

Supporting Educators’ Academic Literacies and Enhanced Discourse (SEALED) Table of Contents

Absolute Priority 1: Supporting Effective Teacher Development in schools with high concentrations of high-needs students

Evidence of Effectiveness (Absolute Priority 1 and Competitive Preference Priorities 1 & 2)

Section A: Significance

A (1) Significance at the National Level: Contribution to Theory, Knowledge, & Practices

Section B: Project Design and Services

B (1) Goals, Objectives, and Outcomes

B (2) Professional Development to Support/Develop Teachers in High-Needs Classrooms

Competitive Preference Priority 1: Promoting Diversity in the Educator Workforce

Competitive Preference Priority 2: Support for Personalized Learning Environments

Section C: Management Plan and Personnel

C (1) Qualifications of Project Personnel

C (2) SEALED M.S. Ed. Programs

C (3) Management Plan

C (3.1) SEALED Project Initiation

C (3.2) Achieving SEALED Aims and Goals

C (3.3) Data Analysis and Dissemination

C (4) Resources to Carry Out the Project

C (5) Disseminating Results and Outcomes

Section D: Project Evaluation

D (1) Methods of Evaluation

D (2) Objective Performance Measures

D (3) Periodic Assessment of Progress

D (4) Evidence about Project Effectiveness

Absolute Priority 1: Supporting effective Teacher Development in Schools with High Concentrations of High-needs Students

The University of Miami (UM) is located in a highly diverse metropolis, also known as the “Gateway to the Americas.” Miami-Dade County Public Schools (M-DCPS) is the fourth largest school district in the U.S. serving more than 356,000 students. The number of K-12 students learning English as an additional language continues to increase annually as Miami is home to the largest number of foreign-born residents in the U.S. (Florida, 2015). These facts are reflected in M-DCPS student demographics (7% White, non-Hispanic, 21% Black, non-Hispanic, 70%

Hispanic, and the remaining 2% Asian, Native American, or multiethnic K-12) (M-DCPS Highlights, 2016-17). Currently 20% of M-DCPS' students are classified as English language learners (ELLs), 22% are served in Exceptional Student Education for a primary exceptionality (Special Education [SpEd]), and 70% qualify for free- or reduced-priced lunch programs. Teachers throughout M-DCPS serve high-needs populations (H-NPs), which are defined as culturally and linguistically diverse students receiving or recently exited from English for Speakers of Other Languages (ESOL) services, and/or students receiving SpEd services.

The University of Miami (UM) and Miami-Dade County Public Schools (M-DCPS) have a long history of partnership efforts to develop effective educators. The Supporting Educators' Academic Literacies and Enhanced Discourse (SEALED) project builds on a previously funded project between the two partners (Avalos, 2001; RESSULTS), which featured an Applied Graduate Education (AGE) model (Blackwell & Diez, 1998; 1999; Diez & Blackwell, 2001; Galluzzo, 1999) for teachers enrolling in a Master's in Education degree program (M.S. Ed.) at UM. For this AGE model, UM faculty conducted graduate courses at school sites and there were two M-DCPS Curriculum Support Specialists (CSSs) funded by RESSULTS that coached and supported M.S. Ed. program-enrolled teachers in their actual K-12 classrooms with the implementation of practices discussed in graduate courses.

The SEALED project will also use an AGE approach to accomplish three goals (Table 1) with the assistance of SEED funding to support educator development. The SEALED project will offer teachers in M-DCPS 6th-12th grade classrooms support for implementing effective academic literacy instruction using the work of Lesaux and colleagues (Lesaux, Kieffer, Faller, & Kelly, 2010; Lesaux, Kieffer, Kelley, & Harris, 2014), and for increasing student

Table 1. SEALED Project Goals

Goal 1- To increase the number of diverse and highly qualified teachers in high-needs secondary schools to improve academic achievement and engagement in school and community;

Goal 2- To increase teachers' knowledge and use of: data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning for H-NPs;

Goal 3- To support and enhance teacher facilitation of their secondary H-NPs' engagement with school and community.

engagement using the CLASS-S™ and MyTeachingPartner™ (Allen, Pianta, Gregory, Mikami, & Lun, 2011), both of which meet the *Moderate Evidence of Effectiveness* as defined by the What Works Clearinghouse (WWC). Thus, M-DCPS teachers serving H-NPs will have the opportunity to participate in a sustained professional development program that embeds, builds, and bridges knowledge of theory and research with practice in their own 6-12 classrooms over two years. Specifically, 120 teachers in schools with high concentrations of H-NPs will have the option of enrolling in one of three UM M.S. Ed. programs: 1) Education and Social Change, 2) Special Education, or 3) Teaching English to Speakers of Other Languages (TESOL). The three M.S. Ed. programs all emphasize the use of data-driven instruction, academic language/literacy and culturally responsive practices, student engagement, and problem-based learning. The graduate courses will be offered as hybrid (online and face-to-face) or face-to-face courses in M-DCPS schools and/or on the UM campus. A quasi-experimental design will be used to evaluate project effectiveness, with two district CSSs supporting a group of randomly selected participating teachers (selected by the UM project PIs and Evaluator) with the emphasized practices and WWC-identified approaches listed above embedded within the M.S. Ed. programs.

The SEALED initiative addresses the following Absolute and Competitive Priorities:

--Absolute Priority 1: Supporting Effective Teachers in Schools with High Concentrations of High-needs Students: b) Providing professional development activities to current teachers that will

improve pedagogy or content knowledge; and c) Providing professional enhancement activities to teachers, which may include activities that lead to an advanced credential.

--Competitive Preference Priority 1: Promoting Diversity in the Educator Workforce: a) Providing educator development activities designed to improve cultural competency and responsiveness skills that contribute to an inclusive school culture; and b) Improving the recruitment, support, and retention of educators from diverse backgrounds.

--Competitive Preference Priority 2: Support for Personalized Learning Environments: Improving teachers' college and career teaching strategies to: a) systematically use student data to inform instructional decisions; and b) increasing students' engagement, voice, and choice in their learning.

The SEALED project uses evidence-based and innovative methods to contribute to and inform stakeholders concerning teacher support and development, while meeting Absolute Priority 1 and Competitive Preference Priorities 1 and 2 to affect significant change for teachers with H-NPs.

Evidence of Effectiveness (Absolute Priority 1 and Competitive Preference Priorities 1 & 2)

The SEALED project primarily aims to accomplish three goals: *increase the number of highly effective teachers in schools with H-NPs by providing professional development activities to current teachers that will improve pedagogy, and provide professional enhancement activities that will lead to an advanced credential (Absolute Priority 1)*. Additionally, SEALED aims *to improve teachers of H-NPs' cultural competency and responsiveness to create a more inclusive school environment, and improve the support of educators from diverse backgrounds (Competitive Preference Priority 1: Promoting Diversity in the Educator Workforce)*. Finally, the SEALED project aims *to support teachers' use of data to inform their instruction, increase students' engagement, voice, and choice in learning using a project-based learning approach (Competitive Preference Priority 2: Support for Personalized Learning Environments)*. These primary aims will

be accomplished via a secondary aim: the recruitment and enrollment of 120 teachers serving H-NPs in M-DCPS schools to investigate M.S. Ed. programs as effective professional development (PD) for practicing teachers. The M.S. Ed. course content will provide foundational knowledge and understanding of theory and practice for all participating teachers, with targeted instructional practices assigned for teachers' classroom implementation. Teachers will be randomly assigned to two conditions: 1) the treatment condition will provide job-embedded supports for the course-based assigned instructional practices; and 2) the control condition will experience a traditional M.S. Ed., attending the same classes and completing the same assignments as the treatment teachers, without the job-embedded supports (teachers in this condition will be provided the opportunity to team-teach with coaching and feedback during a two-week summer academy as part of a final course/culminating project requirement). A Latent Growth Model (LGM) is used for statistical analyses to account for changes in practice over time and to investigate mediation effects of those changes on student achievement. The SEALED project also utilizes two WWC interventions that demonstrate *Moderate Evidence of Effectiveness* for academic literacy instruction using the work of Lesaux and colleagues (Lesaux, Kieffer, Faller, & Kelly, 2010; Lesaux, Kieffer, Kelley, & Harris, 2014), and for increasing student engagement using the CLASS-S™ and MyTeachingPartner™ (Allen, Pianta, Gregory, Mikami, & Lun, 2011).

Academic literacy instruction. Academic language is the kind of language students learn at school; H-NPs often need instructional support to successfully read and write academic texts (Fillmore & Snow, 2000; Schleppegrell, 2004). To be successful in the content areas, H-NPs need to use language in new ways, different from their interactional language (de Oliveira & Schleppegrell, 2015; de Oliveira & Yough, 2015); thus, bridges between everyday and academic language are essential for effective reading and content comprehension (Gibbons, 2006). In order for teachers to understand how language works in the disciplines, they need explicit knowledge

and practice concerning how language expresses disciplinary knowledge. Therefore, SEALED aims to develop teachers' understanding of academic language development in secondary content areas (English, Mathematics, Science, Social Studies). We focus on three dimensions of academic language within the word/phrase, sentence, and discourse (i.e., across paragraphs) levels.

