

Strengthening the University-District-Community Partnership: Compassion, Reflection and Equity for Atlanta Teacher Effectiveness (CREATE)



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INTRODUCTION

The proposed project **Strengthening University-District-Community Partnership: Compassion, Reflection, and Equity for Atlanta Teacher Effectiveness (CREATE)** is a teacher development and support partnership between Georgia State University's College of Education and Human Development (GSU CEHD), Atlanta Public Schools (APS) a district that serves 84% students of color, and 78% students who are eligible for free/reduced price lunch and several community organizations. Our work is guided, in part, by CREATE's vision and mission that was developed in 2018 by a team of diverse teacher educators and school leaders from APS:

Vision: A critically-conscious, compassionate and skilled educator for every student

Mission: To build and nurture a thriving community of educators committed to practices of teaching that prioritize racial justice and interrupt inequities

When this vision is achieved, we believe that all students and particularly those who have been historically underserved--are much more likely to achieve to their highest potential and flourish.

To do this work, CREATE draws on evidence-based strategies from two studies Young et al. (2017) and Glazerman et al. (2006) both of which meet What Works Clearinghouse (WWC) standards without reservations; on additional evidence-based practices for teacher effectiveness; on preliminary results from early years of CREATE programming, and on previously-funded Department of Education Investing in Innovation (i3) and Supporting Effective Educator Development (SEED) awards. Our project addresses Absolute Priority 1 [AP1]: Supporting Effective Teachers, subparts 2 and 3 (Providing teachers with Evidence-based Professional Development that address needs of LEAs [AP1.2] and/or lead to an advanced credential [AP1.3]), as well as Competitive Preference Priority 1 (Promoting effective Science and Math teacher education [CPP1]), Competitive Preference Priority 2 (Fostering Knowledge

and Promoting the Development of Skills that Prepare students to be Thoughtful, Productive Citizens [CPP2]) and Competitive Preference Priority 3 (Spurring Investment in QOZs[CPP3]).

A. QUALITY OF THE PROJECT DESIGN

A.1. An Exceptional Approach to the Priority Areas

The CREATE program merges an innovative 3-year, new teacher residency model with extensive cross-organizational, community-centered, evidenced-based learning experiences to enhance educator effectiveness. More specifically, CREATE is designed to meet three overarching goals while working within Qualified Opportunity Zones (QOZs): (1) recruit and retain a diverse group of new teachers through preparation, support, and connection; (2) recruit and retain experienced educators through deep learning, connection, and opportunities for leadership; and (3) strengthen effective educator programming through university-district-community shared learning and collaborative action. Below we describe programming elements within each goal, and suggest how these elements draw on WWC and other evidence-based strategies to meet SEED Priority areas (indicated in blue).

Goal 1: Recruit/retain diverse cohorts of teachers through preparation, support, connection

Similar to the strategies used by Teach for America (TFA) highlighted in the WWC studies cited above, CREATE aims to recruit and retain teachers in high poverty schools. Since 1990, TFA has *recruited, trained and placed* several thousand high achieving graduates from elite universities in high-needs schools. The majority of these TFA corps members, however, leave their positions in low-income schools during or just after their required two-year commitment (Donaldson & Johnson, 2011), a trend that mirrors national patterns of high teacher attrition in schools serving majority low-income and majority Black and Brown students (Simon & Johnson, 2015). In an effort to address this attrition, CREATE draws residents from the large pool of

candidates enrolled in GSU’s CEHD, where racial demographics in 2019-20 approached the demographics of local schools and where many teacher candidates have made informed commitments to being educators and completing a university-based teacher preparation program focused on urban education. For these reasons, CREATE’s recruitment of residents from the GSU CEHD’s highly diverse, social justice-oriented teacher candidate pool is an exceptional approach to effectively serving high-poverty schools [CPP3].

However, CREATE’s approach to retaining teachers goes beyond recruitment efforts as we seek to support the development of effectiveness through two pathways – the first (and primary) pathway is a multi-faceted teacher residency program that is *three years* in duration and offers extensive site-based support; the second pathway is focused on providing increasingly large numbers of GSU student teachers – who are placed in APS schools for their final year of university teacher preparation – with a trained and supported Cooperating Teacher (CT). Both pathways are aligned with APS (district) needs [AP1.2], as further described in Appendix I.

The first pathway focuses on the expansion of a *3-year residency program* for elementary and middle school teachers that emphasizes preparedness in math, science, ELA, and social studies (with an additional focus on math and science for interested residents in year 3), and a fierce commitment to equity-centered and compassion-based mindfulness practices that support students’ academic growth *and* preparedness to be informed, engaged, active citizens [CPP1, CPP2]. The main supports and overall experiences of each year of the residency are outlined in Table A1.1 below.

Table A1.1. Core Residency Curriculum & Experiences

Year/Summer	Description of supports/services
Pre Year 1 Summer Resident	- Paid 1-month summer academy, focused on engagement with youth in community settings

Academy (Pre-SRA)	<ul style="list-style-type: none"> - Taught by university faculty and community leaders, focused on experiences and readings related to becoming a <i>community</i> educator
Year 1 Residency Experiences (Y1)	<ul style="list-style-type: none"> - Residents complete student teaching alongside a carefully trained Cooperating Teacher (CT) who helps them make sense of their equity-centered coursework - Residents receive additional support via day-long “Together Time” (TT) meetings to encourage connectedness with peers; experience Cognitively-Based Compassion Training (CBCT®) that supports social emotional learning and regulation, and compassion toward self/others; explore racial identity and systemic privilege/oppression; work within and across racial affinity groups - Residents’ coursework, practicum assignments, and instructional skill-building experiences are overseen by one primary educator serving in a “hybrid” role as the university supervisor and mentor for the CT in a coordinated, informed, “wrap-around” fashion, titled University Cooperating Teacher Mentor (UCTM) - Residents are financially supported with a [REDACTED]
Year 1 Summer Resident Academy (Y1 SRA)	<ul style="list-style-type: none"> - Paid 5-week summer academy, focused on teaching summer school - Taught by university faculty, CREATE leaders, and district representatives, focused on how to create a welcoming and inclusive classroom culture - Residents make connections between readings on equity, justice, privilege and oppression in schools and what they are seeing and experiencing in their classrooms, also learning how to manage their own emotions and stress through practices of CBCT®.
Year 2 Residency Experiences (Y2)	<ul style="list-style-type: none"> - Two certified residents are paired as co-teachers, fully responsible for <i>one</i> classroom, enabling them to collaborate and learn alongside a partner, while sharing planning, instruction, assessment and data management responsibilities - Throughout the year they each (a) attend TT sessions, (b) work with a CREATE Instructional Mentor (IM) who supports them in mastery of content and equity-centered instructional practices, and in using the compassion-based mindfulness skills they have been taught; and (c) work with a School-Based Mentor (SBM) to develop a social connection to and sense of belonging with other equity-minded experienced educators - Residents are paid a competitive teacher salary
Year 2 Summer Resident Academy (Y2 SRA)	<ul style="list-style-type: none"> - Two-week, paid summer academy, focused on reflection and planning for Y3 - Taught by CREATE leaders and university faculty, week one involves reflection on the previous year to make meaning of what worked and where struggles persisted, while week two involves lesson-planning for Y3 that promotes students’ academic growth, social-emotional learning, and development as critically-conscious, engaged citizens. - Optional learning experiences include institutes alongside experienced educators focused on diversity, equity and inclusion; and intensive CBCT®
Year 3 Residency Experiences (Y3)	<ul style="list-style-type: none"> - Final year of residency involves teaching in a classroom solo, while continuing to engage the now-familiar support structures of (a) several cohort “Together Time” sessions; (b) work with a CREATE IM to accelerate mastery of content and instructional skills; and they can opt into (c) working with their SBM for another year and/or full scholarships to take up the study of Math/Science - Full engagement in programming generates a [REDACTED] at the end of the year

The three years of summer and school year residency experiences outlined above also draw heavily on TFA and additionally on New Teacher Center (NTC) models--cited in studies that meet WWC standards--that show positive impact on student achievement of similar racial demographics and socioeconomic status as schools served by CREATE. Specifically, TFA's model includes *pre-service training* that features a school-based, intensive 5-week summer experience, and both TFA and NTC include two years of *in-service mentoring* for residents. CREATE utilizes both programming elements, yet provides an exceptional approach through expanded/deeper content and time. Related to pre-service training content, CREATE aims to establish foundational knowledge of school and community history and context answering Zeichner's (2016) critical and timely call for community-centered teachers *before* teacher-candidates begin formal residency. This work supports residents' understanding of how racialized policies create the environment for poverty and inequality to widen, and provides them opportunities to deconstruct deficit-based views of communities so that they may work in solidarity to serve youth. Additionally, CREATE will offer *two* summers and one full school year of pre-service training enabling *substantially more time* spent learning/mastering theoretical and practical concepts that drive effective teaching. Regarding *inservice mentorship*, residents in CREATE are supported by Instructional Mentors (IMs) who have been hired because of their extensive experience in equity-centered, compassion-based coaching methods. Residents and coaches engage in high frequency mentor meetings that utilize data-informed observation cycles and frequent formative feedback (similar to NTC), but offer an exceptional approach to mentorship through observation cycles that focus explicitly on unearthing *inequitable* and ineffective teaching practices, while also supporting residents in their journey to becoming culturally relevant, anti-racist, compassionate and SEL-oriented educators [CPP2].

Finally, CREATE aims to smooth the transition into teaching and promote accessibility to mentoring by pairing Y2 residents as team-teachers in one classroom. This offers additional opportunities for formal mentorship (as one teaches while the other meets with their mentor), and also provides a built in critical co-teaching peer to help navigate a system that is generally not set up for new teachers' or their students' success.

The second pathway for retaining new teachers offers *one year* of targeted support during *university student teaching*, with a singular focus on the benefits of having trained and supported CTs working with new teachers. This new element of CREATE is designed for GSU student teachers (STs) who are placed in APS schools, but who are unable to commit to a 3-year residency program. This pathway utilizes the same equity-centered, compassionate mentorship principles described above, but positions the CT *more centrally*, and without other residency supports in place for the ST (other than a modified stipend). Similar to the CTs of residents, these CTs are trained by CREATE and supported by a “university and cooperating teacher mentor” (UCTM), a full-release educator who works to navigate the needs and understandings of both the ST and the CT, bringing them into alignment. This UCTM’s support is designed to maximize CT-guided student teacher learning by prompting new understandings found at the intersection of university coursework and school-based contexts. It is through this second pathway that CREATE is scaling new teacher support to new areas of the district, in an effort to establish a more sustainable pipeline of teachers from GSU into APS. This pathway also provides important leadership opportunities for greater numbers of experienced educators (working as CTs), highlighting one important aspect of CREATE’s second goal, described in detail below.

Goal 2: Recruit/retain experienced educators through deep learning, leadership, connection

Knowing that new teachers need like-minded (and similarly supported) colleagues and mentors, Goal 2 centers on supporting experienced educators (EEs; including school leaders) in CREATE schools through multi-day, intensive professional development (PD) “institutes” that build on two promising areas of research in teacher effectiveness: (1) equity-centered, anti-racist work, and (2) compassion-based mindfulness, outlined in Table A1.2 below.

