

**Teacher Quality Partnership Grant Program
Broward College – T-PREP Program**

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A. QUALITY OF PROJECT SERVICES

Broward College (BC), a four-year community college, seeks to address a shortage of highly effective STEM secondary school teachers by establishing the ***T-PREP (Teacher Preparation through Residency Experience and Practice) Program*** in collaboration with Broward County Public Schools (BCPS), a high-need urban local education agency (LEA) with a highly diverse population. T-PREP reflects a focus on recruiting, preparing, mentoring and retaining Science, Technology, Engineering and Mathematics (STEM) majors to serve as STEM teachers for underrepresented populations; using an individualized career pathway approach with a year-long undergraduate residency and intensive induction program. The program is part of a BC's larger commitment to prepare highly qualified and effective teachers and to eliminate the achievement gap between minority and disadvantaged students in the local community.

(i) T-PREP SERVICES INVOLVE COLLABORATION OF PARTNERS

The primary focus of T-PREP program is to address critical teaching shortages in STEM in the high-need BCPS district, the sixth largest school district in the United States. The TPREP program will create an individualized education pathway model to prepare 100 highly-qualified and effective STEM teachers each year to teach in high-need eligible schools. On a parallel path, the program will train and support a cadre of 25 teacher-mentors (expert teacher educators) to be paired with the T-PREP pre-service teachers during a yearlong undergraduate residency.

Broward College (Partner Institution of Higher Education) Created by the Florida legislature in 1959, Broward College (BC) is Broward County's first institution of higher learning. Today, it has the second largest enrollment among the 28 members of the Florida College System. The College is consistently recognized for its academic achievements and

student success initiatives, having been named a Finalist with Distinction in 2017 and a Finalist for the 2018 Aspen Prize for Community College Excellence. Each year, more than 63,000 students representing 180 countries attend BC. In 2016-2017, 82% of students identified as ethnic or racial minorities, and 35% of degree-seeking students identified as Hispanic. Recently, BC was ranked sixteenth in the Top 100 Colleges and Universities for Total Hispanic Enrollment by the Department of Education and fifth in the nation for conferring associate degrees to Hispanics by *Diverse Issues in Higher Education*.

Taking advantage of their unique position to respond to critical employment gaps, more community colleges nationally are building baccalaureate programs with many of these programs developed to meet the need for STEM graduates. In 2008, the Florida Legislature authorized BC to offer Bachelor's degree in areas of high demand to significantly increase access to higher education for students, especially those who are considered non-traditional (working adults), those who are from ethnic minority groups, and/or who are from low-income households. Today, BC offers bachelor's degree in Middle Grades Science Education, Middle Grades Math Education, Secondary Biology and Secondary Math Education, and Exceptional Student Education.

In 2015, BC restructured the College's academic infrastructure to better support students interested in specific fields, creating career pathways (similar to majors situated in schools/colleges within the university setting). BC was chosen as one of 30 colleges in the nation to participate in a national project led by the American Association of Community Colleges to design and implement structured academic and career pathways that are aligned with the student's requirements and supports needed for success in employment and the next stage of their education. Through this project, BC's Education Pathway teacher preparation program

(Program of Education), its STEM Pathway and its Arts, Humanities, Communication & Design Pathway **(the equivalent to a School of Arts and Sciences for eligibility purposes)** will collaborate to contextualize curriculum and create a teacher preparation pathway with experienced faculty to serve and support students that want to teach in areas such as engineering, pre-med, life science, environmental science and computer programming/information technology.

The Education Pathway currently prepares teachers through a traditional teacher preparation program and an alternative certification program, recruiting candidates from various industries. The T-PREP project will combine these two areas. Although they are distinctly different, the two preparation programs work collaboratively to prepare secondary math and science teachers by sharing math and science faculty who teach in both, helping prepare and assess the strengths of candidates for certification. In 2015, the latest data available, only 48% of BC's Teacher Education Program (TEP) passed the General Knowledge Exam (GKE) math portion, as compared to 57% statewide. The continued concern for the current TEP program is the students' lack of content knowledge, resulting in only 4-6 students with a science or math teaching certification. Although the GKE scores are low, all students (100%) pass the GKE and subject area test prior to graduating with a Bachelors degree in Education as this is a requirement to teaching in a K-12 classroom.

Broward County Public Schools (High-Need LEA). As defined by section 201 of the Higher Education Act of 1965 (20 USC 1021), Broward County Public Schools (BCPS) is a "high need" public local education agency. BCPS is the sixth largest school district in the nation and the second largest in the state of Florida. The District is Florida's fully accredited school system since 1962, and has more than 271,000 students in 234 schools, centers and technical

colleges, and 93 charter schools. BCPS serves a diverse student population, representing 204 different countries and 191 different languages. Over 62% of students come from low-income families as defined by free and/or reduce lunch eligibility with 16.5%, 48,843 children ages 5-17 years old, living in poverty within Broward County.

On February 14, 2018, the District became part of the national debate on school violence when a tragic shooting at Marjorie Stoneman Douglas High School in Parkland, Florida, resulted in the death of seventeen students and teachers. The shooting had a chilling effect on staff morale; impacting the recruitment and training of teachers in the district. Since the tragedy, BCPS teachers' roles and responsibilities expanded to include assisting with school safety through lockdown drills and other measures to create a sense of security for students while in the classroom.

The program will target secondary schools in the District that are considered High- Need such as Deerfield Beach High School and Stranahan High School. As Broward County continues to grow, its public schools are experiencing a number of issues, including continued overcrowding and high levels of poverty. Many of the high schools in the district have enrollments in excess of 4,000 students, which is the size of entire school districts in smaller counties in Florida and across the country. These school communities have high proportion more than 45%, of students who qualify for Free and Reduced Lunch. In total, the district has 9 middle schools, 27 high schools, 7 grade combination schools and 16 special centers are identified as high-need (see listing in the Attachments). These schools will be targeted for the T-PREP program.

BCPS strives to eliminate the educational barriers for its students but still struggles with issues of low achievement, poverty, and teacher shortages. This puts BC in a unique position to

help fill the need for well-trained minority teachers in BCPS, especially in STEM fields. As a predominately minority institution and Hispanic Serving Institution (HSI) BC serves students that mirror those of the school district's students. BC is well poised to prepare highly qualified teachers using its own evidenced-based practices of emphasizing deep content learning with use of inquiry experiments and group problem solving designed through its Education Pathway, and its existing strong partnership between BC and BCPS.

(II) T-PREP SERVICES REFLECTS UP-TO-DATE KNOWLEDGE

T-PREP is based on evidence-based concepts in place across the country, including

- Targeted recruitment and selection of prospective participants
- Rigorous recruitment and support of mentor teachers
- Training on the development and use of customized curriculum and differentiated Instruction
- Providing deep-end support during training
- Strategic hiring and continued mentoring of graduates

Targeted Recruitment/Selection of Program Participants BC will conduct recruitment sessions with high school seniors. Graduating high school students will be invited to attend a Summer Bridge program. Summer Bridge programs are effective in preparing high school students for college¹. Approximately 75% of the incoming community college students experience a “Readiness Gap,” with additional coursework needed to bring students up to the required academic levels needed to begin taking classes for credit.

¹The National Center for Public Policy and Higher Education and the Southern Regional Education Board. *Beyond the Rhetoric: Improving College Readiness Through Coherent State Policy*. The National Center for Public Policy and Higher Education. (2010).

The Alliance for Excellent Education documented the impact of summer programs on preparing students of color to succeed in STEM fields when enrolling in college². These programs help students learn how to set and achieve goals in science and math. Students in the STEM Pathway and mid-career individuals interested in changing their professional focus through an alternative certification program will also be recruited using outreach programs. Seminars will be held to offer program information to interested individuals from these groups.

Recruitment/Training of Mentor Teachers: T-PREP will change the way in which supervising teachers work with teacher candidates in classrooms. Traditional program feedback for pre-service teachers is limited. Supervising teachers are often selected based on their instructional capacity, not their communication skills. BCPS classroom teachers interested in serving as supervising teachers will be invited to attend training sessions which will address the affective component of leadership, coaching and mentoring. Faculty will learn how they can support teacher candidates by modeling the training techniques and modalities³ specifically in differentiated instruction and contextualized curriculum. The Measures of Effective Teaching Project (www.metproject.org) noted that when teachers receive frequent and actionable feedback they are more likely to improve their processes.

Pedagogy: Contextualized Curriculum and Differentiated Instruction T-PREP will transition BC's teacher preparation from a formulaic process to one that helps candidates reach out in ways that are meaningful to individual students.

² *Building a STEM Pathway: Xavier University of Louisiana's Summer Science Academy* Alliance for Excellent Education. 2015.

³ Feldman, Kevin. *Actionable Feedback for Teachers: The Missing Element in School Improvement*. (2016). <https://www.mnasa.org>.

Contextualized Curriculum: While the validity of using students' cultural orientation in teaching and learning is acknowledged as a best practice, application is lagging in many teacher education preparation programs due, in part, to a lack of tools and other professional development resources that aid implementation. A study of six teachers demonstrating effective use of contextualization defined the strategy into a three-process⁴.

Context-responsive teaching consolidates the knowledge, skills and dispositions associated with culturally responsive teaching, place-based teaching, differentiated instruction, and purposeful collaboration with parents, families and communities. Contextualized instruction is based on the concept that students will be academically successful when new information is connected to and builds on their lives, experiences, family backgrounds and worldviews. Use of contextualized curriculum is truly critical for today's learners that are accustomed to receiving and comprehending information in a multi modal format. This is true for students from all cultures and income levels⁶. In open access institutions such as BC, many students use entry into college as a way to increase their economic power. Many of these students lack academic preparation prior to enrolling in college. Students are often forced to back track to get to the point where they can successfully complete academic programs⁷.

⁴ Wyatt, Tasha. Understanding the Process of Contextualization. Multicultural Learning and Teaching 10(1):111-132. February 2014.

