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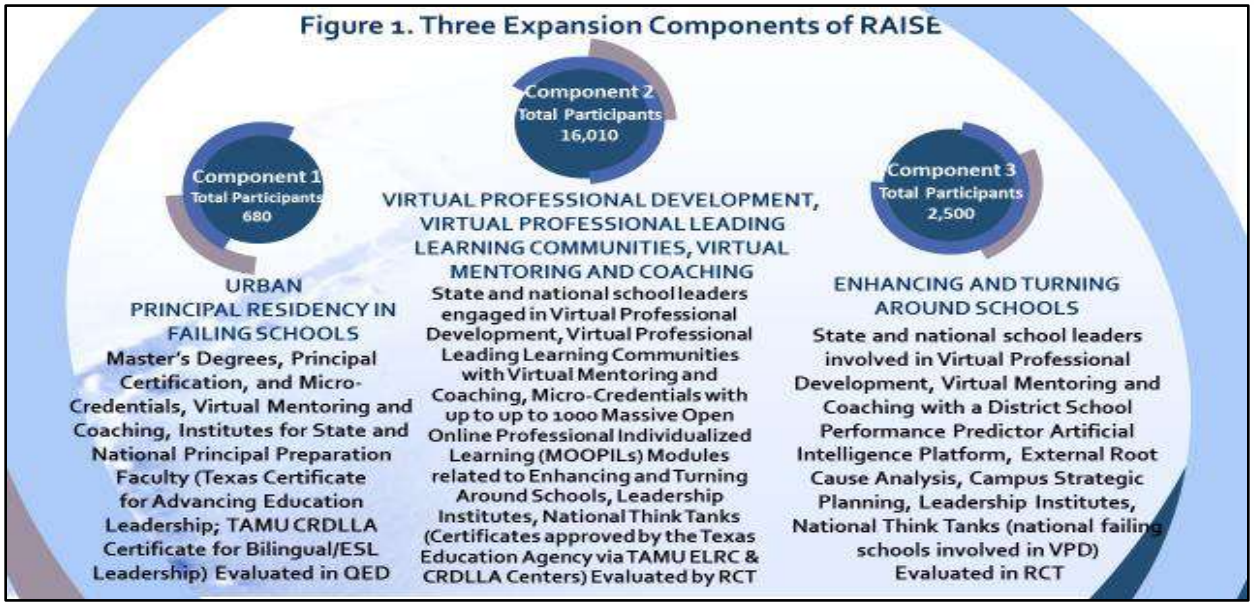
Research-based Strategies and Artificial Intelligence for School Enhancement: Turning Around Schools: Project RAISE

Project RAISE is submitted as an EIR Expansion grant by the Texas A&M Research Foundation (TAMRF) in collaboration with the Education Leadership Research Center (ELRC) at Texas A&M University (TAMU) under Absolute Priority 1 (Strong Evidence) and Absolute Priority 2 (Field-Initiated Innovations), along with 19,190 school leaders in state and national schools as we take to scale entrepreneurial, evidence-based, field-initiated leadership innovations to enhance near-failing schools and turn around failing schools to improve student achievement and attainment for over 500,000 high-need students. RAISE also covers Competitive Preference Priority 2—Addressing the Impact of COVID–19 on Students, Educators, and Faculty. RAISE accomplishes the three priorities within three specific proposed grant components shown in Figure 1 as follows:



(Diverse Urban Principal Residency Program in Failing Schools During COVID-19—Component 1 [C1]) RAISE will deliver an Urban Principal Residency Preparation program in schools that are failing in Houston ISD, the largest district in Texas, with three diverse cohorts over the five years which will lead to (a) an macro-credential for the individual, (b) an increase in the number of diverse principals for underperforming schools ready to serve on day one, (c)

instruction on the provision and use of evidence-based strategies for principal on how to enhance and turn around failing schools as a result of COVID-19; ***(Professional Development [PD] for School Leaders to Enhance and Turn Around Schools as They Continue in Learning Recovery from COVID—Component 2 [C2])*** Evidence-based PD activities for school leaders will be provided that address instructional turnaround needs of Local Education Agencies (LEAs). C2 will offer evidence-based virtual PD (VPD) sessions via our existing platform, *Massive Open Online Professional Innovative Learning (MOOPIL),* supported by rich and authentic virtual professional leading learning communities (VPLCs) supported by a virtual mentor coach (VMCs); and ***(School Enhancement and Turnaround from COVID-19—Component 3 [C3])*** Principals and their leadership teams will be provided with evidence-based school turnaround strategies, leadership coaches, ongoing VPD, leadership institutes, and an artificial intelligence [AI] dashboard (District School Performance Predictor Artificial Intelligence Platform, DSPP) to increase the quality of predictions for enhancing student learning and turning around schools. *In sum, there are **3 RAISE components aligned with the directives of the Absolute and Competitive Priorities addressed.** We have a sufficiently large pool of partners and connections with districts across Texas alone to carry out this expansion plan, which will be the basis with our initial 31 partner districts and 460 high-need elementary schools. However, we also will deliver at the national level. ELRC has developed a relationship with a national marketing company, Market Data Retrieval (MDR), a Dun & Bradstreet division, to recruit school leaders across the nation.* ***Strong Evidence.*** As noted, RAISE is based on ***strong evidence*** from the Building Assets and Reducing Risk Validation study (BARR; Corsello & Sharma, 2015; https://ies.ed.gov/ncee/wwc/Study/132 – see Evidence Form and Appendix J1) and outcomes of that study, as well as evidence from the work that the ELRC-TAMU has accomplished as baseline and promising work in another U.S. Department of

Education grants (SEED U423A170053 - 19B, [redacted] et al., 2017). In meeting Absolute Priority 1, TAMRF and ELRC have partnered with the Center for Research and Reform in Education (CRRE) at Johns Hopkins University (JHU) for a ***rigorous evaluation*** of the program. We will use BARR turnaround strategies that ***we will apply in a different setting in multiple schools, not only one as was in BARR, while also changing the grade level from ninth grade to elementary schools (K-5 grades) and with a focus in school leaders and their school leadership teams*** (principal, assistant principal, instructional school coaches). BARR's strategies are: providing repeated PD that focuses on how student-teacher relationships can help student achievement (C2 & C3), creating student cohorts who take core courses together (C1), encouraging families to participate in their student's learning (C1 & C2) using BARR's Curriculum (We will use our elementary literacy-infused science curriculum for C1 for intensive residency summer bridge programs), holding regular meetings of cohort teacher teams (C1, 2, 3), conducting risk-review meetings to target support to

Figure 2.

persistently low-performing students (C1 & C3 with the DPPS assisting), focusing on the student as a whole (i.e., not just academically, but also students' social, emotional (SEL) needs (C1), and

ongoing supportive administrator engagement (C2 & C3), and assessment of students' reading and math achievement (C3 + science & SEL, C1). We will use our 12-step training plan from the former SEED grant, which laid the foundation for this expansion for school enhancement with near-failing and failing schools. See Figure 2.

RAISE also adopts the WWC rating of *moderate evidence* of the one-year principal candidate residency generated by the New Leader Program (NLP; Gates et al., 2014; https://ies.ed.gov/ncee/wwc/study/81428 – see Appendix J2). The NLP candidates received ongoing support through mentoring, coaching, and PLC via a one-year, residency-based training program under a mentor principal. Of note, the NLP and BARR projects were implemented at the high school level, while in RAISE, we will evaluate such practices *in new settings among school leaders at the elementary level*, focusing on improving their leadership capacity to build teachers' instructional skills as teachers *raise* students' academic achievement for turning around schools. We will include micro-credentials (local TAMU certificates and state-approved certificates) with macro-credentials (M.Ed. degree/certification). The practices that we present (C1, C2, C3) have not been commonly implemented practices *focused on leadership* to build their capacity to turn around the school and address learning disruptions such as occurred in COVID-19.

