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Increasing Classroom Teachers' Use of Linguistically Responsive Strategies to Support English Language Learners: A Mixed-Methods Study

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INCREASING CLASSROOM TEACHERS' USE OF LINGUISTICALLY RESPONSIVE STRATEGIES TO SUPPORT ENGLISH LANGUAGE LEARNERS: A MIXED-METHODS STUDY

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ABSTRACT

With the dawn of the new decade, English Language Learner (ELL) populations began to grow in states without structures and professional learning to equip teachers to face the changing demographic of the classroom. In response to the growth of the knowledge gap between classroom teachers in South Carolina and their diverse classrooms, I conducted a study based on improvement science principles. As a long-standing ELL program coordinator, I experienced the need to increase linguistic responsiveness in classroom teachers on a daily basis. The application of the plan-do-study-act (PDSA) cycle utilized mixed methodology to gather data to increase classroom teachers' use of linguistically responsive strategies through professional learning communities. The professional learning increased awareness among the teachers of strategies that support their ELL students, and facilitate their English acquisition and academic knowledge.

As a result of the PDSA cycle, three findings emerged: create professional learning opportunities, focus on teaching academic vocabulary, and promote scaffolds for teachers. The findings guided the recommendations that emerged from the study, which have local and state implications. Increasing the linguistic responsiveness of classroom teachers stands as a means to support classroom teachers' ability to meet the educational needs of all students in public school classrooms.

DEDICATION

This dissertation is dedicated to my family. My husband, Chuck, remained my number one supporter and encourager throughout this journey. Chuck, your love and support remained steadfast along the way. I could always count on you and our three kids to remind me that I can do hard things. Savannah, for your reminders of how proud you are of me staying the course; Mark, for your hugs when I felt down; and Kate, for your reminders that I would be Dr. Mom—I thank and love you all. Shealy Five—I did it, no we did it!

ACKNOWLEDGMENTS

My first acknowledgment is to my Lord and Savior, for reminding me that David dreamed a dream for many years before he saw it come to fruition. The message my pastor preached about David in February 2019 served as a sign that God was opening the door of opportunity for me to achieve a long-held dream to earn my doctorate. I waited fifteen years to find a program that allowed me to earn a doctorate in a program that aligned with my personal beliefs in continuous improvement. I thank God for reminding me this was the next step in my journey in life.

Though these two students never knew how they changed my life, I would love to acknowledge Carla and Neiva. These two students stayed after school with me many days sharing their plight as ELL students and how their journey defines their lives. They ignited in me a passion for working to ensure all families have the same access to the public school sector that I have as a White middle-class parent. Carla and Neiva, you forever changed my heart and mind.

I would be remiss without acknowledging the wonderful support network of my family and friends throughout this journey. Sharing the journey of the doctorate with my dad, cheers from my mom as I checked off milestones, love from my sister and sister-in-law, and wonderful baked goods and meals from my best friend, Amy. All of you were there to cheer me on to this finish line.

Lastly, I cannot acknowledge enough my Shealy Five. Chuck, your patience, love, and support gave me the reassurance that I needed to see this thing through—I love you! Savannah, Mark, and Kate, I can never tell you how much the sincere statements and

expressions of how proud you were of me along the way helped me make it to this point—I love you!

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CHAPTER ONE

INTRODUCTION AND OVERVIEW

The 1980s ushered in a period of dramatic changes in technology, politics, and population demographics within the United States. According to the Office of English Language Acquisition (OELA, 2020), in the subsequent two decades, English Language Learner (ELL) student enrollments grew in 43 states. OELA (2020) reported that the nationwide ELL population increased by 28.1% within the twenty-first century, while the ELL population in South Carolina increased by 786%. Cooper (2009) discussed a disconnect in the lack of preparedness schools experience in meeting the rapid growth in ELLs. The change in the population of ELL students in South Carolina's public and the inability of teachers to fully meet their educational needs continues to expand. In this study, I sought to answer the research question: *how can classroom teachers' use of linguistically responsive strategies be increased to meet the educational needs of their ELL students?*