Table A1.2. Experienced Educator Curriculum & Experiences

EE Institute	Description/focus
Equity-Centered Critical Friends (ECCF)	EE’s collaborate to examine ideological, institutional, interpersonal, & internalized privilege and oppression in the world and in schools, while engaging in identity work (Lyiscott, 2019)
Culturally Relevant Pedagogy (CRP) Institute	PD for EEs who want to hone their practices as culturally responsive (Ladson-Billings, 1995), culturally sustaining (Paris, 2013), abolitionist teachers (Love, 2019); focused on curricular redesign alongside examination of classroom practices and culture
Compassion-based mindfulness training (CBCT®)	PD on multi-skilled mindfulness training designed to improve focused attention and emotional intelligence (Schonert-Reichl & Roeser, 2016), increase empathic accuracy with others (Mascaro, 2012), and enhance prosocial motivation that buffers against depression and burnout (Mascaro, 2016)
Cooperating Teacher training	(Redesigned) PD for EEs who want to serve as CTs, focused on NTC’s coaching techniques, with a commitment to compassion and equity-centered mentorship
Teacher Leadership trainings (EFF, CBCT cert, & TSC Endorsement)	PD for EEs who want to engage in deeper learning in the areas described above, including an Equity Facilitation Fellowship (EFF) to learn skills for facilitation of equity-centered work, CBCT® teacher certification through Emory University; and/or a two-course sequence from GSU CEHD to earn a Teacher Support and Coaching Endorsement, approved through the state of Georgia

The above outlined, multi-faceted, evidenced-based approach to PD for EEs is an exceptional approach to the priority areas for at least four reasons. **First**, given a recent report of job-related stress among teachers (AFT, 2015), CREATE remains committed to mindfulness training specifically cognitively-based compassion training (CBCT®) developed at Emory University. At the same time, CREATE is deeply invested in supporting experienced educators’

understanding of and commitment to anti-racist, equity-centered practices in schools, particularly for teachers working in QOZs [CPP3]. Importantly, these two key elements of CREATE remain tethered as EEs work to support students in attaining not just academic success, but fully flourishing as informed, thoughtful, engaged and productive individuals [CPP2]. We acknowledge teacher burnout is a critical effect of social justice work if void of restorative practices, and we remain committed to offering up (and researching that impact of) curriculum that highlights the *intersections* between contemplative practices for healing (such as compassion-based mindfulness), and equity-centered, anti-racist work for teachers. **Second**, as stated by the incoming APS Superintendent in her letter of support (see Appendix D), EE PD addresses needs of the LEA and the students it serves [AP1.2; see Appendix I for APS' strategic plan] by offering equity-centered, SEL-focused supports for teachers, and through expanded/scaled, leadership opportunities for experienced educators to move into supported leadership roles as CT's for Y1 residents (or GSU STs in the 1-year pathway program). This not only supports APS' goal to provide more leadership opportunities for teachers, but also helps with the very explicit goal of retaining more GSU CEHD graduates in APS schools. **Third**, all EE institutes are facilitated through the use of collaborative, culturally-relevant methodologies modeling the powerful effects of the pedagogical approaches we hope educators will use with students. We believe that EEs experiencing and in turn learning how to create an equity-centered, socially-emotionally vibrant learning experience [CPP2] through evidence-based practices is what is best for students. **Finally**, CREATE is committed to supporting teachers who want to *lead* equity, mentoring, and/or compassion work in their schools. These deeper/extended PD opportunities provide EEs with a path toward career advancement [AP1.3], an APS strategic plan objective [AP1.2] as they train to be equity facilitators (through EFF), mindfulness coaches

(through a CBCT® certification course at Emory University), or model CTs (through GSU coaching endorsement courses) in their schools. This represents an exceptional approach to scale to more people and deepen the practice of individuals who are leading the facilitation, all at very low cost.

Goal 3: Strengthen effective educator programming through university-district-community cross-organizational shared learning and collaborative action

The third goal of CREATE is, in and of itself, an exceptional approach to meeting the needs of the LEA and the students it serves [AP1.2] because it intentionally prompts, then holds space for, perspective-sharing across settings in three important ways. First, the proposed project creates new cross-organizational personnel positions that aim to reject traditionally accepted roles and responsibilities of universities, schools, and districts, and instead create new hybrid positions that allow for effective teacher educators to work *across* these institutional divides. Second, Goal 3 objectives bring together key project partners (including the aforementioned new staff in hybrid positions), leaders from local teacher induction institutions (GSU CEHD faculty and staff; APS teachers, leaders, and district personnel) and community-based organizations (CBOs) in an “induction collaborative” (IC). The IC meets quarterly to reimagine and reform teacher preparation *in general*, while also learning from and with one another through data sharing, cross-space experiences, and deep dives into curricular and organizational structures within CREATE. A big part of Goal 3 is working with CBOs and their members (community researchers, historians, and activists, for example) who can not only elevate the critical consciousness of CREATE, university, and school-based teacher educators within the IC space, but support sequenced learning experiences for residents to deepen their critical consciousness and the integration of that consciousness to their burgeoning skill of curriculum design. Finally, embedded in Goal 3 is funding for all CREATE leaders to engage in continued examination of

identity, privilege and oppression and how it impacts our organization, programming decisions, and larger educational systems. Taken together, Goal 3 is an exceptional approach to the priority areas in that the work is designed to generate new shared understandings of the *evolving* needs of APS and surrounding community [AP1.2], while designing, implementing, and continuously improving a streamlined, cohesive curriculum for educators in APS. This work also moves us toward co-ownership of the teacher preparation pipeline, with an eye toward capacity building and sustainability for our own work (explored further in A.4 below) and beyond, as impacts of the IC will serve students in regions far wider and for periods far longer-lasting than the work directly funded by this grant. Finally, doing this work together helps ensure we are not perpetuating the very inequities we are dedicated to working against, especially in QOZ schools.

A.2. A Closer Look at the Quality, Intensity and Duration of the PD Services of CREATE

A recent review found that the quality, intensity, and duration of teacher residencies contribute to greater teacher retention, and that students of teachers who participate in residency programs outperform students of non-residency-prepared teachers on state assessments (Guha, Hyler, & Darling-Hammond, 2016). In Table A2.1 below, we summarize the intensity and duration of key CREATE services by goal, with Goals 2 and 3 in place to strengthen Goal 1.

Table A2.1 Intensity and duration of CREATE services

Service	Description of intensity and duration
Progressive core classroom roles across 3 years	<ul style="list-style-type: none"> ● In Y1, residents and other “1-year pathway” STs teach alongside an experienced CREATE cooperating teacher (CT) for year-long practice teaching (<i>20 hrs/wk in fall w/coursework; 40 hrs/wk in spring</i>) ● In Y2, residents are paired (2 teachers/class) for <i>scaffolded teaching</i> (40 hrs/wk) ● In Y3, residents are <i>solo instructors, with full responsibility</i> of classes (40 hrs/wk)
Multi-year instructional mentorship	<ul style="list-style-type: none"> ● In Y1, residents and other “1-year pathway” STs work with UCTMs for <i>1 hr/wk</i> and with their Cooperating Teachers <i>daily</i>. ● Cooperating Teachers will train for <i>28 hours per year</i> to develop coaching skills ● In Y2 and Y3, residents are supported <i>1.5 hours/week</i> by IMs, developing equity-centered SEL curriculum, among other foci, and by their School-Based Mentors

Equity Programming: ECCF, EFF, CRPI	<ul style="list-style-type: none"> ● For residents, ECCF is offered during <i>10 cohort meetings</i> in Y1 and Y2, and <i>7/year</i> in Y3; residents receive extensive CRP exposure in Y1 univ. coursework ● For EEs and Y3 residents, ECCF is offered as <i>4-day institutes, monthly within school ECCF groups, national conference attendance, and year-long support</i> for ECCF coaches; CRPI will be offered in Y2 and Y3 as <i>4-day summer institutes</i> with follow-up throughout the year to support CRP enactment in classrooms ● For EEs interested in equity facilitation, <i>EFF offered monthly across SY</i>
Cognitively-Based Compassion Training (CBCT)	<ul style="list-style-type: none"> ● For residents, CBCT (<i>offered as part of monthly cohort meetings</i>) is a <i>10-week course</i> in Y1 and repeated at a more advanced level in Y2, with <i>follow-up</i> in Y3 ● For EEs, CBCT is offered as <i>a 4-day institute</i> ● For EEs interested in CBCT instruction, CBCT is offered as a <i>7-day retreat</i> followed by a <i>teaching apprenticeship leading to certification</i>
Cross-organizational coursework on race and racism	<ul style="list-style-type: none"> ● During GY1, all CREATE staff working on the grant will study together <i>monthly (3 hr min)</i> to develop tools to challenge patterns of power and grow equity within the CREATE organization operating structures ● During GY2, all CREATE staff meet <i>monthly (3 hr min) with nationally renowned equity scholars</i> to deepen their understanding of the history of and current context of race and racism in our world, communities, and schools
Equity-centered, compassion-based meetings for university, district, community	<ul style="list-style-type: none"> ● Members of the IC meet <i>quarterly</i> to re-imagine teacher prep and support ● Members of the IC engage in cross-organizational experiences (attending meetings, courses led by other organizations, co-planning curriculum, etc.) <i>quarterly, for 3 hrs</i> ● The IC works with APS to design <i>yearly community events</i> to bring CREATE experiences (CBCT/ECCF) and other equity-based activities to communities

Different from traditional teacher preparation programs, CREATE residents and GSU-APS student teachers working with a trained CT, are supported by trained mentors with expertise in culturally responsive, engaging classroom practices. CREATE’s residency program also dramatically increases the amount of *time* novice teachers practice teaching, providing important induction support across three years. Additionally, speaking to quality *as well as to* intensity and duration, CREATE increases opportunities for EEs and leaders to engage in and facilitate/master the design of high-quality and meaningful PD beyond simple “sit-and-get” workshops by taking time to learn deeply, and reflect in ways that will impact their instructional practice, collegiality, compassion and cultural competencies. CREATE also provides needed space and structures to bring together induction organizations for sustained conversation and hoped-for change.

To highlight the quality of services, we draw on (1) published literature (cited in A.1 above and further defined in B.1 below) that describes the impact of services similar to those we provide *and* (2) positive impacts on residents and experienced teachers of our CREATE development work to date. For example, early cohorts in our multi-year residency have shown there's a difference between conditions in retention for Black educators that is statistically significant, with 91% of Black educators retained through three years. New and experienced teachers report positive reflections on their engagement, such that 100% of current residents would recommend the program to others, 95% intend to teach again next year, 100% of 2019-20 mentors indicated interest in repeating their role, 96% of EEs agree that "working with a resident contributes to me being a more effective educator," and 88% agree that "my resident is a more effective educator as a result of our work together." Finally, in recent reflections on our initial pilot of the IC, all members (representing various organizations) said they wanted to continue IC work, as highlighted by one, "I am busy, lots to do, but I am all in. I am convinced that our best work and solutions arise when we collaborate."

A.3. The extent to which the project design is appropriate and will successfully address needs

Focusing on schools on the southern side of Atlanta is purposeful, as teachers and leaders of these schools have determined that addressing issues of oppression stemming from deficit mindsets related to race and class, developing compassion and SEL skills, and building capacity for educator collaboration and a strong sense of connectedness and community are urgent needs, as reflected in the specific school and cluster strategic plans. In short, our partner schools are searching for ways to attract equity-minded, compassionate, effective teachers, who feel supported and therefore *stay* in high poverty schools. For that reason, implementing a program that supports new and experienced educators in the ways described above is both needed and

appropriate. Below we identify strategies to provide programming that is appropriate to, and that will successfully address, the more *specific* needs of the target population (hereby described as K-8 students, 84% of whom identify as students of color and 78% of whom are eligible for free or reduced-price lunch) and their many teachers and leaders who report desires for more support, frustration at daily educational inequities, and who exhibit symptoms of burnout and attrition.