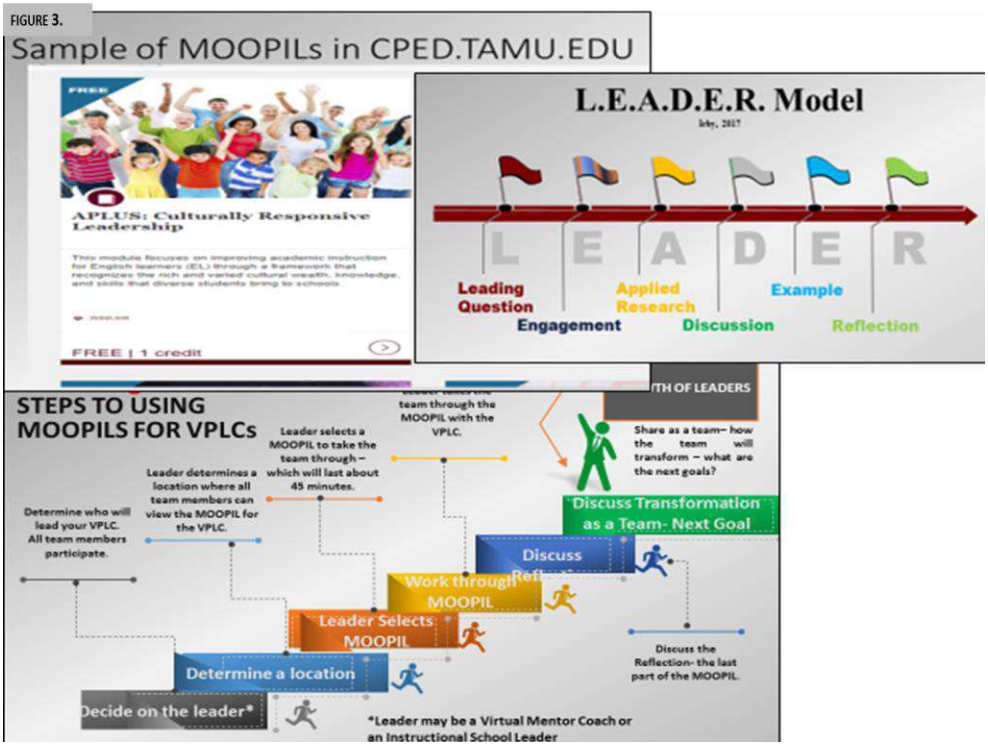
A. Significance ***A.1. National Significance*** **COVID Impact.** The pandemic has not only affected teacher job satisfaction and retention; it has affected students. As IES director Mark Schneider (2020) noted, we as a society must bring to bear our best resources to understand the crisis in learning recovery that has been brought on by the pandemic, respond by deploying new tools to help students catch up, and ensure our high-need students do not get overlooked or fall further behind. To illustrate the problem, in Texas alone, the spring 2021 State of Texas Assessments of Academic Readiness (STAAR) results decreased by 4% compared with the results of 2019. The results showed that 43% of all students met grade level in reading, down from 47%

in 2019. The STAAR math assessment witnessed a larger drop from 50% achieved in 2019 to 35% of all students meeting grade level (TEA, 2022). In March, 2022, the United States began year three of the COVID-19 pandemic, with principals and leadership teams across the nation still struggling to fill teacher vacancies, with principals feeling the stress of aiding the school community to cope, with students having academic lapses, with diminished achievement for ECs, and with students' social-emotional learning needs languishing. We advocate that working with leaders to turn around this situation is critically important to the education of students, particularly those who have been impacted the most by learning losses. The national significance of RAISE lies in our three turnaround components. **Turning Around Schools—Focus on Leadership.** The definition of *turnaround schools* typically has been used in reference to general reform efforts for low-performing school personnel to significantly improve student achievement. Backstrom (2019) noted that there has been little evidence of success observed in low-performing, high-poverty schools across the nation and indicated that they have failed because they lacked three critical features: (a) flexibility must be provided to meet the individual challenges at schools; (b) strong school leaders who are given the freedom to act; and (c) a steady commitment to bold changes. If turnaround is to work, strong leadership is fundamental. Teachers are, of course, critical to their classrooms, and yet, principals *affect all students* in their schools (Branch et al., 2013). Even though the principal's role is as an instructional leader (Lynch, 2012), we have found that *it is difficult for the principal* to be in classrooms every day and support teachers; therefore, *the entire leadership team* becomes even more important for building instructional capacity. According to the Council of Chief State School Officers (2012), we should ensure that all leaders we train and produce are: "…*ready on day one*…to *transform school learning environments*…" (p. iv). ***A.2. Promising New Strategies That Build On, Or Are Alternatives To, Existing Strategies*** RAISE

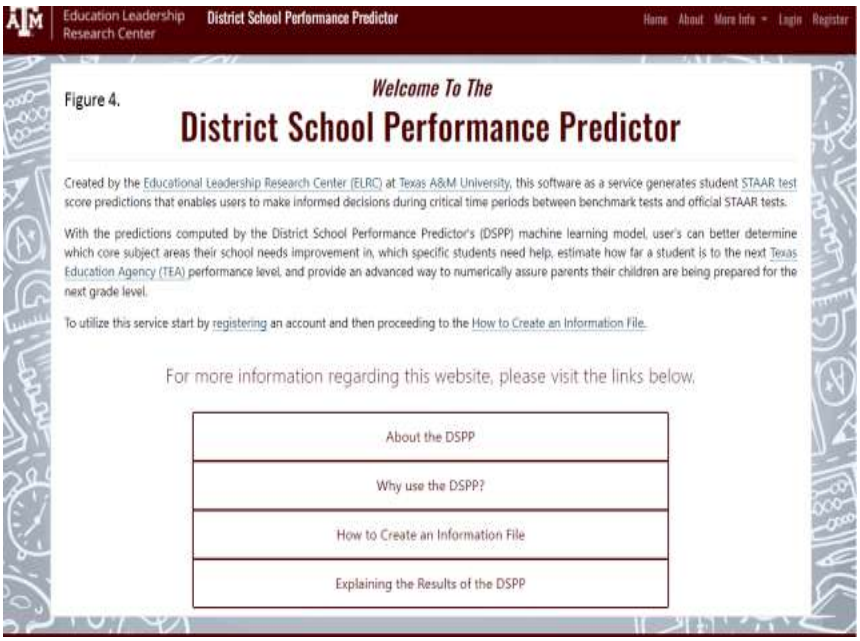
is for the implementation and rigorous evaluation of the strategies that the BARR research found to have strong evidence at the ninth grade level that we will bring to the elementary level for school turnaround. We have tested C1 in a smaller scale in the aforementioned SEED grant where we implemented a residency program for 10 principal candidates at high-needs schools, including VPD, VPLCs, VMC, and a turnaround model that complements the BARR findings. We also worked with PD as was recommended in BARR in our former SEED grant with over 14,000 enrolled in VPD; therefore, our capacity to do this work with the large numbers is adequate. Project RAISE provides promising new strategies that can be expanded nationwide. RAISE C1 will address the development of principal residents and their impact via a strong quasi-experimental study on C, D, or F schools compared to equally ranked schools that do not have principal residents. This is a research component that will add to the knowledge base about the degree of principal residencies' impact in a high-need campus. We will assess scalability by (a) hosting three cohorts of residents over the five years and (b) conducting think tanks and institutes about residencies at state and national levels for faculty members in educational leadership programs who can develop and implement similar programs in partnerships to assist and impact high-need schools. Second, the combination of effective new strategies goes beyond the continuous professional development from the BARR research. We found in our work that a combination of VPD, VPLC, and VMC for leaders was useful and beneficial for making connections and establishing relationships with their coaches and peers and recommended VPD to other school leaders. The campus leaders reported that they had applied the knowledge and skills they learned during the VPD sessions in their daily instructional leadership work with teachers in high-needs schools. Among the most significant features supporting school leaders' growth are: (a) mentoring and coaching, (b) VPLC, (c) learning support in leadership, and (d) reflection journaling (we have

promising new strategies developed and tested to apply with the eduReflection app — see Appendix J3). Additionally, the VPD with MOOPILs used in VPLCs and the L.E.A.D.E.R. model (Figure 3) has had success in the former SEED grant. We already have capacity built with 1,000 MOOPIL VPDs (sample titles are in Appendix J4) for leaders to choose from, and RAISE will add another 125 specifically targeting turnaround strategies. The BARR research team intervened in one secondary school. We plan to expand this concept to multiple schools across Texas and the nation. Specifically, we will implement interventions that we have tested successfully in the former SEED grant and those based on the BARR research findings. We were able to turn around 13 schools over a five-year period, even during COVID-19 (nine schools during this time), within one to two years after intervention (we will scale this further in two WWC RCT studies). We also will take the findings from the smaller scale project across the state to help build a base of understanding that we will share in the Summer Institutes for leaders across the state and nation. In addition, we have developed an *Artificial Intelligence (AI) District School Performance Predictor (DSPP)* (Figure 4) that can significantly reduce the time for leaders and

FIGURE 3.