The growing ELL population in classrooms across the United States is contributing to a need for professional development to equip teachers to meet the needs of all students and assist them in learning to use sheltered instructional strategies in one possible approach to addressing this need. Sheltered instructional strategies emerged is the late 1980s to include and support ELL students within mainstream content instruction. Krashen (1991) defined sheltered instructional strategies as a series of practices to make content comprehensible through explicit attention to language production supported by a series of visual and real-life language tools. By 2009, the

utilization of sheltered instructional strategies served as a critical component of instructional support for ELLs in California, to the point where California State University, in conjunction with other research organizations, sought to quantify the implementation of sheltered strategies. The 2009 California State University study served as a certification of sheltered instructional practices and laid the groundwork for implementing sheltered instructional strategies as a staff development model (Himmel et al., 2009)

While professional development can help increase the use of strategies by some teachers, a gap of understanding exists among the majority White teaching force. Ladson-Billings' (1995) research on culturally responsive pedagogy began to emerge not as a "programmatic reform" (p. 466) but as a way of reframing teaching practice to incorporate a deep understanding of and appreciation for students' culture in daily praxis. Culturally relevant pedagogy addresses the learning of all students in a way that affirms their respective cultures while raising awareness among others around problems that create inequitable opportunities. Cooper (2009) detailed the importance of culturally relevant teaching through the transformative lens to enact real strides toward equity within school settings.

Indeed, culturally relevant teaching practices gained further importance in teaching ELL students with the release of updated standards. The World-Class Instructional Design and Assessment (WIDA) consortium, which consists of 39 states dedicated to rigorous standards and equitable opportunities for ELL students, released its updated standards in 2020. The following statement from the WIDA 2020 standards

asserted the importance of culturally and linguistically responsive teaching strategies: "Drawing on students' linguistic and cultural resources is essential to helping them navigate life in a diverse world, in addition to supporting them in meeting demands of academic content areas as they advance through school" (WIDA, 2020, p. 18). Hollie (2012) defined cultural and linguistic responsiveness as "the validation and affirmation of the home culture and home language for building and bridging the student to success in the culture of academia and mainstream society" (p. 23). The validation of home cultural and linguistic diversity within the classroom fosters a welcoming classroom environment where all students feel safe to learn at high levels. Considering the WIDA organization identified culturally and linguistically responsive ideals as a foundation of the 2020 English Language Development standards highlights the continued need for professional development around these foundational assumptions.

From 2000 to 2019, the United States saw a 34% increase in ELL students enrolled in public schools. Comparatively, South Carolina experienced a 786% increase in the ELL population (National Center for Education Statistics [NCES], 2022). In 2021, Sassafras School District (pseudonym for study district) ranked among the top third of South Carolina districts for ELL enrollment, with over eight percent of the student population identifying as ELL. Thus, the development of linguistically responsive strategies to meet the educational needs of ELL students stands as the problem of practice in the Sassafras School District.