⁵ Vinlove, Amy Louise. Learning To Teach Where You Are: Preparation For Context-Responsive Teaching In Alaska's Teacher Certification Programs. A dissertation presented to the faculty of University of Alaska-Fairbanks. 2012.

⁶ Contextualized Teaching & Learning: A Faculty Primer. A Review of Literature and Faculty Practices with Implications for California Community College Practitioners. 2009.

⁷ Research shows that 40% of all college students and nearly 60% of community college students enroll in at least one developmental course (Adelman, 2004; Attewell, Lavin, Domina & Levey, 2006; Bailey, 2009).

T-PREP's contextualized curriculum will help students connect the dots between the theoretical and practical application of concepts. hears and experiences practically⁸. As part of this paradigm shift the learner will move from passive (directed) to active (constructivist) role, with the immediate transition of the learner into that of an individual who has a wide range of skill sets at their disposal. A study comparing two methodologies for instruction, one explanation of content (comparison) versus application of real-world content (experimental) Study findings indicate that compared with traditional methods, a curriculum of contextualized teaching and learning can be implemented while maintaining a comparable level of student mastery of scientific concepts. A survey of graduates and teacher educators in Alaska (Vinlove 2012) found that most individuals valued context-responsive teaching.

Differentiated Instruction: Differentiated Instruction (DI) is based on the work of Tomlinson¹⁰, who identified the following characteristics as vital to student success:

- Teachers begin where the students are.
- Teachers engage students in instruction through different learning modalities.
- A student competes more against himself or herself than others.
- Teachers provide specific ways for each individual to learn.
- Teachers use classroom time flexibly.
- Teachers are diagnosticians, prescribing the best possible instruction for each student.

⁸ Qazi, Wasim, "A Synthetic Teaching-Learning Model: A Contextualized Study" (2008). Curriculum and Instruction Faculty and Staff Scholarship. Paper 58. http://encompass.eku.edu/ci_fsresearch/58

⁹ The comparison treatment was administered to 22 students during the spring semester of 2009 and the experimental treatment was administered to 16 students during the fall semester of 2009. The research design used was a quasi-experimental non-equivalent control-group design with an identical pre/posttest given to each group as a means of assessing content achievement.

¹⁰ Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: ASCD.

Tomlinson's research on the effectiveness of differentiation found that this approach benefits a wide range of students, from students with learning disabilities to those considered highly gifted. With origins in IDEA (1975) and No Child Left Behind (2000), differentiated instruction is least effective using a lecture format, and most effective using engagement activities.

First year teachers report problems applying differentiated instruction concepts. Renick¹¹ found that despite their training, the ability to use differentiated instruction in the classroom was diminished by student-teacher (internship) experiences that require them to learn so many processes in a short period of time, they don't have the ability to. McCarvey, et al, found that many first year teachers needed help planning activities that allowed for slow and accelerated periods of learning¹².

Teachers are often challenged to serve the needs of diverse groups of students such as the students enrolled in BCPS. During their first year, teachers discovered a mismatch between what they actually needed to teach students of different ethnic or racial groups and the skills addressed during pre-service programs¹³.

To effectively use differentiated instruction, pre-service teachers must be trained to allow them to vary instruction in content, process, product, and learning environment. Content can be varied by grouping students according to thinking skill levels so that students are immersed in

¹¹ Renick, P. R. (1996). *Study of differentiated teaching methods used by first-year special educators*. Paper presented at the annual conference of the Midwestern Educational Research Association, Chicago, IL.

¹² McCarvey, B., Marriot, S., Morgan, V., & Abbott, L. (1997). Planning for differentiation. *Curriculum Studies*, 29 (3), 351–363.

¹³ Manson, T. J. (1999). *Cross-ethnic, cross-racial dynamics of instruction: Implication for teacher education*. (Report No. UD032861). Clarksville, TN: Austin Peay State University. (ERIC Document Reproduction Service No. ED 429 141)

content at the level that works best with their abilities. Process related differentiated instructional strategies approach students using varied learning styles. Based on learning styles, teachers may work with students in the environments that best suit them, including pairs, small groups, or one-on-one. Product related strategies involve helping students demonstrate mastery of the concept in a way the student prefers, based on learning style. Activities will vary based on student learning styles. Establishing a learning environment that is tailored to the needs of each student is crucial to instructional success. This includes selection of furniture, space configurations and classroom management techniques.

Differentiated learning works well with students at all levels and in all learning styles. Giving students options for how they engage with instructional content allows them to become responsible for learning. Differentiated learning takes substantial time to plan activities that address the needs of each student. First year teachers report that finding the time to do so is challenging and that many schools lack the professional resources to provide support for this process.

Deep-End Support- Teacher Residency: The National Council for Teacher Residencies (NCTR) defines residencies as: district-serving teacher education programs that pair a rigorous full-year classroom apprenticeship with education content. Building on the medical residency model, teacher preparation programs provide residents with both the underlying theory of effective teaching and a yearlong, in-school “residency” with the opportunity to practice and hone their skills and knowledge alongside an effective teacher-mentor in a high-need classroom. New teacher residents receive stipends as they learn to teach, and commit to teaching in their districts for three or more years beyond the residency (NCTR.org).

The T-PREP residency will place candidates in a mentor teacher’s classroom for up to a

year, similar to student teaching. Residencies differ from traditional internship programs that are structured to quickly plunge participants into their own classroom, sometimes with steady support and sometimes not. T-PREP will was created in partnership between BC and BCPS. The program will replicate best practice programs, selecting supervising teachers that have a combination of strong mentoring and instructional skills.

In a study of 692 teacher preparation programs, (545 traditional programs, 18 residency programs and 129 alternative certification programs) the National Council on Quality of Teaching singled out residency programs as a highly effective method for preparing new teachers. More than one-third of the programs evaluated earned an “A” for the nature of the clinical experience offered. This is in contract to the six percent of traditional programs that earned this rating.

Pairing Pre-Service Teachers with Highly Qualified Supervising Teachers:NCQT research found that only about 6%of all teacher prep programs incorporate two essential elements that support effective teaching practices: checking the quality of the cooperating teachers who open their classrooms to student teachers, and providing frequent feedback to student teachers (NCQT 2018). As more veteran teachers leave the workforce, finding individuals that are interested in supporting the development of new teachers has been challenging. This high veteran teacher turnover within districts is also a contributing factor to new teacher frustration. Research from The New Teacher Project (TNTP) found that replacing one highly effective teacher could take 11 hires¹⁴. Because of the difficulty finding teachers with both strong instructional and interpersonal skił, BC’s T-PREP will provide supervising teachers with the training needed to acquire effective feedback and guidance.

¹⁴ TNTP studied 90,000 teachers over 4 urban school districts.

**(III) TRAINING IS SUFFICIENT QUALITY, INTENSITY, AND DURATION TO LEAD TO
IMPROVEMENTS IN PRACTICE**

A survey of new teachers found that over 60% felt their teacher preparation did not prepare them to cope with classroom realities.¹⁵ Additionally, while student teaching experience was identified by new teachers as “the most valuable aspect of my education program,” more than three-quarters of graduates reported receiving one term or less of student teaching experience. A 2014 TeachPlus survey of 230 first-year Massachusetts teachers noted that 75% the respondents reported they felt insufficiently prepared to meet the needs of students in their first year¹⁶. This sentiment certainly contributes to the high turnover among beginning teachers. Nationally, half of new teachers leave the profession within the first five years¹⁷. Thus, the T-PREP program is designed as an innovative program that will provide 1,200 additional hours of field experiences and mentoring through an undergraduate residency to prepare teacher candidates to work in high-need schools within BCPS. This is an innovative approach as most residency programs are conducted at the graduate level which limits the students experience until after the teacher candidate receives his/her teacher certification. A one-year undergraduate residency allows the teacher candidate to gain valuable experience in the classrooms, specifically at high need schools, that will impact the quality of teaching and ultimately student academic achievement. Additionally, the T-PREP program will provide early field experiences through

¹⁵ Arthur Levine, *Educating School Teachers* (Washington, D.C.: The Education Schools Project 2006), 32, http://www.edschools.org/teacher_report.htm

¹⁶ Teach Plus Massachusetts, *Ready on Day One: Teachers Weigh in on Teacher Preparation*, February 5, 2015, <http://www.teachplus.org/news-events/publications/ready-day-one-teachers-weigh-teacher-preparation>

¹⁷ Ingersoll, R and Merrill, L. Seven Trends: The Transformation of the Teaching Force. University of Pennsylvania and Consortium for Policy Research in Education. Paper presented the American Educational Research Association. May, 2012.

seminars during the teacher candidates' lower division course work (AA degree) to not only introduce the student to the field of teaching but to confirm the students' choice to enter the field and the program of study. This process ensures the commitment and dedication of the students to teach in a high need school and promotes completion of the program of study. The program of study within the Education Pathway will consist of two years of lower division coursework leading to an associate degree plus two years in upper division coursework leading to a bachelors degree in education. In the final year of the upper division coursework, the student will experience the residency for four days a week while the fifth day is spent engaging in seminars with BC faculty. The reforms/redesign of the program to include contextualizing the curriculum and enhancing the teaching program, in partnership with the College's STEM Pathway and Arts, Humanities, Communications & Design Pathway will ensure that teacher candidates not only attain pedagogical techniques but also the content knowledge needed within the subject area to impact student achievement. Additionally, after certification, the new teacher will receive two years of induction support through a teacher mentor, school liaison, and participation in professional learning community.