For the word/phrase level, we use the tenets identified in Lesaux and colleagues' work (Lesaux, Kieffer, Faller, & Kelly, 2010; Lesaux, Kieffer, Kelley, & Harris, 2014), which showed significant effects on several aspects of vocabulary knowledge, including meanings of taught words, morphological awareness, and the word meanings as presented in expository text. Specifically, we build on three guiding tenets from Lesaux et al.'s work: 1. the promotion of deep understanding of a relatively small number of words, their elements, and semantically and morphologically related words in productive contexts; 2. the identification of instructional vocabulary words that were of high utility in nature, namely general-purpose academic words; and 3. the balance of direct teaching with teaching word-learning strategies so students develop cognitive tools to learn words independently. The intervention reported in Lesaux and colleagues' work (2010; 2014) was "designed to bring theoretically based strategic and explicit vocabulary instruction into low-performing middle school classrooms with high numbers of language minority learners" (Lesaux, Kieffer, Faller & Kelley, 2010, p. 200). **Lesaux and colleagues' work demonstrate the effectiveness of the vocabulary intervention from a study that met WWC Evidence Standards with reservations; teachers used these tenets with students and in contexts that reflect Project SEALEDs' participating teachers.**

For the sentence and discourse levels, SEALED draws on a meaning-based theory of language, *systemic-functional linguistics* (SFL) (Halliday & Matthiessen, 2004), which puts the focus on how academic language works at the sentence and discourse levels to construct and communicate knowledge in the disciplines. This goes beyond general "strategies" instruction to

provide a means of tackling content area texts, unpacking meanings clause by clause to examine how the content is presented through language, and helping H-NPs read and write in school-based genres (de Oliveira & Iddings, 2014). Zwiers (2008) refers to academic vocabulary as the “bricks,” and the SFL-related academic language features as the “mortar” of academic language; teachers need to learn about both the “bricks and the mortar” to facilitate their H-NPs’ acquisition of academic language (p. 22-23). By combining the Lesaux et al. (2010, 2014) word/phrase level vocabulary learning approach along with an SFL genre-based approach for sentence and discourse level reading/literacy instruction, the SEALED project holistically targets literacy teaching and learning to help teachers demystify academic language for H-NPs. In their SEALED graduate courses, teachers will learn about language at the brick and mortar levels to provide explicit and meaningful literacy instruction for their content area texts.

An SFL or genre-based approach to academic literacy learning is relatively new to the U.S. (see de Oliveira & Iddings, 2014), but it has experienced success with instruction for improving H-NPs’ academic literacy outcomes in Australia (Koop & Rose, 2008; Martin & Rose 2008; Walsh et al., 1990). For example, in a recent Australian qualitative study, Humphrey and Macnaught (2015) found that growth in writing outcomes was related to using genre-based methods to raise students’ metalinguistic awareness, teachers’ modeling how to read and write academic texts, and providing feedback on writing that was related to the modeled text instruction. This is also referred to as the Teaching-Learning Cycle (Martin & Rose, 2005; Rothery, 1996), which SEALED teachers will implement as assignments in their classrooms.

To date there are no studies utilizing SFL methods that meets the WWC’s evidence standards. While there have been few studies using SFL with successful outcomes in quasi-experimental or mixed methods designs, these have been carried out in Intensive English Program post-secondary contexts (Caplan, 2017), or internationally with older secondary students

(Horverak, 2016). There have not been studies using SFL or the Teaching-Learning Cycle (genre-based pedagogy) that uses quasi-experimental design with secondary teachers serving H-NPs in the U.S.; therefore, the SEALED project would be one of the first in the U.S. to investigate this holistic approach to academic language instruction in secondary school contexts using quasi-experimental methods. The SEALED project would greatly contribute not only to the knowledge base of supporting effective educator development, but also to the field of academic language practices for H-NPs.

Classroom Assessment Scoring System–Secondary™ (CLASS-S) and MyTeachingPartner™ (MTP). We emphasize the CLASS-S engagement domains of emotional support, classroom organization, and instructional support within the three UM M.S. Ed. programs’ content. The CLASS-S instrument developed for secondary schools by Pianta and colleagues (2007), and used in a study that meets the WWC standards with reservations (Allen et al., 2011), will be integrated as a research tool for documenting participating teachers’ practices over time, along with the MTP approach to professional development, integrated within the content of the M.S. Ed. programs. The CLASS-S is a standardized protocol successfully used to assess the quality of the teachers’ social and instructional interactions with students; it is based on research suggesting that interactions between adolescents and adults are the primary mechanism of fostering student development and learning. CLASS-S domains and dimensions include: (a) emotional support (climate, teacher sensitivity, regard for student perspectives; (b) classroom organization (behavior management; productivity; instructional learning formats); (c) instructional support (concept development, quality of feedback, language modeling; and (d) student outcomes (student engagement). The CLASS-S is one of the few engagement measures that has been used in a broad range of classroom contexts (i.e., rural and urban), and takes into account adolescent development and engagement needs (Hafen, Hamre, Allen, Bell, Gitomer, & Pianta, 2014). Pianta

and associates have established the face, construct, criterion and predicative validity of the initial CLASS-S instrument (Pianta et al., 2007) and has been validated as a protocol to code classroom instruction (Mashburn, Hamre, Downer & Pianta, 2006).

In addition to using the CLASS-S as a measure changes in teachers practices, it will also be used as a teacher reflection tool for graduate course-related coaching and feedback; thus teachers in the randomly selected group will receive coaching in their classrooms related to the CLASS-S content, while those not receiving job-embedded supports will receive the MTP and CLASS-S course content exposure. Using the CLASS-S as a reflection tool for real-time feedback has been used in teacher preparation programs at the University of Virginia's (UVA) Curry School of Education; however, more studies using quasi-experimental design and mixed methods to document the results would help to differentiate the value-added supports teachers experience when using the CLASS-S as a tool for reflection (Dr. Adria Hoffman, personal conversation). Also, while exposure to the CLASS-S system and MTP content (without classroom-based coaching) has produced gains in teacher-student engagement practices (Dr. Bridget Hamre, personal conversation), the SEALED project's study design will enable empirical results to distinguish the extent to which classroom-based coaching adds value to using the MTP in conjunction with a long-term comprehensive PD program. Therefore, the SEALED project's quasi-experimental design will not only contribute to additional understandings of the CLASS-S as an engagement measure in secondary classrooms with H-NPs, but also to how it can be used as a reflection tool during coaching to effectively develop teaching practices.

Section A: Significance

A (1) Significance at the National Level: Contribution to Theory, Knowledge & Practices. Improving the quality of the teaching workforce has become an imperative; however, recruiting and retaining quality teachers has become a challenge (Zeichner, 2009). Attracting high-

achieving and motivated candidates into teacher education programs, and a shortage of quality teachers in high-needs schools has been the challenging reality for districts nationwide. At the same time, the U.S. is experiencing a “critical time for teacher education” with questions around college and university teacher preparation programs’ (U-TPP) effectiveness in preparing high-quality teachers for today’s complex classrooms, and non-university programs with market mentalities receiving more support and resources to do so (Zeichner, Payne, Brayko, 2015, p. 122). Traditional U-TPPs are known for emphasizing academic knowledge for educator development, with teacher candidates bearing the responsibility of translating that academic knowledge into practice. To date, little empirical work has been done to investigate the M.S. Ed. as an approach for continuing PD that supports teachers to increase student achievement outcomes (Cochran-Smith, Feiman-Nemser, McIntyre, & Demers, 2008; Cochran-Smith & Zeichner, 2005; National Research Council, 2010). The SEALED project aims to build on a previously funded project that used an AGE approach to teacher development (Avalos, 2001), as well as additional work to transform M.S. Ed. programs (Galluzzo, Isenberg, White, & Fox, 2012; Zeichner et al., 2015). A quasi-experimental study design is used to investigate the extent to which M.S. Ed. degree programs effectively develop educators serving H-NPs. This work is timely and important as teacher preparation programs, in general, have not focused on including the specific personal attributes, needs, knowledge, and skills required of teachers in urban schools (Haberman, 1995; Hollins, 2012; Whipp & Geronime, 2015). This work is also timely and relevant due to the critical shortages of ESOL- and SpEd-certified teachers. Additionally, the increasing number of reformer-based teacher certification pathways are placing teachers in H-NP classrooms with minimal to no preparation in the field of education, pedagogy, or understanding of adolescent development (Zeichner, 2009). Regardless of teacher preparation background, most teachers in urban schools are often under-prepared to work with H-NPs (Lucas & Villegas, 2011; Sharma et al., 2014), thus

the SEALED project is needed to investigate and document the development and implementation of hybrid spaces for university/district partnerships to support, develop, and retain highly qualified teachers in urban contexts, as well as the impacts of these efforts on H-NPs' achievement outcomes. The SEALED project builds on previous work to make important contributions to urban teacher development with a focus on improving academic achievement and engagement for secondary H-NPs'; in addition to targeted instructional practices, culturally responsive and engagement practices will be emphasized throughout SEALEDs' academic content and practical applications for teacher development.

