, designed to increase the number of racially and ethnically diverse teachers in the classroom. Strategies include a Teacher Cadet program launched in each target high-need high school, plus ongoing community-based efforts to recruit lateral entry professionals into the teaching profession. ► **Improving Educator Effectiveness :** To increase teacher effectiveness, TCs, BTs, and educators within our two target LEAs will receive coursework and PD to assist them in building a toolbox of instructional strategies and evidence-based interventions to increase their effectiveness in improving students' academic achievement. This includes a concentration of coursework and professional learning in *Teaching Students in Poverty* designed to build student engagement and motivation; and increase our educators' cultural responsiveness

so they can incorporate students' prior experiences, frames of reference and cultural backgrounds, and increase the relevancy of learning activities for poor and ethnically diverse students. We have also infused trauma-informed approaches into program design as many problematic student behaviors reflect a developmental response to their experiences rather than willful, purposeful misbehavior.⁸² ► **MTSS:** A positive classroom environment creates a safe space for students, creating more high-quality teacher–student and student–student interactions and provides a scaffolding for higher-intensity socio-emotional learning and delivery of trauma-informed interventions.⁸³ TCs, BTs, and current educators within Montgomery and Stanly County Schools will learn how to communicate clear expectations and develop predictable classroom routines which help support student self-regulation and self-control.⁸⁴ Professional learning will focus on how school staff can help students build more positive coping and self-management strategies, to better build their resiliency and more positively process their complex emotions.⁸⁵ ► **Literacy Across the Curriculum:** Through in-service PD and through required course content in Pfeiffer's TEP, aspiring and current teachers will learn to identify student stumbling blocks using formative and summative assessment data, integrating literacy instruction at all grade levels and subject areas.⁸⁶ Techniques will include how to explicitly model reading strategies such as summarizing, clarifying, predicting, and questioning in read-alouds and guided reading exercises; how to prompt students to ask and answer questions; and apply newly learned comprehension strategies.⁸⁷ Teachers will receive PD on how to teach vocabulary including prompting students' active processing, to support greater comprehension.⁸⁸ Other topics will include: how to assign reading texts based on student reading level, scaffolding strategies for increased comprehension; how to connect new content to existing knowledge; and how to apply ideas and information to develop writing assignments, which are particularly helpful for adolescent readers.⁸⁹

Competitive Preference Priority 3: Novice Applicants. Neither Pfeiffer University, Montgomery or Stanly County Schools have previously received a grant or subgrant under the US Department of Education's TQP program. None of our three partnering entities has been a member of a group

application in a TQP eligible partnership nor has Pfeiffer had an active discretionary grant from the Federal government in the five years before the deadline for TQP grant applications.

Quality of the Management Plan

1) Adequacy of management plan to achieve objectives on time and within budget, including clearly defined responsibilities, timelines, and milestones.

REPERTOIRE's project design includes necessary structures and the collaboration of all partners to conduct regular program monitoring and ensure that all project components are effectively implemented on time and within budget. Our management structures include: 1) *REPERTOIRE Management Team (RMT)* will meet monthly to oversee program implementation and will include multidisciplinary faculty from Pfeiffer University's Divisions of Education and Arts & Sciences and members of Montgomery and Stanly County Schools. Members will include Dr. Dawn Lucas, Dean of Teaching, Learning, and Innovation; Dr. Christopher Boe, Dean of the Division of Education; Dr. Marilyn Sutton-Haywood, Dean of the Division of Arts & Sciences; Dr. Ann Crutchfield, Reading Specialist; Dr. Laura Lowder, STEM Specialist; Mr. Tracy Grit, Assistant Superintendent of Learning of Montgomery County Schools; Mr. Wade Auman, Director of Secondary Education and CTE of Montgomery County Schools; and Dr. Jeff James, Superintendent of Stanly County Schools. Additional information on the members of our RMT are included in *Appendix H*. The RMT will regularly review findings from our third-party, independent evaluation findings to inform strategic decision-making, needed refinements to our project, and fidelity of implementation over the five year program period. In addition, our RMT will identify best practices to improve the recruitment, preparation, support, and retainment of Teacher Candidates and Beginning Teachers across our three organizations. The RMT will be responsible for overseeing the federal funding for the project as well as local and state funding that is contributed to the project. By the end of the program period, the RMT will engage in a long-term sustainability planning process to produce a written sustainability plan that ensures continuation of *REPERTOIRE* after the federal grant funding