The extent to which the project design is appropriate to the needs of the target population

APS clusters include all schools that feed into one high school, and clusters are required to agree upon “signature programming” such as STEM, International Baccalaureate (IB), or College and Career Readiness (CCR) to address their region’s needs. CREATE primarily serves the Jackson and Carver clusters in southeast Atlanta, and these clusters utilize IB and CCR programming, respectively. As we expand during this grant period into the Douglass cluster (STEM programming) and beyond, our approach is to be flexible and responsive. First, where signature programming is STEM, our program provides incentives for new teachers to develop STEM content knowledge through additional university math and science courses. Where signature programming is IB or CCR both of which emphasize community, collegiality, and SEL skills our CBCT and equity institutes support new and experienced teachers to excel in these schools. Additionally, for EEs, our PD is presented as a menu of offerings so they can make choices based on differentiated personal needs and desires for leadership roles. By anchoring PD with approaches that generate powerful, collaborative learning and that are *appropriate to the needs of local schools/individuals*, we are effectively and appropriately responding to the context. Adding to this, CREATE currently works with schools with varying levels of autonomy within APS (9 charters, 2 partner, and 7 traditional district schools) and has demonstrated appropriateness of PD for *all* schools through its flexible approach. As a

cornerstone of our programming, we have engaged flexibly to not only serve the specific needs of each school-level population, but as part of a larger effort to develop a framework that can be replicated in varied schools and districts across the nation. We will continue this menu-based approach for the entire grant period.

The extent to which project design will successfully address needs of target population

CREATE has a strong history of programming success for residents and EEs, with demand outpacing capacity, leading to the conclusion that similar impacts/successes can and will be continued. In fact, as a result of CREATE PD, 98% report a “support network” at their school, 91% of participants report a positive sense of community; and 85% report positive opportunities for collaboration aimed at improving effectiveness. More specifically, CBCT® successes include 96% of participants recommending that other educators in their school learn these practices and 100% of participants strongly agreeing or agreeing with the statement, “I have learned techniques that enable me to manage my reactions in a healthy, constructive way when faced with stressful situations related to my job as a teacher.” Successes from equity-centered collaboration programming include 100% of ECCF participants reporting they believe that engagement in ECCF has started to or has the potential to “improve student achievement and increase collegiality and collaboration within my school” and 100% of those who participated in ECCF reported that as a result of the training, “I understand how (and why) to prioritize issues of social justice and racial equity in my teaching practice.” Regarding engagement, 90% of participants completed their multi-day training sessions (with 7% missed sessions due to Covid-19); and 93% of CREATE school leaders spent funds to hire residents who reflect deep engagement with this type of programming for positions that opened in 18-19 and 19-20 school years (SYs). Also, 100% of CREATE principals indicated that they would like to continue or

expand CREATE programming for 20-21 SY and beyond. Finally, CREATE has successfully implemented every program component over the past three years, as evidenced by an external evaluation fidelity of implementation (FOI) study.

A.4. The potential for project activities or benefits to extend beyond the end of the grant

As CREATE works to realize its vision, we keep one eye on day-to-day programming activities, and one eye on various forms of capacity-building for programming after the grant ends. As such, all three project goals guide our work to address an immediate need, while also working to build human, material, structural, and organizational capacity (TQPTA Center, 2017). Due to space limitations, we present a sampling of our capacity-building program elements that we hope to continue *and expand* as we move toward a more sustainable model post-grant.

Human Capacity *“The knowledge, skills, will, and view of self...within and outside systemē”*

- CBCT Instructor/Equity Facilitator Training: Since 2017, six experienced educators have been selected to obtain certification from Emory University to teach CBCT®. Similarly, our recently piloted Equity Facilitation Fellowship generates facilitators (18/year) for this work, ensuring facilitators for schools engaging equity work in the short and long run.
- Scaled Cooperating Teacher training: Following redesign of CT training, during years 2 and 3 of the grant, CT training will be facilitated for increasing numbers of CTs across the district to build workforce size, and ability to double the number of STs we serve.

Material Capacity: *“The fiscal and staffing resources and other material supports, including matching funds, in-kind time, meeting space, technological capabilities...”*

- New district-level financial commitment to this work: Atlanta Public Schools (APS) has recently made financial contributions to the project, funding [REDACTED], funding for the new arm of the CT training program, and in 2019 indicated

it would make available an emergency fund for Y2 residents if needed. This enhanced material capacity is critical for sustainability and we will continue to build this capacity through steady efforts.

- Foundation support: CREATE has leveraged past federal grants to ignite new relationships with local and national foundations for matching funds, as well as local individuals for in-kind donations of time, meeting space, conference registrations, and other supports.

Structural Capacity: *“The elements within and outside the system that exist independently of the individuals involved, such as policies, procedures, and formalized practices of a system”*

- District strategic planning: CREATE has been influential during the district’s strategic planning process (executed spring 2020) and has engaged a carefully crafted communications campaign to guide district stakeholders toward understanding the root causes and costs of high teacher turnover and methods for mitigating these insidious problems. Through CREATE’s work, the district sees in its own schools how shifting investments of time and money from a focus on hiring and training teachers (to fill vacated positions) to a more proactive *and ultimately effective* approach of supporting and retaining talented teachers is beneficial on many levels. CREATE will leverage SEED funds to reach more schools and principals within the district to generate widespread understanding of the benefits of the residency, equity-centered programming, and scaled CT training programs.

Organizational Capacity: *“The interactions and communications among internal stakeholders (leadership, staff) and external stakeholders (partners, vendors, others) which shape culture”*

- Programming for principals and district personnel: Each year CREATE holds a retreat for school and district leaders to develop shared understandings of the long-term, money-

saving, achievement-driving benefits of this work. We will use SEED funds to continue this practice and expand to more schools.

- Induction Collaborative (IC): As cited in A.1, CREATE brings together a wide range of induction partners, generating organizational capacity among external stakeholders.
- New University Center on Equity in Teacher Preparation: Supports for all four co-directors of GSU's Center for Equity and Justice in Teacher Education (CEJTE) are included in the proposed SEED budget to support program redesign and research that will position the CEJTE to serve more GSU students/CREATE residents, and ultimately more K-8 students.

According to Coburn (2003), for a reform effort to be considered “at scale,” ownership over the reform must shift so that it is no longer an “external” reform, controlled by a reformer, but rather becomes an “internal” reform with authority for the reform held by districts, schools, and teachers who have the capacity to sustain, spread, and deepen reform principles themselves. As highlighted above, our program is designed to develop a cadre of knowledgeable teachers, the transfer of strategic decision making from the reform organization to district and school leaders, and shifts in the capacity to generate funding. Capacity building efforts such as these will help ensure project activities and associated benefits extend beyond the end of the grant.

B. SIGNIFICANCE

In the sections that follow, we summarize CREATE's significance, giving attention to (1) the importance of the results likely to be attained; (2) the potential contribution of the project to theory, knowledge, and practice; and (3) the extent to which the results are to be disseminated.

B.1. The importance/magnitude of outcomes likely to be attained

The importance/magnitude of results and outcomes likely to be attained by the proposed project fall into 2 categories: *numbers* of teachers and students impacted and what the attained

outcomes could mean for students. First, *the numbers*: CREATE will recruit and retain 90 new teachers in high-needs schools through the residency, provide modified programming to 30 student teachers, and provide PD to 650 experienced educators, including 30 school leaders, in these same schools. CREATE will also convene 14-20 teacher educators, school leaders, district staff, and community members through IC work that has the potential to impact 500 CEHD teacher candidates and hundreds of experienced APS teachers each year, resulting in positive impacts for 15,040 K-8 students in CREATE schools and 72,000 other APS students (K-12) over the grant period (and thousands more beyond the end of SEED funding).

Next we examine the essential drivers of our work as outlined in our logic model (see Appendix H) and in Section A above: *What do high teacher retention, pedagogical effectiveness, and teachers' fierce commitment to equity in education mean for students?* It is widely known that teacher turnover is high in high-needs schools, and seems to be *highest* in grades 4-8, with two-thirds of educators exiting within the first five years (Marinell & Coca, 2013). This is particularly alarming when one considers longitudinal studies that show that students impacted by high teacher turnover score lower in ELA and math (see, e.g., Ronfeldt, Loeb, & Wyckoff, 2012). We also know that if teachers do stay, but show high levels of teacher occupational stress, students are negatively impacted (Oberle & Schonert-Reichl, 2016). With this in mind, the most significant of CREATE's three goals, and potential contribution to the field, is to recruit *and keep effective, supported, flourishing* new and experienced teachers teaching in high-needs schools. Considering the context of Atlanta--where schools showing the highest teacher attrition (and lowest income) also enroll majority Black students--it is also important to consider the retention of Black teachers in particular as studies have shown that Black students who have Black teachers perform better on standardized tests (Gershenson, Hart, Lindsay, & Papageorge,

2018), are less likely to drop out of high school, and more likely to aspire to attend college (Gershenson et al., 2018). For these reasons, CREATE’s focus on the retention of teachers of color, and Black teachers in particular, is critical to serving majority Black schools in Atlanta.

However, teacher retention is only one piece of the puzzle, and *all* teachers who stay need evidenced-based PD that offers opportunities to engage in critical self-reflection and racial identity work (in racial affinity and across race), analyze forms of privilege and oppression in the world, and work alongside CBOs. We know when teachers engage in this important work as outlined above they are better able to see how systemic inequities affect students (Matias, 2015); sustain students’ cultures (Paris, 2012); help students explore social injustices and their own emerging identities (Conklin & Hughes, 2016); and draw on richly contextualized knowledge of community in their professional work with children and families (Murrell, 2001). We also know that teachers who engage in important and viable self-care through compassion-based meditation routines have decreased levels of stress (Pace, 2008), and also improve classroom climate and teacher-child relationships (Gorski, 2015). CREATE programming also aims to impact student achievement by providing teachers with opportunities to consider what and how they teach, a final key lever in supporting achievement and wellness/flourishing in students. CREATE helps teachers envision classrooms that move beyond rote instruction found in many schools serving high-needs children (Darling-Hammond, 2010) toward classrooms and schools that prioritize culturally responsive, inquiry-based curriculum that supports students’ social-emotional learning and development of a critical lens through which to view the world. As Noguera et al (2016) suggest, this more meaningful or “deep learning” is *essential* for closing the opportunity gap and serving all students equitably. Finally, offering expanded leadership opportunities to experienced educators--such as CT training and coaching endorsements, equity

facilitation training, and CBCT certification offered through CREATE--has been found to increase retention of mid-career teachers (Grahn, 2018). Taken together, CREATE supports are based on evidence-based strategies designed to keep highly effective, compassionate, critically conscious, culturally relevant teachers working in high-needs schools, and have the potential to positively impact student achievement and flourishing. These efforts, in total, seem to be particularly important for Black teachers who cite a lack of PD opportunities as a key reason in their decision to leave teaching (Ingersoll & Conner, 2001).