Culturally responsive practices. In a study with practicing teachers in urban schools, Cavendish and Espinosa (2013) reported a need for greater preparation in culturally responsive instructional practices for personnel working in culturally and linguistically diverse (CLD), urban schools. Additionally, PD has identified potential practices to improve educational opportunities for CLD learners (NCCRES, 2005). The importance of teachers' skill in culturally responsive instruction is also supported by data from the National Education Association that indicates when students are taught with culturally responsive techniques and content-specific strategies, they make significant academic gains. Teachers must first value their H-NPs' experiences in order to provide meaningful instruction that builds on what students know; changing teacher practice to build on diverse backgrounds and distinct language and literacy learning needs requires teachers to understand their students' in- and out-of-school experiences to ultimately foster engagement and positive identities in schools and community (Bryson, 2014; Genessee, Lindholm-Leary, Saunders, & Christian, 2005; Ladson-Billings, 1995; Lawson & Lawson, 2013). There is also a need to acknowledge and validate different cultural, communication, and background experiences from that of the typical teaching populations' backgrounds (Knight & Wiseman, 2005). The SEALED project incorporates a validated protocol, the RTI Effectiveness Model for ELLs

(*REME*; Hopewell & Hoover, 2012) to measure teacher’s supportive literacy instruction and culturally responsive practices. The *REME CLD Literacy Teaching Guide* and observation protocol includes instructional practices grouped within five major categories: 1) accessing prior knowledge and connecting new content, 2) development of multisensory supports to aid in access of new concepts, 3) strategies to meet varying language and literacy levels, 4) culturally responsive practices, and 5) differentiated core literacy instruction. The *REME* protocol has been used in the U.S. DOE Office of Special Education Programs (OSEP) Model Demonstration Projects. The features are: 1) development of strengths-based, responsive learning environment that validates students’ diversity as assets and resources for learning and 2) the implementation of evidence-based practices with data-based decision making to promote language and literacy development (OSEP, 2015).

Student engagement. Facilitating student engagement is a critical skill for secondary teachers working with H-NPs. Federal reports have identified failure to graduate from high school as a national problem (e.g., Hartman, Wilkins, Gregory, Gould, & D’Souza, 2011); and, historically, graduation rates have been lowest for CLD youth and students receiving SpEd (National Center for Education Statistics, 2009). Poor graduation rates reflect potentially decreased opportunities for post high school education and employment (e.g., Gaumer Erickson & Morningstar, 2009). However, research has identified student engagement as one of the factors that contribute to students’ achievement, graduation, and positive post-school outcomes (Fisher, Frey, & Lapp, 2011; Kortering & Christenson, 2009). Research has also demonstrated that supportive class environments can enhance student efficacy and engagement (Patrick, Ryan, & Kaplan, 2007). Further, teacher facilitation of student engagement has been described as relevant to fostering school commitment and self-determination and positive school outcomes both across gender and cross-culturally (Gibson & Bejinez 2002).

Student engagement can be facilitated through supportive interaction among school faculty and students (Cavendish, 2013). As student engagement is related to likelihood of graduation and consequently postsecondary education and employment opportunities (National Research Council, 2004), facilitating student engagement for H-NPs may be key to improving students' outcomes. Integrated within the graduate programs' curricula, the SEALED project draws on the transactional model of student engagement (Lawson & Lawson, 2013) that includes components for identifying and facilitating: student dispositions/drivers of engagement, classroom and school conditions or contexts of engagement, and acts of engagement.

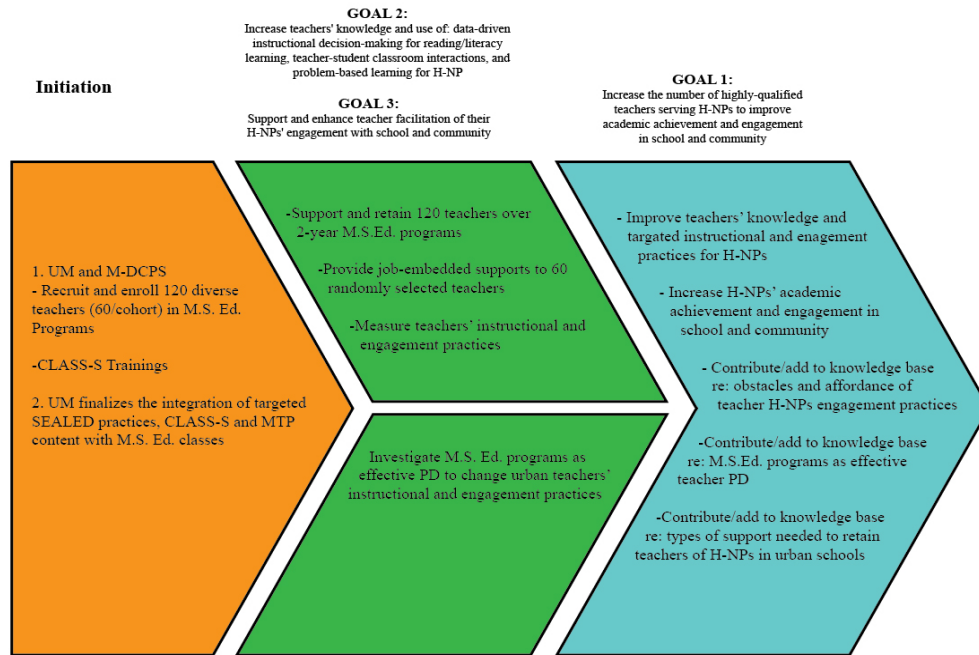
Specifically, elements to facilitate engagement identified in a student's environment include meaningful academic tasks as well as a connection between student and faculty, collaboration with other students, a supportive learning environment that yields to the student a level of agency, and culturally responsive activities (Bryson, 2014). In addition to the CLASS-S and MTP protocol systems previously described, the SEALED project will utilize the Student Engagement Inventory (SEI; Appleton & Christenson, 2004) as a measure of student engagement. The SEI consists of 35 items that are scored on a 4-point Likert scale. The SEI was validated with over 1,900 diverse 8th and 9th grade students. Appleton et al. (2006) found appropriate convergent and discriminant validity of the six-factor scale, which consists of student-teacher relationships, peer support for learning, future aspirations and goals, family support for learning, and extrinsic motivation. Confirmatory factor analysis of the six-factor scale included model fit values of .95 and the reliability of items comprising each of the six factors ranged from .72 to .88 (Appleton et al., 2006). Notably, the SEALED project will inform the knowledge base concerning PD for teachers of H-NPs and outcomes related to its goals of changing practices around engagement, culturally responsive practices, and instruction in secondary urban schools. Additionally, the project will contribute significantly to the field's understanding of teachers' and H-NPs'

perspectives, as well as the obstacles and affordances experienced while shifting practices towards a more engaged approach to teaching and learning in urban secondary schools.

Section B: Project Design and Services. The SEALED project’s theory of change (Figure 1) initiates with project partners working to recruit and enroll 120 M-DCPS secondary teachers serving high concentrations of H-NPs to one of three UM M.S. Ed. programs, and also attending the CLASS-S trainings. The UM faculty on the project will also finalize the integration of the CLASS-S and Lesaux and colleagues’ content within the three M.S. Ed programs to ensure the content is equally addressed across the three programs. The SEALED project has two specific aims: 1) supporting and investigating effective educator development and learning for H-NPs, and 2) investigating M.S. Ed. programs as effective teacher PD, which combine to enable multiple outcomes in meeting Goal 1.

Supporting and investigating effective teacher development. Sixty practicing secondary teachers will be recruited district-wide to begin one of three UM M.S. Ed. programs in January 2018 (Cohort 1) and the remaining 60 teachers will begin the M.S. Ed. programs in August 2018 (Cohort 2). Project personnel at UM will randomly select a total of 60 teachers (30/cohort) to be included in the coaching condition; the remaining teachers will be placed in the no-coaching condition. According to colleagues working with teachers using the CLASS-S, in previous studies, all teachers experienced gains in student engagement and achievement, with

Figure 1. Theory of Change



and without coaching (Hamre, Berlin, and Hoffman, personal conversations); thus, it is expected that all teachers learning the CLASS-S content through their graduate courses will improve their knowledge/practices for the CLASS-S-related content integrated within the courses. All participating teachers in both conditions will be observed and/or turn in video-recorded lessons as graduate course assignments ($N = 3$ lessons) throughout their two-year M.S. Ed. program for analyses and coding using multiple measures to determine the extent to which their practices change over time (see Section D). M.S. Ed. assignments that include reflections, questionnaires, and interviews of teachers' perspectives will also be used as data sources to document changes in teacher development over time. Increased academic achievement and engagement by secondary H-NPs will be measured by pre/post student achievement results, analyses of secondary H-NPs' work samples as part of class assignments, and multiple classroom-based measures, including Lesaux and colleagues' work, the CLASS-S, a Student Engagement Inventory (SEI), and the REME to meet primary goals and to document how teachers are implementing targeted practices

assigned in graduate courses. A secondary aim associated and integrated within the SEALED project includes an empirical study of M.S. Ed. degree programs.