has ended. 2) A Master's level Project Director (1.0 FTE) will oversee the daily operation of *REPERTOIRE*, coordinate implementation between Pfeiffer University and our high-need LEA partners and targets schools, lead the RMT, provide fiscal management and accountability, comply with all TQP program requirements, coordinate communication between organizations, engage in progress monitoring with our third-party evaluators, and ensure that relationships are maintained with our partners and vendors that support TQP implementation. 3) An Induction Coordinator (1.0 FTE) will be hired to coordinate the implementation of our two-year induction program with Montgomery and Stanly County Schools to extend the pre-baccalaureate clinical preparation to two semesters (one year) and provide extended support in the teacher's first three years in the classroom. 4) We will engage our existing Field Placement Director (0.15 FTE) to work with the Induction Coordinator and faculty mentors to support our comprehensive induction and mentoring programming. 5) LEA Induction Specialists (0.30 FTE) in each of our high-need LEAs will work closely with our Induction Coordinator and Field Placement Director to support the induction and mentoring of Beginning Teachers. 6) To support the expansion of mentoring and course development, we will hire an additional Educational Leadership Faculty member (1.0 FTE) for the Pfeiffer TEP. 7) Our Recruitment Specialist (0.50 FTE) will lead recruitment efforts with *REPERTOIRE* to increase the percentage of under-represented populations in our TEP and lead recruitment activities on high school campuses within our high-need LEAs as well as at two-year junior colleges. 8) Two part-time, retired teachers will be hired as LEA Recruitment Coordinators (0.50 FTE) at our high-need LEAs will support recruitment through the Teacher Cadet program. 9) Each high-need school will engage our existing 18 Instructional Facilitators (3.6 FTE) to provide coaching and PD on effective instructional strategies and customized support on identified needs to TCs and BTs across the high-need LEAs. 10) Each of our 17 high-need schools will have a Teacher Mentor Coordinator to oversee the day-to-day mentoring coordination. 11) Each high-need school will also engage our beginning Teacher Mentors to ensure that teachers in their first three years in the profession have extra support as they navigate through the induction period. 12)

Retention Strategy Tutors will be hired to support struggling teacher candidates as they complete prep work for licensure exams. 13) We will establish a Pfeiffer/LEA Advisory Committee which will meet five times throughout the year to reflect upon the *REPERTOIRE* project design and develop curriculum based on the needs of our high-need LEAs. 14) The Evaluation Group (TEG), identified through an open and competitive procurement process that complies with the requirements of 2 CFR 200.317-200.326 and policies of our organizations, will conduct a rigorous study to determine program effectiveness and disseminate findings for continuous improvement and replication. The evaluation will be led by Dr. Karyl Askew and Dr. Catherine Snyder who both bring a wealth of experience to evaluating teacher professional development and support programs including multiple federally-funded US Department of Education programs such as Professional Development for Arts Educators, Investing In Innovation (i3) STEM-focused programs, and School Climate Transformation. Our dynamic team will allow us to implement *REPERTOIRE* on time and within budget. Our management plan is described below in Table.3

Table 3. <i>REPERTOIRE</i> TQP Management Plan (October 1 – September 30)		
Responsibility Key: ELF (Educational Leadership Faculty); FPD (Field Placement Director); IC (Induction Coordinator); IF (Instructional Facilitators); IS (Induction Specialists); LEAs (Partner High-Need LEAs); RC (Recruitment Coordinators); PD (Project Director); Pfeiffer (Pfeiffer University); Pfeiffer LEA AC (Pfeiffer LEA Advisory Committee); RMT (<i>REPERTOIRE</i> Management Team); RS (Recruitment Specialist); RST (Retention Strategy Tutors); TEG (The Evaluation Group); TM (Teacher Mentors); TMC (Teacher Mentor Coordinators)		
Timeline	Milestone	Responsibility
Overall Project Management (2018-2023)		
10/2018	◆ Confirm grant timeline and external partnerships, order supplies, and hire staff (Project Director, Induction	RMT

	Coordinator, Educational Leadership Faculty, Recruitment Coordinators)	
	♦ Convene <i>REPERTOIRE</i> Management Team (monthly)	
	♦ Study Teacher Candidate and Beginning Teacher data to inform professional development and mentoring (weekly)	RMT, IF, PD, FPD
	♦ Conduct program evaluation (i.e., data analysis, tools)	TEG
	♦ Compile baseline data at target high-need schools and IHE	
11/2018	♦ Create professional development schedule to include two-day Summer Institute, Fall Workshop series, and Spring Research Consortium (annually)	RMT, PD
	♦ Identify professional conferences for faculty and LEA mentors to attend (annually)	
12/2018	♦ Design stakeholder feedback and input plan	PD, TEG
	♦ Maintain reporting to TQP Program Office (ongoing)	
	♦ Develop Evaluation Plan (annually)	
1/2019	♦ Provide evaluation updates to RMT (quarterly)	TEG
	♦ Disseminate evaluation findings (quarterly)	RMT
6/2019	♦ Attend TQP meeting in Washington, DC (annually)	PD, TEG
10/2019	♦ Develop written sustainability plan (quarterly)	RMT, PD
6/2023	♦ Finalize impact evaluation study and share findings	TEG
9/2023	♦ Complete grant closeout activities and final reporting	RMT, PD
Recruit		
10/2018	♦ Begin planning for Teacher Cadet Program within each high-need LEA	RMT, LEAs, RC
11/2018	♦ Hire an educator at each target high school to teach	LEAs, RC