their teacher teams to determine with data where they may fall with their state scores and which students need assistance with specific subject areas. Where it takes these teams three weeks to work through the data, the AI can do this in 45 seconds with 95% accuracy. Through institutes, we can introduce this approach to participating leaders across the state and nation. Furthermore, most schools conduct an internal Root Cause Analysis (RCA), but we have found as a promising new strategy that we can actually conduct an external RCA—and even virtually—that yields school turnaround (See Appendix J5 indicates specific targets in the RCA). ***A.3. Potential Contribution of Proposed Project to Increased Knowledge or Understanding*** Over five years, RAISE will serve



a total of 19,190 principals and other school leaders on campuses with K-5 grade learners and a focus on ELs and ECs. We have an ***initial 31 partner LEA*** school districts (see Appendix J6 and support letters in Appendix C) and will recruit partner districts across the nation. We have a large database already developed of national school leaders, and we work with a national marketing firm. We are confident in securing state and national partners, since we have successfully gathered over 14,000 educators in Texas via face-to-face and online PD. In our RAISE Texas districts alone, there are 13 rural (42%) and 18 non-rural (58%) districts with 460 elementary schools (562,028 students and 156,090 ELs) (28%); additionally, in Texas districts,

there are 350 schools noted as "failing" by TEA and are in need of turnaround support, with another 464 D schools and 1,419 C schools that may be poised to go in either direction (TEA, 2021). We will partner with school leaders to offer leadership residencies, VPD, and a *School Enhancement/Turnaround (SET)* intervention. Our goal is *not to turn around the schools by replacing staff*; our goal is to support *steady and research-based school enhancement that builds leaders' skills to continue well past our departure*. Appendix J7 has a list of the acronyms used in RAISE. RAISE, via rigorous evaluation, will be able to provide specific information for school leaders and for university faculty related to how to turn around schools within a multi-school, state, and national project. **B. Strategy to Scale** ***B.1. Specific Strategies Addressing Particular Barriers that Prevented Going to Scale Herein*** Coburn (2003) conceptualized scaling in education as four interrelated dimensions: (a) depth, (b) sustainability, (c) spread, and (d) shift of ownership. Depth is translated at the leader level and is addressed with the implementation of VPD learning in a controlled study. Sustainability with VPD will provide evidence-based delivery model findings so schools can maintain or sustain the work as the EIR funding dissipates and for the ELRC to continue the work as a Center. Spread is addressed by VPD provided to leaders with close communications with superintendents and principals nationally. Policy and procedural changes will be analyzed over the scope of the grant, and policy briefs based on evidence will be produced. Shift of ownership will be made in phases through the five-years, starting with initial implementation or deepening of the innovation (Y1), moving to sustaining and spreading (Y2-Y3), and spreading, testing the sustainability, and shifting ownership (Y4-Y5) fully to the ELRC and to national school leaders and leadership preparation faculty. In the Summer Institutes, we will teach leaders how to conduct VPD with MOOPILs and VPLCs, turnaround strategies, and higher ed faculty on principal residencies—and other strategies that are found to be successful. When the

innovations and effective strategies are then owned by school personnel by the end of each year, the innovation will be considered to have been institutionalized. As the educational practices become sustained, widespread diffusion and spread is possible. ***Prior Prevention to Scale.*** We tested, at a small scale, the potential of a principal residency, but we did not intervene with principal preparation faculty which will occur in RAISE and will conduct an experimental study in C1. In the former SEED grant, we were unable to make a national impact with the VPD MOOPILs due to the main focus on one state. Additionally, we were not focused on specific topics of school turnaround in VPD in prior grants and for national leaders. Ultimately, our former SEED grant work tested specific strategies outside the BARR project. Former SEED grant data collection was interrupted by COVID-19. We will test interventions via WWC standards-align QED and two RCTs. ***B.2. Management Plan*** Overall program management (PM) will be the responsibility of the Principal Investigator (PI). PM will focus on four classes of activities: (a) Overall Project, (b) RAISE Academic/PD Program (C1, C2, C3), (c) School, District and University Relations, and (d) Other External Relations. The major activities will be tracked through a *grant milestone chart*. ***An Advisory Board*** (AB) will meet at the initiation of the grant to review purposes and objectives of the project, then, the AB will meet virtually annually to review progress of the project goals and objectives to review and provide feedback on the annual report. The AB will consist of the following (each one state and one national): two turnaround campus principals, two bilingual/ESL teachers, two district administrators, and two professors. The AB will also monitor the non-discrimination aspects of the grant. The broad management plan is presented in Figure 5.

Figure 5. ***Broad Management Plan***

Legend: Semesters: S spring; S summer; F Fall; **Action:** √ initiate; √ **milestone;** • continuation; X check point; **Person Responsible:** PI Principal Investigators; E Evaluators, F Faculty; PC Program Coordinators	**Y1**			**Y2**			**Y3**			**Y4**			**Y5**		
	S	**S**	**F**	**S**	**S**	**F**	**S**	**S**	**F**	**S**	**S**	**F**	**S**	**S**	**F**
MAJOR PROGRAM ACTIVITIES: Program Management															

1.Finalize/approve IRB, recruit participants (PI, PC)	✓	•	✓	•	•	•	•	•	•	•	•	•	•	•
2.Establish accounting/purchasing procedures (PI, PC)	✓													
3.Acquire PD materials and office materials (PI, PC)	✓	•	X	•	•	X	•	•	X	•	•	X	•	•	•
4.Maintain high morale/collaborative spirit in program (PI, PC)	✓	•	X	•	X	•	•	X	•	•	X	•	•	X	•
5.Set monthly goals/assess program-wide/student-specifics (PI)	✓	X	X	X	X	X	X	X	X	X	X	X	X	X	✓
6.Obtain materials for curriculum development (PI, PC)	✓	•	•	•	•	•	•	•	•	•	•	•	•	•	•
7.Develop national VMC manual (PI, PC)	✓	X	✓												
8.Prepare mid/end-year reporting for AB & USDOE (PI, E)			X	✓	X	•	✓	X	•	✓	X	•	✓	X	✓
9.Develop coordinators to enact 3 components (PI)	✓	X	✓												
MAJOR PROGRAM ACTIVITIES: Academic/PD Program															
1.Residents maintain high achievement in instructional leadership curriculum for turning around schools (PC, F)		✓	•	X	✓	•	X	✓	•	X	✓				
2.Residents supported by field supervisors, lecturers, mentor/coaches, and principals (Treatment) (PC)		✓	•	X	✓	•	X	✓	•	X	✓				
3.Residents apply turnaround knowledge in field-based coursework (high-needs schools w/ Els and ECs) (PI, F)		✓	•	X	✓	•	X	✓	•	X	✓				
4.Residents plan/implement parent/community involvement, DL action research (PI, PC)				✓	✓		✓	✓		✓	✓				
5.Cohorts pass (90%) TExES principal exam/cohort (PI, PC)					✓	•	•	•	•	•	•	•	•	•	✓
6.Cohorts display ease/sensitivity in mentoring relationships (PI)			✓	X	•	✓	X	•	✓	X	•				
7.Cohorts/faculty/mentors collaborate to prepare conference presentations/publications based on fieldwork (PI, F)					✓	X	✓	•	X	✓	•	X	✓		
8.Participants apply C2/3 to turnaround their school (F)		✓	•	X	✓	•	X	✓	•	X	✓	•	X	✓	
9.Participants participate in up to 95% of all activities (PI, PC)		✓	•	X	✓	•	X	✓	•	X	✓	•	X	✓	
SCHOOL & DISTRICT RELATIONS: Program Management															
1.Establish communications/contact persons (for district office, schools, parents, and university) (PI, PC)	✓	X	✓	•	•	•	•	•	•	•	•	•	•		
2.Orient students and district personnel to RAISE (PI, PC)	✓	X	✓	•	•	•	•	•	•	•	•	•	•		
3.Inform administrators of study & field projects (PI, F)	✓	X	✓	•	•	•	•	•	•	•	•	•	•		
4.Cohorts develop relationships w/ beginning and other bilingual and regular school leaders. (PI, PC)		✓	•	X	✓	•	X	✓	•	X	✓	•	X	✓	
SCHOOL & DISTRICT RELATIONS: External Relations															
1.Publicize RAISE and PD programs to other school leaders in initial LEAs and beyond (PI, PC)	✓	•	✓	•	•	X	•	•	X	•	•	X	•	•	X
2.Publicize RAISE design/accomplishments to leaders in Texas' and other university programs (PI, PC)	✓	•	✓	•	•	X	•	•	X	•	•	X	•	•	X
3.Publicize RAISE design/accomplishments to school leaders at national, state, regional conferences (PI, PC)				✓	•	X	•	•	X	•	•	X	•	•	✓
4.Publicize/publish action-research at conferences such as TABE, NABE, TEPSA, TASSP, AERA (PI,PC)				✓	•	X	•	•	X	•	•	X	•	•	✓
5.Present RAISE to Texas Education Agency, for dissemination by state authorities (PI, PC)				✓	•	X	•	•	X	•	•	X	•	•	✓
6.Provide data for internal audits/comprehensive evaluation (formative/summative) (E)	✓	•	✓	•	•	X	•	•	X	•	•	X	•	•	X