Investigating M.S. Ed. programs. Zeichner and colleagues (2015) posit that among other stances, *the transformers* advocate for significant changes to the traditional U-TTP for improving teacher preparation (p. 122). The SEALED project aligns with a transformer approach as partners create a hybrid space for effective educator development (Zeichner et al., 2015). Moreover, as in Zeichner and colleagues' (2015) work, we also advocate for equal distribution of expertise across this hybrid space to instill and create mutual respect; participating teachers will enhance and inform SEALED project personnels' knowledge about contextual challenges and implications for the field in meeting goals and objectives, while project personnel will enhance teachers' knowledge and practices to effectively meet their H-NPs' learning needs. This shared and equal distribution of expertise will lead to further theorizing of how a transformational model of educator development can better support and retain teachers to continue building their expertise while working with H-NPs in urban classrooms. At the same time, given that improving teachers' academic literacy instruction, culturally responsive and engagement practices via data-driven and problem-based learning are important factors to promote student achievement, SEALED clearly focuses on improving teachers' skill sets to improve H-NPs' learning and engagement with school and community.

The continuum of project activities contributes to theory and practice for M.S. Ed. programs to the extent to which two M.S. Ed. models support teacher development. At the same time, all participating teachers will gain theoretical and practical understanding to improve their engagement practices using the CLASS-S/MTP. The project's goals are ultimately achieved by the logical progression of activities with formative assessments to achieve expected outcomes.

B (1) Goals, Objectives, and Outcomes. The SEALED project aims to achieve three primary goals (Table 1) with multiple outcomes to formatively and summatively inform the project team of progress in meeting objectives. The goals of the project aim to support and retain diverse teachers in targeted M-DCS high-needs secondary schools by providing professional development activities to improve their use of: data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning for H-NPs (Absolute Priority 1, Competitive Preference Priority 1). The goals also focus on increasing teachers’ knowledge and use of student engagement and culturally responsive practices through professional enhancement activities that lead to an advanced credential (Absolute Priority 1, Competitive Preference Priority 2).

Goal 1. During 2016-17, M-DCPS employed a total of 18,275 teachers who self-identified as White non-Hispanic (21%), Black non-Hispanic (25%), and Hispanic (52%); 5,503 were secondary teachers. The district experiences a high rate of teacher attrition each year. UM and M-DCPS will work together to target secondary schools with high numbers of H-NPs and SpEd students in order to recruit and enroll 120 diverse English, Mathematics, Social Studies/History, and Science teachers to one of three M.S. Ed. programs: Education and Social Change, TESOL, or SpEd. The SEALED project will target diverse teachers (for which the aforementioned M-DCPS statistics demonstrate are the majority teaching population) in high-needs secondary schools serving large numbers of H-NP and SpEd populations to support and improve teacher retention rates, thus increasing the number of highly-qualified teachers for H-NPs in high-needs schools (Absolute Priority 1). The following table aligns the objectives, outcomes, and measures for Goal 1.

Table 2. Goal 1 Objectives, Outcomes, and Measures

Objective	Outcome	Measure
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Goal 1: To increase the number of diverse and highly qualified teachers serving H-NPs in high-needs secondary schools to improve academic achievement and engagement in school and community.	-Recruit and enroll 120 teachers (60/cohort during Years 1 and 2) to enroll in the Education and Social Change, TESOL, or Special Education M.S. Ed. programs at UM;	Annual Performance Measures and Project-based Data for On-going Formative and Summative Evaluation
A: Support and develop diverse teachers in M-DCPS secondary schools	-Participating teachers serving H-NPs completing the SEALED project activities	-Percent of diverse teachers teaching high-needs schools serving H-NPs and enrolled in the SEALED M.S. Ed. programs -Cost/teacher
B: Improve engagement, teaching and learning in high-needs secondary schools	-Teachers are supported and identify as professionals who are highly qualified to teach in urban schools -Increase in H-NPs' engagement with school and community and academic achievement at the teacher level	-Pre-/Post-teacher questionnaire -Pre-/Post teacher interviews or focus group; -CLASS-S and REME measures for video-recorded lesson analyses/coding -Student SEI, work samples, and achievement data at the teacher level (EOC, FSA, Interim/Benchmark assessments, as applicable)
C: Empirically investigate M.S. Ed. degree programs' impact on teachers' practices and student learning	-Transform three M.S. Ed. programs to include coaching for CLASS-S content and MTP, and job-embedded coaching, and summer academies for bridging theory with practice in meaningful contexts -Random selection of participating teachers into a treatment (AGE) and control (Traditional M.S. Ed.) for quasi-experimental study of M.S. Ed. programs	-Pre-/Post SEALED course syllabi -Pre-/Post teacher focus groups or interviews -Teachers' video-recorded observations at 3 time points over two years (CLASS-S & REME measures) -Teacher questionnaires (four time points over two years); -Identified reflection assignments from M.S. Ed. courses -Coaching and feedback notes for AGE teachers -Student SEI, work samples, and achievement data at the teacher level (EOC, FSA, Interim/Benchmark assessments, as applicable)

Goal 2. The three UM M.S. Ed. programs include course content for the instructional approaches identified in Goal 2 (data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning for H-NP). UM PIs will ensure that Lesaux and colleagues' (2010, 2014) work and the CLASS-S/MTP

content is integrated within courses so that such revisions and existing target practices (e.g., culturally responsive teaching, data-driven instruction, and problem-based learning) are appropriately introduced, synced to align, and are revisited across programs. Teachers’ video-recorded lessons will be analyzed using CLASS-S/MTP and REME protocols at three time points across the two-year M.S. Ed. program to assess progress made towards SEALEDs’ goals and objectives. Other data sources will be integrated within the M.S. Ed. course assignments (e.g., reflections, questionnaires, interviews, student work samples), or retrieved from the M-DCPS Office of Evaluation and Research (student achievement data at the teacher level). The table below provides an overview of Goal 2 objectives, outcomes, and measures.

Table 3. Goal 2 Objectives, Outcomes, and Measures

Objective	Outcome	Measure
Goal 2: To increase teachers’ knowledge and use of: data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning for H-NPs	-Increase the instances and quality of data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning	-Teachers’ video-recorded observations with increasing instances and quality of instruction at 3 time points over two years (CLASS-S & REME measures)
A: Improve engagement, teaching and learning in high-needs secondary schools	-Teachers are supported to identify as professionals who are highly qualified to teach in urban schools -Increase in H-NPs’ engagement with school and community and academic achievement at the teacher level -Increased understanding of the various instructional supports needed by effective urban teachers in two conditions (AGE vs. Traditional M.S. Ed.) to change practices and H-NPs’ student achievement	-Teacher questionnaires -Pre-/Post-interviews with randomly selected teachers -Teacher reflections as part of the CLASS-S and MTP course assignments -Student SEI, work samples, and achievement data at the teacher level (EOC, FSA, Interim/Benchmark assessments, as applicable)

Goal 3. As explained for Goal 2 (above), M.S. Ed. program content will include engagement objectives throughout to enhance teachers’ knowledge and facilitation of engagement activities. During Year 1 (fall), project personnel will attend training for the REME protocol, as

well as trainings for the CLASS-S/MTP systems as project evaluation and teaching/ reflection tools. Teachers’ engagement practices will be measured as described in Table 4.

Table 4. Goal 3 Objectives, Outcomes, and Measures

Objective	Outcome	Measure
Goal 3: To enhance teacher facilitation of their secondary H-NPs’ engagement with school and community.	-Increase the instances and quality of engagement practices used by teachers	-Teachers’ video-recorded observations with increasing instances and quality of engagement at 3 time points over two years (CLASS-S & REME measures);
-To improve teacher-student interactions to increase K-12 H-NPs’ engagement, voice, and choice in classrooms that emphasize problem-based learning driven by the Florida Standards -To better understand the obstacles and affordances of engaging students for learning	-Teachers are supported and identify as professionals who are highly qualified to teach in urban schools -Increase in H-NPs’ engagement with school and community and academic achievement at the teacher level -Increased understanding of the various instructional supports needed by effective urban teachers in two conditions (AGE vs. Traditional M.S. Ed.) to change practices and H-NPs’ student achievement	-Teacher questionnaires -Pre-/Post-interviews with randomly selected teachers -Teacher reflections as part of the CLASS-S and MTP course assignments -Student SEI, work samples, and achievement data at the teacher level (EOC, FSA, Interim/Benchmark assessments, as applicable)

In summary, SEALED has overlapping outcomes across goals, which seek to 1) improve engagement, teaching, and learning in high-needs secondary schools using qualitative (surveys, interviews, student work samples) and quantitative methods (student engagement and achievement data; coded video-recorded lessons) to inform progress made towards achieving project outcomes over time. SEALEDs’ goals, objectives and outcomes are clearly specified, aligned, and measurable (Tables 2-4). The objectives and outcomes focus on developing highly qualified teachers through best practices for PD to enhance *and* apply teachers’ knowledge of H-NPs’ in their classrooms to increase H-NPs’ achievement and sustained engagement in schools (Absolute Priority 1; Competitive Preference Priorities 1 and 2) over a sustained time period. Finally, as a secondary aim and project outcome, SEALED empirically investigates M.S. Ed. programs as effective PD to develop highly-qualified teachers.