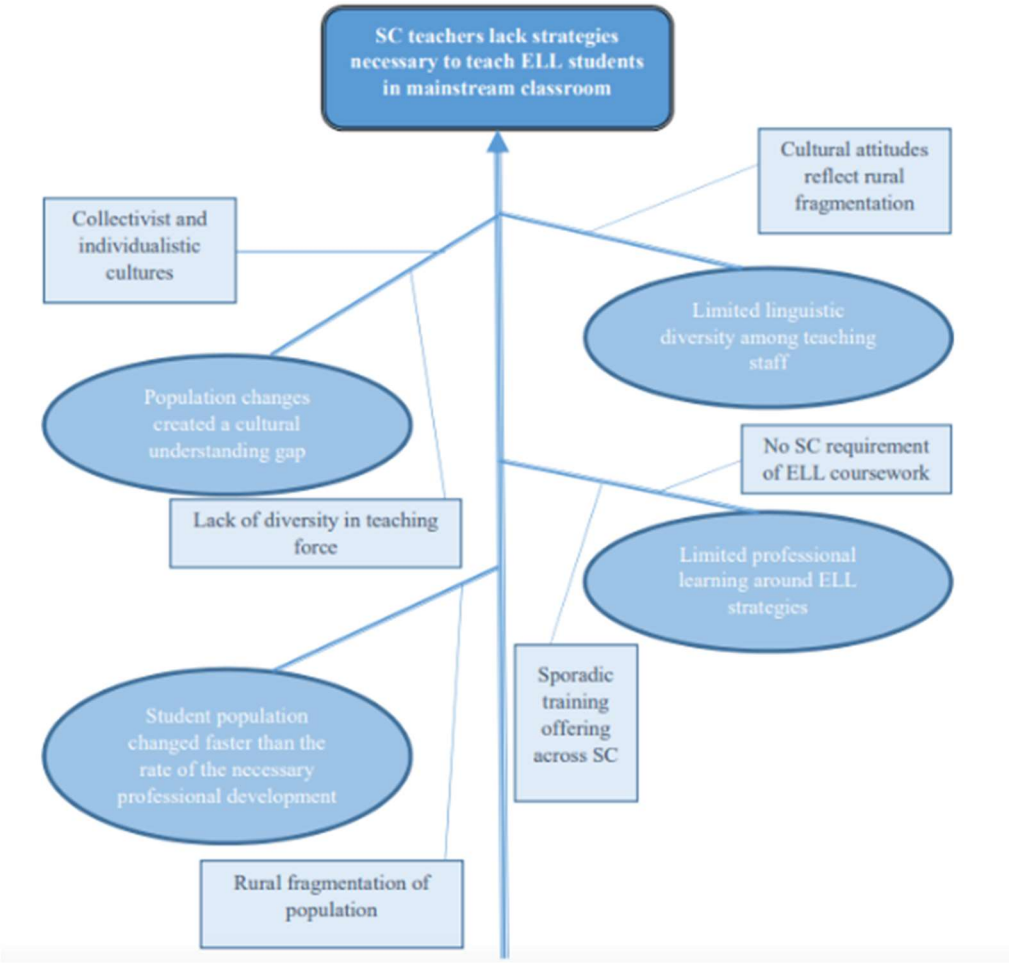
Problem of Practice

The Dissertation in Practice (DiP) incorporates the application of theoretical knowledge into a problem of practice to enact a sustainable improvement (Perry et al., 2020). The Carnegie Foundation for the Advancement of Teaching envisioned the DiP to bridge the gap between applying theoretical knowledge and action research centered on finding solutions to problems of practice from the field. The problem of practice within this DiP focuses on the struggle for classroom teachers to utilize linguistically responsive strategies (LRS) to support the ELL students in their classrooms. The problem of practice in this study focuses on Sassafras School District; however, across the State of South Carolina, school districts find themselves grappling with the same situation. Thus, the results of this study provide a context for affecting educational practice across other school districts.

Utilizing the fishbone diagram to identify critical elements for this DiP analyzes the "cause and effect" (Hinnant-Crawford, 2020) relationship between growing ELL populations and teacher preparedness to educate all students. The fishbone diagram in Figure 1.1 details the primary focus of this DiP. Using a fishbone diagram identifies root causes related to the problem of practice to provide a framework for appropriate theoretical knowledge (Perry et al., 2020). Since 2018, administrators and classroom teachers in Sassafras School District have requested support to meet the needs of ELL students within their classrooms. The fishbone diagram in Figure 1.1 details many possible contributors to this problem of practice.

Figure 1.1

Problem of Practice Fishbone Diagram



Growing ELL Population

The rapidly growing ELL population in schools across the United States creates a need for support structures to equip classroom teachers to meet the needs of all their students. Zong and Batalova (2015) reported that in the past three decades, the ELL population "grew 80 percent from nearly 14 million to 25.1 million" (p. 1), including immigrant students and students born into non-English speaking homes. The United States Department of Education Office of English Language Acquisition (OELA) (2018)

reported that in the 2014-2015 school year, ELL students made up approximately 10% of the student population. According to the National Center for Education Statistics (NCES), during the 2000 school year, 5,121 ELLs enrolled in the South Carolina public school system (NCES, 2020). A 49% increase in the immigrant population within South Carolina contributes to the sharp rise in ELL enrollments. The increase in the immigrant population led to South Carolina earning the designation as a New-Destination state (Terrazas, 2011).

The growth of the ELL population within South Carolina affects nearly every school district. The transition in the state ELL leadership position led to limited reporting of ELL student enrollments across the state; however, tracking changes in Title III funding under Every Student Succeeds Act of 2015 (ESSA) yields approximate changes in the ELL populations. The OELA (2018) called for the dispersion of Federal Title III money by state education agencies to local education agencies based on ELL enrollments. Using changes in Title III allocations, approximately three out of four school districts within South Carolina from 2014-2019 experienced an increase in enrollments. During the same period, Sassafras School District experienced a 41.4% increase in ELL enrollments. With the rapid growth of the ELL population in South Carolina schools, classroom demographics stand in stark contrast to the current teacher workforce across the state. The South Carolina Teacher Education Advancement (2020) consortium reported that 63% of classroom teachers bring over 10 years of experience to the classroom. Teachers face language demands in the school starkly different from the beginning of their careers.