RAISE PI and Co-PIs have strong experience running large research grants, as well as training projects at the federal and state levels. Continuous improvement will be in the form of

communication with district superintendents, curriculum directors, principal, teachers, the evaluation team, and the local project team. The project staff will seek semi-annual feedback from project participants, their supervisors, and the AB. The RAISE team will meet monthly to discuss updates and improve the project; a milestone & management chart will be kept in the shared Google Drive. ***B.3. Qualified Personnel, Financial Resources, or Management Capacity to Bring to Scale*** The PIs are highly qualified to bring the project to scale. The PIs ([redacted]) have worked with VPD, institutes, and webinars with micro-credentials provided for personalized learning. Moreover, they have taken to scale evidence-based curriculum and have via the TAMU System commercialized one curriculum from one of the early projects with Frog Street Press. There have been many substantial publications (five reviewed by WWC, with three with/without reservations) and presentations. They have posted ELRC Research Briefs on the three components of this Expansion grant testing residency, including the M.Ed. program and turnaround schools. [redacted] (PI, Project Director) has also led research teams and has been responsible for curriculum development, implementation, and micro-credentials with VPD, VMC models, and the Reflection Cycle. She has managed over $65,000,000 in grants over the past eight years. [redacted] (Co-PI), has led a team of researchers for over two decades, and the work he has overseen led to WWC recognized studies. He has directed over $100,000,000 in research and training grants. [redacted] (Co-PI) has led research teams and trained graduate students in evaluative data collection, with Teleform, and with statistical procedures. She has been a Co-PI on large RCT grants and has led grants as well. She is also a WWC-certified reviewer. ***Resources for Scaling RAISE*.** Within the grant budget, there is sufficient human, structural, and organizational capital to manage the Expansion work. Human capital includes the PI, four Co-PIs, three Co-Is, lead coordinator, three coordinators, research coordinator, one

logistics coordinator, a post-doc research assistant, four graduate assistants, and graduate techs. Additionally, there is an Education, Outreach, and Marketing Director in the ELRC and the supporting Center (Center for Research & Development in Dual Language & Literacy Acquisition; CRDLLA which is a collaborative partner with RAISE), an Editorial Coordinator, and a Program Coordinator available for working on the strategies for scaling and dissemination. The two active research Centers, CRDLLA and ELRC, have undergone recent successful external evaluations. To expand RAISE and get the project to the point where it can be sustained with ELRC personnel, we need these individual coordinators to bring this to scale. We will engage mentor coaches hired and trained for all three components. We have partnered with three experts who have worked with us on turnaround schools and will be assisting us with this component. Together we will train school leaders on the DSPP that we have developed and are ready to share with near-failing and failing schools in Texas and the nation. This is a resource for scaling. We have an expert on adult transfer of learning, which is critical for the work in RAISE. Also, we have a supervising coach who will assist with all coaches and all the VPD/VPLC MOOPILs to help check them and monitor the quality. For structural capital, we have leveraged first our official partners for RAISE, TAMU ZOOM and TAMU Continuing Professional Education with Canvas Catalog. We have an official structural partner with Houston ISD for the residencies. We also are now making MOOPILs more interactive with a media consultant. We have a new Decision-Making Simulation app working with SIM SCHOOL that we developed for the principal candidates and principals in high-needs schools over the topic of failing schools, in addition to the new eduReflection app that we developed. For organizational capital, the university has provided a new 10,000 square-foot building (see Appendix J8) that is well-equipped and adequate for all personnel. The evaluation will be conducted by JHU, one of the nation's premier research institutions. ***Evaluation Support***

and Commitment. CRRE employs five Ph.D.s and five other research and support staff engaged in a wide range of research involving children from preschool through high school who are in economically challenged communities. CRRE PIs are full-time researchers without teaching responsibilities who are therefore able to focus on high-quality longitudinal research, including many randomized and matched field experiments. ***B.4. The Mechanisms the Applicant Will Use to Broadly Disseminate Information.*** All purposes of this project are a major function of the ELRC. Our function is to conduct and apply research and to conduct evaluations with and for school districts in Texas and beyond. The broad dissemination is a function of the ELRC and CRDLLA. The findings will be disseminated in Center Research and Policy Briefs, Open Access Reports, JHU CRRE Evaluation Reports, Open Access Journal Juried manuscripts, continued VPD, Top-Class Institutes and webinars, new podcasts via the Center, Think Tanks, and Summer Leadership Institutes (SLI). Additionally, we have a very active social media group and have reached over 20,000 users in one single month. RAISE results will be disseminated in print, presentations, and online to a range of audiences, published in peer-reviewed scholarly journals, and presented at academic conferences. MOOPILs will be freely and publicly available to school leaders on the ELRC website (http://elrc.tamu.edu). We will post step-by-step guidelines for school practitioners in implementing the SET (turnaround) model, the SLI model, and the urban summer bridge intensive residency model—all developed or enhanced and evaluated over the course of the project. Other products to be on the ELRC website include *VMC Best Practices and Challenges Report*.

C. Quality of the Project Design ***C.1. Conceptual Framework and Its Quality.***

Theoretical assumptions from the self-directed learning (SDL) and andragogy theory (Merriam, 2001), and transfer of learning theory (Baldwin & Ford, 1988) will be applied to RAISE PD.

Based on the SDL and andragogy theory, providing adult learners with learning environments in which they can communicate their opinions, share their knowledge, and reflect on the new learning content helps them to understand new content and incorporate it with their previous knowledge. SDL also helps to explain how through such collaboration, interactions, and reflections, adult learners are able to construct their learning. Merriam's and Baumgartner's (2020) noted that adult transformational learning can be a byproduct of cognitive engagement for individuals that supports integration of knowledge and skills learned where critical reflection is brought about by an experiential sharing of learning as in RAISE PD. Collaborative learning engagement in RAISE PD is needed so that participants can reflect together and come to a point of *how* they know. The transfer of learning (ToL) theoretical framework provides a grounded understanding of ToL in the workplace. Trainees should be able to generalize, apply, and maintain knowledge, skills, behaviors, and attitudes from PD to apply to their job (Baldwin & Ford, 1988; Burke & Hutchins, 2007; Ford & Weissbein, 1997). Three important training factors include (a) training design, (b) trainee characteristics, and (c) work environment. The ***Logic Model*** is presented in Appendix G.

C.2. Goals, Objectives, and Outcomes are Clearly Specified and Measurable.

GOAL 1: Prepare via an urban leadership residency program of diverse principal resident candidates focused on leading learning at an elementary underperforming campus level with high numbers of ELs and ECs. *C1, the Urban Principal Residency Program in Failing Schools, is shared in Figure 6* with a noted total number of participants for C1 of 680 with the main focus

on diverse principal residencies; 60 school leaders (teacher leaders who are instructional specialists) over the 5 years will receive an M.Ed. in Educational Administration and can sit for the Texas principal certification. This group of leaders will be prepared from the largest urban school district in Texas, Houston ISD, to influence policy and lead campuses in need to turn around which serve diverse learners, particularly those with ELs and ECs. The 60 members of the cohort groups (20 in each cohort; 1 resident per campus; three cohorts in total with no repeated campus), as the treatment (T) group, receive the intervention of VMC and an intensive year-long and summer instructional leadership residency program, following the NLP (NLP; Gates et al., 2014) model of a one-year, residency-based training program providing ongoing support through mentoring, coaching, and a professional learning community (our program adds an intensive

summer to the year-long residency). Another 60 campuses (20 in each cohort) will be matched to the treatment campuses that host residency programs, based on the percentage of ELs, ECs, and ranking, as the control campuses with no residency program implemented. The efficacy of the residency program will then be examined by tracking students' reading achievement measured on the STAAR test. This is ***RAISE WWC study 1***, using a cluster quasi-experimental design (QED) with students' grade 3 STAAR reading scores as the baseline and grade 4 (G4) STAAR reading as the outcome. Students' STAAR scores will be collected in both treatment and control campuses. We expect this study to generate evidence that meets WWC standards with reservation. The T group will be in charge of all leadership aspects of an intensive summer residency as they develop a summer school bridge program (four-week program) for two rising 2nd grade classrooms each (24 total high-needs students) who are in COVID-19 learning recovery. The summer bridge program will bring together motivated undergraduates and high school students trained and led by the resident to strengthen the literacy-infused science concepts. The residents will also take courses with 1,628 base PD hours, plus another 940 residency hours. ***Objective 1:*** To recruit and complete 60 pre-service school leaders in a residency principal preparation program within three cohorts from diverse ethnic groups, who desire to be certified campus principals from HISD LEA ***as measured by*** the completion of the three diverse cohort groups with the first cohort beginning Fall 2023 and ending Fall 2024; the second cohort will begin Summer 2025 and will end Summer 2026; the third cohort will begin Summer 2026 and will end Summer 2027. **OUTCOME:** 60 recruited school leaders who obtain a macro-credential with an M.Ed. (online) in instructional leadership, focused to lead and impact underperforming urban campuses. ***RECRUITMENT FOR C1:***. Candidates must submit a transcript with a 3.0 undergraduate GPA, three reference letters, a graduate application, a teaching service record, a writing sample that indicates their motivation,