B. QUALITY OF THE PROJECT DESIGN

(I) RATIONALE FOR T-PREP PARTNERSHIP

Grounded in up- to-date literature as described in section A(II) above, the conceptional rationale used to design T-PREP is described in Table 1. In addition, a comprehensive logic model that guides the design and evaluation of the program is found in the Appendix G, and depicted in Figure A shows the interconnected relationships among all components in the mode

Table 1. Conceptual Rationale for T-PREP			
T-PREP Approach			Results
<p><i>Recruitment & retain diverse urban teachers</i></p> <ul style="list-style-type: none"> - Recruitment of diverse high school students mirroring the school population - Recruitment of mid-career changers that possess context knowledge learned in the field - Recruitment of high school student showing high interest in the field of teaching - Utilize early exposure strategies to confirm student's choice to enter the field of teaching 	<p><i>Prepare teachers in a 2+2 program of study with a yearlong residency</i></p> <ul style="list-style-type: none"> - Provide extensive clinical experience through an undergraduate residency prior to become a teacher of record - Contextualize curriculum to address strengths/needs of the teacher candidate and the district - Integrate coursework and clinical experience in reciprocal, tightly connected delivery 	<p><i>Provide differentiated induction support</i></p> <ul style="list-style-type: none"> - Individualize professional development plans for induction related to effectiveness evaluation - Provide mentor teacher to support teacher and school-based liaison to familiarize the new teacher at the school - Support teacher through professional learning communities and online resources 	<p><i>Teachers remain in the field longer and become highly skilled teachers</i></p> <p><i>Strong teaching skills and content knowledge leads to increased achievement of diverse students</i></p>

BC is committed to revising the teacher education program to reflect research-based practices on preparation candidates need to teach in a high need urban school. Teacher Quality Partnership funds will support implementation of reforms and revisions to the current Teacher Education Program (TEP) to address the need for high quality teachers in critical shortage areas. T-PREP program will target 25 teacher candidates per year focusing on math, science, Exceptional Student Education (ESE), and computer science (Business Ed/Tech Ed certification) for a total 100 new highly qualified teachers.

Figure A. T-PREP Model

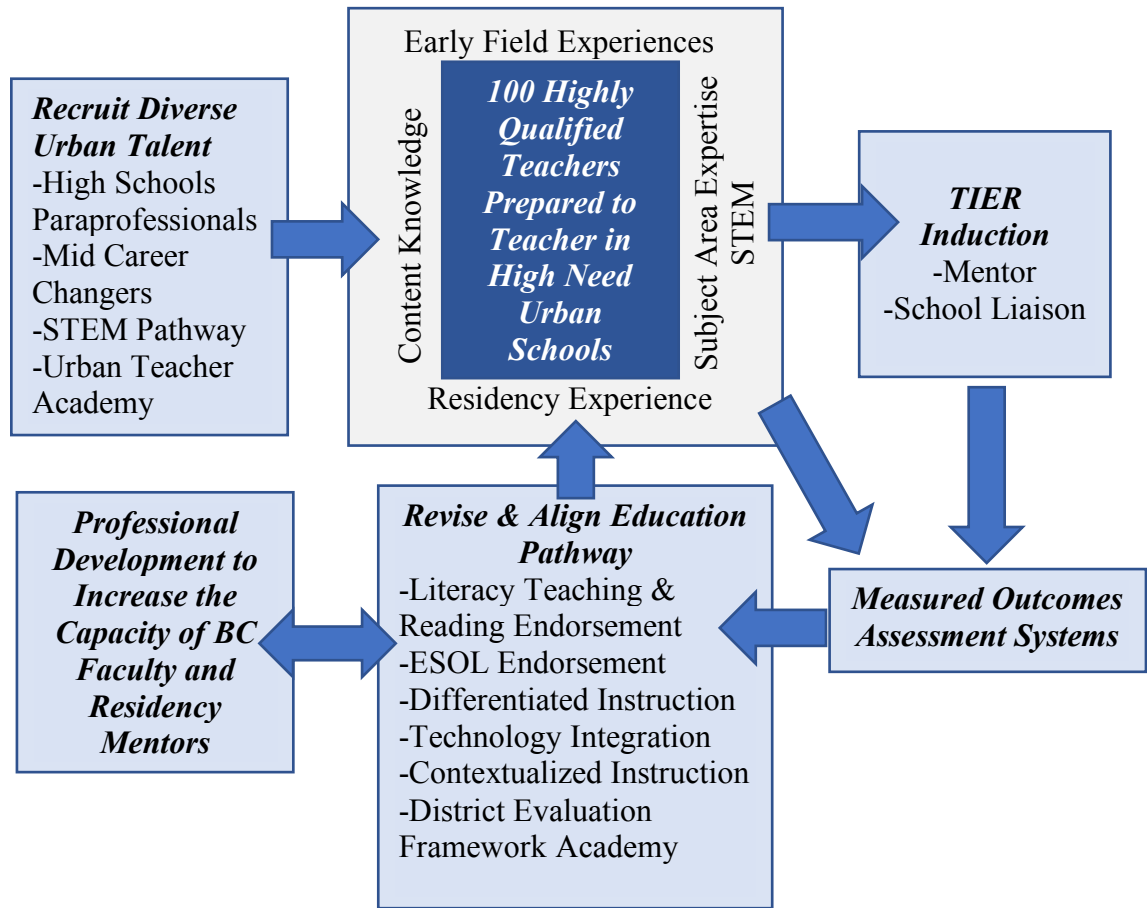
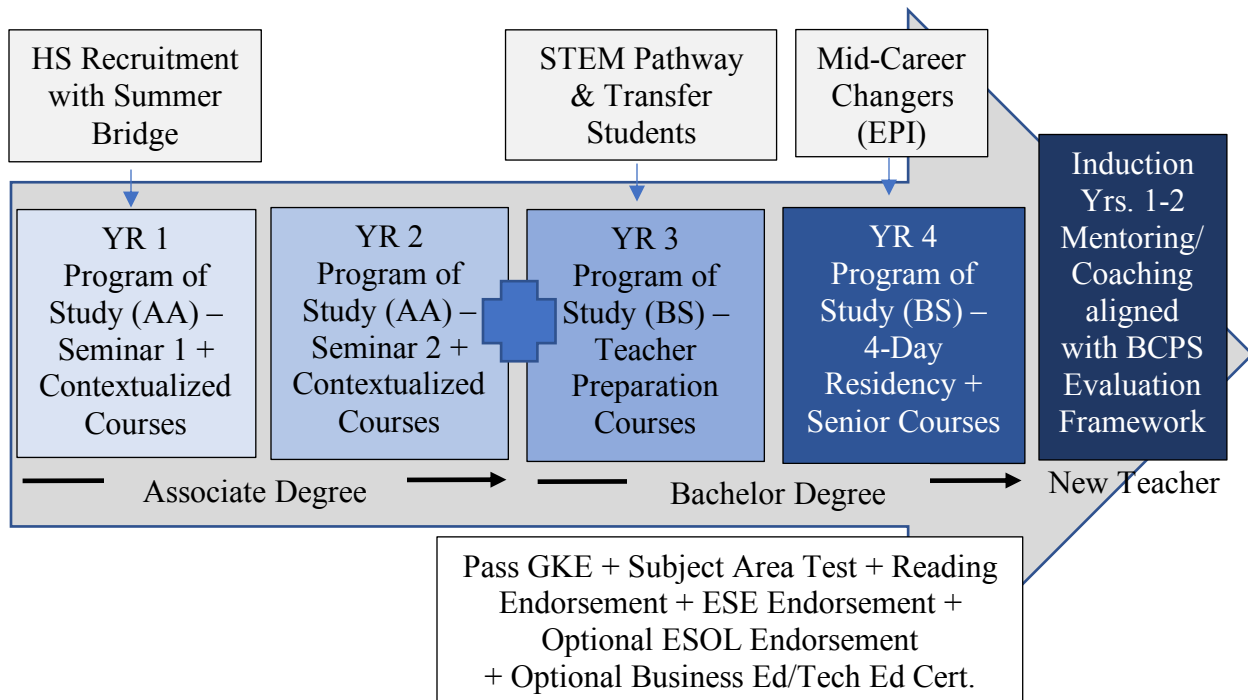


Figure B demonstrates recruitment into the T-PREP program along their education pathway and the progression of the student as they complete two years of an Associate of Arts (AA) degree program and two years of a Bachelors of Science (BS) degree program (2+2) with a residency built into the last year of their program. Students will also be directed to take and pass the General Knowledge Exam (GKE) in the last semester of their AA degree as a pre-requisite to the BS program. Subject Area Test and Endorsements will be taken by the last year to ensure full certification with endorsements. Students will also have an option to take the ESOL and

Business Ed/Tech Ed Certification exam. The residency placement will align with the district priorities, as well as the students area of focus (e.g., Math, Biology, Computer Science, etc.).

Figure B. Progression of Teacher Candidate through the T-PREP Program



Recruitment. Building interest in teaching at the secondary level early in a student’s high school and college career is imperative. Recruitment efforts will begin with this high school population by making presentations about the profession of education to students. Recruitment efforts at the high school level will include working with the 143 high need high schools within the district, the Future Florida Educators of America (FFEA) student clubs, and through the Urban Teacher Academy Program at Deerfield Beach and Stranahan High School. College students that are participating in the program will also have the opportunity to provide information, guidance and mentoring to high school students that are interested in the program. This allows high school students a direct link for asking questions and gives them a better sense of what it is like to be in the program. High school students, specifically all of the FFEA club

(which represent the diversity found in BCPS) will be invited to attend an annual Education Pathway event where they will learn more about the program and sign-up for classes through an early registration process which includes financial aid and scholarship application completion, as well as sign up for the summer bridge program.

Through this grant, BC will develop an 8-week summer bridge program for graduating high school students, entitled Teach for Broward, that will provide the opportunity for students to receive an introduction to the field of education, as well as to begin to build a strong foundation in reading, math and science. Teach for Broward will include an introduction to the teaching profession, classroom observations in a K-12 classroom and an early childhood setting, and lessons in reading, math and science utilizing various pedagogical techniques such as project-based learning. The summer bridge program will help student explore teaching as a career option, help them choose a program of study (e.g., math, science, ESE, computer science, etc.) and allow staff to develop an individualized full-program plan.

Outreach activities will also include AA students from the STEM Pathway that have an interest in teaching, as well as other transfer students from other colleges and universities. The STEM Pathway will make available classroom presentation time for Education faculty and staff to speak to students in the math and science classes, particularly computer science classes regarding careers in teaching. Presentations will be conducted each semester. This avenue of recruitment has been successful in recruiting individuals with strong backgrounds in science and math.