B.2. Contribution to the development and advancement of theory, knowledge, and practice

The CREATE project and associated research studies are also well positioned to contribute to theory, knowledge, and practice in the field of teacher support and effectiveness. First, our study design—a quasi-experimental, matched comparison study explained in detail in Section D—and the complementary exploratory study will produce important results about the effectiveness of CREATE that has the potential to impact knowledge and practice. Through an independent impact evaluation, Empirical Education Inc. will investigate the effects of CREATE on student achievement and teacher instruction and retention outcomes using a nonequivalent comparison group study, designed to meet WWC Standards with reservations. The power analysis of this study shows that educationally important impacts based on findings from previous rigorously conducted impact evaluations of similar programs will be detectable. Specifically, given available samples, and empirically-based parameter values concerning variances in outcomes and the explanatory power for covariates, we expect a minimum detectable effect size (MDES) value of .21 for impacts on achievement—this translates to between 2 months and 8 months in average annual achievement gain in reading and math depending on grade level (Hill, Bloom, Black, & Lipsey, 2007)—and an MDES of .36 for

impacts on quality of instruction assessed through the Danielson classroom observation rubric and differences in retention of 8–10%. The associated exploratory study is designed to examine conditions for positive impact as mediated through antecedent impacts on intermediate outcome, including perceived sense of belonging and degrees of job burnout, and as moderated by attributes of teachers and students. A final arm of the external evaluation is to examine the impact of a smaller intervention—a trained Cooperating Teacher for GSU student-teachers—on teacher retention. Results of this study will help researchers and program directors explore whether or not a smaller, less intense intervention has similar impacts on retention. This work answers Coburn's (2003) call to explore the multidimensionality of scale in research designs and examine the tensions and tradeoffs involved in different strategies to take reform to scale. Thus, quantitative results will make a significant contribution to the literature.

In addition, a research team from GSU will design and implement 3 complementary *qualitative* studies that will enable evaluators to gain a more complete picture than would be possible with only quantitative research, while also filling a gap in qualitative research in teacher residency literature. First, using a longitudinal embedded case study (Yin, 2014) of several residents across multiple years of the CREATE program, the research team will explore the impact of CREATE programming on three cohorts of residents in the first, second and third years of their program. The team will recruit 12 participants each year, providing a unique opportunity to consider the longitudinal experience of residents across all 3 years of the program, while also comparing the experiences of different cohorts across time as CREATE programming is shifted or enhanced based on preliminary results. This design also allows for a detailed exploration of the innovative practice of paired teaching, again filling a gap in research on the benefits of co-teaching for new teachers. Throughout this case study project, the team will pilot a

newly developed observation protocol that blends effective practices from the Danielson (2013) framework with equity-oriented practices aligned with social justice education approaches, using a consequential validity framework to examine intended and unintended consequences of use. A second qualitative study, drawing on cultural historical activity theory and design-based research, will enable the GSU team to explore the impact of IC work on CREATE partners learning and associated impacts on institutions, answering a call to examine the tensions and possibilities that arise when teacher induction organizations and community-based leaders come together to improve teacher education and induction, particularly in high-poverty schools. Finally, aiming to add important detail and context to the studies outlined above, the last research study is a critical ethnography that aims to describe and interpret the overall culture of CREATE, with the ultimate goal of illuminating the ways CREATE serves educational equity in all elements of its programming, operating structures, and partnerships. Due to our commitment to high quality, longitudinal, diversified research studies with the ability to triangulate results, we and others are well positioned to learn from and then replicate this work in other settings.

B.3. Project Dissemination

Results from the CREATE initiative will advance knowledge and understandings in the fields of teacher preparation, induction, and university-school-district partnerships as we engage in sustained efforts to disseminate results in several critical educational arenas. The external evaluation team, Empirical Education, will publish interim and final research reports related to the retention and effectiveness of CREATE teachers. Upon completion of the study, Empirical intends to publish at least one WWC level research article to a top-tier, high-impact education journal, and present findings at national and local conferences, as appropriate. Attending to results related to teachers' overall experiences with CREATE and impacts on teachers

opportunities to be critically conscious, compassionate, and well, the GSU research team will also disseminate results from their qualitative case-study design through international, national, and local conferences, and will continue to publish research articles in journals targeted to teacher practitioners, teacher educators (i.e., JTE), educational policy makers (i.e., EPAA), and the education community at large (i.e., AERJ). Additionally, work from all 3 qualitative studies will culminate in two books--one that details the history and story of CREATE, a social justice teacher residency that changed Atlanta, and another written for practitioners and teacher educators, focused on best practices and lessons learned for equity-centered teacher development. Similar to Empirical, the GSU team will share interim and final reports with the CREATE team to inform its work moving forward. As part of CREATE's IC, project partners university faculty, CREATE leadership, community members, and district and school leaders will come together monthly to share informal results from their work, consider interim/final GSU and Empirical research reports, and design local and national presentations to other schools/districts who wish to replicate the work of CREATE. Finally, we will expand on traditional notions of dissemination by offering an interactive webinar series, where CREATE research and implementation teams present findings and lessons learned *collaboratively*. Broad and varied dissemination efforts such as these are key to further development of our own work in Atlanta, and may also support others in replication of this work. We hope that these varied forms of dissemination will positively impact the experiences of teachers and students across the nation.

C. QUALITY OF THE MANAGEMENT PLAN

C.1. Clearly Specified and Measurable Goals, Objectives, and Outcomes

Table C1.1 below outlines the goals, objectives, and projected outcomes of CREATE programming, including a list of measures used to evaluate progress towards outcomes.

Table C1.1. CREATE goals, objectives, and outcomes (with measures)

Objectives	Outcomes
Goal 1: Recruit and retain racially diverse cohorts of new teachers [AP1.2, CPP1, CPP2, CPP3]	
Incr. teacher diversity	<ul style="list-style-type: none"> ● Increased percentage of Teachers of Color (<i>Measure: Teacher race/ethnicity</i>)
Increase contemplative practices, connectedness, and understandings of inequities of new teachers working in QOZs	<ul style="list-style-type: none"> ● Residents report enhanced feelings of connection and belonging (<i>Social Capital (SC) survey</i>) ● Residents report increased executive function, flexible thinking, self-compassion (<i>SC survey</i>) ● Decreased sense that stress from teaching is unmanageable (<i>Interviews</i>) ● Residents report increased willingness to talk deeply and openly about equity issues in schools (<i>SC survey and case study interviews</i>) ● Residents report deeper understandings of individual identity and systemic privilege and oppression, in relation to race/SES (<i>Interviews and observation protocols</i>)
Increase pedagogical effectiveness and fierce commitment to equity in QOZ's	<ul style="list-style-type: none"> ● Residents demonstrate improved instructional skills through the use of culturally and linguistically relevant pedagogy and social-emotional learning (<i>Teacher effectiveness observations, including new tool</i>) ● Residents report improved classroom climate, relationships w/ students/colleagues (<i>Pride</i>) ● Students taught by residents show increased achievement (<i>Milestones tests</i>)
Increase retention of teachers in QOZs	<ul style="list-style-type: none"> ● Residents/early career teachers commit to working in high-poverty schools during and beyond the granting period (<i>Retention data from APS Human Resources/Ga DOE</i>)
Increase yield of GSU STs into APS employment	<ul style="list-style-type: none"> ● GSU student teachers in APS apply for and begin employment within the district at higher percentages (<i>GSU to APS yield</i>)
Increase residents w/Math/Science certification	<ul style="list-style-type: none"> ● Y3 residents looking to specialize/transition into mathematics or science teachers enroll in post-baccalaureate coursework at GSU (<i>No. of Math/Science GACE test passing scores</i>)
Goal 2: Recruit & retain experienced educators through deep learning, connection, & leadership [AP1.2, CPP2, CPP3]	
Increase connectedness of educators	<ul style="list-style-type: none"> ● Educators report increased feeling of being respected for their craft knowledge (<i>SC survey</i>) ● Educators report enhanced feelings of connection and belonging (<i>SC survey</i>) ● Educators report feeling invigorated in teaching practice (<i>SC survey</i>)
Increased commitment to equity in educ	<ul style="list-style-type: none"> ● Educators report changes in classroom practices, a deep commitment to culturally relevant pedagogies, and increased willingness to talk openly about equity issues in schools (<i>Interviews</i>)

Increased critical consciousness, commitment to induction	<ul style="list-style-type: none"> ● School/district leaders report deeper understandings of identity, systemic privilege, oppression (<i>Interviews, Internal surveys</i>) ● School and district leaders report increased understandings of the importance of/commitment to new teacher induction programming (<i>Interviews, Internal surveys</i>)
Increased retention of effective EEs in APS	<ul style="list-style-type: none"> ● Non-CREATE Cooperating Teachers working with APS student-teachers continue working in their APS schools during/beyond the granting period (<i>Retention data- APS HR Dept.</i>)
Goal 3: Strengthen effective educator programming through cross-organizational learning and action [AP1.2, CPP3]	
Increased ownership of district/university	<ul style="list-style-type: none"> ● Financial and district/university cost-share contributions to the project increase over time (<i>Cost-share budget narrative</i>)
Increased alignment of curriculum, with work from university, district and community	<ul style="list-style-type: none"> ● Streamlined, equity-centered curriculum across 3-year residency program (<i>Curriculum docs</i>) ● Development of theory reflecting the intersection (and co-dependence) of equity and compassion practices for highly-effective educator professional development (<i>Curriculum docs</i>) ● Redevelopment of equity-centered CT curriculum reflecting needs of univ & district (<i>Curriculum docs</i>)
Project partners disseminate findings	<ul style="list-style-type: none"> ● Increased knowledge sharing across partners (<i>IOC mtg agendas, written reflections</i>) ● Findings presented to stakeholders regionally/nationally (<i>Presentations, publications</i>)

As outlined in the above table, our team works hard to ensure that all of our project goals, objectives, and outcomes are clear and measurable. For more details on implementation objectives and measures, see the Fidelity of Implementation matrix (located in Appendix H).

C.2. Management Plan (including responsibilities, timelines, and milestones)

Table C2.1 outlines the CREATE management plan, highlighting key responsibilities, timelines and milestones. The skills of all key team members to lead the implementation and monitor CREATE’s outcomes are highlighted in CVs (see Appendix B).