B (2) Professional Development to Support/Develop Teachers in High-Needs

Classrooms. Teacher PD has traditionally consisted of workshop-like models in which teachers come together to listen to and learn from experts informing them of effective teaching methods, and supposedly, to transfer the information to their classroom practice. This made PD for educators a series of disconnected, short-term workshops (Darling-Hammond, 2006; Lieberman, 1995). A recent report cites too many goals/priorities for teachers to attend to, unrealistic expectations regarding the time teachers need to adopt or implement PD goals, training events that are inappropriate in scope, size, and structure, and limited support provided to teachers, as primary reasons that teacher PD fails to create changes and improve instruction or student outcomes (Gulamhussein, 2013). Effective PD is continuous and on-going with a long-term focus, provides multiple opportunities for teachers to collaborate and contribute to the professional learning or curriculum/design, and job-embedded support for teachers in their classrooms when implementing new and different practices (Darling-Hammond, Hyler, & Gardner, 2017). International education systems that have achieved significant and widespread gains in student outcomes primarily focus on: shaping the professional teacher; learning through teacher peers and innovation (i.e., collaborative practice among educators, decentralizing pedagogical decisions to teachers, school-based coaching); and raising the caliber of existing and entering educators (Mourshed, Chijioke, & Barber, 2010). The SEALED project includes important aspects of successful PD. Specifically, teachers will invest in their learning and growth as educators over a sustained period of time (two years), collaborate and learn from peers and with SEALED personnel to improve their practices, receive job-embedded supports (through the coaching condition or summer academy) to build knowledge of and transfer theory into practice, to ultimately apply their learning to, and reflect upon their practices with their specific H-NPs.

Competitive Preference Priority 1: Promoting Diversity in the Educator Workforce

Teachers working with diverse students have specific PD needs (Ball, 2006), though there is limited evidence of what works due to the scant number of studies with teachers of diverse populations using methods approved by the WWC (Calderón, 2009). Knight and Wiseman (2005) synthesized the literature investigating PD for teachers of diverse H-NPs and report four major issues that must be addressed by research: 1) Studies investigating the effectiveness of PD for teachers serving H-NPs provide little guidance for transforming in-service teachers' practices; 2) Current research on PD for diversity provides little evidence for the relative effectiveness of different professional development models and strategies; 3) Current trends in PD for teachers of H-NPs favor inquiry and collaborative models of PD that involve learning communities in inquiry into practice, but little is known about their impact on students' learning; and 4) Although a number of instructional models have a research base to support their effectiveness for H-NPs, little is known about how to enable teachers serving these students to acquire these skills and knowledge (pp. 399-403). The SEALED project addresses all of these issues: 1) SEALED project results will contribute to the field's understanding of PD for teachers serving H-NPs as the content of the M.S. Ed. courses will be linked with multiple data sources to document how, and the extent to which teachers are translating academic knowledge with and without job-embedded supports to implement desired practices; 2) the quasi-experimental design allows for comparison of the PD's outcomes on teacher development for two conditions (coaching and no coaching), as well as student achievement; and 3) the coaching condition provides detailed notes/logs to document the types of supports H-NP teachers need, and frequencies of those supports to effectively implement identified, targeted practices in classrooms. UM and M-DCPS partners will work closely to carefully align teachers' learning needs, in response to their H-NPs' learning needs, through the integration of targeted instructional practices and coaching and/or summer academies to ensure project success. SEALED will make important contributions to the fields of PD research and

practice for teachers serving H-NPs while building on previous work to increase the number of highly qualified teachers. It is also important to note that the M.S. Ed. programs are completed over a two-year period, providing ample time for teachers to learn about *and* experience changes in practice (Darling-Hammond et al., 2017; Gulamhussein, 2013).

Competitive Preference Priority 2: Support for Personalized Learning Environments

Cartledge and Kourea (2008) assert that high-quality, research-based instruction and data-based decision-making serve as foundational elements for effective instruction integral to culturally responsive classrooms. Data-based decision-making requires educators to critically examine the type of data valued to make appropriate educational decisions for individual students. Providing teachers with instruction and practice in working with diverse and comprehensive data allows educators to know what works for whom, by whom, and in what contexts (Klingner & Edwards, 2006). Thus, engaging in culturally responsive instructional practices that yield meaningful data may support more equitable outcomes for CLD students.

Appropriate use of data also allows teachers to involve students in self-monitoring and independent goal setting (skills critical in the secondary setting). Preparation for students to practice self-monitoring and self-advocacy develops skills for students as active agents in the educational process (e.g., Meadan, Shelden, Appel, & DeGrazia, 2010). This kind of student engagement is linked to improved student outcomes. Teachers, administrators, researchers, and policy makers all agree on the importance of person-centered data use and planning to provide meaningful involvement for students to enter into a genuine collaboration that ensures their position at the center of the education process (Meadan et al., 2010). The SEALED project embeds culturally responsive instructional practices and methods for facilitating student engagement across the courses as well as within the focused classroom application support.

Section C: Management Plan and Personnel

C (1) Qualifications of Project Personnel. The SEALED project relies on a strong team and partnership to realize its goals and objectives. **Dr. Mary A. Avalos (PI)** is a Research Associate Professor in the School of Education and Human Development's (SEHD's) Teaching and Learning (TAL) Department, specializing in teacher PD and literacy instruction for ELLs. She has worked on numerous funded projects (NIH, IES, US DOE, Carnegie). Avalos has extensive experience with resolving challenging school-based issues concerning operations and data collection for funded projects. As PI, Avalos will oversee and manage all aspects of the SEALED project, working closely with the Co-PIs and the project coordinator to ensure SEALED is effectively implemented/operating to meet project goals and objectives. She will work closely with Dr. Soyeon Ahn on the project's evaluation, and oversee the summer academy. Avalos will retain her role as faculty advisor for the Education and Social Change M.S. Ed. and ensure close attention is paid to teacher retention/program completion.

Dr. Wendy Cavendish (Co-PI) is Associate Professor in the SEHD's TAL Department with expertise in secondary SpEd teacher preparation. Her research is focused on school-based malleable factors and teacher practice that facilitates meaningful student engagement for marginal students' successful transition outcomes. She has served as PI on federal, state, and county research and training grants. Dr. Cavendish has 20 years of teaching and administrative experience in general and SpEd in diverse, urban schools. Cavendish will assist with training GAs, all aspects of data analyses (formative/qualitative and summative/quantitative), oversee the SpEd M.S. Ed., teach/advise students, and revise/align M.S. Ed. content in Year 1.

Dr. Luciana C. de Oliveira (Co-PI) is Chair and Professor in TAL. She is President-Elect (2017-2018) of TESOL and a past member of the TESOL Board of Directors (2013-2016). She has been involved with several grants totaling over 4 million dollars. Her expertise is in academic language development in the content areas and teacher preparation for ELLs. Dr. de Oliveira will

collaborate with Drs. Avalos and Cavendish to work on integrating Lesaux et al. (2010, 2014) with the academic language and literacies content for the M.S. Ed. programs, data analyses and evaluation tasks, and advise/teach TESOL courses.

Dr. Soyeon Ahn (Evaluator) is Associate Dean for Research and Associate Professor and Program Director of the Research, Measurement, and Evaluation (RME) Program. She will be responsible for the quantitative analyses of the evaluation study. Her research focuses on methodological issues in the use of advanced statistical techniques such as meta-analysis, longitudinal data analysis, Structural Equation Modeling (SEM), and Hierarchical Linear Modeling (HLM). As the director of the Statistical Supporting Unit (STATS-U) for the UM Dunsbaugh-Dalton Community and Educational Well-Being research center, she actively collaborates on TAL projects.

Dr. Adrea Hoffman (consultant) will assist with the integration of the CLASS-S content within the UM Master's degree courses, as well as with the training of personnel who will coach M.S. Ed. teachers using the CLASS-S as a common lexicon and taxonomy. Dr. Hoffman serves as the Field Placement Coordinator and Director of the Clinical Faculty Program at UVA; she has trained and supported over 50 successful coaches and supervisors to use the CLASS-S as a common lexicon to support candidates working towards a M.S. Ed. She also developed and successfully implemented a graduate course focused on coaching and mentoring skills for clinical educators working with teacher candidates.

Advisory Board. Three content and two district experts will be available, as needed, to advise the SEALED project team. **Dr. Bridget Hamre** has expertise in student-teacher relationships and classroom processes that promote positive academic and social development for children. Her work documents how teacher-child relationships are predictive of academic and social development and the ways in which exposure to effective classroom social and instructional

interactions may help close the achievement gap for H-NPs. Dr. Hamre co-authored the CLASS/MTP systems and continues to be involved in the development of interventions to improve the quality of teacher-student interactions. **Dr. Gary Galluzzo** is Professor Emeritus at George Mason University; he was also the former Dean of the Graduate School of Education, Executive Vice-President of the National Board for Professional Teaching Standards, and on the Executive Board of Directors for the American Association of Colleges for Teacher Education (AACTE). He is an expert on curriculum reform and program evaluation for teacher education. As a member of the AACTE Research and Information Committee, he assisted with eight annual national studies of teacher education and published a monograph series, as well as many other manuscripts concerning teachers and teacher education. **Dr. Maria Carlo** is Associate Professor of Pediatrics at the University of Texas Health, specializing in bilingualism and literacy development. She has been PI or Co-PI on NIH- and IES-funded projects focusing on the cognitive processes underlying reading in a second language, understanding cross-language transfer of reading skills, and vocabulary development for ELLs, publishing her work in numerous outlets. **Ms. Wandarece Ruan** is the Administrative Director for the M-DCPS Office of Professional Development and Evaluation. Ms. Ruan oversees the district's Teacher Growth and Development programs, Center for Professional Learning, and Non-Instructional training programs (e.g., New Teacher On-Boarding, Diversity Training). **Ms. Ana Gutierrez** is the District Director of Bilingual Education and World Languages for M-DCPS. Ms. Ruan and Ms. Gutierrez have previous teaching and administrative leadership experience in secondary schools and are SEALED Co-PIs for the district. They will assist the project team with teacher recruiting teachers, identifying target schools, hiring CSSs, as well as utilizing current district resources to augment project activities (e.g., for summer academies).