Mid Career Changers will also be recruited into the T-PREP program through BC's Educator Preparation Institute (EPI). This program recruits from throughout Broward County, specifically to individuals within STEM careers, who want to explore teaching as a profession.

The program will be advertised through the College's Website, social media and through presentations at community events.

Reforms and Revisions. Reforms will include programmatic curricular changes that (1) contextualize coursework to align with general knowledge and content standards to improve teaching skills, (2) incorporate early field experiences and innovative instruction, (3) train and provide professional development in use of differentiated instruction and meeting the needs of diverse learners, (4) provide for explicit, systematic instruction in literacy skills, incorporating the key components identified in the NRP report as well as tiered levels of instructional support, diagnostic and formative assessments, (5) incorporating a residency component to offer students real, authentic work experiences, and (6) expand the New Teacher Induction Program.

Through the Teacher Quality Partnership grant, BC will reform/revise the teacher education program by contextualizing the lower division coursework so that teacher candidates in the program meet the standards tested on the General Knowledge Exam. Additionally, Education Pathway faculty and staff will re-examine the Education Pathway program maps which include the courses that best prepare the students for their career goals and the sequence of courses, to ensure that all courses lead to success in the program and in their teaching career. The Education Pathway faculty, along with the STEM Pathway and the Arts, Humanities, Communication & Design Pathway faculty will convene sessions to contextualize gateway courses for the students in the T-PREP program. Revisions to the program will reflect current research on how to prepare candidates to teach in high-need schools and in critical shortage areas. STEM Pathway faculty will ensure that the required math courses are appropriately

aligned with the student's program of study or area of teaching the teacher candidate is pursuing.

Curricular changes within BC's current teacher preparation program will improve the teaching of prospective and new teachers by strengthening their skill set in content knowledge, pedagogy, and issues specific to BCPS, and how to meet the educational needs of diverse learners in a systematic, comprehensive manner. By contextualizing the lower division (e.g., associate degree gateway courses), T-PREP graduates will increase in their ability to positively impact the learning of students in high-need schools throughout Broward County. The faculty and staff will also examine and design an intensive support system including intrusive advising, tutoring, supplemental resources, use of the College's Academic Success Centers, early alert system, the residency and other support to ensure student success in the college level courses and within their teaching careers.

Teacher Preparation: T-PREP staff will deliver two seminars conducted at the beginning of the program (usually in the student's first two years of their program of study) to introduce prospective candidates to the world of teaching and innovative teaching practices. The seminars will be used as a recruitment tool into the program and to solidify the candidate's commitment to the teaching field.

- *Seminar 1 – Introduction to the Teaching Profession* is a seminar introducing students to field of teaching using topics such as

education, and create and present an instructional lesson utilizing effective teaching

- *Seminar 2 – Authentic Experiences and Innovative Instruction* is a seminar that exposes to inquiry-based instruction strategies. This one-day seminar provides students with an introduction to inquiry-based instruction including hands-on activities as a way to way to motivate and engage students while concretizing science and math concepts, as well as understanding of the impact of inquiry-based instruction on K-12 student science and math conceptual learning and academic achievement.

The T-PREP program integrates *differentiated instruction* focusing on meeting the needs of all students, especially ESE and ESOL students. Teacher candidates admitted to the T-PREP program will gain knowledge of effective teaching methods that involves providing different students with different avenues to learning in terms of acquiring content, processing, constructing, or making sense of ideas. Teacher candidates will learn how to examine assessment data (both formal and informal), interpret the data, and make instructional decisions based on the data so that all students within their classroom can learn effectively, regardless of differences in ability.

Teacher candidates will be engaged in authentic, classroom-based learning focused on meeting the academic needs of all students through differentiation of instruction. Candidates will learn to address goals and objectives found on IEPs and how to support the language and learning for ELL students, as well as use District's three-tiered Positive Behavioral Interventions and Supports (PBIS) system, BASIS (the behavior dashboard to identify practices), and Leaps (an online Tier 1 behavioral resource featuring social, emotional, behavior lesson plans). Integration of the management of problem behaviors using the PBIS system will

be integrated with the use of highly individualized strategies using CHAMPs II classroom management program and Responding to Individual Differences in Education (RIDE) program endorsed by all BCPS. Additionally, with the district-wide changes to the district after the February 14 shooting tragedy, the T-PREP program will incorporate social, emotional and behavioral lessons and activities in the curriculum to help teacher candidates build resiliency skills with their students, as well as how to handle vulnerability and emotional insecurity of students.

Each T-PREP student will have the opportunity to secure their Reading Endorsement graduating with knowledge and pedagogy necessary to teach literacy skills specific to their concentration area. Currently, BC's Education Pathway offers *literacy instruction* through a course on literacy strategies in the content areas and a language arts methods course. Teacher candidates are provided with training and opportunities to administer screening, curriculum-based, diagnostic and summative assessments (e.g., Florida Standards Assessment, the state's standardized assessment) so they can learn what each type of measure can tell a teacher about a student's performance and learning. Current research indicates that literacy skills are not modular and that effective teachers teach literacy skills, strategies and concepts through all content areas (Denton, Vaughn, & Fletcher, 2003). Therefore, given that literacy skills can and should be supported throughout the school day and in various content areas, instruction in literacy skills, strategies, and concepts will be embedded throughout the T- PREP program. The T-PREP curriculum will focus on multiple modes of assessment, both standardized, norm-referenced and criterion-referenced; developmental milestones; empirically-supported instruction; strategies for intervention; and literacy resources.

T-PREP also incorporates the use of *research and assessment data* to drive instruction focusing on: types of research, credible sources of research, types of data, analysis of data, and using data to inform instructional decisions. *Literacy and other content areas* will focus on: assessment, instruction in the key content area skills, especially the essential literacy skills (e.g., National Reading Panel Report), intervention, strategies, tiered support, motivation for academic engagement, and literacy in the content areas. *Educational technology* will focus on effective, integrated, and relevant applications to enhance learning as well as data analysis to drive instructional decision-making. *Developing cultural proficiency* will focus on urban settings (contextual) and diverse student population needs. Empirically-evidence supported these curricular areas and are critical in high needs schools (Scheurich, 1998).

Through a BC and BCPS partnership, students in the Education Pathway can now receive training and obtain certification within the Career Technical Education (CTE) area of computer science/information technology such as Applied Cyber Security, Cloud Computing and Virtualization, Database Application Development and Programming, Java Development and Programming, and Network Systems Administration. Students wanting to receive certification in this area will receive training and preparatory test courses for the Business Education 6-12 certification.

Upon completion of the T-PREP program, candidates will possess the knowledge, skills, and dispositions from the integration of pedagogy and research-based practices to work effectively in a high-need BCPS in a critical shortage area. Many of the candidates will have learned to teach in the same work environment where they will be employed in the district. Additionally, teacher candidates will be prepared to be licensed in their chosen content area and will have the skills and knowledge necessary to receive endorsement in reading and ESE as all

classroom in BCPS integrate literacy and into the curriculum and are inclusive of students with special needs.

Residency Experience. Through the dynamic relationship between BC and BCPS, an undergraduate residency (internship) will be embedded into the T-PREP program giving teacher candidates relevant, authentic classroom experience. Through this residency, candidates will gain real work experience to help prepare them to become successful teachers. T-PREP teacher candidates will be placed in a high need school for their residency experience. School selection will be conducted a mutual selection process. Schools who express an interest in serving as a residency school will be consulted regarding their high need status and commitment to a shared responsibility for teacher preparation and continuous learning. This commitment is demonstrated by a willingness of the school faculty to mentor teacher candidates and to create a community of learners who support and nurture teacher candidates. Residency mentors act as teaching-educators helping residents identify, practice, analyze, and develop the knowledge and skills they need to be effective classroom teachers. Mentors and residents will be paired one-on-one for one full academic year. The role of the Residency mentor is to provide the classroom experience for the teacher candidate and to provide regular feedback regarding their work in the classroom. Residents will work in the residency mentor's classroom four days a week with senior seminars held one day a week during designated times. Co-teaching will be the predominant strategy within the classroom to give residents the greatest number of opportunities to teach. Residents and Residency mentors will be trained on co-teaching strategies in a collaborative setting, so that they learn and plan together. Mentors will guide each resident through the coaching cycle which will include observation, co-teaching, and debriefing. The teacher candidate is also assigned a College faculty who is primarily

responsible for supporting both the Residency Mentor and the teacher candidate to promote a positive learning experience for the teacher candidate and K-12 students. Both the College faculty and the Residency Mentor work cooperatively to mentor, train, and help the candidate utilize self-reflection to grow in his/her teaching abilities. Grant funds will be used to fund the resident's tuition to participate in the pilot residency program and provide a stipend/living wage during the training period. Prior to enrollment in the residency, teacher candidates will be required to sign a contract to ensure completion of the residency and indicating that they commit to teaching in a high needs BCPS school for at least three years after completing the residency program. A repayment plan will be created for those leaving the school district prior to completion of the three-year commitment. Repayment funds will go back into the program to provide opportunities for other students to participate in a residency.

Residency mentors will be provided with supplemental pay for the additional responsibilities associated with mentoring residents. Mentors will have a minimum of at least five years of teaching and ranked "Innovative" (the highest ranking) on their last two performance evaluations. They must also be able to: model effective instructional practices in STEM and Literacy, reflect on their own teaching and articulate the rationale for their strategies, assess the impact of their instructional choices on student learning, and reflect on their work as a professional teacher, as well as understand the needs of new teachers. They must also have strong pedagogical knowledge and skills, deep content knowledge, excellent verbal and written communication skills, exemplary interpersonal skills and the ability to model professional behavior.

Mentor teachers will be identified through a rigorous selection process that includes: a formal application to the program, recommendation from a site administrator, interviews,

classroom observation, and final selection by a panel consisting of a balanced representation of site and district administration and BC faculty and staff.