Cultural and linguistic diversity

The approach of the teacher in regards to cultural and linguistic diversity in the classroom shapes the lens through which students understand the world and the content taught. Understanding how students learn, interact with peers and operate within their cultural beliefs around group behavior and worldviews would better prepare classroom teachers from different cultural and linguistic backgrounds to make the "mindset shift" (DeCapua & Marshall, 2013) necessary to meet the needs of their students. DeCapua and Marshall (2013) explored the cultural differences between many ELL families and the predominantly White teaching force. The Migration Policy Institute (2015) reported that Spanish-speaking students make up 71% of all ELL students, highlighting the cultural disconnect between students and their classroom teachers. Many Spanish-speaking families operate within a collectivist culture focusing on the greater good of the group; however, classroom teachers, who are predominantly White, emerge from an individualistic culture grounded in self-actualization, supporting the misaligned meritocracy narrative (DeCapua & Marshall, 2014). Support for classroom teachers should address cultural differences in addition to strategies to help their acquisition of content and language.

The conflation of the lack of diversity among the current teaching force and the cultural diversity of their students highlights the need for professional learning to take on a transformative learning approach. Meeting current teachers within their cultural understanding and seeking to provide experiences that can shift their habits of mind lays the groundwork for transformative learning. During the 2019 school year, White teachers

made up 79% of the workforce in the United States and South Carolina. The limited cultural and linguistic diversity inherent in the current teaching force creates a knowledge gap in the experiences and values students bring to the classroom that plays a role in their mastery of content.

Teacher preparedness

The level of preparedness a teacher brings to the classroom impacts their level of efficacy and delivery of content for all students. Cummins (1987) stated that educators empower their students "if they are secure in their own personal and professional identity and confident that they have the ability and administrative support to help students succeed academically" (p. 3). In a collaboration between Stanford University and the University of California, researchers explored classroom teachers' needs to serve ELL students within classrooms better. Gandara et al. (2005) reported that "the quality and extent of teacher preparation is therefore critical" (p. 3). During the last half of the twentieth century, seven states remained destination states for immigrant families—California, Florida, Illinois, Massachusetts, New Jersey, New York, and Texas (Migrant Policy, 2011). By 2009, three destination states added coursework for preservice teachers to support ELL students. In South Carolina, the lack of preservice or recertification requirements continues to shape or perpetuate classroom teachers' knowledge gap in meeting ELL students' needs.

A reported positive association between staff development and teacher confidence with instruction of ELL students provides a strong background for increasing teacher knowledge opportunities. A 2007 study of teachers and ELL students across California

found a need to incorporate research into professional development to equip teachers better to address the various levels of English proficiency ELLs bring into the classroom (Maxwell et al., 2007). Since 2009, 34 states have required coursework or professional development for educators on CLR practices (Education Commission of the States, 2020). The ability to best utilize human resources within the new destination states depends upon strengthening the current teaching force. In 2020, all but 11 states required coursework or professional development for educators on CLR practices (Education Commission of the States, 2020). Simultaneously, the work of Hollie (2012) defined CLR pedagogy as "the validation and affirmation of the home (indigenous) culture and home language for building and bridging the student to succeed in the culture of academia and mainstream society" (p. 23). Hollie called for a “mindset shift” in CLR to refute the deficit perspectives assigned to underserved students. Professional learning must promote cultural and linguistic responsiveness to empower the ELL student within the classroom. Adding such preparation to preservice programs would only address people entering the profession. Thus, the addition of CLR professional learning as part of recertification creates a viable means to address all teachers, even those who enter the work through non-traditional methods.

The problem of practice for this dissertation centers on the growing need for a teaching population with limited diversity to meet the educational needs of the increasing number of ELL students. During this study, the combination of the problem of practice and district instructional goals remains a vital component. Within the Sassafras School District, the instructional focus of professional development continues to be the

utilization of professional learning communities committed to continuous instructional improvement grounded in the tenets of improvement science. Thus, the focus of this study was using teachers' professional learning communities to introduce professional learning grounded in cultural and linguistic practices like sheltered instructional strategies to increase the linguistic responsiveness of classroom teachers.