C (2) SEALED M.S. Ed. UM is known for its rigorous graduate education programs, recently ranking 42nd in the 50-top Graduate Schools of Education (U.S. News and World Report, 2016). The three UM M.S. Ed. programs within the SEALED project will contribute to supporting and developing high-quality teachers for those with temporary Florida Department of Education (FDOE) certification, English to Speakers of Other languages (ESOL) and SpEd student education; thus, SEALED will ameliorate and support H-NP teachers in district critical shortage areas. The Education and Social Change M.S. Ed. program targets practicing teachers with temporary certification who are completing alternative teacher preparation programs and wish to complete the FDOE criteria required to earn full certification, which includes 15 graduate credits in assessment, reading instruction, classroom management, teaching methods, and diversity. The TESOL M.S. Ed. program focuses on improving certified teachers' knowledge and practices for teaching ESOL learners; teachers with full certification completing this program may apply to the FDOE for TESOL certification and be licensed to teach K-12 ESOL students. The SpEd M.S. Ed. program is for those interested in becoming a teacher (i.e., an initial K-12 certification program), or for those certified teachers who wish to add to an existing secondary certification in order to be certified to teach SpEd students. The three programs fulfill important teacher development needs in teacher shortage areas to increase the numbers of highly qualified teachers serving H-NPs.

C (3) Management Plan

C (3.1) SEALED Project Initiation. Upon notification of funding during fall (Year 1), the UM and M-DCPS PIs will advertise postings and hire the Curriculum Support Specialists (CSSs) and Project Coordinator (PC); Graduate Assistants (GAs) will also be identified by UM PIs to work on the project (see Table 6-Overview of the Management Plan). The CSSs will have earned a M.S. Ed. in ESOL or SpEd, with previous and extensive coaching/teacher leadership experience in M-DCPS secondary schools with ESOL and/or SpEd teachers. The PC will have earned a doctoral

degree in an area congruent with one of the SEALED M.S. Ed. programs to be able to teach graduate students, as required by UM. The CLASS-S and MTP trainings by Teachstone and Dr. Hoffman will be scheduled as soon as possible, when all project personnel have been hired/identified, on-boarded, and can attend. Prompt and immediate scheduling is needed for the UM PIs to align Lesaux and colleagues' work, and the CLASS-S/MTP content with M. S. Ed. content. Additionally, the UM PIs and PC will finalize the course assignments (i.e., classes for which the three video-recorded lessons, questionnaires, reflections, and other data sources will be assigned/collected). During their first class for the M.S. Ed. program, participating teachers will be assigned to video-record themselves while teaching a lesson as their baseline instructional observation; it is not expected that GAs will be able to video-record 60 teachers' instruction within a few weeks, as needed for the baseline measure. This will be the only self-recorded lesson that is used for SEALED analyses, as the remaining two lessons will be recorded by project GAs at mid-point of M.S. Ed. enrollment (Fall 2018 and 2019, Cohorts 1 and 2, respectively) and end-point (Spring 2019 and 2020, Cohorts 1 and 2, respectively). The UM PI and GA trainings for analyses using other project measures (REME and SEI) will also take place in the fall after the CLASS-S/MTP trainings. Thus, milestones for the Initiation Phase of the project include: posting/hiring project personnel, targeting schools, recruiting, and enrolling 60 teachers for Cohort 1 (and another 60 teachers for Cohort 2 by fall, Year 2), and arranging for CLASS-S/MTP trainings to align M.S. Ed. program content, embed Lesaux and colleagues' work, and finalize course assignments doubling as SEALED data sources.

Aligning UM SEALED targeted practices with UM M.S. Ed programs. The SEALED project includes a variety of instructional principles and content to strengthen participating teachers' use of data-driven instruction, academic language/literacy practices, culturally responsive practices, student engagement, and problem-based learning to meet the instructional

needs of H-NPs throughout the two-year M.S. Ed. programs (Table 5). Lesaux and colleagues’ work and the CLASS-S/MTP content will be aligned with the engagement content so that all is consistently re-visited and congruent with domains, while the other emphasized areas will be emphasized intensively during certain courses, and re-visited periodically throughout the two-year M.S. Ed. program.

Table 5. Course Titles and Emphasized Content across UM’s Three M.S. Ed. Programs

M.S. Ed. Courses with Emphasized Instructional and Engagement Content	Program			Engagement	Academic Literacy	Data-driven Instruction	Culturally Responsive	Problem-based
	TESOL	Ed-Soc Change	SpEd					
TAL 627: Understanding Culture, Families, and Communities	X	X	X	X			X	
TAL 683: Intro to Theories and Practice of TESOL	X		X*		X	X	X	
TAL 612 Building Positive Relationships in Diverse Schools		X		X		X	X	X
TAL 635: Instructional Strategies for Transition			X	X		X		X
TAL 637: Assessment in SpEd			X			X		
TAL 686: Principles of L1/L2 Acquisition	X						X	
TAL 680: Foundations of Bilingual Ed	X							
TAL 629: Educating Exceptional Students		X	X					
TAL 682: Methods of Teaching Content Areas in TESOL	X			X	X	X	X	X
TAL 685: Language Assessment	X				X	X		
Secondary Methods for Teaching: TAL 661: English TAL 662: Mathematics TAL 663: Science TAL 661: Social Studies		X	X	X	X	X	X	X
TAL 601: Educational Assessment and Accountability		X		X	X	X	X	
TAL 733: Applied Linguistics	X				X			
TAL 668: Human Development, Learning, & Schooling		X		X			X	
TAL 669: Psychosocial Change and Well-being in Education		X		X			X	
TAL 684: Advanced Techniques in TESOL	X			X	X	X	X	X
TAL 636: Instructional Strategies for Transition			X	X		X		X

TAL 647: Language/Reading Instruction		X	X	X	X	X	X	
TAL 681: Principles of Curriculum Development	X		X*	X	X	X	X	X
TAL 677: Applied Research in Education (2)	X	X	X	X	X	X	X	X

X* required for initial Certification in SpEd

Identifying target schools. The secondary schools targeted for the SEALED project will have a grade of B or lower, a high number of ESOL and/or SpEd students, and a strong administrator commitment to the project. Within the three regions of M-DCPS (North, Central, and South), specific regions will be targeted for teacher recruitment each year to focus project activities and use grant resources/personnel’s time wisely.

Teacher recruitment and participation expectations. Once target secondary schools are identified, recruitment activities will include email blasts, question/answer (Q & A) sessions for teachers at targeted schools, presentations at varying district meetings to inform school and district leadership, social media and web-site announcements, and announcements on local public radio stations. To meet the SEALED project’s criteria for participation, teachers must work in a project-targeted secondary school (grades 6-12) and teach a core subject area in Math, Science, English, or Social Studies, or self-contained ESOL or SpEd classes. Teachers who are recruited to apply for admission and enroll in the UM M.S. Ed. programs must agree to: a) the possibility of being randomly selected (or not selected) for the coaching treatment group; b) teaching in M-DCPS high-needs secondary schools for a minimum of two-years while enrolled in/completing the M.S. Ed. program; and c) co-teaching in a two-week summer academy as part of the programs’ final course and culminating project. SEALED partners will work together to identify locations (M-DCPS schools, UM) and course formats (online, face-to-face) for the M.S. Ed. classes and two summer academies. These expectations will be made clear to interested teachers via their required attendance at Q & A sessions; a special online M.S. Ed. application will be created for the

SEALED project and PIs will monitor applications received to ensure that all who apply to enroll in SEALED M.S. Ed. programs are teaching at targeted schools and have attended a Q & A session.

Teachers will complete a 30-credit hour M.S. Ed. program of study within 1.5 academic years and two summers. Those who apply must have a minimum cumulative undergraduate grade point average of 2.8 and meet established admission criteria to the UM SEHD graduate programs, including a completed online application, scoring a minimum of 297 for the quantitative and verbal sections (combined) on the Graduate Record Exam (GRE), three letters of recommendation, a resume, a statement of purpose defining goals for earning an M.S. Ed., and submission of official undergraduate transcripts. The GRE has been an obstacle in the past for some teachers to gain admission; therefore, the TAL Department has instituted a GRE waiver process for teachers with three years or more of full time teaching experience.

The teachers will be offered a significantly reduced tuition scholarship (50% waived by the UM SEHD Dean and 40% of the remaining tuition paid by the SEED grant) from UM's regular rate of tuition and pay approximately \$196/credit during 2017-18 to enroll in the SEALED M.S. Ed. programs, which will incorporate collection of all data sources (e.g., video-recorded lessons, reflections, questionnaires, interviews, co-teaching for the summer academy) as required assignments. All three of the M.S. Ed. program areas are considered "in-field" for M-DCPS teachers; M-DCPS offers a tuition reimbursement benefit for in-field graduate classes (up to \$150/credit for up to 36 credits). Also, upon successful completion and M.S. Ed. degree conferral, teachers will receive a salary increase.