Residency mentors will participate in a 35-hour training, provided by BC faculty and BCPS Talent Development Department, prior to being assigned a resident and will participate in ongoing monthly training during the residency mentoring. Trainings will ensure that mentors can effectively coach in the following areas: cognitive coaching, essential components of reading instruction, effective use of technology, use of data to improve instruction, differentiated learning and research-based strategies to meet the needs of ESOL and students with special needs, with an emphasis on the integration of STEM subject matter. Mentors will also provide continuous feedback to the program and will help inform its improvement.

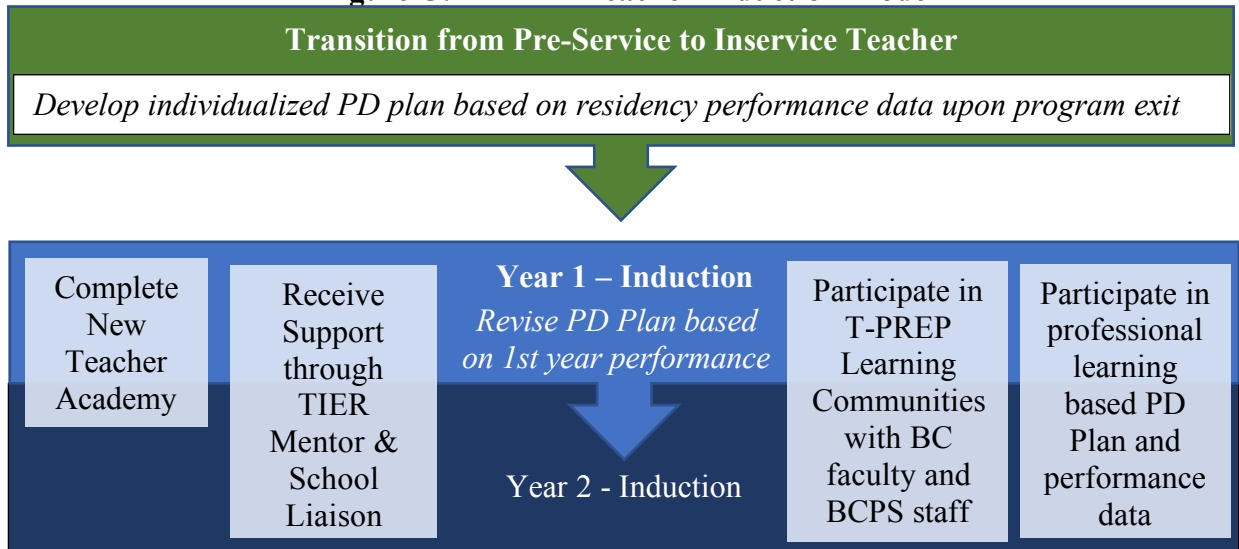
Selection of residents will be prioritized to align with BCPS hiring priorities. Additionally, admissions to the residency program will include a minimum of 2.75 GPA, successful completion of the General Knowledge Exam, as well as recommendations from a BC Education Pathway faculty involved with the residents' earlier experiences.

Induction. With 100% placement of its graduates¹⁸, at a BCPS school, BC had established an induction program to support its students hired by the school district. BCPS has committed to hire all completers of the T-PREP program that earn their bachelors degree and received their teaching certification. BC will extend the induction process to provide the new teachers (T-PREP completers) with a collaborative professional network that will continue after their participation in the program. T-PREP teachers will have numerous induction supports provided both by BCPS and the T-PREP program. Near the completion of the teacher candidates

¹⁸BC has a 100% placement rate, with 88% going to work in BCPS and 12% going to other school districts.

Bachelors degree, the candidate will develop an individualized professional development plan with the district mentors targeting growth areas based on their performance data during residency as they exit preparation. The T-PREP teacher induction process will provide support through the first two years of teaching.

Figure C. T-PREP Teacher Induction Model



After completing the preparation program, T-PREP teachers will participate in the New Teacher Academy (NTA), an intensive four-day quality professional learning activity designed for new teachers and teachers new BCPS. NTA provides new teachers with effective instructional practices through the Marzano Art of Teaching Framework, exploration of the Florida Standards and its implementation in the classroom. Teachers will also learn classroom management strategies, professionalism practices and technology integration to make their initial classroom experience successful, positive and rewarding. The New Teacher Academy is available to all new BCPS classroom teachers.

Once placed in a high need school, the T-PREP teachers will participate in the BCPS coaching and induction professional development program, entitled Teacher Induction

for Effectiveness and Retention (TIER). TIER is deliberate in its design to build inquiry, encourage collaboration and trust, and provide the needed support for new educators. Through TIER, new teachers receive weekly support through a school-based TIER Mentor along with monthly support meetings facilitated by the TIER School Liaison. TIER is designed to be unique to each school, but is research-based with norms of inquiry and trust supporting new educators in building their craft. TIER Mentors provide individual and differentiated support with classroom management, instructional strategies, lesson content and design as well as formative assessment feedback for instructional effectiveness. TIER Liaisons add support with school-wide initiatives, state and district information, school-norms and organizational culture. TIER Mentors and Liaisons submit monthly evidence of support to the site-based Administrator and District Coaching and Induction Supervisors for additional feedback and reflection. The TIER program serves as the induction of the new teacher for one year.

T-PREP teachers will have added support through the T-PREP Professional Learning Community (PLC) using social media and other internet-based collaboration tools, as well as monthly video conference sessions with other graduates of the TEP program share stories of success, areas of frustration and have a general question and answer opportunities The PLC is designed to help students with their transition into teachers who can effectively deliver subject matter in a way that enhances student understanding and results in higher levels of achievement. The program will provide peer to peer support as well as professional mentorship outside of their school to build confidence and improve the T-PREP teacher's skill in content and pedagogy with other members of their cohort. Additionally, T-PREP teachers will have access along with their mentor to a T-PREP Web Page, providing information of interest, an active message board

where they can post questions and share information with each other, links to new research in areas of interest, case studies, and inquiry-based lesson plans.

(II) GOALS, OBJECTIVES AND OUTCOMES TO BE ACHIEVED

The overarching goal of the T-PREP project is to increase secondary student achievement. This goal will be achieved through enhancements to the dynamic partnership between BC and BCPS. T-PREP will implement a high quality, rigorous, systemic, research-based program that attracts, places, and retains a highly qualified cadre of teachers capable of meeting the academic needs of students in urban high-need schools.

Table 2. T-PREP Objectives and Outcomes (All objectives will be met by the end of the 5-year grant period)
<i>Objective 1. Recruitment - 80% of BCPS high school students and mid-career changers who participate in the Education Pathway recruitment activities will take measures necessary to enroll in and pursue a program of study in education.</i>
Outcome 1.1 85% of high school students that participate in the Teacher for Broward Summer Bridge program and attend BC will enter into a course of study leading to a degree in teacher education.
Outcome 1.2. 45% of students that complete the BCPS Urban Teacher Academy Program (UTAP) and are actively involved in the Future Educators of America Association (student club) and attend BC will enter into a course of study leading to a degree in teacher education.
Outcome 1.3. 75 % of BC lower division students involved in pre-teaching recruitment activities (seminars 1 & 2) will enroll in the Bachelors degree program immediately following the completion of their associates degree.
Outcomes 1.4. The percentage of mid career changers who enroll BC’s Educator Preparation Institute (EPI) alternative certification will increase by 25%.
<i>Objective 2. Teacher Prep and Residency Experience – 76% of teacher candidates who complete the T-PREP residency program will become highly qualified teachers capable of meeting the needs of a diverse student population in high need schools.</i>
Outcome 2.1. 80% of teacher candidates who enter the T-PREP residency program will gain licensure by passing all necessary licensure assessment and attain a bachelor’s degree within twelve months.
Outcome 2.2. A passing rate of 72% for the initial state licensure exam for teachers (Florida’s General Knowledge Exam) will be attained.
Outcome 2.3. 92% of T-PREP residents that complete the program will be able to demonstrate the skills and ability to effectively integrate technology into curricula and instruction, including technology consistent with the principles of universal design for learning and common to BCPS classrooms.

Table 2. T-PREP Objectives and Outcomes (All objectives will be met by the end of the 5-year grant period)
Objective 2.4. 92% of T-PREP residents that complete the program will be able to demonstrate the effective use of technology to collect, manage, and analyze data to improve teaching and learning for purposes of improving achievement for all students.
<i>Objective 3. Induction - 80% of first, second and third year teachers who participate in the T-PREP induction activities will gain a better understanding of their teaching roles and demonstrate high levels of commitment to remain in teaching.</i>
Outcome 3.1. 76% of all first year teachers who participate in induction activities provided through the T-PREP program will continue in teaching after one year of employment.
Outcome 3.2. 84% of all second year teachers who participate in induction activities provided through the T-PREP program will continue in teaching after two years of employment.
Outcome 3.3. 88% of all third year teachers who participate in induction activities provided through the T-PREP program will continue in teaching after three years of employment.
<i>Objective 4. High Quality Teaching - Each cohort of students assigned to teachers in their third year of teaching who completed the T-PREP program and are employed in a high need BCPS schools will demonstrate increased academic performance on the state assessment or End of Course exam in a STEM areas.</i>
Outcome 4.1. BCPS students assigned to teachers in their third year of teaching who completed the T-PREP program and are employed in a high need BCPS will attain higher mean scores on performance-based assessment aligned to Florida State Standards in a STEM area compared to non-T-PREP teachers in their third year.
Outcome 4.2. 80% of T-PREP teachers who completed the T-PREP program and are employed in a high need BCPS will demonstrate continuous improvement in professional teaching practices, by increasing to or maintaining an overall rating of Effective or Highly Effective on BCPS Instructional Evaluation System.