commitment, and qualifications to be in RAISE to improve instruction in failing schools, and participation in an on-campus or virtual (TAMU) interview by a committee of 2 TAMU faculty. The basic ***measure of success*** will be the number of students (% of diverse students) admitted and the number to graduate with the cohorts within 5 years and obtain positions of leadership in underperforming schools. **REPLICABLE ACTIVITY:** RAISE can provide an easy-to-follow program for other university-school residencies for turning around schools. ***Objective 2:*** To build a replicable urban campus-level practicum residency, mentoring/coaching model for the aspiring instructional leaders ***as measured by*** 940 hours of a replicable urban campus-level practicum residency, mentoring/coaching model for the aspiring instructional leaders. **OUTCOME:** A replicable diverse standards-aligned urban leadership residency preparation program.. **REPLICABLE ACTIVITY**: The structural and curricular model will be shared via Summer Institutes, webinars, and podcasts which will be accessible nationwide for university faculty. ***Objective 3.*** To examine the efficacy of leader residency programs via a cluster QED design over the five-year grant ***as measured by*** student academic growth on the STAAR and the Texas English Language Proficiency Assessment System (TELPAS). In each cohort, 20 principal candidates, one per campus, will receive the one-year leader residency intervention as the treatment (T) group. Another 20 campuses, matched by the percentage of ELs and ECs and initial school scores on the STAAR, TELPAS, and letter grade rank, will be recruited as the control group which will have no principal candidates receiving the RAISE leader residency program. At the end of each cohort, G4 students' G3 and G4 reading achievement measured by the state high-stakes tests will be collected in both treatment and control campus. **OUTCOME:** A cluster QED evaluation study (***RAISE WWC study 1***) will be conducted and reported with each cohort and over the entire program to examine the intervention effect on G4 students' reading achievement. **REPLICABLE**

ACTIVITY: The cluster QED will determine if a campus that hosts a leadership resident is as effective as compared to a traditional non-resident focused campus for applying residencies in underperforming urban schools. ***Objective 4:*** To assess the instructional leadership standards and competencies of the principal candidates to lead learning and to observe teachers' instruction based on a low-inference teacher observation scale and to determine the quality level of outcome-based instructional feedback for the observed teachers by the T (who have had mentors/coaches and resident supervisors the summer before this activity is implemented) candidates) ***as measured by*** a rubric that assesses the quality of the resident's feedback to the teacher on the lesson based on their observation via Pedagogical Observation Protocol (POP; see Appendix J9-11); 80% achieve mastery). **OUTCOME:** Trained RAISE candidates on the ability to observe classrooms using the POP and provide feedback to improve instruction/build teachers' capacity to develop turnaround schools. **REPLICABLE ACTIVITY:** A low inference observation scale will provide targeted observations with specific feedback provided for teachers of high-needs students is critical to improving school turnaround. The shared instrument, POP, was developed and validated based on the *four-dimensional bilingual pedagogical classroom theory* in Appendix J12 ([redacted] & [redacted], 1994). ***Objective 5:*** To examine the efficacy of the summer bridge program for ELs and ECs implemented by the T group during the intensive summer residency program ***as measured by*** a pre-post comparison of a researcher-developed curriculum-based instrument (Big Ideas in Science Assessment [BISA]) and Self-Esteem Inventory (SEI) for ELs and ECs (80% of students demonstrate growth). **OUTCOME:** A literacy-infused science summer bridge program curriculum, accompanied by the BISA and SEI, that is trained by the resident with the college students under their care and which can be shared with faculty of educational leadership programs for intensive summer residencies. **REPLICABLE ACTIVITIES**: A residency manual and VPD

for principal preparation faculty at other universities to incorporate as a part of the year-long residency activities, specifically for the intensive summer residency program. ***Objective 6:*** To analyze: (a) parent and family engagement systematic plans during the residency-ready annual activities and (b) campus PD plans developed and implemented in the semester of the developing ***as measured by*** a developed rubric for a and b above (80% highly rated). **OUTCOME:** 60 parent and family systematic engagement and PD plans that are developed, implemented, and evaluated based on a developed quantitative rubric while working collaboratively with the VMC, and posted. **REPLICABLE ACTIVITIES:** 60 parent/family and community engagement plans and campus PD plan will be posted on the ELRC website to be used by school leaders in helping to turn around their schools. ***Objective 7:*** To analyze the 60 turnaround strategy plan *models* that the residents develop for their campuses in conjunction with the leadership team and teachers and determine feasibility (in conjunction with their practicing principal and campus teams) as reported by candidates' action research projects (in their research course) ***as measured by*** the residency turnaround project rubrics (Appendix J13) which assess the percent of plans that are highly rated (80% highly rated). **OUTCOME:** 60 turnaround strategy plans in 60 action research projects written and posted and analyzed for differences both quantitatively and qualitatively with the rubric. **REPLICABLE ACTIVITIES:** 60 action research project reports on turnaround strategy plan models will be posted on the center websites to be used by other similar campuses. ***Objective 8:*** To disseminate the results of RAISE, via faculty in the program, through (a) at least 4 state and 4 national or regional conferences, through 8 professional media sources, and through a RAISE website, and via the leader candidates' presentations, (b) two think tank on principal residencies, and (c) two higher education principal preparation residency Summer Leadership Institute (SLI) ***as measured by*** 12 dissemination products of presentations, think tanks, and Summer Leadership

Institutes (SLI). **OUTCOME:** 12 dissemination products including 8 presentations, two think tanks, and two SLIs. **REPLICABLE ACTIVITIES**: Principal preparation programs can replicate evidence-based strategies for urban school partners. **GOAL 2: Prepare over 16,010 in-service school leaders for building instructional capacity at underperforming schools.** ***C2***. C2 supports and activities ***are shared in Figure 7***. At least 16,010 school leaders over a 5-year time period will receive VPD and will work in virtual professional learning communities (VPLCs) with virtual mentor coaches (VMCs). We will recruit school leaders via fliers to the superintendent and campus principal and put up video link invitations related to Component 2 outlining the benefits professionally and compensation allowances. ***Objective 1:*** To recruit and train 13,500 of the 16,010 total participants who are principal and school leaders via 3 MOOPILs providing a total of 40,500 Continuing Professional Education (CPE) Development Hours aimed at building teachers' instructional capacity and other turnaround strategies, ***as measured by*** the fulfillment of the recruitment plan with 3 MOOPILs completed by the leaders over the five year period (60% MOOPIL hours completed). The other CPE opportunity is the Top-Class Institute Series where

successful practicing leaders virtually present best practices from their schools and experiences; therefore, additional hours may be gained. ***RECRUITMENT FOR C2*:** Notices of the potential program will be sent in January (if funded) 2023 (Year 1) and continuously in Years 2-5 to all district and campus leaders in participating school districts with high-needs campuses first, then other districts across Texas and the nation will be invited to participate and partner. **OUTCOME:** 13,500 (of the 16,010 total participants in C2) school leaders will be equipped with just-in-time VPD from 3-45 CPE hours (they may select from 1025 MOOPILs- with 25 directly targeted to turnaround schools and others we have developed targeted to building the leader's capacity to build their teachers' instructional capacity in high-needs schools). **REPLICABLE ACTIVITIES:** MOOPILs will be able to be used open access statewide and nationally for VPD hours for leaders. ***Objective 2:*** To randomly select 70 participants annually and randomly assign 35 to treatment and 35 to control groups to participate in five virtual PLCs and determine how much the school leaders grow if virtual mentor coaches are added to the PLCs in T only. Both T & C PLCs will practice rotational leadership (each participant will practice 5 times) of the VPLC group T will lead the VPLC with VMC feedback; C will have MOOPILs without VMC. This objective is ***measured by*** pre-post assessments for each MOOPIL (5) used in VPLCs each of the five years with a 10% higher gain with the T group as opposed to the C group. **OUTCOME:** An RCT study outcome on VPD with VMC—determining the difference between typical VPD with VPLCs and VPD with VPLCs using VMCs. **REPLICABLE ACTIVITIES:** Districts will have a model of how to enhance PLCs using the MOOPIL modules for leaders. ***Objective 3:*** 25 leader participants will produce 125 MOOPILs over a five-year period related to enhancing and turning around schools ***as measured by*** the number of MOOPIL modules produced with 95% accuracy per the rubric (Appendix J14) for assessing the quality of a developed MOOPIL. **OUTCOME:** 125 leading

learning/leadership MOOPILs from the participants will be produced on topics enhancing and turning around schools. **REPLICABLE ACTIVITIES:** 125 turnaround MOOPILs will be screened for usability and quality and placed in the TAMU CPED Canvas Catalog. **GOAL 3: Prepare 2,500 school leaders across Texas and the nation for building instructional capacity at the campus level in the education of ELs and ECs with a School Enhancement/Turnaround (SET) Intervention over five years.** ***C3 is shared with supports, activities and number of participants in Figure 8.*** C3 is to (a) provide a combined intervention of Turning Around Schools intensive VPD and VMC + DSPP to school leaders via a virtual RCT to schools in Texas and nationally (b) prepare school leaders in schools across Texas (10 RCT schools) for building instructional capacity at the campus level in the education of ELs and ECs with a SET Intervention over five years, and (c) provide online SET PD to 350 Texas school leaders annually who serve on underperforming campuses. ***RECRUITMENT FOR C3:*** Notices of the program will be sent to all superintendents, assistant superintendents, and elementary principal in participating school districts with high-needs campuses that are low-performing