	Teacher Cadet program ♦ Register students for Teacher Cadet Program	
1/2019	♦ Select Teacher Candidates for educator scholarships(annually)	Pfeiffer
3/2019	♦ Identify recruitment improvements to target individuals from under-represented populations (annually)	RMT, RS
4/2019	♦ Revise and define recruitment strategy	RMT, RS
	♦ Implement enhanced content area training (ongoing)	RMT
5/2019	♦ Develop admissions goals and priorities aligned with partner LEAs (annually)	RMT, Pfeiffer Admissions, RS,
	♦ Identify hiring process improvements	LEAs
6/2019	♦ Implement recruitment strategies (ongoing)	RMT, RS
7/2019	♦ Develop revised hiring process plan, as needed	RMT
8/2019	♦ Implement coaching process	PD, IF, TM
	♦ Launch Teacher Cadet programs (new cohort annually)	LEAs, RC
Prepare		
11/2018	♦ Engage culturally responsive training experts	RMT
	♦ Launch Curriculum Development Retreats (ten days annually)	RMT, Pfeiffer/LEA AC
	♦ Review <i>Pfeiffer Life</i> interdisciplinary program and identify program integration with <i>REPERTOIRE</i> (annually)	Pfeiffer
	♦ Launch Teacher Candidate high-need school clinical experience (8 months per year, annually)	
	♦ Expand Teacher Education Board	
	♦ Begin Spring Research Consortium planning	Pfeiffer, PD

	<ul style="list-style-type: none"> ◆ Launch planning for two-year induction period with Teacher Candidates and Beginning Teachers 	RMT, PD, IC, FPD, IS, ELF
1/2019	<ul style="list-style-type: none"> ◆ Collaborate with high-need LEAs to review lateral, emergency certification teacher data ◆ Begin planning for Boot Camp Pre-Licensure and Licensure Test Prep for Teacher Candidates ◆ Begin planning for test prep course for teachers with lateral, emergency certification to attain full certification ◆ Select and train Retention Strategy Tutors 	RMT, LEAs High-Need Schools
	<ul style="list-style-type: none"> ◆ Identify Teacher Candidates for AP/IB course work (annually) ◆ Begin Summer Institute planning (annually) 	Pfeiffer, PD
2/2019	<ul style="list-style-type: none"> ◆ Collaborate with high-need LEAs to identify subject areas for recruiting mid-career professionals into teaching 	RMT, LEA High-Need Schools
3/2019	<ul style="list-style-type: none"> ◆ Host Spring Research Consortium (annually) 	Pfeiffer, PD
	<ul style="list-style-type: none"> ◆ Design program of study for mid-career professionals 	RMT, ELF
	<ul style="list-style-type: none"> ◆ Engage Pfeiffer University Teacher Education Board to enhance content area training 	RMT
5/2019	<ul style="list-style-type: none"> ◆ Recruit mid-career professionals into lateral entry prep program (annually) 	LEAs
6/2019	<ul style="list-style-type: none"> ◆ Launch lateral entry prep program cohort (annually) 	Pfeiffer, LEAs
7/2019	<ul style="list-style-type: none"> ◆ Host Summer Institute (annually) 	Pfeiffer, PD
	<ul style="list-style-type: none"> ◆ Begin Fall Workshop series planning (annually) 	
8/2019	<ul style="list-style-type: none"> ◆ Launch Boot Camp Test Prep for teacher certification (twice a year, annually) 	RMT, PD