(III) T-PREP BUILDS CAPACITY AND YIELDS RESULTS BEYOND FUNDING

Teacher shortages continue to challenge the school district’s commitment to improving student achievement . Recruiting and retaining high quality teachers equipped to meet the needs of today’s students is one of the most pressing challenges faced by BCPS and peer school districts in South Florida. In the past five years, BCPS has consistently experienced critical shortages in key areas, including Science and Math. Each year, district staff recruits teachers from other communities, the private sector and schools abroad. Still, shortages remain. At the

beginning of school year 2017-2018, the school district had about 1,300 vacancies, forcing the district to fill positions with out-of-field teachers.

Using out-of-field teachers impacts student success. Minority and disadvantaged students have achievement levels below that of other groups. Out-of-field teachers are not able to give students the best understanding of subject matter they are simultaneously learning themselves, further handicapping under achieving students.

T-PREP will provide additional resources to BC's TEP. The 8-week Summer Bridge Program will aid in the recruitment of a diverse group of students into the teacher preparation process. Early exposure to the opportunities available within education will help students better plan their academic pathway increasing their ability to complete on time and decreasing the expense that occurs when students don't plan and end up enrolling in excessive courses¹⁹. Like many open access colleges, BC's department of Institutional research found that barriers to graduation was a student's lack of a clear plan. Although many interventions have been put into place, including a First-Year program, students enrolled in the Education Pathway continue to vacillate between the various majors within the discipline.

Historically, BC's teacher candidates had difficulty passing certification exams. The T-PREP residency program will provide additional support for the school district by giving residency participants the opportunity to develop deeper instructional capacity in these areas. T-PREP will also provide wrap-around supports, such as learning cohorts, mentoring, coaching, test preparation assistance, and financial aid. The extended period for supervision of teacher candidates provides time to learn and strengthen the application of multiple best instructional

¹⁹ BC Department of Institutional Research, 2014. Barriers to Completion.

practices, including differentiated instruction and the use of contextualized curriculum.

Supervising teachers will model effective pedagogy for residents .

A 2016 report from the U.S. Chamber of Commerce Foundation (USCCF²⁰) examined teacher recruitment practices and found that many school districts struggle with finding teachers that are adequately prepared to support the myriad of student needs. The report cited factors such as a lack of formal system to communicate teacher needs and limited pathways into the classroom. T-PREP will instill a formal feedback loop into teacher training. The report also suggested that increasing avenues of communication and collaboration from the recruitment to the placement stage was important and that states, such as Florida, with critical teachers shortages, should focus on recruiting teachers early, while students are still in high school.

Initiating this program will also further expand the diversity of the teacher workforce. Research indicates that students of color achieve greater academic and social outcomes²¹ when they identify with their teachers. Initiating this process in BC's Teacher Education Preparation (TEP) Program and BCPS teacher development process will establish a new normal for the partner institutions.

(IV) T-PREP REPRESENTS APPROACH TO TQP PRIORITIES

The design of the T-PREP program addresses Absolute Priority 1 and three Competitive Preference Priorities.

Response to Absolute Priority 1. Recruiting and retaining excellent teachers is a critical factor in the success of students, especially for those living in underserved communities. TPREP is

²⁰ Teacher Talent Pipeline. U.S. Chamber of Commerce. 2016.

²¹ Gershenson, Seth, Stephen B. Holt and Nicholas W. Papageorge. Who Believes In Me? The Effect Of Student-Teacher Demographic Match On Teacher Expectations. [Economics of Education Review](#), Volume 52, June 2016, Pages 209-224

²² Op. Cit.

designed to staunch the exit of teachers from the workforce, and increase the efficacy of those who serve our students. Exit interviews reflect the top two primary reasons that teachers leave the field, including: Poor Preparation, Lack of Support in the classroom. T-PREP addresses both of these concerns through creation of a strong, integrated partnership between BC and BCPS that provides training and support before, during and after participation in the Education Pathway.

As mentioned previously, research suggests that individuals in the workforce that transition into Education from other fields are perhaps the most in need to training and modeling of various instructional strategies. While content knowledge in specific areas of certification is strong, individuals who participate in alternative certification programs are the most in need of training in how to approach and motivate today's students. T-PREP will help BC and BCPS insure that professionals in STEM fields are comfortable with the instructional strategies deemed most effective with high-need students.

T-PREP redesigns BC's teacher preparation program at the baccalaureate level, the alternative certification process and adds a new development component for high school seniors and lower division (years 1 and 2) college students. Further, the redesign offers fourth year students expanded and intensive support and training. As described and when implemented, T-PREP will reflect a holistic transformation of BC's training for future teachers. The table below demonstrated how multiple components of the program will be changed through the advent of T-PREP. Key to the success of T-PREP will be collaboration among college faculty from three academic pathways, STEM, Arts & Humanities and Education to develop curriculum that helps BC's students become more effective coaches and leaders for high-need student

Competitive Preference Priority 1—Promoting STEM Education.

T-PREP was built on collaborative effort between three of BC's academic pathways: STEM including Computer Science; Arts, Humanities, Communication, and Design; and Education. This program components based on the need to address critical teacher shortages within the school district is these areas and to strengthen education pathway student success with general knowledge and specific content certification exams.

The Information Technology Industry Council (ITIC) believes that helping today's students become conversant and facile with technology is critical to help American workers acquire in-demand skills that will return our country to a competitive position in the global market (2016)²³. The U.S. lags behind most industrial nations in the proportion of college graduates that receive degrees in STEM fields. Less than two in ten U.S. college graduates earn degrees in STEM, with the nation ranking behind 26 countries in the number of students earning technology-related college degrees.

Focusing on technology will help level the playing field domestically where minority and disadvantaged communities lag behind other students in access to and use of technology. The link between STEM education, greater research, and increased innovation is well documented. The Organization for Economic Cooperation and Development (OECD) believes that education plays a critical role in supporting innovation, with a knowledge-based society resulting in a highly qualified workforce that is engaged in continuous learning (Information Technology & Innovation Foundation 2016). In fact the number of STEM-related jobs is projected to continue growing over the next decade, and at a faster rate than other sectors.

²³ Moving STEM Forward: Strengthening STEM in Today's Classrooms, Information Technology Industry Council. 2016.

Faculty from these three academic pathways will work together to flesh out the existing content used in teacher education programs so that program faculty are able to help teacher candidates become more effective instructors in these critical shortage areas. Revitalized pedagogy will be designed to increase technology literacy among all Education Pathway students, infusing the use of interactive technology into the delivery of all program content. Teachers with high level so technology literacy will develop students with this skill set as well. Faculty will work together during the first year of the program to strengthen course content, developing strategies for integrating elements of each discipline into curricula. The revised curriculum will increase students’ understanding about the disciplines relate to course content, leading to improved skill at addressing the material with their students.

Students will also be recruited to become Computer Science teacher – a critical need in the school district. BC and BCPS have already begun to develop a training program for its teachers to receive Business Education 6-12 certification which allows teachers to teach computer science in secondary schools. The special training pathway will focus on the Career Technical Education (CTE) area of computer science/information technology such as Applied Cyber Security, Cloud Computing and Virtualization, Database Application Development and Programming, Java Development and Programming, and Network Systems Administration. Students wanting to receive certification in this area will receive training and preparatory test courses and be offered a yearlong residency alongside an experienced CTE teacher in the field.

Competitive Preference Priority 2— Promoting Effective Instruction in Classrooms and Schools. T-PREP is designed to increase the quality of classroom instruction through intensifies coaching and mentoring during and after teacher training. T-PREP begins with strategic recruitment of high school seniors. Because the district is made up a majority minority population, it increases the diversity of the candidate pool. In addition, the program will recruit

from the Urban Teacher Academy Program that is conducted at Deerfield Beach High School and Stranahan High School where a majority of the students (over 90%) are either Black or Hispanic students promoting the diversity of the teacher candidates. Students interested in majoring in education will be encouraged to attend an 8-week Summer Bridge program designed to help prospective education majors understand the goals and objectives of the program, enrollment and graduation requirements and the benefits of participation. Students will also receive academic support to assist them in preparing for their college studies so that they can complete general education requirements and begin teacher preparation training. This is particularly important for students from high-need communities who may not have the needed resources to help them improve their readiness for higher education.

Students enrolled in BC's lower division AA track and others interested in pursuing a career in education can attend a Seminars to help them understand the requirements of the program and how their current program can cross-walk to the Teacher Preparation program. As a Hispanic Serving Institution (HSI), BC also serves a significant population of students who are minority or disadvantaged, with 82% receiving financial assistance and two thirds receiving Pell grants. For these students, many of whom are the first in their families to attend college and lacking in role models for success, Seminars will serve another purpose, which is to lay out a clear pathway to graduation and career opportunities.

T-PREP will insure that student participants are successful in the classroom through program coaching and mentoring activities. Students will participate in a residency for an entire school year, working hand in hand with a master (supervising teacher) who is a strong instructional leader and an effective mentor and coach. Veteran teachers interested in participating in the T-PREP program in this capacity will be vetted to determine their skill set

and receive additional training in key areas as required. Unlike traditional programs, which strive to place interns in their “own” classroom and provide 4-5 observations throughout the semester, T-PREP will provide students with a co-teaching experience and support from supervising teachers with superior feedback and mentoring skills throughout the course of the two semesters.

The T-PREP program framework strengthens pre-service teacher skill sets that lead to improvement in student achievement. Infusion of Differentiated Instruction (DI) and Contextualized Curriculum (CC) into teacher preparation course content helps address disparities in student achievement by reaching out to students at their level of knowledge and skill, and approaching them in ways that they can relate to.

To insure that a diverse teacher workforce is retained, T-PREP will support graduates through their first three years of service to the district. District staff will work with supervising teachers to monitor teacher progress and the achievement of the students in their classroom(s). Beginning T-PREP teachers will receive continued support, mentoring and coaching during this person to ensure that they are successfully transitioning into the teacher workforce and meeting student achievement goals.

Competitive Preference Priority 3—Novice Applicants.

BC has never received a grant under this funding opportunity as either a sole applicant or as a member of a partnership or consortium.