Table C2.1. CREATE Management Plan

Milestone	Timeframe by School Year			Responsible Party
	2020-21	2021-22	2022-23	
Hire University Cooperating Teacher Mentors (UCTMs)	ASAP upon receipt of award	If needed, April/May		Co-Dir (EH) & CREATE admin. team
Schedule resident cohort meetings, including ECCF & CBCT	August	June of each school year		AD (AH) & CREATE admin.
IM and UCTM mentor meetings	Weekly across grant			Mentor Lead, IMs, UCTMs
Convene CREATE admin team	Bi-weekly all year			Co-Dir (EH) & CREATE admin.
Advisory Team and Induction Collaborative (IC) Mtgs	Quarterly during School Year			Co-Dir's (SBC/EH); IC members, all Administrators
Validate, publish teacher observ. tool for culturally-resp. pedagogy	Ongoing throughout grant period			GSU Faculty (NB), GRA, IMs
CT & SBM pairing with residents	Summer prior to SY and adjust as needed			Co-Dirs, AD (AH), school leaders
Select and train CTs and SBMs	Selection begins spring, training in summer			AD(MM), school leaders, APS Human Resources (McLothin)
Redesign/scale CT training	Redesign all SY	Facilitate in Summer & Fall		AD (MM), Equity team, GSU faculty
Redesign/adjust pre-service coursework and curric; co-instruct programming by hybridized IMs	Redesign all SY; adjusted courses taught in spring	Adjusted coursework and residency curriculum applied all school years		GSU faculty, IMs, UCTMs, Mentor Lead
CREATE school leaders' retreats to build buy-in, induction support skills	November of each year			Co-Dir (EH), AD (AH), school leaders, university faculty
Plan and conduct ECCF institutes	October, February, & June of each year			Equity Coordinator & Dir (RD,FPA)
Plan, conduct CBCT institutes	January & June of each year			CBCT(r) instructors, Program Coord.
Plan, conduct Black Male Educator Collaborative (BMEC)	Spring planning & summer programming each year			AD (AH) and BMEC Facilitators
Applics., plan, conduct Equity Facilitation Fellowship	Apply in April, monthly meetings during SY			Equity Coord (RD) & Director (FPA)
Plan Summer Resident Academy, 3 levels (Pre-SRA,Y1 SRA,Y2 SRA)	February through May of each school year			Mentor Lead, IM team, and GSU faculty, APS Prof development (Stroud)

CREATE team engages courses about identity, inclusion, equity	Monthly sessions across each school year	All CREATE faculty/staff
Exper. Educators attend annual School Reform Initiative Fall Mtg	November of each school year	Classroom teachers and leaders from all CREATE schools
Review evaluation reports; conduct PDSA cycles; adjust programming	Quarterly throughout grant period	Empirical Education; GSU research team; CREATE admin. team
Publish studies, present findings at local and national conferences	Ongoing throughout grant period	Empirical Education (quantitative) and GSU (qualitative) research teams

Our ability to successfully complete project tasks is not only supported by the detailed management plan shared above, but is related to our past successful efforts at project management. CREATE has been operationally successful for several years, managing programming that has been scaled from its 2012 cohort of eight residents in one school, to its current state of multiple cohorts with 50+ residents, 38 mentors and CTs, hundreds of experienced educators, and 15 school sites. CREATE has never missed a reporting deadline and has met or exceeded budget goals on state grants, two federal grants, 7 private foundation grants, and substantial cost-share donations and earned income for a total budget of \$15.9 million over the past 8 years. Leaders at all 15 schools report they are satisfied or very satisfied with CREATE programming, and all intend to continue or grow their work with CREATE in future years (see Appendix D, letter of support, principals).

C.3. Procedures for Feedback and Continuous Improvement

Fundamentally, CREATE team members and project partners believe that if programming is not working, it needs to change. We also believe that making sense of what does and does not work is a collaborative endeavor. With that in mind, *four CREATE teams* will work to consider feedback on programming and analyze preliminary data to ensure continuous improvement. (1) The **CREATE administrative team** consisting of project directors, Instructional Mentors, equity coordinators, and university faculty funded full-time through this

grant meet bi-weekly to utilize data (such as the written reflections from trainings) to analyze success and trouble spots for residents and EEs and focus on planning upcoming programming. This bi-weekly meeting is critical to the success of the work and is always aimed at continuous improvement. (2) **The CREATE advisory team** composed of at least one representative from the APS district office, GSU ECEE and MSE departments, and CBOs, along with one resident, experienced educator, and school leader from CREATE schools meets monthly to engage in more long-term, big-picture program planning with the members of the CREATE administrative team. This team discusses opportunities for scale, advises on alignment of work to mission/vision, engages in collaborative sensemaking of research reports, and considers new initiatives. They will also collaboratively plan and host the *annual CREATE retreat, which will include all of the members of the advisory board, CREATE admin team, and school and district leaders.* (3) **The Induction Collaborative (IC)** composed of at least two representatives from GA DOE, APS district office, GSU/CEJTE faculty, school-based educators, CREATE personnel, and CBO members will meet quarterly to engage in collaborative inquiry into induction curricula, program (re)design, and policies/practices across organizations that may be supporting or hindering teacher effectiveness. Importantly, this group will also consider various sustainability models for work to continue beyond the granting cycle. Finally, (4) the **Empirical Education and GSU research teams** will meet with CREATE admin. to share preliminary findings with an eye toward program and study improvement. Empirical will utilize an adaptation of the PDSA (Plan-Do-Study-Act) framework from Improvement Science, explained further in Section D.

Led collaboratively across difference as often as possible, all groups will utilize equity-centered discussion and/or “looking at data” protocols to more deeply analyze project data and

formulate next steps. Overall, these teams commit to the regularly scheduled meeting and feedback cycles described above, all with an eye--always--toward continuous improvement.

D. QUALITY OF THE PROJECT EVALUATION

Empirical Education Inc. (Empirical) will lead an independent evaluation of CREATE that will **produce qualitative and quantitative data to address research questions aligned with project goals, objectives, and outcomes**. The Empirical team has extensive experience conducting large-scale, rigorous, impact studies, as well as formative and process evaluations, including numerous evaluations for ED-funded projects (e.g., SEED grant, Investing in Innovation (i3) grants). (CVs for Empirical team researchers are included in Appendix B). Empirical will build on its seven-year partnership as the independent evaluator of CREATE. The proposed evaluation will include: (1) a **process study** with rapid-cycle feedback to support CREATE achieving intended outcomes and reaching performance goals, (2) a **study of Fidelity of Implementation** (FOI), including of obstacles to achieving optimal thresholds, (3) a study of the impact of CREATE on confirmatory outcomes using a **design that meets WWC Standards With Reservations**, and (4) a cost effectiveness study. We expand on each below.

Timeline of the evaluation

Table D0.1 and Table D0.2 provide an overview of the timeline of the evaluation and key outcomes for the following educators who will benefit from the program implementation:

- CREATE residents who join the three-year residency program (**RES**)
- Cooperating Teachers (**CT**) who receive intensive training and mentor a student teacher
- Student teachers who attend GSU's College of Education (**GSU-CEHD**), who are not CREATE residents, but are placed with a CREATE-trained CT for one year (**STs**)
- Experienced Educators (**EE**) who attend CREATE professional development

Confirmatory impacts will be evaluated for **RES** (Table D0.1) and **CT** (Table D0.2)--those who receive intensive CREATE training. Additional exploratory analyses will be

conducted to assess impacts on RES, CTs, and STs. EEs, who go through various CREATE professional development, will receive a pre-survey and annual post-survey; this data is used in the exploratory analysis.

Table D0.1. Timeline of Evaluation for CREATE Teacher Residents (by year in residency)

Year in Residency	2020/2021 School Year	2021/2022 School Year	2022/2023 School Year
Residency Year 1 [student teaching]	RES Cohort 3 (C3)	RES Cohort 4 (C4)	RES Cohort 5 (C5)
	Graduation rate, Teacher Effectiveness	Graduation rate, Teacher Effectiveness	Graduation rate, Teacher Effectiveness
Residency Year 2 [co-teaching with another Y2 resident]	RES Cohort 2 (C2)	RES Cohort 3 (C3)	RES Cohort 4 (C4)
	Retention in Teaching, Student Achievement, Teacher Effectiveness	Retention in Teaching, Student Achievement, Teacher Effectiveness,	Retention in Teaching, Student Achievement, Teacher Effectiveness
Residency Year 3 [solo teacher of record/has own classroom]	RES Cohort 1 (C1)	RES Cohort 2 (C2)	RES Cohort 3 (C3)
	Teacher Effectiveness Retention in Teaching, Student Achievement	Teacher Effectiveness Retention in Teaching, Student Achievement	Teacher Effectiveness Retention in Teaching, Student Achievement
Notes:			
Red Fonte Outcomes. Outcomes in Bold are confirmatory.			
Collection of outcomes data for confirmatory impacts is timed to allow for (a) program development in (2020/21); (b) a long enough period of implementation to accrue impact, and (c) sample sizes needed for adequate statistical power.			
Each cohort of CREATE residents will be matched to students in GSU going through their normal one-year preservice program; outcomes will be collected for both groups.			
The evaluation is limited to the three-year period of assured funding; however, CREATE will apply for a two-year continuation award, in which case data collection will be extended into Years 4 and 5 with program impacts and Fidelity of Implementation evaluated in those years.			
Resident Cohorts 1 & 2 (C1, C2) began their residencies in 2018-19 & 2019-20 under a different grant, respectively, and thus are already grandfathered into this proposed SEED timeline			

Table D0.2. Evaluation Timeline for Cooperating Teachers (CTs) and GSU Student-Teachers (STs)--those being served only by trained CTs and receiving no further CREATE programming

Role Description	2020-2021 SY	2021-2022 SY	2022-2023 SY
Cooperating Teachers (CTs)	CT-ST components under development	CT Retention in School (First Year in CT role)	CT Retention in School (1st Year in CT role)
		N/A	CT Retention in School (2nd Year in CT role)
GSU Student Teachers (STs) with Trained CTs	CT-ST components under development	ST Graduation Rate	ST Graduation Rate
		N/A	Retention in Teaching Student Achievement

Note: Outcomes in bold are confirmatory.

D.1. Performance Feedback/Assessment of Progress toward achieving Outcomes.

We will provide timely formative feedback to the program team using an adaptation of the PDSA (Plan-Do-Study-Act) framework from Improvement Science (Bryk, Gomez, Grunow, & LeMahieu, 2017). Empirical and CREATE will identify specific areas critical to the continuous improvement of the program. Then for each of three half-year PDSA cycles, we plan, implement, study, and scale those changes. For example, CREATE is particularly interested in the participation of CTs in intensive training. As this component is being implemented, Empirical will collect data (e.g. short surveys and interviews) on the frequency and ways in which CTs engage with this program component and identify how to enhance support to teachers, while addressing any barriers to their engagement. Empirical and CREATE will review the data together and discuss ways to translate findings into actionable steps to improve CT engagement and learning. Aside from the rapid-cycle feedback, evaluators will also provide formative feedback about this program component within 90 days of data gathering in each cycle. All indicators will be assessed regularly, summarized annually, and reported and discussed with

CREATE directors. As CTs are one type of Experienced Educator (EE) CREATE PD targets, outcomes of the PDSA evaluation cycle are aligned with CREATE’s goal to recruit and retain EEs through deep learning, connection, and leadership. Specifically, the PDSA evaluation will focus on helping CREATE reach its high target of having at least 85% of EEs reporting opportunities for collaboration aimed at improving effectiveness. Opportunities for collaboration will be measured using a series of instruments (description of outcome measures and their reliability statistics are reported in Appendix G). The PDSA will provide CREATE with findings about EEs that are intended to provide them the context for understanding the conditions under which their program is working, and provide necessary information for continuous improvement and replication.

D.2. Evaluation of Implementation

Research questions for the Implementation Study are listed in Table D2.1 and are detailed further in the text sections just below the table.

Table D2.1. Research Questions for the Implementation Study.

Research Questions for the Implementation Study
<ul style="list-style-type: none"> A. To what extent are CREATE inputs implemented, resulting in the outputs specified in the logic model? Are key components implemented with fidelity? B. What important implementation barriers and supports are encountered in different contexts? What are the contextual factors that promote fidelity of implementation and support impact? C. What are the observed variations in the implementation of CREATE? How is variation in implementation related to (1) barriers and supports encountered and (2) perceived effectiveness of the program? D. How do the experiences of the GSU control residents compare with those in the CREATE intervention group? What is the achieved Treatment-Comparison service contrast? E. What is the potential for CREATE to become integrated into the schools system once study supports are lifted, and what is the potential for CREATE to scale-up in terms of its scale and depth of practice within and across settings?