	<ul style="list-style-type: none"> ◆ Launch test prep course for teachers with lateral, emergency certification to attain full certification (annually) ◆ Pair teachers with Retention Strategy Tutors (as needed) 	
	<ul style="list-style-type: none"> ◆ Launch two-year induction program and place Teacher Candidates in high-need schools (annually) 	RMT, Pfeiffer, PD, IC, FPD, IS, ELF
10/2019	<ul style="list-style-type: none"> ◆ Host Fall Workshop series (annually) 	Pfeiffer, PD
Support & Retain		
10/2018	<ul style="list-style-type: none"> ◆ Identify university faculty and school personnel to provide dual-mentoring ◆ Begin mentoring visits to high-need rural schools (ongoing) 	RMT, FPD, LEAs
	<ul style="list-style-type: none"> ◆ Launch development of <i>Teaching Students in Poverty</i> concentration 	Pfeiffer
11/2018	<ul style="list-style-type: none"> ◆ Provide professional development on coaching and mentoring to university faculty, school personnel, Teacher Mentor Coordinators, and Teacher Mentors (ongoing) 	PD, IF, FPD
	<ul style="list-style-type: none"> ◆ Recruit teachers from target schools and community organizations to serve in peer network for TCs and BTs 	PD
12/2018	<ul style="list-style-type: none"> ◆ Develop targeted PD plans (quarterly) 	RMT, IF
1/2019	<ul style="list-style-type: none"> ◆ Implement school-wide PD (ongoing) ◆ Provide coaching based on NCEES (ongoing) ◆ Model/coach effective instructional strategies (monthly) ◆ Provide training on using EVAAS data (ongoing) 	IF
	<ul style="list-style-type: none"> ◆ Launch peer and community networks to embed TCs and 	PD

	BTs within rural communities (monthly)	
	♦ Assist in education observation process (ongoing)	RMT, IF
	♦ Identify professional development needs for NCEES evaluations (ongoing)	RMT
	♦ Identify effective educators as mentors (ongoing)	RMT, PD
	♦ Conduct <i>Teaching Students in Poverty</i> Training (annually)	RMT
	♦ Launch dual-mentoring for BTs	PD, TMC, TM, Pfeiffer

2) 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. Our TQP program was designed to ensure alignment with the Council for the Accreditation of Educator Preparation’s standards and long-term sustainability of our program at the end of Federal funding by building local capacity through professional development and support to ensure that strategies implemented will continue after our grant has ended. *REPERTOIRE* will leverage the expertise of existing Pfeiffer University faculty across the Divisions of Education and Arts & Sciences as well as existing Instructional Facilitators and Beginning Teacher Mentors from our partner high-need LEAs. Collaboratively, they will work to support Teacher Candidates and Beginning Teachers during and after the grant to improve teacher effectiveness. The implementation of our TQP program at Pfeiffer University and Montgomery and Stanly County Schools will allow our organizations to prepare a cadre of highly qualified teachers to serve in our high-need rural schools. Over the course of our five-year program, we will ensure that timely performance feedback is gathered to ensure continuous improvement and make certain that program activities are coordinated with other teacher preparation and professional development programs and is consistent with State, local, and other education reform activities that promote teacher quality and student academic achievement.

► **Logic Model:** To guide our implementation, *REPERTOIRE* will follow our evidence-based logic

model included in *Appendix G*. Outputs have been identified to align with our strategies and activities and will assist our leadership across our three partner organizations in assessing progress and achieving our outcomes. Benchmark data has been identified to annually assess progress in meeting our goals and objectives. ► **Evaluation:** Utilization-focused evaluation ensures that stakeholders receive beneficial information to assist in making programmatic decisions. Our Evaluation Team will provide ongoing feedback to our *REPERTOIRE* Management Team to assist with project monitoring at Pfeiffer University and our partner high-need LEAs. Feedback from the Evaluation Team will be gathered through a myriad of resources including interim and annual performance reports, survey reports, infographics, data snapshots, and consultation. ► **Management:** Our *REPERTOIRE* Management Team will meet monthly, provide overall project direction, and work closely with faculty, district leadership, and the principals in our high-need schools. Moreover, they will review implementation data to determine if adjustments are needed which will help plan for sustainability after grant funds have ended and assist with the replication of *REPERTOIRE* in other districts with similar demographics and needs to Montgomery and Stanly County Schools. In addition, we will establish a Pfeiffer/LEA Advisory Committee to reflect upon the *REPERTOIRE* project design and develop curriculum based on the needs of our high-need LEAs. Data will be shared regularly with faculty across the university to guarantee data-driven decision making. This is a common practice in the Division of Education which has resulted in our division becoming a model for other divisions within the University.