C. QUALITY OF THE MANAGEMENT PLAN

(I) ADEQUACY OF MANAGEMENT PLAN, TIMELINE FOR ACHIEVEMENT OF OBJECTIVES

The T-PREP program will be managed by a team of experts in the education field from BC and BCPS through this unique partnership. The timeline and management team described

below was developed by the team to create a program that will effectively train teacher candidates in the shortest amount of time, and ultimately produce the highest quality teachers.

Table 3. T-PREP Program Management and Project Team		
Program Management and Oversight		
Name	Role	Primary Responsibilities
Dr. Jeffrey Nasse	Principal Investigator (PI), BC Dean, Ed. Pathway	Overall direction and coordination for curriculum enhancement, reforms & evaluation
Dr. Elizabeth Molina	Co-PI, BC Assoc. Dean Education Pathway	Overall direction and coordination with partners, residency and induction program
Dr. Kristina Taylor	BC Field Placement and Student Teaching	Coordination of field placements and student observations; works with faculty on placements
Dr. Fabian Cone	Co-PI, BCPS Director, Teacher Professional Learning & Growth (TPLG)	Overall direction and coordination for induction program, New Teacher Academy and BCPS professional development offering for all teachers
Deborah Porter	BCPS Coordinator, TPLG	Coordination of teacher development and oversees BCPS induction program
Michele Gallagher	BCPS Field Experience Coordinator	Coordination of field experience placements for BCPS and oversees teacher mentors
Dr. Linda Whitehead	BCPS, PD Specialist	Coordination of PD offerings based on teacher evaluation results
T-PREP Project Team		
Position	Role	
Project Director – to be hired (TBH)	Coordination of T-PREP program delivery; prepares all US Dept. of Ed reports; coordination of individualized student support/induction	
Education Pathway Recruiter (TBH)	Outreach & recruitment in high schools, student clubs, midcareer changers, BC STEM pathway, coordinates summer bridge component	
Teacher Residency Prgm. Coord. (TBH)	Coordinate of all project activities within BCPS and the residency program; serve as key contact for residency program for the College	
Administrative Assistant/ Bookkeeper (TBH)	Collect data for evaluation/reporting, collect application for TPREP program/residency, schedule meetings, schedule college tours, Process payroll and stipend payments, process summer bridge paperwork	

Several other BC positions will support T-PREP as indicated in Table 4 below. Appendix H contains the resumes of the key positions involved in T-PREP.

Table 4. Additional T-PREP Position in Support of Management and Project Team	
Ed. Pathway academic advisors and faculty	STEM Pathway, Dean Tom Ayers
District Director of Student Assessment	AHCD Pathway, Dean Jamonica Rolle
Lead Dean of Student Services	STEM and AHCD Pathway faculty
T-PREP Advisory Council (TAC)	TIER Mentor Teachers
T-PREP Residency Mentors	TIER School Liaisons
BC Institutional Research Department	BCPS Cooperating Teachers

BC Academic Affairs Department BC Center for Teaching and Learning	BCPS Student Assessment and Research Dept BCPS Innovative Programs Dept (UTAP)
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The following timeline will guide the planning and implementation of the T-PREP program to ensure the program meets all of the deliverables, objectives and intended outcomes.

Table 5. T-PREP Program Timeline							
Obj.	Personnel	Major Tasks	Year				
			1	2	3	4	5
All	PIs	Hire Project Director (PD), Recruiter (Rec), and Teacher Residency Coordinator (TRC), Administrative Assistant/Bookkeeper (AA)					
	PD, TAC	Create the T-PREP Advisory Committee (TAC) ensure broad-based representation					
Objective 1. Recruitment	PD, Evaluator	Update needs assessment with BCPS					
	PD, Rec	Collaborate with existing recruitment pipelines and pathways within BC (STEM and EPI)					
	PIs, PD	Conduct strength and gap analysis for program customization					
	PD, Rec	Develop and conduct summer bridge program beginning in June 2019					
	PD, Rec	Develop and conduct lower division seminars					
	PD, Rec	Develop T-PREP application/interview process					
Objective 2. Teacher Preparation and Residency	Pathway faculty	Conduct contextualization sessions with Ed., STEM and AHCD faculty					
	PIs, PD	Train Education Pathway faculty on contextualized curriculum					
	PIs	Make revisions/reform to Teacher Education Program based on needs assessment and gap analysis					
	PD, AA	Purchase classroom resources (i.e., technology) to equip BC classrooms same as BCPS					
	PD, BC faculty	Conduct GKE/subject area test prep workshops					
	PIs, TRC, PD	Design final year residency program					
	TRC, PD	Develop residency application/process					
	TRC, PD	Recruit and select residents for the program					

Table 5. T-PREP Program Timeline							
Obj.	Personnel	Major Tasks	Year				
			1	2	3	4	5
	TRC, PD, PIs	Identify high-need schools for residency					
	TRC, PD, PIs	Define process for selecting residency school and high-quality residency mentors					
	TRC, BC faculty	Design and deliver residency mentor training					
	TRC, PD	Conduct residency program orientation for residents					
	Residents	Begin residencies (cohort – 25/yr.)					
Objective 3. Induction	PIs, PD, BCPS staff	Extend TIER induction program to TPREP first and second year teachers					
	AA, PD, BCPS staff	Schedule New Teacher Academy for T- PREP completers (beginning year 2)					
	AA, PD, BCPS staff	Create and conduct Professional Learning Communities (PLC) for T-PREP teacher cohort					
	PD, AA	Develop Website to include resources for resident mentor and residents					
	PIs, PD, BCPS staff	Conduct PD based on teacher evaluation					
Obj. 4. High Quality-Teacher	PIs, PD	Continue to engage T-PREP teachers through their third year of teaching and beyond					
	PIs, faculty	Align BCPS district teacher evaluation framework and tools					
	PD, AA, Evaluator	Create system to receive teacher retention data					
	PIs, PD	Request teacher evaluation ranking of T-PREP completers and utilize data in gaps analysis					
Evaluation and Continuous Quality Improvement	PD, TAC	Create and convene the T-PREP Advisory Committee (TAC) monthly meetings					
	PIs, PD	Create and engage in once a semester continuous improvement process					
	PD, PIs, Evaluator	Collect baseline and yearly licensure test results (GKE and subject area test) for analysis					
	PD, PIs, Evaluator	Collect data for BCPS student cohorts assigned to T-PREP teacher and analyze results					
	PIs, TRC, Rec, AA	Conduct satisfaction survey/forum for residency, induction, recruitment					
	TRC	Conduct classroom observations during clinical experiences/residencies					
	PIs, BCPS staff	Modify induction program based on T-PREP teacher survey and teacher evaluation results					

Table 5. T-PREP Program Timeline							
Obj.	Personnel	Major Tasks	Year				
			1	2	3	4	5
	PIs, Evaluator	Analyze program data and provide findings and recommendation					
	PIs, Evaluator	Develop Interim and Annual Performance Reports and disseminate to stakeholders					

(II) INCORPORATION OF T-PREP INTO BC/BCPS’S TEACHER EDUCATION PROGRAM

Based on the needs assessment described earlier in this proposal, BC and BCPS are aware of the need to revise teacher preparation to strengthen the readiness of pre-service teachers and expand the cadre of teachers qualified to fill critical shortages in STEM. The components embedded into the T-PREP framework will serve as the foundation for the redesign of BC’s Teacher Education Preparation (TEP) program. All of the components embedded into the program redesign are identified as proven practices as cited throughout this proposal.

As stated in earlier sections of the Program Narrative, T-PREP will increase *targeted recruitment* of teacher candidates from multiple populations, including; graduating high school students, non-education pathway students enrolled in associate of arts degrees and midcareer STEM professionals. Recruitment activities will become a cornerstone of BC’s *strategic candidate selection* process, with emphasis on finding candidates that demonstrate high levels of interest and long-term commitment to working in high-need schools.

T-PREP will enhance strategies for BC’s pre-service training prior to classroom service. This will begin with a *Summer Bridge* program for graduating high school seniors, continue with a *Seminar* program for lower division students and *redesigned curriculum* for education pathway students that focus on using *differentiated* and *contextualized instruction* to achieve higher levels of classroom engagement.

One of the major shifts in teacher education preparation partnership will be the length and depth of support that teacher candidates receive as a result of the program redesign. T-PREP will drive a transition of 4th year (final year for EPI participants) practicum/clinical experiences from 1 semester with limited observation and feedback to a *yearlong residency*. During the residency period, the candidate will work with a supervising teacher selected because of strong content knowledge and instructional leadership. BCPS will identify teachers that can serve in these roles and BC will *provide BCPS teachers with additional training* in coaching and mentoring.

Graduating Education Pathway students will be strategically placed in high-need secondary schools with a supportive learning community that can assist new teachers with application of instructional strategies, model best practices and offer feedback and support during their first two years. Evaluation of pre-service teacher development and efficacy using the T-PREP construct will inform the future collaboration for both institutions.

(III) ADEQUACY OF SUPPORT

BC will dedicate the appropriate resources to support this initiative. Leadership for BC's TEP Program and Education Pathway (see staffing chart) will assist with program implementation, providing oversight and advising the college's senior leadership on the progress of the program. In addition, BC will provide in-kind resources to deliver the program, including but not limited to facility space to house program staff requested for the program; the Project Manager, Education Pathway Recruiter, Teacher Residency Program Coordinator and Administrative Assistant/Bookkeeper.

BC will also provide facility space for recruitment activities, including the Summer Bridge program for graduating high school students, Seminars for lower division students and work pace for faculty revising TEP curriculum to include differentiated instruction and

contextualized curriculum. The Summer Bridge will help improve the academic readiness of prospective students before they enter the program so that they are ready to achieve learning outcomes and prepare for the General Knowledge Exam (GKE). Program staff will work with BC's Academic Success Center staff on delivery of the Seminars to provide lower division program participants with additional academic support. Both of these support programs will help address gaps in the program as identified in the Needs Assessment.

BCPS will provide in-kind support through delivery of the New Teacher Academy (Orientation) and the redesign of its Induction Program. The program is currently structured for first year teachers to achieve benchmarks through a series of calendared events. It will be redesigned using a more individualized type of advisement, providing targeted support for new teachers during their first two years of service. For example, mentoring teachers will work with new teachers to help them develop activities that differentiate instruction, so that they are able to engage with students at their current academic level and assist them in advancing to the next one.