C (3.2) Achieving SEALED Aims and Goals. In January 2018, the list of targeted schools will be revisited/revised by SEALED partners to continue recruitment efforts in M-DCPS selected regions January-July 2018 to recruit 60 teachers for Cohort 2's M.S. Ed. admission and enrollment

in fall 2018. The PIs and evaluator will randomly select SEALED teachers to treatment (n=30) vs. control (n=30) groups; teachers will first be matched as closely as possible for certification area and number of years teaching; they will then be paired (A/B) for random selection with A or B assigned to the coaching condition. This will ensure stratification for teacher certification area and years of teaching experience. To facilitate the coordination of scheduling and M.S. Ed. assignment/data collection for SEALED project activities, each participating teacher will select a single period and identify three high-, three mid-, and three low-performing secondary students in that period; these are the periods that will have coaching (if assigned to the coaching condition), and any assignments involving their students will be carried out in these periods to consistently track student progress over time.

Teachers assigned to the coaching condition will receive coaching and feedback related to the targeted instructional and engagement practices for H-NPs, including the CLASS-S/MTP and culturally responsive content. M-DCPS utilizes a planning, modeling, feedback approach to coaching; the CSSs will already be trained and have experience with this model; however, they will be trained for the CLASS-S/MTP and REME culturally responsive measures to align district coaching with SEALED project content and expectations. The M.S. Ed. programs will have the data collection timeline integrated within; thus participating teachers' assignments completed for the graduate courses and applied in classrooms will be data sources analyzed for the SEALED project. In summer during Years 2 and 3 (2019, 2020), Cohorts 1 and 2 will respectively enroll in their final course for the program (Applied Research in Education). To provide teachers in the no-coaching condition with the opportunity to receive feedback while teaching secondary students, a two-week summer academy will take place for 6th-12th grade M-DCPS students. Teachers will be paired to work together based on certification areas. During the first 2-3 weeks, co-teachers will plan an action research project and lessons for targeted instructional practices focusing on

academic literacy teaching and learning for the 2-week summer academy. The CSSs will also provide coaching feedback lessons for all teachers via role play to prepare them for giving/receiving feedback based on the CLASS-S/MTP and REME content. The milestones to achieve SEALED aims/goals include: continued recruitment for Cohort 2, random selection of teachers for coaching support condition and providing coaching, assigning/collecting all assignments/data sources, and planning/implementing the summer academies for 2019 and 2020.

C (3.3) Data Analysis and Dissemination. Qualitative data analyses will begin in January, 2018 when teachers are assigned to video-record themselves while teaching a lesson as their baseline instructional observation. GAs will analyze the lessons collected at 3 time points for each teacher utilizing the CLASS-S and REME measures throughout the SEALED project period. Teacher interviews, questionnaires, student work/SEI responses, and other data sources assigned in the M.S. Ed. will be collected throughout the two-year program for summer analyses. Beginning in spring Year 2, project results will be disseminated via web-based social media and conferences (see C (5) for Disseminating Results and Outcomes and E for Project Evaluation).

C (4) Resources to Carry Out the Project. The UM SEHD is located in Miami-Dade County, a dynamic and highly diverse community. The UM SEHD is participating in about 30 research-based projects that are key to advocating for healthy, connected communities and a “whole child” approach to education. The UM-SEHD Dunspaugh-Dalton Community and Educational Well-Being (CEW) Research Center supports ongoing faculty research and sponsors training for the latest research and evaluation methods. The UM Office of Research Administration also provides faculty training for external/internal grant requirements. The UM Libraries rank among the top research libraries in the U.S., with a combined collection of about 3.3 million volumes, 80,830 current serials, over 76,840 E-journal titles.

Table 6. Overview of Management Plan

Activity	Involving (Owner)	2017-18				2018-19				2019-20			
		F	Sp	SA	SB	F	Sp	SA	SB	F	Sp	SA	SB
Initiation & Recruitment Phase													
Hire Project Coordinator & Curriculum Support Specialists; Identify Graduate Assistants	PIs, M-D												
Align M.S. Ed. programs with Lesaux et al., CLASS-S/MTP, required course assignments	PIs, PC												
Target Schools and Recruit Teachers to Enroll in M.S. Ed. Programs (Cohorts 1 and 2)	PIs, M-D, PC												
Determine Class Locations (M-DCPS Sites or University) & Format (Hybrid, F2F)	PIs, M-D												
Trainings/Calibration for Engagement and Project Measures (CLASS-S; REME Culturally Responsive; SEI)	PIs CSSs, PC, GAs												
Milestones: Hire personnel, Target/recruit 120 secondary teachers serving H-NPs in M.S. Ed. programs; Arrange/complete trainings/calibrations for project measures; Align M.S. Ed. programs with Lesaux et al./CLASS-S/MTP and finalize assignments/data sources													
Achieve: Goal 1: Increase the number of Highly Qualified Teachers Serving H-NPs Goal 2: Increase teachers' knowledge of data-driven instruction, engagement... Goal 3: Enhance teachers' facilitation of their secondary H-NPs' engagement...													
Continue Recruitment for Cohort 2	PI, CSSs, PC,												
Randomly Select 30 Teachers/Cohort to Receive Coaching Support	PIs, EV												
Provide Coaching to Randomly Selected Teachers	PI, PC, CSSs												
Collect or Video-Record Teachers' Lessons (3 Time Points/Teacher); Administer Questionnaires & Interviews; Collect Student Achievement Data and Work Samples (Course Assignments)	PI, PC, GAs, Ts												
Plan/Implement Summer Academy for Last Class (Cohorts 1 and 2)	PIs PC, GAs												
Milestones: 120 Secondary teachers complete M.S. Ed. programs, Coach Ts, Collect data; Plan/carry out two summer academies													
Data Analysis and Dissemination Phase													
Analyze Teachers' Video-recorded Lessons (CLASS-S, SEI, Culturally Responsive Practices)	PIs, PC, GAs												
Analyze questionnaires, interviews, other data sources collected in courses	PIs, GAs												
Disseminate findings through conferences, social networks, manuscripts, etc.	PIs, PC, GAs												
Project Evaluation (see Section D(3) for Management Plan)	PIs, EV, PC												
Milestone: Complete Data Analyses, Disseminate Findings	PIs, EV, PC, GAs, M-D												

PI=Mary Avalos; PIs=Mary Avalos, Wendy Cavendish, Luciana de Oliveira; M-D=Miami-Dade County Public Schools PIs; CSSs= M-D Curriculum Support Specialists; PC=Project Coordinator; GAs=Graduate Assistants; EV=Evaluator; Ts=Teachers [F=Fall; Sp=Spring; SA=Summer A; SB=Summer B

In meeting Goals 1-3, the SEALED project will support and develop 120 highly qualified secondary teachers, and minimally 2,760 of their H-NP students. This will build district capacity by way of training CSSs to implement coaching for targeted practices and content. Also, the participating teachers will have the knowledge and expertise to continue teaching to positively impact thousands of students beyond SEALED's final year. Moreover, the teachers will be positioned to lead, coach, and support others serving secondary H-NPs. Also, as a secondary aim, SEALED will systematically investigate M.S. Ed. programs as effective teacher PD, a timely and important need to inform the field concerning transformative U-TTP.

C (5) Disseminating Results and Outcomes. The SEALED partners will broadly disseminate study findings to policy makers, scholars, practitioners, teacher educators, and the general public. Presentations will be made at conferences targeting researchers (e.g., LRA, AERA, SSSR), as well as practitioners (e.g., ILA, Council of Great City Schools, TESOL), and the public via social media and newspapers. The PIs have published manuscripts in journals that reach both practitioner and research audiences; manuscripts accepted for publication will also be uploaded to the ERIC database. PIs have accounts with widely used social network sites for to share their work. Additionally, during Year 3 we will create informational webinars acknowledging the US DOE, to share UM/M-DCPS efforts to disseminate findings.

Section D: Project Evaluation

D (1) Methods of Evaluation. The SEALED evaluation uses a mixed-methods approach (Creswell, 2003) to assess the extent to which goals, objectives, and measurable outcomes are met. A quasi-experimental design will be used to examine the effect of SEALED activities on H-NPs' target instruction and engagement practices. This empirical study is designed to meet WWC standards with reservations: a quasi-experimental evaluation study combining quantitative and qualitative methods. The SEALED project will randomly assign participating teachers to

treatment (coaching) and control (no-coaching) groups, using a quasi-experimental design to answer research questions (RQs) for Goals 1-3 (Tables 7-9, respectively).