A: Fidelity of implementation: The implementation study takes advantage of the fidelity of implementation (FOI) reporting system (following the i3/EIR model), as it is a proven model for identifying S(pecific) M(easurable) A(ttainable) R(ealistic) T(imely) goals/thresholds for monitoring progress, and for giving feedback to CREATE. We focus on assessing adherence to and ongoing adaptation of the program logic model (Appendix H) including **key components, activities/outputs** related to **inputs/services**, and attainment of **fidelity thresholds**. Key components of the program include: 1) Progressive core classroom roles, 2) Equity-centered professional development, 3) Cognitively-Based Compassion Training (CBCT®), 4) Multiple forms of mentoring, 5) Summer Resident Academy, 6) Cooperating Teachers in Atlanta Public Schools (APS) district, 7) Personnel structure. Indicators of fidelity of implementation (FOI) and corresponding minimum thresholds that must be met to achieve FOI are described in Table D2.2 below. Findings will be regularly shared with CREATE to determine whether specific key components of the program and fidelity thresholds for the use should be adjusted or discontinued. Y1, Y2, and Y3 in the table below refers to Year 1, Year 2, and Year 3 of residency.

Table D2.2: Fidelity of Implementation Matrix

Component	Indicators of Fidelity	Measurable Threshold for Achieving Fidelity
Progressive Core Classroom Roles	<ul style="list-style-type: none"> ● Resident is paired with another Y1 resident for fall semester in the same school building. ● Resident is placed in classroom of experienced educator trained in mentoring. ● Resident is placed in a CREATE school. 	All three must be met: <u>Y1:</u> 90% or more of residents meet fidelity on 2+ indicators <u>Y2:</u> 80% or more of residents meet fidelity on 2+ indicators <u>Y3:</u> 85% or more of residents meet fidelity on 2+ indicators

Equity-Centered Professional Development	<ul style="list-style-type: none"> ● CREATE administrators host 2 or more options for experienced educators to attend 4-day ECCF/ iGroup Institute each year. ● Experienced educators attend 4-day ECCF/iGroup Institute. ● Residents attend 4-day CF Institute by the end of Year 3 of their program. Residents may attend the CF Institute during Y2 or Y3. ● CREATE residents attend monthly ECCF meetings (during Together Time meetings). ● CREATE residents attend racial affinity group meetings. 	<p><u>Y1 and Y2</u>: Fidelity is met for Indicator 1 and at least two other indicators</p> <p><u>Y3</u>: Fidelity is met for Indicator 1, Indicator 3 and at least two other indicators</p>
Cognitively-Based Compassion Training	<ul style="list-style-type: none"> ● Program administrators offer at least one (CBCT®) per year for general population of teachers at CREATE schools. ● Residents attend monthly Together Time meetings that include CBCT® practices. 	<p><u>Y1</u>: Fidelity is met for two indicators</p> <p><u>Y2 and Y3</u>: Fidelity is met for Indicator 1</p>
Multiple Forms of Mentoring	<ul style="list-style-type: none"> ● Residents have mentors who attend training prior to mentoring. ● Residents have mentors who attend training during their mentoring year (at least 1 session). ● Residents attend 2x/mo mtgs w/mentor (SBM, IM) ● Resident participates in mentor-resident observation cycles. 	<p><u>Y1</u>: Not measured</p> <p><u>Y2 and Y3</u>: All indicators meet fidelity</p>
Summer Resident Academy	<ul style="list-style-type: none"> ● Residents attend Summer Resident Academy. 	<p><u>Y1, Y2, and Y3</u>: 95% of residents attend 85% or more of total SRA meetings offered</p>
CTs in APS	<ul style="list-style-type: none"> ● EE are recruited to attend CREATE CT training. ● CTs attend 2 days of summer CT training. 	<p><u>Y1</u>: Not measured</p> <p><u>Y2 , Y3</u>: All inds meet fidelity</p>
Personnel Structure	<ul style="list-style-type: none"> ● Recently recruited University & CT Mentors (UTCM) will attend both CT & university supervisor training in fall semester. ● University & CT Mentor meets with their assigned CTs. ● University & CT Mentor meets with the residents. 	<p><u>Y1e</u> Not measured</p> <p><u>Y2 and Y3</u>: All indicators meet fidelity</p>

Band C: Variation in implementation. To understand important barriers to and supports for CREATE implementation, we will survey residents (quarterly), CTs (quarterly), and administrators (annually) about specific factors that serve as barriers to and/or support for implementation including competing initiatives, levels of perceived support, and preexisting attitudes and beliefs. We will also characterize participants’ perceptions of the value of each of the program components that they experience. A strong rationale for this aspect of the

implementation study is to better understand the conditions for impacts in a prior study of CREATE. Positive and statistically significant impacts on teacher retention were observed, especially for Black educators. The proposed work provides an opportunity to replicate this finding, and to use mixed methods to understand the process through which CREATE facilitates teacher retention.

D: Treatment-Control Contrast. To present a full picture of implementation, we will also survey comparison group teacher-candidates (quarterly) to assess the extent of common components of CREATE and non-CREATE programs to establish the planned and realized Treatment Control (service) contrast (Cordray & Pion, 1993; Cordray & Hulleman, 2009; Weiss, Bloom, & Brock, 2014) and achieved relative strength of the intervention (Hulleman & Cordray, 2009).

E: Potential for sustainability and scale up. Surveys and interviews of key participants will help us to establish the school-level and district-level conditions that support sustaining CREATE practices, including inter- and intra-organizational factors that become institutionalized with ownership shifted to districts, schools, and teachers and what their potential is to continue after the study is over (Coburn, 2003). We will also analyze surveys and interviews of experienced educators' (annually) and administrators to understand their motivations for and interest in integrating CREATE program components into their institutional structures and practices.

D.3. Impact Evaluation: Rigorous approach that meets WWC Standards with Reservations

D.3.1. Confirmatory and Exploratory Research Questions. The impact study will address the research questions in Table D3.1. (All impacts on residents are relative to the Business As Usual program for preservice students at GSU; all impacts on CREATE-trained CTs

are relative to other CTs in APS not trained in CREATE). For each research question we have identified the *valid and reliable* outcome measure with reliability information. Appendix G includes a more detailed description of each measure and the reliability statistics.

Table D3.1. Confirmatory and Exploratory Research Questions for CREATE

Confirmatory Research Questions:
<p>Is there a positive impact of CREATE on:</p> <ol style="list-style-type: none"> 1. Student achievement in grades 4 - 8 (Math & English Language Arts) among students of CREATE (three yrs after start of residency for C2 & C3)? (<i>GA Milestones, alpha = 0.88-0.94</i>) 2. Residents' teaching effectiveness (three years after the start of residency for C2 and C3 and two years after the start of residency for C4)? (<i>Framework for Teaching Framework [Classroom Environment and Instruction dimensions], alpha = 0.60-0.84</i>) 3. Residents' retention in teaching (three years after the start of residency for C2 and C3)? 4. Black educators' retention in teaching (three years after the start of residency for C2 and C3)? 5. Cooperating Teachers' retention in teaching at the school, compared to matched counterparts in schools housing GSU non-CREATE graduates, in GY3?
Exploratory Research Questions:
<p>Additional impacts: Is there a positive impact of CREATE on:</p> <ol style="list-style-type: none"> 6. Student achievement in science and social studies (in grades 5 and 8) among students of CREATE (3 years after the start of residency for C2 & C3)? (<i>Ga Milestones, alpha = 0.90-0.94</i>) 7. Graduation rate from GSU-CEHD for CREATE residents (i.e, one year after induction start)? 8. Residents' teaching effectiveness compared to non-CREATE GSU teacher graduates, for other cohorts and years? (<i>Framework for Teaching [Classroom Environment and Instruction dimensions], alpha = 0.60-0.84</i>) 9. Graduation rate from GSU-CEHD for student teachers paired with CREATE Cooperating Teachers (GSU-CT group) compared to GSU students NOT paired with Cooperating Teachers? <p>Mediating impacts: Is there a positive impact of CREATE on potential critical mediators of the program for CREATE residents, Cooperating Teachers, and experienced educators, including:</p> <ol style="list-style-type: none"> 10. Levels of connection and belonging (<i>Teachers Social Capital Scale, alpha = .74-.96</i>), 11. Teachers' perceived levels of quality of school climate and community (<i>PRIDE Teacher Environment Scale, alpha > .70</i>), 12. Levels of collaboration (<i>PRIDE Teacher Environment Scale, alpha > .70</i>), 13. Self-compassion (<i>Self-compassion Scale, alpha = .78-.81</i>), 14. Teacher burnout (<i>Maslach Burnout Inventory for Educators, alpha = .76-.90</i>) and 15. Daily stress of teaching (assessed through a log/application sent at random time pts during SY) 16. Do impacts on mediators listed above mediate positive impacts on student achievement, for students of residents? <p>Moderating/differential impacts:</p>

17. Is there a **differential impact** of CREATE on teacher and student outcomes based on teacher and student baseline characteristics, including incoming student achievement scores & teacher motivation for entering teaching?

D.3.2 Impact study designed to meet WWC standards with reservations (DESIGN).

We describe the approaches to matching, statistical power, impact models and methods.

Matching. CREATE residents and Cooperating Teachers will be matched, within cohort, to their respective comparison groups using Euclidean or Mahalanobis distances. Covariates will be from baseline surveys (Appendix G describes this step in detail). Students will be matched following the approaches by Turner, Goodman, Adachi, Brite, & Decker (2012) in their quasi-experimental study of the impact of Teach for America. Propensity scores will be computed within each grade level (or across adjacent grade levels if sample sizes at a given grade level are small), using a logistic regression model. All covariates will be obtained from the year prior to entering classes of study teachers, and will include students' ethnicity, economically disadvantaged status, special education status, limited English proficiency, and incoming achievement. We will explore both sub-classification and one-to-one matching with replacement. With sub-classification, we will use the approach described in Michaelopoulos, Bloom, and Hill (2004) and in Dehejia and Wahba (1999), including use of specification tests for balance within subclasses and re-specification of propensity score generating equations, if needed. For math and ELA, we anticipate about 1,340 students retained for analysis after matching, for science and social studies about 480. Data for student-level matching will be obtained from GADOE. Because the study is designed to meet WWC standards with reservations, we will monitor whether matching results in baseline equivalence on covariates that are important for review under WWC topic area protocols. Where baseline equivalence is not achieved, we will implement alternative matching procedures until baseline equivalence is established.

Recruitment, Sample sizes and Statistical Power. Potential participants will be introduced to CREATE and invited to apply by the CREATE project director. As we have with prior evaluations of CREATE, we will work with the GSU-CEHD to recruit study participants from both the CREATE and comparison groups. For residents/student-teachers, researchers will introduce the research study through presentations that will occur during established GSU class or meeting time and will be presented in-person or via webinar. Researchers will work with CREATE and APS to identify CREATE-trained and non-CREATE-trained prospective CTs to present recruitment materials. During recruitment presentations, researchers will provide information on study participation and invite participants to consent. Following the presentations, researchers will also email potential participants an invitation to participate and a link to the online consent form and baseline survey. The baseline survey covers background characteristics, motivation for entering teaching, and covariates that have shown to be predictive of retention in past studies.