schools first, then other like campuses in districts across Texas and the nation via our extensive school database from the ELRC and with MDR (for the training) will be invited to participate and partner. ***Objective 1:*** To evaluate the effectiveness of C3 SET Intervention, a cluster RCT design will be employed with 20 eligible elementary schools. Over the five years, two cohorts of 10 failing Texas schools per every two years will be randomly selected. In each cohort, 2 schools in a pair will first be matched on the STAAR test scores at the school level. Within the pair, schools will be randomized to T or C conditions (i.e., business-as-usual/typical practice; 5 in each condition ***and measured by*** student achievement data pre and post intervention on state assessments of STAAR with an expected effect size of 0.15 in favor of T student achievement). ***Objective 1a.*** To conduct a longitudinal RCA (RCA items for review in Appendix J15) at each campus (T and C) ***as measured by*** the number of RCA reports by an external team for RCA with school observations, focus group interviews, and trend data review. ***Objective 1b.*** To provide and assess the effectiveness of Summer Leadership Institutes on school turnaround for 350 school leaders from failing schools each summer ***as measured by*** an SLI pre-post assessment and a follow-up qualitative survey on application of the lessons learned (10% knowledge growth pre-post SLI assessment). ***Objective 1c.*** To determine the efficacy of (a) instructional leadership VPD with the leadership team two hours per month to build their leadership capacity ***as measured by*** pre-post VPD MOOPIL assessments analysis (10% growth) and interviews with the leadership team members [qualitative], (b) how the leadership team builds instructional leadership capacity via observing teachers collectively virtually and provide immediate real-time feedback to teachers via bug-in-the ear device VMC model (see Appendix J17) ***as measured by*** interviews with the leadership team (qualitatively analyzed), and (c) the AI DPSS to predict the school rating and identify the students who need assistance with specific subject areas in the accountability system

as measured with interviews of the leadership team on the campus for level of usability [qualitative]. ***Objective 1d.*** To determine the efficacy of 5 hours of virtual leadership coaching per month ***as measured by*** coaches fieldnotes (qualitative) and open-ended surveys of the leadership team (qualitative). ***Objective 1e1.*** To determine the one-year impact of SET intervention ***as measured by*** students' achievement on the state STAAR exam collected on 2023 G3 students' STAAR scores (before intervention) as baseline, and 2024 STAAR G4 scores after one-year intervention (anticipated effect size of 0.15 in favor of T). ***Objective 1e2.*** To determine the two-year impact of SET intervention ***as measured by*** students' achievement on the state STAAR exam collected on 2023 G3 students' STAAR scores (before intervention) as baseline, and 2025 STAAR G5 scores after two-year intervention. Same objectives will apply for the next 10-school turnaround cohort (anticipated effect size of 0.15 in favor of T). **OUTCOME:** An RCT (***WWC studies 2 and 3***) with a university/school partnership that provides support and training to the school leadership teams so that they can be successful turning the school around with intervention of **SET with VPD+VMC+Leadership Coach+DSPP**. **REPLICABLE ACTIVITIES**: SET Leadership Intervention on high-needs underperforming campuses offers a model to bring a school out of failure and improve student achievement. ***Objective 2:*** To determine leadership differences between the pre and post 12-step training SET training during the SLI for 350 school leaders (different leaders annually) across Texas ***as measured by*** the Organizational Leadership and Effectiveness Inventory (OLEI published out of the ELRC, 2021) with a 10% leadership change. **OUTCOME:** The difference between pre and post of the SET training. Paired *t*-test will be adopted to analyze participants' growth over time. **REPLICABLE ACTIVITIES**: A SET, PD Preparation model for leadership teams is shared and disseminated. ***Objective 3:*** To determine if there is growth for all participants' knowledge and transfer of learning on a pre- to post- assessment

as ***measured by*** Transfer of Learning Assessment after engagement in the SET program with 80% of the participants demonstrating growth. Transfer of learning refers to the application of the knowledge, skills, and attitudes gained in the training environment to the job context (Nafukho et al., 2017; Baldwin & Ford, 1988; Burke & Hutchins, 2007; Macaulay & Cree, 1999). **OUTCOME:** Trained school leaders who have *up-to-date, just-in-time* information on topics related to school enhancement. **REPLICABLE ACTIVITIES:** The AI DSPP will be shared widely in sustained SLIs. ***Objective 4:*** To review and compare (Campus Improvement Plans) CIPs among the 10 schools per cohort in Texas in the RCT— the strategic planning process will be taught—current CIPs will be reviewed and new ones will be initiated. In the Fall, the participant groups will submit their CIPs and then again in the Spring—to follow through to review differences ***as measured by*** a CIP rubric will be used to analyze them (see Appendix J16), with the T schools having greater gains than do the C schools on the rubric. **OUTCOME:** A processed CIP with a strategic plan for completing and following through on it and monitoring it. **REPLICABLE ACTIVITIES:** CIP process is posted for leaders to access. ***C3. Project is Appropriate To, and Will Successfully Address, Needs of Target Population.*** RAISE, as described, is developed to address the needs of near failing and failing schools, particularly due to the COVID-19 lag. Leaders will receive professional development and in-depth mentoring and coaching, which will enhance their instructional leadership knowledge and use of evidence-based school enhancement and turnaround strategies. RAISE addresses the needs of growing a diverse leadership pool for underperforming schools by providing strategic supports for school leaders to build leadership capacity through these three primary components: (a) providing high-quality leadership preparation via a principal residency program, (b) providing evidence-based PD via

MOOPILs and VPLCs that target the needs of the students they serve, and (c) providing evidence-based school turnaround activities.

D. Quality of The Project Evaluation

The evaluation will be conducted externally by JHU's CRRE, which will have responsibility for formative and summative evaluation with RCT, QED, one-group and pre-post design, both quantitatively and qualitatively. CRRE will also conduct scientifically-based research (presented later) and assess ***overall the objectives-based and management-oriented evaluation plan*** that is presented under four main categories: (a) Program Management, (b) Academic Program, (c) School & District Relations, and (d) Project Director ***(is the PI)***. The plan has overarching evaluation questions, with five elaborations for each question: (a) What evaluative criterion will be used?; (b) Who has direct responsibility for answering the question? (ES=evaluator; PD=project director/principal investigator; M=mentors; P=professors; PC=program coordinators; SL=school leadership students); (c) What measurement method will be used? (IQ=interview/questions; D=documentation; QC=Quality check; LR=log record of events; DO=Direct Observation; S=standardized measure); (d) What main purpose will be served by the evaluation? (I=improve; V=verify; D=document; P=planning; Dis=dissemination); (e) On what schedule will the evaluation take place (C=continuous; Pre=prior to project; Post=end of project; M=monthly; W=weekly; S=semester; 2y=two times per year)? After each question are answers to the questions above abbreviated as indicated above with "/" separating questions b, c, d, and e. See Figure 9.

Figure 9. Overall Objectives and Management-Based Evaluation Plan

Program Management. 1.Are school leaders successfully recruited in a fair and unbiased manner and are they recruited with respect for traditionally under-represented students to join in RAISE? (PD;PC/D/D/Pre;S) 2. Are individual campuses utilized for field-based research and are the projects efficiently conducted and maintained? (PD;P;PC/QC/D;I/S) 3. Are Mentors/Coaches successfully oriented to program? (PD;PC;P/DO/I/Pre) 4. Are effective accounting/purchasing/payroll procedures established in a timely manner? (PD/D/D/Pre) 5. Is high morale and collaborative spirit maintained in RAISE? (PD;PC/DO/I/C) 6.