Finally, the institutions will collaborate on evaluating program success. BC's Department of Institutional Research will track student outcomes as they progress through the T-PREP program while BCPS Student Assessment unit will measure the academic achievement of the students assigned to the new teachers that graduate from the T-PREP program.

D. QUALITY OF THE PROJECT EVALUATION

(I) T-PREP METHODS OF EVALUATION

The evaluation of the T-PREP program will serve several programmatic purposes: (1) to assess the effectiveness of the program to prepare highly qualified and effective teachers for high-need urban schools; and (2) to understand the impact of the recruitment, retention (pre-service and in-service), and induction strategies on the T-PREP teachers' performance in the

classroom. The evaluation plan involves formative analysis to provide performance feedback and permit regular assessment and necessary adjustments, and summative analysis regarding the impact of the program on achieving the intended outcomes of the project. This continuous assessment will be instrumental to ensure that implementation plans for the project are on course and effective or will provide the rationale for altering implementation strategies.

In partnership with the PIs and the T-PREP Advisory Committee, the evaluation plan will be conducted by an external evaluator team, MN Associates, Inc. (MNA), led by Kavita Mittapalli, Ph.D. (Please see Dr. Mittapalli's resume in Appendix). The team will be engaged for the entirety of the program. From 2005-2008, Dr. Mittapalli worked in the Teacher Quality and Improvement Center at the Council of Chief State School Officer. Upon completing her Ph.D. in education research/design at George Mason University in 2008, Dr. Mittapalli's firm was hired as an outside evaluator to conduct the evaluation of the American University's (AU) Title II USDE-funded two teacher quality partnership (TQP) program grants (2009-11). MNA worked again with American University, to evaluate the Math for America, DC initiative, a collaboration with the DC Public and Public Charter Schools (DCPS) and the Carnegie Institute of Science (CIS) that was awarded a five-year NSF's Noyce Scholarship grant in 2011. Additionally, MNA is currently evaluating a Teaching Equity for Appalachian Mathematics and Science at Appalachian State University and a NSF-funded Math and Science Partnership grant to Johns Hopkins University and the U.S. Dept. of Education's Innovation in Adolescent Literacy for Alleghany County Public Schools.

Data collection for evaluation will follow a concurrent mixed methods approach using both quantitative comparisons and qualitative investigations. Appropriate measures for the Institution Review Board (IRB) oversight and human subject protection will be followed.

Assessment of the effectiveness of the program to prepare and graduate highly qualified and effective teachers will begin with the selection of the teacher candidate and continue throughout their years of required teaching. Comparisons will be conducted to identify variable differences between T-PREP teachers who complete the program and non-T-PREP new teachers. Data sources include semi-structured interviews, portfolio appraisal, competency compliance checklist, graduation records and transcripts, surveys and focus groups.

The following questions will guide the evaluation: To what extent were the recruitment strategies effective? In what ways do program T-PREP teacher candidates show any benefits from being in the program (e.g., field experiences and mentoring/support experiences, residency and professional development)? Did the program better prepare T-PREP teachers to become highly qualified by-passing certification exams at higher levels than other Education pathway majors? Did the program benefit teacher preparation at high-need urban schools in critical shortage areas? How well do program T-PREP teachers' students perform in STEM areas compared to other students?

Selected interviews will be conducted with students who attended initial recruitment opportunities, seminars and classroom presentations, including students that do not participate in the program. Interviews will seek to exam the impact of the program on students' choice of whether to participate in the T-PREP program. T-PREP teachers who complete the program will also be interviewed about their perception of how the program shaped their understanding of the teaching profession and their understanding of themselves as teachers.

(II) EXTENT EVALUATION METHODS ARE THOROUGH, FEASIBLE, AND APPROPRIATE

An important goal of the T-PREP program is the impact on BCPS teacher shortage in critical STEM areas, and on student success at high-need urban schools where most students are low-income, minority students and struggling academically. Exit interviews will include questions regarding teaching placements to facilitate connections between students and the College. Completion of a survey mailed to T-PREP teachers regarding their experience in the classroom and the induction program, and a letter from the principal will serve as evidence of required teaching completion. The evaluation will identify those T-PREP teachers who did not meet their promissory commitment for required teaching years and the reasons why for program adjustments. Finally, a request will be made for classroom observations during induction and end-of-year interviews with residents who are teaching to examine teaching practices. The BCPS' teacher evaluation system uses, in part, Marzano instructional strategies to detect the degree to which classroom instruction is effective/innovative. The same tool will be used for observations by Resident Mentors during the residency and TIER Mentors during the induction phase. In-service interviews will also focus on induction programs, teacher retention, and continued professional development.

The evaluation data will be combined to ascertain if the program has fulfilled the goal to address the critical shortage of BCPS teachers in STEM areas and provide highly qualified and effective secondary STEM teachers for BCPS high-need urban schools. Furthermore, the results of the evaluation will be used to improve the recruitment process, the pre-service teacher preparation program, and induction process. Results will also be used for the Annual Performance Report (APR) and to measure the impact of the program on student achievement in high-need schools. Table 6 below shows the evaluation process using the performance objectives.

TABLE 6. Evaluation Process and Measures			
Criteria/Types of Data	Data Source	Collected When & By Whom	Data Analysis
Objective 1. Recruitment - 80% of BCPS high school students and mid-career changers who participate in the Education Pathway recruitment activities will take measures necessary to enroll in and pursue a program of study in education.			
<p>Formative</p> <ul style="list-style-type: none"> - # of high school participants in Summer Bridge who attend BC and enroll in teacher education program - # of high school students who complete UTAP and are actively enrolled in Future Educators of America (FEA) who attend BC and enroll in teacher education - # of lower division students who participate in Session 1 & 2 who enroll in Bachelor's degree program in teacher education - # of mid-career changers who enroll in EPI program 	<ul style="list-style-type: none"> -Summer Bridge Sign in sheets -Session 1 & 2 Sign in sheets - Enrollment reports -UTAP student completion records -Future Educator membership 	<ul style="list-style-type: none"> Collect Quarterly Collected by Recruiter and Director 	<ul style="list-style-type: none"> -Review summer bridge enrollment records and compare it to TEP enrollment records -Review UTAP completion records and FEA membership with TEP enrollment records -Review Session 1 & 2 attendance and bachelors degree program enrollment - Compare baseline and EPI enrollment records to determine increase
<p>Summative</p> <p>85% of high school students and mid-career changers that enroll in teacher education program.</p>	<p>College enrollment records; EPI records</p>	<p>Collected Annually</p> <p>Collected by Director</p>	<p>-Collect enrollment data from College records</p>
Objective 2. Teacher Prep and Residency Experience - 76% of teacher candidates who complete the T-PREP residency program will become highly qualified teachers capable of meeting the needs of a diverse student population in high need schools.			
<p>Formative</p> <ul style="list-style-type: none"> - # of Participant who pass the GKE and subject area test and attain bachelors degree - Passage rate of GKE - % change between Pre-and Post-assessment on effectively integrating technology results - % change between Pre-and Post-assessment on using data for differentiated instruction results 	<ul style="list-style-type: none"> -State assessment records (GKE and subject area test) -Pre-and-Post assessment results 	<ul style="list-style-type: none"> Collected Quarterly Collected by Director And Residency Coordinator 	<ul style="list-style-type: none"> -Review student GKE and subject area test scores with the passing score -Review the number of students that take the GKE and divide by the number of those who pass -Compare pre and post-assessments to determine change

TABLE 6. Evaluation Process and Measures

Criteria/Types of Data	Data Source	Collected When & By Whom	Data Analysis
<p>Summative 76% of teacher candidates who complete the residency program become highly qualified teachers</p>	<p>-Residency program records -Teacher evaluation records</p>	<p>Collected Annually Collected by Director</p>	<p>-Collect residency completion records -Collect teacher evaluation records</p>
<p>Objective 3. Induction - 80% of first, second and third year teachers who participate in the T-PREP induction activities will gain a better understanding of their teaching roles and demonstrate high levels of commitment to remain in teaching.</p>			
<p>Formative - # of first year teachers who participate in induction activities and employed after one year of teaching - # of second year teachers who participate in induction activities and employed after second year of teaching - # of third year teachers who participate in induction activities and employed after third year of teaching</p>	<p>-Induction program records -BCPS employment records</p>	<p>Collected Annually Collected by Director and BCPS Staff</p>	<p>-Review employment records and compare hire date and employment status -Review induction program completion records</p>
<p>Summative 80% of 1st, 2nd, 3rd year teachers who participate in induction activities will gain a better understanding of their teaching roles and demonstrate high levels of commitment to remain in teaching.</p>	<p>-Application data -Acceptance data</p>	<p>Collected Annually Collected by Director</p>	<p>-Collect survey data -Collect retention records</p>
<p>Objective 4. High Quality Teaching - Each cohort of students assigned to teachers in their third year of teaching who completed the T-PREP program and are employed in a high need BCPS schools will demonstrate increased academic performance on the state assessment or End of Course exam in a STEM area.</p>			
<p>Formative - # of BCPS students assigned to T-PREP teachers who attain higher mean scores than students of non-T-PREP teachers</p>	<p>-Class records -Student mean scores -Teacher evaluation results</p>	<p>Collected Annually Collected by Director and BCPS Staff</p>	<p>-Review number who complete applications -Collect and review student data enrollment in postsecondary program</p>

TABLE 6. Evaluation Process and Measures			
Criteria/Types of Data	Data Source	Collected When & By Whom	Data Analysis
- # of T-PREP teachers who rank effective or highly effective on teacher evaluation			-Compare enrollment data
Summative Cohort of students demonstrate increased academic performance on the state assessment or End of Course exam in a STEM area.	-Student assessment records -Teacher student assignment records	Collected Annually Collected by Director	-Collect and review student test assessment records