3) Adequacy of support, including facilities, equipment, supplies, and other resources. We will leverage existing resources from our partner organizations to ensure successful implementation of activities as well as the continuation of activities after the grant funding has ended. Our total non-federal commitment to the project totals \$4,340,075 over the five-year program period and demonstrates that the partner organizations are committed to integrating *REPERTOIRE* program activities into our approach to teacher preparation and beginning teacher support after the federal funding has ended. The time commitments and participation of our

REPERTOIRE Management Team represent an in-kind commitment of \$575,000 over the course of the grant period and includes: Dr. Dawn Lucas, Dean of Teaching, Learning, and Innovation; Dr. Christopher Boe, Dean of the Division of Education; Dr. Marilyn Sutton-Haywood, Dean of the Division of Arts & Sciences; Dr. Ann Crutchfield, Reading Specialist; Dr. Laura Lowder, STEM Specialist; Mr. Tracy Grit, Assistant Superintendent of Learning of Montgomery County Schools; Mr. Wade Auman, Director of Secondary Education and CTE of Montgomery County Schools; and Dr. Jeff James, Superintendent of Stanly County Schools. Each member of our Management Team will collectively contribute a total of 1.6 FTE. Numerous other faculty and staff from our partnership organizations will also contribute their time in-kind to the project including Professor DeAnna Hurley-Chamberlain, Field Placement Director (0.15 FTE); Dr. Kevin Lancaster, LEA Induction Specialist/Assistant Superintendent of Operations of Montgomery County Schools (0.15 FTE); Ms. Vicki Calvert, LEA Induction Specialist/Assistant Superintendent of Personnel of Stanly County Schools (0.15 FTE); Alex Baldy, Recruitment Specialist (0.50 FTE); and 18 Instructional Facilitators working in our high-need LEAs (3.6 FTE) for a total in-kind commitment with fringe benefits of \$1,838,120 over the five-year grant period. Travel costs for activities that will continue after the grant funding has ended, such as management team meetings, curriculum development retreats, Pfeiffer University faculty site visits to high-need rural schools, and faculty professional development, will be provided as a local match and is valued at \$ 117,995. Supply costs for teacher recruitment and office supplies will be provided as a local match and valued at \$262,500. Professional development costs will be provided for faculty and CAEP site visit, valued at \$34,000. We will also provide an Educator Scholarship (equivalent to 49% of tuition) each year to 15 prospective teachers who pursue a teaching credential, valued at \$1,286,250. Indirect costs will be provided as match, valued at \$226,210.

Quality of the Project Evaluation

The Evaluation Group (TEG), with more than 30 years of demonstrated experience in planning,

implementing, and evaluating federal and state grant programs, will serve as the external evaluator for *REPERTOIRE*. TEG's capacity to conduct a rigorous, objective evaluation along with previous experience evaluating TQP grants make them highly qualified to serve as our external evaluator. *REPERTOIRE*'s evaluation will be led by Dr. Karyl Askew and Dr. Catherine Snyder and supported by TEG's Cross Functional Team, all of which have expertise in all areas of evaluation, including: research design; measurement; benchmarking; test and survey construction; data analysis and reporting; as well as the development of project-specific, quantitative instruments and qualitative data collection methods. TEG has significant experience with more than 180 completed evaluations of education programs, many of which have focused on teacher education and professional development in rural, high-need areas, similar to our *REPERTOIRE* partnership. Some recent examples of relevant evaluation studies include: Teacher Quality Partnerships (TQP) , Teacher and School Leaders (TSL), Teacher Incentive Fund (TIF), GEAR UP, i3/EIR, and Race To The Top– District (RTTT-D). TEG employs a skilled team of PhD-level evaluators that follow a multi-level, utilization-focused, participatory approach to data collection and analysis to ensure that resulting process and outcome measures are timely, relevant, and answer our overarching research questions. The **guiding research questions** for *REPERTOIRE* are: (1) How successful is the *REPERTOIRE* initiative at recruiting highly-qualified teachers to serve in high-need rural areas? (Obj. 1.1 – 1.4, 3.1 – 3.5); (2) To what extent is the undergraduate TEP at Pfeiffer University preparing students to be effective teachers in rural, high-need schools? (Obj. 2.1 - 2.6); (3) Are the components of the induction and mentoring program for beginning teachers supporting their needs and increasing employment retention? (Obj. 3.6, 3.7, 3.9, 3.10); and (4) What effect does the *REPERTOIRE* initiative have on improving student academic achievement in high-need rural schools? (Obj. 2.5, 2.6, 3.11, 3.12, 3.13).