Are reasonable Monthly program goals set by PI(Program Director), and is goal progressed assayed, monitored, and publicized? (PD; PC/D/I; P/M)
Academic Program. 1. Do participants maintain high academic achievement in program courses? (PD;PC;P;SL/D/D/C) 2. Do participants demonstrate skills in key program content objectives: transfer of effective theory and practice into field-based experiences, classroom-based and language application, study skills /learning/leadership/ instructional feedback strategies for developing PLCs? (PD;PC; P;SL;M/S/ DO;D) 3. Do participants demonstrate skills in collaboration/consultation with teachers, students, and parents? (PD;PC;M/D;DO;QC/D/S) 4. Do participants demonstrate skills in leadership? (P, SL/DO/D; DIS/S) 5. Do project leadership candidates demonstrate sensitivity to the participants? (PD; PC;SL M/I;DO/I;V/C) 6. Do the leaders in training on campuses demonstrate peer-supervision or coaching skills? (PD; PC; M/ I; DO/I; V/C). 7. Do graduates have an impact on the student achievement scores and on parent/family/community involvement on the campus through efforts they made in leadership? (PD; PC; SL,M/ I;DO/I;V/C) 8. To what extent do participants pass the state certification exams and how quickly are they placed into leadership positions within one year from graduation? (ES PC;SL,M/I; DO/I;V/C). 9. Is all PD aligned to state standards? (PD; PC; M/ I; DO/I; V/C)
Project Director. 1. Are program existence, design, and accomplishments effectively publicized throughout Texas? (ES/D/V;DIS/2Y) 2. Is RAISE existence, design, and accomplishments effectively publicized throughout the region and nation? (ES/D/V;DIS/2Y) 3. Do participants become more successful and influential EL & EC leaders and advocates for these children? (ES;PD;PC/IQ;D/V;DIS/S) 4. Is each objective accomplished in the grant? (ES;PD;PC/IQ; D;DO;LR/V;D;DIS/Post—after each objective's timeline).
School & District Relations.1. Does RAISE respect and follow school and district procedures? (PD;PC;P/D; LR/D/S) 2. Does RAISE help support school and district program goals? (PD;PC;P/D;LR/D/S) 34 3. Is effective and timely communication established and maintained with school principals, mentors, project participants, and faculty ? (PD;PC;P;M/D;LR/D/S) 4. Do school programs benefit from collaboration with University on-site training/ mentoring as part of the campus residency program? (PD;PC;P/D;LR/D;P/S) 5. Are all campus curriculum aligned with the state standards on which the RAISE student works and did the RAISE students work in that alignment to improve education for the EL and ECs students? (ES;PC;P/D;LR/D;P/S)

D1. Evaluation Methods Will Produce Evidence That Meets WWC Standards Without Reservations. C1 and C3 will meet WWC standards. For ***C1*** leadership residency program, we will use a clustered QED where we will recruit 60 schools as treatment group and another set of 60 matched by the percentage of ELs and EC students and initial school scores on the STAAR and TELPAS rating, as the control group (20 in each cohort in each condition; 1 member per campus; three cohorts in total with no repeated campus). In this manner, there will be no contamination of both conditions on the same campus; therefore, we address the issues of a design flaw noted by Song and Herman (2010) by separating out the intervention from the campus effects since the campus will not be involved in both conditions. Baseline equivalence will be compared and

controlled for. School- and student-level demographic data will be collected including: ethnicity (school-level percentage/ member/ student-level), gender (school-level percentage/ member/ student-level), socioeconomic status (school/student), regional classification (e.g., rural, urban, suburban), language spoken at home (student), certification (school-level percentage), demographics of teachers (school-level percentage), and inclusion student or not. Because the schools will be the unit of randomization and we are also interested in collecting data from their students (who are nested in each school) as one outcome to evaluate the efficacy of the residency program, we will use HLM to justify the nested structure, as recommended by WWC 4.1. To be specific, via the cluster QED design and HLM analysis, we examine the efficacy of the students' reading achievement measured by the high-stakes test STAAR-reading with students' G3 STAAR reading scores as the baseline and G4 and G5 STAAR-reading as the outcome. Baseline equivalence will be examined and reported following WWC baseline equivalence guidelines. This is ***RAISE WWC study 1*** that we expect to generate evidence that meets WWC standards with reservations. For ***C3 school turnaround program***, we will use a cluster RCT design where schools will be randomly assigned to either treatment or control condition. We plan to recruit 350 Texas schools and randomly select 20 schools (10 per cohort with 2 cohorts) for randomization. Schools will be matched, as a pair, based on the percentages of ELs and ECs and ranking the school level. Within the pair, schools will be randomized to T or C conditions (5 in each condition). The integrity of such assignment will be maintained because when a school is assigned to receive T in fall 2023, then this school will continue to receive T in the subsequent years till summer 2025. We will follow the same procedure for C schools. In this manner, there will be no contamination of both conditions on the same campus. This is the first cohort. The same randomization and intervention will be provided for the second cohort starting in fall 2025 till summer 2027. The

same school-, teacher-, and student-level demographic data will be collected, as indicated in RAISE WWC study 1. Because the schools will be the unit of randomization and we are also interested in collecting data from their students (who are nested in each school), we will use HLM analysis. Over the 2 years, the same students who entered grade 3 in fall 2023 in 10 schools will be monitored on their reading performance measured by the state high-stakes test – STAAR reading, when they advance to G4 in 2024 and G5 in 2025. To examine one-year intervention effect, students' G4 STAAR reading achievement will be the outcome with their G3 STAAR reading as the baseline (***RAISE WWC study 2; for both cohorts***). To examine the two-year intervention effect, students' G5 STAAR reading achievement will be the outcome with their G3 STAAR reading as the baseline (***RAISE WWC study 3; for both cohorts***). Baseline equivalence will be examined and reported following WWC baseline equivalence guidelines. We expect both ***RAISE WWC study 2*** and ***RAISE WWC study 3*** to generate evidence that meets WWC standards without reservations. Therefore, Project RAISE includes three WWC studies that will generate evidence to meet WWC standards. Please note that C2 does include an RCT, and it is rigorous; however, it will not be based on student outcomes; therefore, we have not included it in the WWC studies herein. ***D2. Evaluation Will Provide Guidance About Effective Strategies for Replication or Testing.*** RAISE replicable activities include providing VPD for developing leaders for high-needs campuses, sharing an M.Ed. leadership PD curriculum via ELRC website, scaling up research-based leadership resident program, sharing low-inference observation scale (e.g., POP) that can assist in providing specific feedback to teachers, posting a residency manual with supportive VMC activities for leading learning, sharing 60 parent/family and community engagement plans, PD plans, and turnaround strategy plans. Other principal preparation programs can replicate RAISE findings, sharing developed leadership MOOPILs statewide and nationally,

introducing VMCs to enhance PLCs, placing 125 MOOPILs on TAMU Canvas, and promoting the SET Intervention and AI DSPP platform. The research-based products include VPD, VMC, PCLs, SET, MOOPILs, AI DSPP, and POP. The evaluation rubrics will also be launched and shared with the research-based products. We will disseminate our findings and strategies through research and practitioner publications and presentations, webinars and institutes, implementation manuals, and social media outlets. The sustainability plan will be based on anticipation of positive results from the QED and two RCTs that will meet WWC standards without reservations. ***D3. Evaluation Plan Clearly Articulates Key Project Components, Mediators, Outcomes, and Measurable Threshold for Acceptable Implementation.*** JHU will examine outcomes through valid and reliable outcome measures aligned with the confirmatory and exploratory research questions on the outcomes of Project RAISE (see Appendix J18). Project RAISE includes the following measures: (a) POP ([redacted] & [redacted] et al., 1994) utilized for analyzing observation data of students. IRR using Gwet's (2012) AC_1 coefficient is reported to range from .724 to .945 ([redacted] et al., 2020); (b) the state-mandated, standards-aligned assessment of TELPAS (reliability 0.85-0.91) to measure ELs' English language proficiency; (c) BISA is curriculum-based and formative assessment aligned with state and national standards and is embedded in instruction to provide timely feedback for purposes of adjusting instruction to improve learning (concurrent validity=0.754; [redacted] et al., 2018); (d) the state-mandated, standards-aligned assessments of STAAR, including reading (GR. 3-5). STAAR measures academic progress of all students. According to *Technical Digest 2018-2019*, the reliability of STAAR grades 3-5 reading ranges from 0.89 to 0.90 (TEA, 2019); (e) MOOPIL Pedagogical Knowledge Assessment is a valid instrument for measuring teachers' pedagogical knowledge gained from MOOPIL. Its internal consistency, as reported in Cronbach's alpha, ranges from .50-.86 (Lynch et al., 2021) at module

level; (f) Teachers' knowledge, skills, and attitudes gained in the training environment to the job context will be measured via Transfer of Learning Survey (Nafukho et al., 2017). The Cronbach's alpha values ranged from .64 to .91 across factors. The overall reliability coefficient was .856 for the entire instrument (Nafukho et al., 2017); (g) ELs and ECs' self-esteem in learning English literacy will be measured by SEI ([redacted] et al., 2011) with internal consistency of 0.64; and (h) SLI assessment with internal consistency ranging from .85-.89. **Goal 1. *Component 1: Urban Leadership Residency Program.*** **Objective 1.1:** *Exploratory RQ 1.1* What is the number of recruited school leaders who obtain an advanced credential with an M.Ed. (online) with an emphasis on instructional leadership? *Analysis:* To answer RQ 1.1, the number of counts will be documented through descriptive statistics to calculate the percentage. **Objective 1.2:** *Exploratory RQ 1.2* What is the number of hours provided by a replicable urban campus-level practicum residency, mentoring/coaching model for the aspiring instructional leaders? *Analysis:* Descriptive statistics, see RQ1.1. **Objective 1.3:** *Confirmatory RQ 1.3a* To what extent do ELs and EC students differ between T and C on G4 reading achievement measured by STAAR Reading, controlling for their G3 STAAR reading scores, after the residency members receive one-year intervention? **Objective 1.3:** *Exploratory RQ 1.3b* To what extent do ELs students differ between T and C on Grade 4 English language proficiency measured by TELPAS, controlling for their G3 TELPAS scores, after the residency members receive one-year intervention? *Analysis:* To answer question 1.3a and 1.3b, we will use an HLM to analyze the treatment effects on Grade 4 students scores after the one-year of intervention. Students will be the level-1 unit of analysis, with pretest score as covariate. School as a level-2 unit of analysis. The condition of T or C will be included as a level-2 predictor as school is the unit of randomization. A simple presentation of the model follows: $Y_{ij} = \gamma_{00} + \gamma_{01} treatment_j + \gamma_{10} grand\_pretest_{ij} + u0j + r_{ij}$, in which the fixed effect Y_{00}