Table D3.1 shows Minimum Detectable Effects Sizes (MDESs) achievable after matching, assuming power of 80% and Type-1 error of 5% or less (depending on adjustment for multiple comparisons). We address power for confirmatory impact analyses. For impacts on Teacher Effectiveness we will observe outcomes for 50 CREATE residents and 50 matched (out of 100) comparison cases. For assessing impacts on retention in teaching we expect to follow 40 CREATE residents and 40 matched cases (out of 80) from GSU-CEHD (half this number for Black educators). For impact on student achievement we expect outcomes for 20 students for each retained CREATE teacher and 15 for each matched comparison teacher ($35 \times 20 = 700$ CREATE and $32 \times 15 = 480$ controls for ELA and math). For impacts on CTs retention in the school, we expect to follow 50 CTs and 50 (out of 100) matched non-CT cases. (The full details

of the power analyses are provided in Appendix G.)

Table D3.1. Sample Sizes and expected MDES

	CREATE Resident (RES) or Cooperating Teacher (CT)	Available Comparison Cases	Comparison Cases retained after matching	MDES
Teacher Effectiveness (Cohorts: RES 1, 2, 3)	50 residents	100 non-CREATE participants in GSU-CEHD	50 non-CREATE participants in GSU-CEHD	ES .36
Retention in Teaching (Cohorts: RES 3, 4)	40 residents	80 non-CREATE participants in GSU-CEHD	40 non-CREATE participants in GSU-CEHD	Cox Index .33 (retention: 35 of 40 CREATE, 32 of 40 comparison)
Retention in Teaching (Black Educators) (Cohorts: RES 3, 4)	20 residents	40 non-CREATE participants in GSU-CEHD	20 non-CREATE participants in GSU-CEHD	Cox Index .32 (retention: 16 of 20 CREATE, 14 of 20 comparison)
Retention in Teaching at the School (Cohorts: RES 3, 4)	50 CTs	100 matched comparison teachers	50 CTs	Cox Index .48 (retention: 45 of 50 CREATE, 40 of 50 comparison)
Student Achievement in Math and ELA (Cohorts: RES 3, 4)*	700 students (ELA and Math)**	32 residents × 20 students/resident 640 students	480 students (after matching for ELA and Math)	ES .21***
Notes:				
*We will obtain outcomes from Georgia Milestones assessment is grades 4-8 for ELA and Math				
**35 (retained) residents × 20 students /resident = 700 students (ELA & Math)				
***The resulting MDES of .21, and is similar to value of impact observed for residency programs like CREATE with QEDs (e.g., Turner, Goodman, Adachi, Brite, & Decker, 2012) and RCTs (Glazerman, Mayer, & Decker, 2006; Clark et al., 2013)				

Impact Estimation. Teacher outcomes. The distribution of each scale will be determined in order to select the most appropriate model (linear (surveys), linear probability and logistic (retention), linear or cumulative logistic (ratings for teacher effectiveness)). Each outcome will be expressed through the appropriate link function as a linear combination of a dummy variable

for condition (CREATE = 1, comparison = 0), a series of teacher-level covariates drawing on the extensive baseline survey and including an indicator for cohort, and fixed effects for school membership. (Impact models and approach to estimation are detailed in Appendix G). Student Achievement. With the sub-classification approach, we will create five subclasses based on the quintile distribution of estimated treatment group propensity scores and conduct specification tests to assess balance within subclasses on covariates, until an adequate number of strata is arrived at following Michalopoulos, Bloom, and Hill (2004). We will then conduct within-stratum regressions—achievement scores will be z-transformed within grade to be put on a common scale, as recommended by May et al. (2009) and Somers, Zhu, and Wong (2011)—and take a weighted sum over the strata to arrive at average impact estimates (weights being set to the proportion of treatment teachers in each stratum). Regressions will be of individual student scores against the indicator of treatment status, student covariates (e.g., pretest), and teacher covariates (e.g., baseline survey responses); also, we will include a teacher random effect to adjust for clustering of students in teachers. (HL models are provided in Appendix G.)

Other analyses. Differential impacts will be assessed by adding a term for the interaction between the indicator of treatment status and the hypothesized moderator to the regression models. Questions of impact on key mediators (e.g., levels of teacher resilience) will be extended to formal mediator analyses using a multilevel regression framework (Krull & MacKinnon, 2001), and other methods that require fewer assumptions concerning the causal relationship between mediator and outcome variables, including principal stratification approach (Frangakis & Rubin, 2002; Jo, Stuart, MacKinnon, & Vinokur, 2011; Page, 2012). The mediation analyses will help to determine the active paths in the logic model (see Appendix H). Power may be limited for these analyses; therefore, we consider them exploratory. Analyses will be conducted

using PROC MIXED and GLIMMIX in SAS as well as specialized programs such as *Remediation* (Tofghi & MacKinnon, 2011) and *mediation* in R (Imai, Keele, Tingley, & Yamamoto, 2010). Robustness checks for impact findings will include use of OLS and HL models, linear probability modeling as alternatives to logistic regression, and alternative estimation algorithms (REML vs ML). For the confirmatory impact analyses, we will follow WWC topic area review protocols reporting all statistics necessary for WWC review, including sample sizes, and baseline equivalence for analysis samples.

D.4. Cost Effectiveness

We will assess the annual per-student direct cost and the incremental full resource cost (time, space, and effort) by schools for CREATE, compared to the business-as-usual program. Using the “ingredients method” (Levin, McEwan, Belfield, Bowden, & Shand, 2017), we will collect data and calculate costs for the primary “ingredients” used to implement CREATE. We will use CostOut (Hollands et al., 2015), to calculate total and per-participant costs, and estimate the cost effectiveness ratio. Interviews with CREATE, district, and GSU administrators will yield costs of materials, training, staffing, space allocation and dollar costs of delivering the program and supports. We will then calculate the added-value of CREATE per unit cost as a ratio of impact to cost (direct and incremental). Teacher FTE and hiring costs will be obtained from publicly available data, and teacher and facilitator salaries will be obtained using U.S. Department of Education school and staffing surveys. Program costs for the controls will be obtained from publisher websites. For guidance we will consult with the assistance offered through the “Cost Effectiveness in Practice” project funded through IES (Teachers College, n.d.).

Reporting: Empirical will report a summary of activities and preliminary findings in quarterly reports delivered to CREATE directors. Additionally, annual interim reports during the three-

year grant period will provide more extensive findings of the impact on exploratory research questions. These reports will serve as updates to CREATE on their progress and success and potentially as feedback for determining future programming. Interim and final outcomes from the program evaluation will be reported at AERA and SREE, with submissions to the *Journal of Mixed Methods Research*, *JREE*, *Education Policy Analysis Archives*, *Educational Evaluation and Policy Analysis*, and the *Journal of Occupational Health*.

REFERENCES

- American Federation of Teachers (AFT). (2015). Stressed out. *RSRP Reporter*, 35(1): 2.
- Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27-45
- Bloom, H. S. (2005). Randomizing groups to evaluate place-based programs. In H. S. Bloom (Ed.), *Learning More from Social Experiments*. New York: Russell Sage Foundation.
- Bloom, H. S., Michalopoulos, C., & Hill, C. J. (2005). Using experiments to assess nonexperimental comparison-group methods for measuring program effect. In H. S. Bloom (Ed.), *Learning more from social experiments* (pp. 173-235). NY: Russell Sage.
- Bloom, H. S., Richburg-Hayes, L., & Black, A. R. (2007). Using Covariates to Improve Precision for Studies that Randomize Schools to Evaluate Educational Interventions. *Educational Evaluation and Policy Analysis*, 29(1), 30-59.
- Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2017). *Learning to Improve*. Harvard Education Press, Cambridge, MA.
- Carver-Thomas, D. (2018). *Diversifying the teaching profession: How to recruit and retain teachers of color*. Palo Alto, CA: Learning Policy Institute.
- Clark, M.eA., Chiang, H. S., Silva, T., McConnell, S., Sonnenfeld, K., Erbe, A., & Puma, M. (2013). The effectiveness of secondary math teachers from Teach For America and the Teaching Fellows programs (NCEE 2013-4015). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. <http://files.eric.ed.gov/fulltext/ED544171.pdf>.
- Coburn, C.E. (2003). Rethinking scale: Moving beyond numbers to deep and lasting change. *Educ. Researcher*, 32(6), 3-12. Retrieved June 8, 2020 from <https://journals.sagepub.com/doi/10.3102/0013189X032006003>
- Conklin, H. G., & Hughes, H. E. (2016). Practices of compassionate, critical, justice-oriented teacher education. *Journal of Teacher Education*, 67(1), 47-60.
- Cook, T.D., Shadish, W.Ϡ., & Wong, V.C. (2008). Three conditions under which experiments and observational studies produce comparable causal estimates: New findings from within-study comparisons. *Journal of Policy Analysis and Management*, 27, 724-750.
- Cordray, D.eS., & Pion, G. M. (1993). Psychosocial rehabilitation assessment: A broader perspective. In R. Glueckauf, G. Bond, L. Sechrest, & B. McDonel (Eds.), *Improving assessment in rehabilitation and health* (pp. 215-240). Newbury Park, CA: Sage.

- Cordray, D. S. & Hulleman, C. (2009, June). *Assessing intervention fidelity: Models, methods and modes of analysis*. Presentation at the Institute for Education Sciences 2009 Research Conference, Washington, D.C.
- Darling-Hammond, L. (2010). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teachers College Press.
- Danielson, C. (2013). *The framework for teaching evaluation instrument: 2013 edition*. Princeton, NJ: The Danielson Group.
- Davidson, J.R.T., & Connor, K.M. (2016). *Connor-Davidson Resilience Scale (CD-RISC) Manual*. Unpublished. Partly accessible at www.cd-risc.com
- Dehejia, R.H., & Wahba, S. (1999). Causal effects in nonexperimental studies: Reevaluating the evaluation of training programs. *Journal of the American Statistical Association*, 94, 1053-1062.
- Donaldson, M. L., & Johnson, S. M. (2011). TFA teachers: How long do they teach? Why do they leave? *Phi Delta Kappan*.
- Frangakis, C. E. & Rubin, D. B. (2002, March). Principal stratification in causal inference. *Biometrics*, 58(1), 21-29.
- Garet, M., Wayne, A., Stancavage, F., Taylor, J., Walters, K., Song, M., et al. (2010). *Middle school mathematics professional development impact study: Findings after the first year of implementation* (NCEE 2010-4009). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Dept. of Ed.
- Georgia Department of Education. (2019, December). *An Assessment & Accountability Brief: 2018-2019 Georgia Milestones Validity and Reliability*. Retrieved June 8, 2020 from https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/Milestones/2018-19_Georgia_Milestones_Vailidity_and_Reliability_Brief.pdf
- Georgia Department of Education. (2014). Overview/Executive Summary of the 2012-2013 TKES and LKES Evaluation Report. Retrieved June 7, 2017 from https://www.gadoe.org/School-Improvement/Teacher-and-Leader-Effectiveness/Documents/FINAL%20Year%203%20Report%202-21-2014_FORMATTED%202-23-2014.pdf
- Georgia Department of Education. (n.d.). *The Georgia Milestones Assessment System*. Retrieved June 7, 2017 from <http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Pages/Georgia-Milestones-Assessment-System.aspx>
- Gershenson, S., Hart, C., Hyman, J., Lindsay, C., & Papageorge, N. W. (2018). *The long-run impacts of same-race teachers* (No. w25254). National Bureau of Economic Research.
- Glazerman, S., Mayer, D., & Decker, P. (2006). Alternative routes to teaching: The impacts of Teach for America on student achievement and other outcomes. *Journal of Policy Analysis and Management*, 25(1), 75-96.
- Glazerman, S., S. Dolfin, M. Bleeker, A. Johnson, E. Isenberg, J. Lugo-Gil, M. Grider, E. Britton (2008). *Impacts of Comprehensive Teacher Induction: Results from the First Year of a Randomized Controlled Study*. Washington, DC: U.S. Department of Education, Institute of Education Sciences.
- Gorski, P. (2015). Relieving burnout and the “martyr syndrome” among social justice education activists: The implications and effects of mindfulness. *Urban Review*, 47, 696-716.
- Grahn, L. (2018). Teachers taking the lead: Increasing teacher retention through leadership opportunities. *The Language Educator*, 34-37.