1) Extent evaluation methods provide valid and reliable performance data on relevant outcomes. The five-year evaluation plan for *REPERTOIRE* will be designed to utilize a ***mixed-methods approach***. This approach supports triangulation of quantitative and qualitative data from

multiple sources, benchmarking progress toward outcome goals and enhancing the validity and reliability of the evaluation.^{90,91} **Quantitative data** sources will include: standardized, state-administered test scores (e.g., North Carolina EOG reading, math, science; EOC English 2 and Math 1); teacher evaluation proficiency scores (e.g., NCEducator Evaluation Standards); Pfeiffer enrollment and program retention counts; number of teacher candidates passing NC certification and licensure requirements; transcript analyses and course grades; hours in classroom practicums; mentoring contact hours; hiring records from partnering school districts; codified classroom observation results; contact hours for professional development; and student, mentor, Pfeiffer faculty, school administrator, TC, BT, and partner survey rating scale scores. **Qualitative data** sources include: students, mentors, Pfeiffer faculty, school administrators, TCs, BTs, and partners, interviews, focus groups, and open-ended survey questions; curriculum analyses; and documentation of professional development session agendas and minutes. Reliable and valid data elements will be drawn from all levels of participants involved in the proposed *REPERTOIRE* program (i.e., TCs, BTs, Pfeiffer faculty, school district administrators, teachers, mentors, partners, and stakeholders) to demonstrate that project goals are met. As detailed in our logic model, the data elements will be collected to measure progress towards meeting project goals and objectives, which in turn will lead to long-term outcomes and changes in behavior. Table 4, below, details the reliable, valid data sources that have been selected to address objectives and outcome measures for all levels of participants in the *REPERTOIRE* program.

Table 4. Reliable and valid data sources for tracking progress towards meeting objectives, performance measures, and desired outcomes				
Data Source	Quantitative or Qualitative	Reliability/ Validity Evidence	Evaluator Developed	Objective Addressed
<i>Participant Level: Student</i>				

NC EOG tests, grades 3-8 (Reading/Math/Science) EOC English II, Math I	Quantitative	α range=.88 to .93	No	3.11-3.12
Student Surveys	Both	α minimum=.80	Yes	2.5
<i>Participant Level: Teacher Candidates (TCs)</i>				
Certification/Licensure	Quantitative	Standardized	No	2.1-2.3
Program persistence	Quantitative	Count	No	2.4
Technology/Research Pedagogy*	Both	α minimum=.80	No	2.5
Practicum/Mentoring**	Both	α minimum=.80	Yes	2.6
<i>Participant Level: Beginning Teachers (BTs)</i>				
Certification/Licensure	Quantitative	Standardized	No	3.1-3.5
Teacher Retention (1 st and 3 rd Years)	Quantitative	Count	No	3.6-3.7
Data Source	Quantitative or Qualitative	Reliability/ Validity Evidence	Evaluator Developed	Objective Addressed
Practicum/Induction/ Mentoring**	Both	α minimum =.80	Yes	3.9
Professional Development***	Both	α minimum =.80	No	3.10
Teacher Evaluation	Quantitative	Standardized	No	3.11, 3.13
<i>Participant Level: Pfeiffer Faculty</i>				
Recruitment Outreach	Qualitative	N/A	No	1.1-1.3
Program Persistence	Quantitative	Count	No	2.4

Teaching, Research Pedagogy*	Both	α minimum =.80	No	2.5
Practicum/Mentoring**	Both	α minimum=.80	Yes	2.6
<i>Participant Level: School District Personnel</i>				
Teacher Cadet Enrollment	Quantitative	α minimum=.80	No	1.4
Retention Records (1 st and 3 rd Years)	Quantitative	Count	No	3.6-3.7
Induction/Mentoring**	Both	α minimum=.80	Yes	3.9
<i>Participant Level: Partnerships</i>				
Partnerships	Collaboration Study	α minimum=.80	Yes	1.1-1.3
*Transcript and curriculum analysis, course grades; **Hours, surveys, codified classroom observations; ***Hours, surveys, satisfaction evaluations				

The standardized instruments being used for assessing student achievement, teacher effectiveness, and teacher/certification and licensure have had acceptable levels of reliability and validity established by national publishers. As such, they meet the What Works Clearinghouse (WWC) design standard requirement for measurements. For project-specific instruments developed by TEG’s research staff, a controlled development process will be followed. Standardized instruments with acceptable reliability and validity will be consulted and reviewed for use as is or with modifications. It is anticipated that sections of published instruments may be incorporated into survey, interview, and focus group protocols. This strategy will allow TEG to make comparisons to normative standards from across the nation. Instrument content that is developed by TEG researchers to assess components of the *REPertoire* project will be developed after consulting existing literature in the area to ensure content and construct validity. After development, the items will be administered to a pilot sample from the intended audience to establish clarity, face validity,

and reading level. From the pool of items that are accepted from the pilot testing, internal consistency reliability indices will be calculated using Cronbach's α . If the coefficient alpha for the instrument does not meet a minimum of .80, refinements will be made to the items in the pool until internal consistency reliability that meets WWC standards is obtained. Trained evaluation researchers will be used to conduct focus groups, structured interviews, and classroom observations. In this case, they will use standardized, structured protocols to maximize the objectivity and reliability of observations. For classroom observations of TCs and BTs, external evaluation personnel will be trained on use of the observation instruments to ensure adequate interrater reliability. Each TC and BT will be rated by at least 2 different evaluators at each rating period. Monitoring of interrater reliability indices will be conducted by TEG at each observation period. When raters disagree, recalibration and retraining will occur until Cohen's Kappa coefficients are at least .80.