represents the average score in a school with e_{ij} representing deviation of the individual student score from the school mean; Y_{01} represents the main effect of the treatment. The level-2 model involves a school random effect u_{0j} associated with the intercept γ_{00} to account for the clustering effect of schools. Y_{ij} is the outcome (i.e., Grade 4 STAAR reading for 1.3a; G4 TELPAS for 1.3b). The analysis will be repeated for three cohorts. **Mediation question**: *Exploratory RQ 1.3b1* Is the treatment effect on students' achievement in STAAR reading mediated by their teachers' quality of instruction? We will conduct an exploratory analysis to evaluate the potential mediation effect of teachers' quality of instruction (teacher outcome as measured by POP). Analysis: HLM will be conducted by adding teachers' quality of instruction on students' outcomes in reading, controlling for students' pre-intervention performance. **Objective 1.4:** *Exploratory RQ 1.4* What is RAISE candidates' knowledge gained to use POP to observe classrooms and provide feedback to improve instruction/build teachers' capacity? *Analysis:* Descriptive analysis of the rubric feedback form collected from RAISE candidates for examining their mastery. **Objective 5:** *Exploratory RQ 1.5a* To what extent do RAISE candidates' recruited students gain from pre- to post-test in science as measured by curriculum-based researcher-developed literacy-infused science assessment – BISA, after attending the summer bridge residency program? *Exploratory RQ 1.5b* To what extent do RAISE candidates' recruited students gain from pre- to post-test self-esteem in English language and literacy as measured by SEI, after attending the summer bridge residency program? *Analysis:* For RQs 1.5a and 1.5b, paired *t*-test for identifying differences between pre- and post-tests.The analysis will be repeated for three cohorts. **Objective 6:** *Exploratory RQ 1.6a* What is the quality of 60 parent/family and community engagement plans, as evaluated by a researcher-developed rubric? *Exploratory RQ 1.6b* What is the quality of 60 campus PD plans, as evaluated by a researcher-developed rubric? *Analysis:* Descriptive. See RQ

1.1. **Objective 7:** *Exploratory RQ 1.7* What is the quality of 60 *turnaround strategy plan*, as evaluated by a researcher-developed rubric? *Analysis:* Quantitative and qualitative analysis of the data collected via rubrics. **Objective 8:** *Exploratory RQ 1.8* What is the number of presentations and research publications disseminating the findings of the residency program? *Analysis:* Descriptive. See RQ 1.1. **Goal 2. *Component 2 MOOPILs.*** **Objective 2.1:** *Exploratory RQ 2.1* What is the number of principal and school leaders recruited and trained via 3 MOOPILs? *Analysis:* Descriptive. See RQ 1.1. **Objective 2.2:** *Exploratory RQ 2.2* To what extent do T PLCs differ from C PLCs regarding their knowledge growth in using VPD MOOPILs with PLCs? *Analysis:* Analysis of covariance (ANCOVA) for identifying differences between T and C, controlling for pretest scores. **Objective 2.3:** *Exploratory RQ 2.3* What is the number of MOOPILs produced by participants, over a five-year period, related to enhancing and turning around schools? *Analysis:* Descriptive. See RQ 1.1. **Goal 3. *Component 3 School Enhancement/Turnaround Intervention (SET).*** **Objective 3.1:** *Exploratory RQ 3.1(a)* What is the number of RCA reports generated for schools? *Analysis:* Descriptive. See RQ 1.1. *Exploratory RQ 3.1(b)* To what extent do school leaders gain from pre- to post-test in SLI assessment, after attending the SLI? *Analysis:* Paired *t*-test, see RQ 1.5a. A descriptive analysis of the survey on the application of the lessons learned. The analysis will be repeated for each SLI. *Exploratory RQ 3.1(c1)* To what extent do leaders in the T schools differ in their leadership capacity as measured by pre-post VPD MOOPIL assessment? *Analysis:* Paired *t*-test. *Exploratory RQ 3.1(c2)* What are the perceptions of the leadership team in building instructional capacity using the bug-in-the-ear feedback VMC Model? *Exploratory RQ 3.1(c3)* What is the leadership team's feedback on the level of usability of AI DSPP? *Analysis:* For RQs 3.1(c1) and 3.1(c2), qualitative analysis of interviews. *Exploratory RQ 3.1*(d) What is coaches' evaluation and leadership team's perception of the monthly virtual

leadership coaching? *Analysis:* Qualitative analysis of coaches' fieldnotes and leadership team's open-ended surveys. *Confirmatory RQ 3.1(e-1)* Do T and C students differ on accountability measures on G4 STAAR reading after one-year of intervention, controlling for G3 STAAR reading scores? *confirmatory RQ 3.1(e-2)* Do T and C students differ on accountability measures on G5 STAAR reading after two-year of intervention, controlling for G3 STAAR reading scores? *Analysis:* To answer confirmatory questions 3.1 e-1 and e-2, we will use a hierarchical linear model (HLM) to analyze the treatment effects on Grade 4 students' reading achievement after the one-year of intervention. Students will be the level-1 unit of analysis, with pretest score as covariate (e.g., G3 STAAR reading). Same HLM will be applied, see RQ 1.3b, with Yij as the outcome (i.e., Grade 4 STAAR reading for question 3.1e-1; G5 STAAR reading for question 3.1e-2). **Objective 3.2:** *Exploratory RQ 3.2* To what extent do 350 school leaders gain (e.g. leadership differences) from the 12-step training of the SET Intervention as measured by the OLEI at the beginning and end of two-year intervention? *Analysis:* Paired t-test. **Objective 3.3:** *Exploratory RQ 3.3* To what extent do participants gain in the training environment to the job context as measured by Transfer of Learning? *Analysis:* Paired *t*-test. **Objective 3.4:** *Exploratory RQ 3.4* Is there a difference between T and C campuses on the CIP? *Analysis:* CIP will be analyzed qualitatively via document analysis. ***D4. Evaluation Methods Will Provide Performance Feedback and Permit Periodic Progress Assessment.*** As indicated in D1 and D3, we will utilize a variety of valid and reliable quantitative and qualitative instruments that will produce solid data that will be analyzed by the external evaluators regularly. These results will be shared with the project team and the AB members each year for review and feedback to assess the progress of the project. Based on the results and feedback, we will make adjustments as needed.

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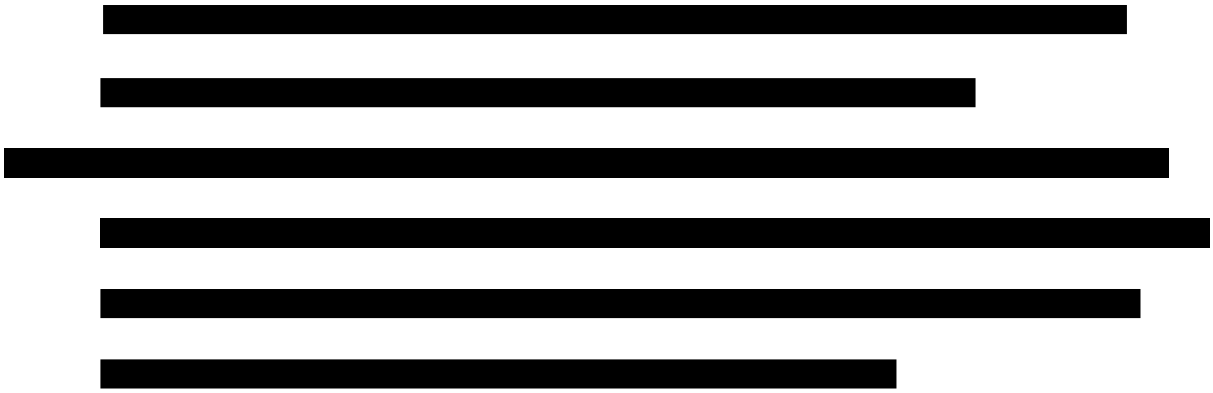

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