- Guha, R., Hyler, M.E., and Darling-Hammond, L. (2016). *The Teacher Residency: An Innovative Model for Preparing Teachers*. Palo Alto, CA: Learning Policy Institute.
- Hill, C. J., Bloom, H.S., Black, A.R., & Lipsey, M.W. (2007, July). *Empirical Benchmarks for Interpreting Effect Sizes in Research*. New York: MDRC.
- Hollands, F. M., Hanisch-Cerda, B., Levin, H. M., Belfield, C.R., Menon, A., Shand, R., Pan, Y., Bakir, I., & Cheng, H. (2015). *CostOut- the CBCSE Cost Tool Kit*. New York: Center for Benefit-Cost Studies of Education, Teachers College, Columbia University. Retrieved from: www.cbsecosttoolkit.org
- Hulleman, C. S., & Cordray, D. S. (2009). Moving from the lab to the field: The role of fidelity and achieved relative intervention strength. *Journal of Research on Educational Effectiveness*, 2(1), 88-110.
- Imai, K., Keele, L., Tingley, D., & Yamamoto, T. (2010). Causal Mediation Analysis Using R. *Advances in Social Science Research Using R*, ed. H. D. Vinod, New York: Springer (Lecture Notes in Statistics), 129-154.
- Ingersoll, R., Merrill, L., & May, H. (2014). What are the effects of teacher education and preparation on beginning teacher attrition? Research Report (#RR-82). Philadelphia: Consortium for Policy Research in Education, University of PA.
- Ingersoll, R., Merrill, L., & Stuckey, D. (2014). *Seven trends: the transformation of the teaching force*, updated April 2014. CPRE Report (#RR-80). Philadelphia: Consortium for Policy Research in Education, University of Pennsylvania.
- James-Burdumy, S., Mansfield, W., Deke, J., Carey, N., Lugo-Gil, J., Hershey, A., et al. (2009). *Effectiveness of selected supplemental reading comprehension interventions: Impacts on a first cohort of fifth-grade students* (NCEE 2009-4032). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Jaciw, A. P. (2016). Assessing the accuracy of generalized inferences from comparison group studies using a within-study comparison approach: The methodology. *Evaluation Review*, 40(3), 199-240. Retrieved from <http://erx.sagepub.com/content/40/3/199.abstract>
- Jo, B., Stuart, E. A., MacKinnon, D. P., & Vinokur, A. D. (2011). The use of propensity scores in mediation analysis. *Multivariate Behavioral Research*, 46, 425-452.
- Krull, J. L., & MacKinnon, D. P. (2001). Multilevel modeling of individual and group level mediated effects. *Multivariate Behavioral Research*, 36, 249-277.
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally responsive pedagogy. *Theory into Practice*, 34(3), 159-165.
- Lemire, S, Christie, C. A., & Inkelas, M. (2017). The methods and tools of improvement science. In C. A. Christie, M. Inkelas & S. Lemire (Eds.), *Improvement Science in Evaluation: Methods and Uses*. *New Directions for Evaluation*, 153, 23-33.
- Levin, H. M., McEwan, P. J., Belfield, C., Bowden, A. B., & Shand, R. (2017). *Economic Evaluation in Education: Cost-Effectiveness and Benefit-Cost Analysis, Third Edition*. Washington, D.C.: SAGE Publications, Inc. Retrieved June 10, 2020 from <https://us.sagepub.com/en-us/nam/economic-evaluation-in-education/book245161#contents>
- Love, B. (2019). *We want to do more than survive: Abolitionist teaching and the pursuit of educational freedom*. Boston, MA: Beacon Press.
- Lyiscott, J. (2019). *Black appetite, White food: Issues of race, voice, and justice within and beyond the classroom*. New York: Routledge.

- Marinell, W. H., & Coca, V. M. (2013). *Who stays and who leaves? Findings from a three-part study of teacher turnover in NYC middle schools*. Synthesis Report: The Research Alliance for New York City Schools.
- Mascaro, J. S., Kelley, S., Darcher, A., Negi, L. T., Worthman, C., Miller, A., Raison, C. (2016). Meditation buffers medical student compassion from the deleterious effects of depression. *Journal of Positive Psychology*.
- Mascaro, J. S., Rilling, J. K., Negi, L. T., Raison, C. L. (2012). Compassion meditation enhances empathic accuracy and related neural activity. *Social Cognitive and Affective Neuroscience*, 8, 48-55.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (2018). *Maslach Burnout Inventory Manual: Fourth Edition*. Menlo Park, CA: Mind Garden, Inc.
- Matias, C. E. (2015): "Why do you make me hate myself?": Re-teaching Whiteness, abuse, and love in urban teacher education. *Teaching Education*, 1-18.
- May, C. R. et al. (2009). Development of a theory of implementation and integration: normalization process theory. *Implementation Science*, 4(29). ISSN 1748-5908. Retrieved June 7, 2017 from <http://eprints.gla.ac.uk/5944/1/1748-5908-4-29.pdf>
- Michalopoulos, C., Bloom, H. S., & Hill, C. J. (2004). Can propensity-score methods match the findings from a random assignment evaluation of mandatory welfare-to-work programs? *The Review of Economics and Statistics*, 86, 156-179.
- Minckler, C.H. (2011). *Teacher Social Capital: The Development of a Conceptual Model and Measurement Framework with Application to Educational Leadership and Teacher Efficacy*. A Dissertation presented to the Faculty of the University of Louisiana at Lafayette In Partial Fulfillment of the Requirements for the Degree Doctor of Education.
- Murrell, P. C. (2001). *The community teacher: A new framework for effective urban teaching*. New York: Teachers College Press.
- Neff, K. D. (2003). Development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223-250
- Noguera, Pedro, Linda Darling-Hammond, & Diane Friedlaender. 2015. *Equal Opportunity for Deeper Learning. Students at the Center: Deeper Learning Research Series*. Boston, MA: Jobs for the Future.
- Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *School Science & Medicine*, 159, 30-37.
- Pace, T. W. W., Negi, L. T., Adame, D. D., Cole, S. P., Sivilli, T. I., Brown, T. D., . . . Raison, C. L. (2008). Effect of compassion meditation on neuroendocrine, innate immune and behavioral responses to psychosocial stress. *Psychoneuroendocrinology*, 34, 87-98.
- Page, L.C. (2012). Principal stratification as a framework for investigating mediational processes in experimental settings. *Journal of Research on Educational Effectiveness*, 5(3), 215-244, DOI: 10.1080/19345747.2012.688410
- Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, 41(3), 93-97.
- Pride Surveys. (2011). *Research Documentation: Pride Teaching Environment Survey*. Retrieved from <http://www.pridesurveys.com/index.php/the-pride-teaching-environment-survey/>
- Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *AERJ Journal*, 50(1), 4-36.

- Schochet, P. Z. (2008). *Technical Methods Report: Guidelines for Multiple Testing in Impact Evaluations (NCEE 2008-4018)*. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. DOE.
- Schonert-Reichl, K. A., & Roeser, R. W. (2016). *Mindfulness in behavioral health. Handbook of mindfulness in education: Integrating theory and research into practice*. Springer-Verlag Publishing.
- Simon, N. S., & Johnson, S. M. (2015). Teacher turnover in high-poverty schools: What we know and can do. *Teachers College Record*, 117(3), 1-36.
- Somers, M., Zhu, P., & Wong, E. (2011). *Whether and how to use state tests to measure student achievement in a multi-state randomized experiment: An empirical assessment based on four recent evaluations*. NCEE Reference Report 2012-4015. Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved May 18, 2020 from <https://ies.ed.gov/ncee/pubs/20124015/pdf/20124015.pdf>
- Spybrook, J., Bloom, H., Congdon, R. Hill, C., Martinez, A., & Raudenbush, S.W. (2011, October). *Optimal Design Plus Empirical Evidence: Documentation for the "Optimal Design" Software (through version 3.0)*. Retrieved June 9, 2020 from <http://hlmsoft.net/od/od-manual-20111016-v300.pdf>
- Stanford Center for Assessment, Learning and Equity (SCALE). (September 2015). *Educative Assessment and Meaningful Support: 2014 edTPA Administrative Report*. Retrieved June 7, 2017 from https://secure.aacte.org/apps/rl/res_get.php?fid_2183
- Teachers College. (n.d.) Cost Analysis in Practice (CAP) Project. New York: Teachers College, Columbia University. Retrieved June 10, 2020 from <https://capproject.org/>
- The Danielson Group. (2020). The Framework for Teaching. Retrieved June 8, 2020 from <https://danielsongroup.org/framework>
- Tofighi, D., & MacKinnon, D. P. (2011). RMediation: An R package for mediation analysis confidence intervals. *Behavior Research Methods*, 43, 692-700. doi:10.3758/s13428-011-0076-x.
- Turner, H. M., Goodman, D., Adachi, E., Brite, J., & Decker, L. E. (2012). *Evaluation of Teach For America in Texas schools*. San Antonio, TX: Edvance Research, Inc.
- Weiss, M. J., Bloom, H. S., & Brock, T. (2014). A conceptual framework for studying the sources of variation in program effects. *Journal of Policy Analysis and Management*, 33, 778-808.
- What Works Clearinghouse (WWC). (2020, January). *What Works Clearinghouse Standards Handbook, Version 4.d*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved June 8, 2020 from <https://ies.ed.gov/ncee/wwc/Docs/referenceresources/WWC-Standards-Handbook-v4-1-508.pdf>
- Yin, R. (2014). *Case Study Research Design and Methods* (5th ed.). Thousand Oaks, CA: Sage.
- Young, V. M., Schmidt, R., Wang, H., Cassidy, L., & Laguarda, K. (2017, December). A comprehensive model of teacher induction: Implementation and impact on teachers and students. Evaluation of the New Teacher Center's i3 Validation grant, final report. Prepared for the New Teacher Center. Menlo Park, CA: SRI International. Retrieved June 8, 2020 from https://www.sri.com/wp-content/uploads/2020/02/NTC-i3-Validation-Comprehensive-Report-with-App_Final.pdf

Zeichner, K., Bowman, M., Guillén, L., & Napolitan, K. (2016). Engaging and working in solidarity with local communities in preparing teachers of their children. *Journal of Teacher Education*, 67(4), 277-290.