2) Extent methods of evaluation are thorough, feasible, and appropriate to the goals, objectives, and outcomes of the project. A strong evaluation plan is guided by asking quality questions that focus on formative and summative outcomes.⁹² An essential component of the evaluation plan is the logic model. This model is a critical framework for ensuring valid measures are used to assess progress towards meeting the desired changes in teaching and learning outcomes. The comprehensive logic model for *REPERTOIRE* (see *Appendix G*) provides a sound theoretical foundation to guide the evaluation design, data collection methodology, and results reporting protocol.^{93,94} The model articulates *inputs* (partnership members, resources, in-kind support), *program activities* (recruiting, preparation of students, support and retention of TC and BT), *outputs* (operationally-defined performance indicators) *short-term outcomes* (measurable objectives related to project goals and research questions) and *long-term outcomes* (ultimate goals such as improved TC preparation, increased rates of teacher certification/licensure, improved BT retention, increased BT effectiveness, and improved student academic achievement). TEG will schedule quarterly reviews of the logic model with partners and other stakeholders to gauge the

early impacts of project interventions. Regularly scheduled data analysis and reporting will also be used to help identify unintended outcomes, suggest needed program changes, and ensure data collections are useful for informing continuous quality improvement.

► **REPERTOIRE’S**. A longitudinal, four-cohort, ***quasi-experimental design*** (QED) will be used to assess the impact of *REPERTOIRE* interventions on teachers’ evaluation ratings; students’ reading, math, and science achievement; teacher retention; and other formative and summative measures. ***Quantitative data*** will be analyzed using both descriptive (e.g., means, frequencies, percentages) and inferential statistics (e.g., HLM, growth curve modeling, repeated measures analyses for survey data, and effect sizes disaggregated by demographic categories). For the ***qualitative measures*** being used in the study (i.e., open-ended survey and interview items, focus group protocol, and teaching observation ratings), responses will be examined for common themes. Based on these themes, a constant comparative coding system will be developed so similar responses can be aggregated and all responses can be quantified. TEG will use member checking to ensure that codification has been done accurately.^{95,96} independent raters are being used for interpreting qualitative measures, a monitoring and recalibration system will be implemented.

Table 5. Data Collection and Analysis Plan Elements by Objective				
Data Element	Data Point of Contact	Collection Frequency	Analysis Method	Objective Addressed
Teacher Recruitment	Institutional Research	Each Semester	Descriptive Frequencies	1.1
Under-represented Recruitment	Institutional Research	Each Semester	Descriptive Frequencies	1.2

High-need Areas Recruitment	Institutional Research	Each Semester	Descriptive Frequencies	1.3
Teacher Cadet Enrollment	LEAs Course Enrollment	Each Semester	Descriptive Frequencies	1.4
TC Certification and Licensure	NC State Board of Education	Each Semester	Descriptive Frequencies	2.1 – 2.3
TC Persistence	Institutional Research	Each Semester	Descriptive Frequencies	2.4
TC Technology Training, Induction, Mentoring	Surveys and Classroom Observations	Survey Annually; Observe Quarterly	Repeated Measures Analyses	2.5 --2.6
BTs in High-need Areas	LEA Records	Annually	Descriptive Frequencies	3.1 –3.5
Data Element	Data Point of Contact	Collection Frequency	Analysis Method	Objective Addressed
BT Retention	LEA Records	Annually	Descriptive Frequencies	3.6 –3.7
Emergency Teacher Rates	LEA Records	Annually	Descriptive Frequencies	3.8
BT, PD, Induction, Mentoring	Surveys; Classroom Observations; PD Contact Hours;	Survey Annually; Observe and PD Hours Quarterly;	Repeated Measures Analyses	3.9 –3.10

Student Achievement	NC EOG & EOC Tests in Reading, Math, Science, English II, Math 1	Annually	Hierarchical Linear Modeling (HLM)	3.11 –3.12
Teacher Effectiveness	NC Educator Evaluation Standards	Annually	Growth Curve Modeling	3.11 –3.13