Table 7. Research Questions, Objectives, and Measures for Goal 1

Goal 1: To increase the number of diverse and highly qualified teachers serving H-NPs in high-needs secondary schools to improve academic achievement and engagement in school and community;		
Comprehensive Research Question: To what extent do graduate M.S. Ed. programs in education increase the number of highly qualified teachers serving H-NPs?		
Objectives	Research Questions	Data Sources/Measures
-Recruit 120 teachers (60/cohort during Years 1 and 2) to enroll in the Education and Social Change, TESOL/Bilingual, or Special Education M.S. Ed. programs at UM; 30 participating in the AGE M.S. Ed. model and 30 in the traditional approach to M.S. Ed. programs.	-In what ways are teachers supported by M.S. Ed. programs when teaching H-NPs? -What are teachers' perspectives of M.S. Ed. programs in supporting and preparing them to teach H-NPs? -How do M.S. Ed. program completers' (treatment and control groups) student achievement levels compare?	1. Pre/Post surveys with teachers in treatment vs. control groups (coaching vs. no coaching, respectively); 2. Pre/Post interviews with a sample of randomly selected teachers across treatment vs. control groups who complete the survey (#1 above). 3. Cost/teacher in both groups; 4. M.S. Ed. instructors' rankings of teachers by performance for their classes (assignments, discussions, participation, etc.) 5. Student achievement (EOC, FSA, Interim/Benchmark assessments)

Table 8. Research Questions, Objectives, and Measures for Goal 2

Goal 2: To increase teachers' knowledge and use of: data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning for H-NPs;		
Comprehensive Research Question: To what extent do participating teachers increase their use of data-driven instructional decision-making for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning for H-NPs across the two conditions (coaching and no-coaching)?		
Objectives	Research Questions	Data Sources/Measures
- Provide job-embedded supports (coaching, modeled lessons) to 60 randomly selected participating teachers (30 per cohort) to empirically investigate M.S. Ed. programs as professional development; -Improve teacher-student interactions to increase K-12 H-NPs' engagement, voice, and choice in classrooms that emphasize problem-based learning driven by the Florida Standards; -Increase K-12 H-NPs' academic achievement levels on state,	-How do teaching practices change across the teachers in the two conditions— teachers with and without coaching support? - To what extent do teachers increase their use of the identified key practices around problem-based learning based on students' learning needs (data-driven instruction) as presented in M.S. Ed. courses? -What types of supports do teachers need to increase the instances and quality of their data-driven instructional decisions for reading/academic literacy learning, teacher-student classroom interactions, and problem-based learning?	1. Video-recorded observations at 3 time points over two years (CLASS-S, SEI, & REME measures); 2. Student achievement (EOC, FSA, Interim/Benchmark assessments) 3. Teacher interviews (pre/post over two years); 4. Teacher questionnaires (four time points over two years); 5. Teacher Logs

district, and teacher-created assessments for the relevant subject areas of participating teachers.		6. Coaching and feedback notes
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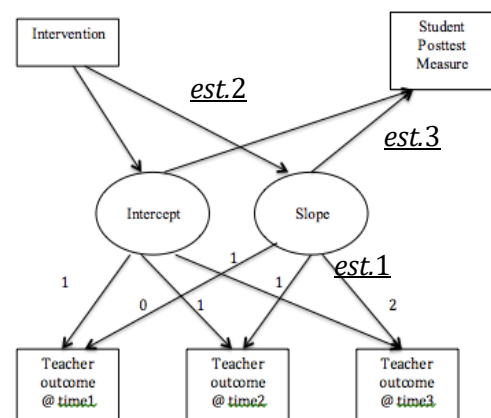
Table 9. Research Questions, Objectives, and Measures for Goal 3

Goal 3: To support and enhance teacher facilitation of their secondary H-NPs' engagement with school and community.		
Comprehensive Research Question: To what extent do teachers across the two conditions engage their H-NPs with academic learning and community development?		
Objectives	Research Questions	Data Sources/Measures
<ul style="list-style-type: none"> -To better understand the obstacles and affordances of engaging H-NPs for learning; -To improve teacher-student interactions to increase 6-12 H-NPs' engagement, voice, and choice in classrooms that emphasize problem-based learning driven by the Florida Standards. 	<ul style="list-style-type: none"> -How do teachers across the two conditions engage their students with school learning and community development? -To what extent do teachers across the two conditions draw on their students' out-of-school lives to engage them in academic learning and community development? -To what extent do teachers take up the SEALED engagement and interaction practices as presented in M.S. Ed. courses? -How do participating teachers' attitudes towards their H-NPs change? 	<ol style="list-style-type: none"> 1. Video-recorded observations at 3 time points over two years (CLASS-S measure; CLD measure, SEI) 2. Student achievement (EOC, FSA, Interim/Benchmark assessments) 3. Teacher questionnaires (four time points over two years) 4. Teacher interviews (pre, mid, post over two years) 5. Teacher logs 6. Coaching and feedback notes 7. Student work samples 8. Student achievement scores

D (2) Objective Performance Measures. As

shown in Figure E-1, the effectiveness of the proposed SEALED will be evaluated using a series of Latent Growth Models (LGM), in which the change in teacher practice over time is compared between comparison groups (Group1: AGE vs. Group2: AGE with coaching) after controlling for teacher- and classroom-level characteristics (e.g., years of teaching experience, content area) and its effect on student outcome

Figure E - 1. The proposed Latent Growth Model to evaluate the effectiveness of intervention



Note. The proposed model do not show a number of teacher- and classroom-level characteristics as the controlled variables and student performance measured before intervention, which will be included in the actual LGM analysis.

measures. The effect on student outcomes will be further modeled when student pretest (e.g., previous year's test score) is controlled in the model.

Specifically, the proposed LGM model shown in Figure E-1 allows us (1) to estimate the overall trajectory (i.e., slope) of the global teacher practice and each domain of teacher practice measured using CLASS-S over time (*est.1* in Figure E -1), (2) to examine the effectiveness of the intervention on the change in teacher practice (i.e., slope) by comparing teacher practice between two comparison groups as a dummy variable (*est.2* in Figure E -1), (3) to evaluate how the change in teacher practice affects student performance aggregated at the classroom level (*est.3* in Figure E -1), and further (4) to assess how student performance (aggregated at the classroom-level) measured after intervention is mediated by the change in teacher practice as a result of intervention (*est.2* * *est.3* in Figure E -1).

The proposed LGM model shown in Figure E-1 will be conducted separately for global and each domain of teacher practice using Mplus 7.3.1. Even though they are not shown in Figure E – 1, the teacher- and classroom-level characteristics as the controlled variables and student performance measured before the intervention will be all included in the actual LGM analyses.

D (3) Periodic Assessment of Progress. Our methods of evaluation provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes, as well as valid and reliable performance data on relevant outcomes. In order to understand the role of M.S. Ed. programs on all participating teachers' practice and perceptions, we will collect data infused in M.S. Ed. programs as class-based assignments for qualitative analyses, such as teacher logs, video-recorded instruction, questionnaires, interviews, etc. (Tables 7-9), utilizing multiple sources to enable triangulation of data. Qualitative data analyses will be on-going to identify any

possible concerns related to goals and objectives to be resolved, as well as findings and recommendations to be reported as soon as possible and appropriate. Using the constant comparative method (Merriam, 1998), themes that emerge in repeated analyses of data sources will be identified. To check the strength of findings, data analyses will be on-going, from the beginning of the study. Several methods will be implemented to increase accuracy and trustworthiness of analysis, including written handbooks for coding procedures, detailed trainings and certification of analysts, multiple coders rating the same data sources to calculate agreement rates for inter-rater reliability. In addition, periodic calibration codes and coding methods for the different analytical tools used will be carried out.

Classroom-level data (i.e., teacher logs, questionnaires, SEI, etc.) will be collected via teachers' assignments for their identified period and high-, mid-, and low- achieving students to be analyzed using constant comparison methods. The data collection timepoints for the assignment data sources will be determined during fall (Year 1), upon notification of funding. All SEALED personnel will be trained to use the CLASS-S by Teachstone, who will provide follow-up calibration services over three years to ensure systematic and consistent coding across raters over time. SEALED GAs will video-record three of the six required in-class observations (teachers will video-record themselves as class assignments for the remaining three required videos), as well as independently code the lessons using the CLASS-S and REME protocols for their respective and integrated domains of practice. Video coding will employ a sampling technique of 30 minute cycles (20 minutes observe, 10 minutes record). An observation sheet includes a final rating score for each of 12 dimensions in four broad domains of emotional support, classroom organization, instructional support, and student outcomes/engagement at end of each cycle. Ratings are from 1-7, where 1-2=Low; 3, 4, 5=Mid; and 6-7=High for each of 12

dimensions. We will obtain domain scores by calculating average dimension scores across corresponding four major domains: (a) emotional support: positive climate, negative climate (reversed), teacher sensitivity, regard for adolescent perspectives, (b) classroom organization: behavior management, productivity, instructional learning formats, (c) instructional support: procedures and skills, content understanding, analysis and problem solving, quality of feedback, and (d) student engagement (active vs. passive engagement, and sustained engagement). We will analyze distribution of teachers on each dimension.

D (4) Evidence of Project Effectiveness. The evidence of the effectiveness of the SEALED project will be supported by the following three quantitative results: (1) the change in teacher practices measured over three time periods is positive, which is statistically significant; (2) the change of teacher practices measured over three time periods is statistically larger in the intervention group, (where AGE and coaching are given) than the control group; (3) the change in teacher practices measured over three time periods is significantly related to student outcome measured after intervention, when student outcome measured before intervention is controlled; and (4) the mediation effect of intervention in the relationship between the change in teacher practice and student outcome measured after intervention is statistically significant, suggesting that the effect of the change in teaching practice over time on the student performance is significantly different between two comparison groups.