► **Analysis Methodology:** Hierarchical linear modeling (HLM) will be utilized to examine the impact of the *REPERTOIRE* program on students’ achievement^{97,98,99} The analysis model will examine student achievement scores nested within teachers nested within schools. The level one factors (students) will include free- and reduced-lunch status, gender, ethnicity, and baseline achievement test scores. No level two factors will be included in the impact model. The level three factors (schools) will include school percent free- and reduced-lunch status, school percent minority, and school percent ELL. To rule out internal threats to conclusion validity, matched cases will be established for teachers who have not participated in the *REPERTOIRE* program. Beginning teachers from similar schools will be propensity score matched (1:2, nearest neighbor) based on years of teaching experience, ethnicity, gender, school percent free- and reduced-lunch status, school percent minority, and school percent EIL. In addition to the multi-level analysis of student achievement scores, an exploratory study using growth curve modeling will be conducted on teacher evaluation ratings from the NC Educator Evaluation Standards for both teachers in the *REPERTOIRE* program and the matched comparisons. Intra-individual growth in teacher effectiveness ratings will be examined for both initial status (intercept) and rate of growth (slope). In collaboration with TEG, partner LEAs, and Pfeiffer University, data will be collected for all students receiving instruction from the *REPERTOIRE* program and control teachers over the entire grant period. Achievement and teacher evaluation data will be analyzed at the conclusion of the

grant to determine the overall effectiveness of the program. This will guarantee a sufficient sample size for obtaining adequate power to detect minimum detectable effect sizes (MDE) between teachers in the *REPERTOIRE* program and controls. The design parameters (see Table 6 below) for this QED study meet WWC evidence standards with reservations and provides a moderate level of evidence for assessing the effectiveness of the *REPERTOIRE* teacher preparation program.

Table 6. Summary of Design Parameters for Rigorous Evaluation Studies	
Parameters	Study Design: QED
School Level	Elementary - High (Grades K - 12)
Unit of Analysis	Students (nested in teachers nested in schools)
Sample Size	3,000 students over 5 years (15 <i>REPERTOIRE</i> and 15 comparison teachers with 20 students each year, minimal attrition expected)
Confirmatory Outcome(s)	Academic achievement in Grade 3-12 (Measures: EOG math, reading, and science; EOC Math 1 and English 2), Teacher Evaluation Ratings
Propensity Score Matching Variables	Baseline EOC/EOG math, reading, and science scores, free or reduced lunch status, ethnicity, gender, grade level, school percent free and reduced lunch status; school percent minority, and school percent ESL
Statistical Analysis	3-level HLM model with students (level-1) within teachers (level-2) within schools (level-3)
MDES*	.44, alpha .05, power .80 (<i>Appendix J</i>)

Impact Model	$ \begin{aligned} Y_{ijk} = & \beta_0 + \beta_1 \text{Treatment}_{jk} + \beta_2 \text{BaselineScore}_{ijk} \\ & + \beta_3 \text{FreeReducedLunch}_{ijk} + \beta_4 \text{Gender}_{ijk} \\ & + \beta_5 \text{MinorityStatus}_{ijk} + \beta_6 \text{PercentMinority}_k \\ & + \beta_7 \text{PercentFRPL}_k + \beta_8 \text{PercentESL}_k + \sum_{\beta_9} \text{Cohort}_{jk} \\ & + \sum_{\beta_{10}} \text{Grade}_{ijk} + \mu_{jk}^{\text{Teachers}} + \mu_k^{\text{Schools}} + \epsilon_{ijk} \end{aligned} $
*See Appendix J for the MDES Calculator Table	

The QED evaluation design for the *REPERTOIRE* program will not only be methodologically sound but will also be efficient and feasible. Data elements that are being collected for the formative and summative analyses are existing measures that are routinely collected by Pfeiffer and our partner LEAs. The only newly developed data elements will involve surveys, interviews, and focus groups. Existing teacher observation protocols currently being used for student and teacher evaluation will be modified to include items that address *REPERTOIRE* program evaluation components. TEG will meet with partners on a monthly basis to monitor data collections and program activities. Formative measures related to project implementation and fidelity will be collected and regularly communicated to all project partners.^{100,101} Timely data will be provided to clearly describe progress towards meeting project goals, objectives, and outcomes. Summative results will be reported in aggregate and disaggregated by relevant subgroupings to maximize utility. Evaluation findings will be regularly communicated to partners through quarterly, mid-year, and end-of-year or final reports. In addition, survey briefs and data snapshots will clearly and graphically present findings for ease of understanding by a variety of audiences.