Literature Review

The inclusion of ELL students within the public school system brought debate around the legality of the participation of ELL students in the public school system, the instruction the ELL students receive, and the context in which they would learn. Two United States Supreme Court cases formed the foundation of ELL programs and instruction: *Plyer v. Doe* (1982) and *Lau v. Nichols* (1974). In the next section, I discuss the legal foundation for educating ELL students, regardless of their citizenship status.

The Legal Foundation for Educating ELL Students

Justice Earl Warren, in *Brown v. Board of Education* (1954), said, "In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education" (p. 493). *Lau v. Nichols* (1974) unanimously established the inclusion of non-English speaking immigrant children in the public school system and English instruction to grant them access to the mainstream curriculum (Sugarman & Widess, 1974). Sugarman and Widess (1974) detailed the importance of the Supreme Court decision in the case commentaries on *Lau v. Nichols*:

> In *Brown v. Board of Education*, the Court was concerned with who is allowed in the schoolhouse; in *Lau*, the Court is being asked to regulate what goes on inside.

> In *Tinker v. Des Moines Board of Education*, the Court decided there are some things a school cannot do to its students; in *Lau*, the Court is being asked to tell the school that there are some things it must do for its students. (p .2)

Chief Justices Brennan and Marshall went on to rule on the Supreme Court case *Plyer v. Doe* (1982), using the principle from *Brown v. Board of Education* (1954) to establish undocumented students' education as an extension of the Fourteenth Amendment of the United States Constitution. The Supreme Court upheld the educational rights of all immigrant children regardless of citizenship status.

The precedent established in *Brown v. Board of Education* (1954) interpreted the Fourteenth Amendment to declare public education as a property right to guarantee against the formation of a caste system that fundamentally blocks a group of people from government access and the ability to self-advocate for equality. *Plyer v. Doe* (1982) centered on denying public education to 16 students from four undocumented families in Tyler, Texas. Justice Marshall warned in *Plyer v. Doe* (1982) that the barring of access to public education for undocumented students would create an undocumented underclass of students that would ultimately undermine the Fourteenth Amendment, which stood as the basis of the desegregation of schools (Hutchinson, 1982).

Lau v. Nichols (1974) established equal protection for non-English speaking students to receive support to learn grade-level content while simultaneously acquiring English proficiency (Sugarman & Widess, 1974). Bridging the gap outlined in *Lau v. Nichols* (US Supreme, 1954) has remained a challenge for educators for over 40 years. Chief Justice Burger remarked that the Supreme Court was overstepping its bounds and

ruling in a case best resolved by the law's legislative branch. Without proper legal action to deal with immigration, Chief Justice Burger felt the Supreme Court's decision would only further exacerbate the situation (Hutchinson, 1982). Thus, while unanimous, *Lau v. Nichols* (1954) stopped short of defining appropriate supplemental services leaving states to grapple with this issue 70 years later.

Plyer v. Doe (1982) defined public education as a property right for the student despite the legality of the parent's actions. Citing parallel logic from the education of children from incarnated parents, *Plyer v. Doe* established the importance of public education to a democratic society. *Plyer v. Doe* has managed to withstand many challenges since the original decision. One such challenge, Californian Proposition 187, led to the *Los Angeles Times* reporting on the 16 anonymous children named in *Plyer v. Doe* (1982). The children represented in *Plyer v. Doe* lived out the foundational principles of the case. Thirteen of the 16 children are now citizens of the United States. Ten still live in Tyler, Texas, as citizens working and giving back to the community that the state held in 1984 would never put their education to use to improve Texas's condition (Feldman, 1994). The five justices ruling in favor of *Plyer v. Doe* (US Supreme Court, 1982) gave a chance to a student named Dhalla from the TEDx talk (2014), who detailed her journey exemplifying the spirit of the Fourteenth Amendment's protections in the preface of *Is Everyone Really Equal?*

Landmark rulings, *Lau v. Nichols* (US Supreme Court, 1974) and *Plyer v. Doe* (US Supreme Court, 1982), laid a foundation for ELL students' education in the United States. These students have a fundamental right to be in public school classrooms and

receive appropriate supports to access grade-level content. Hence, researchers and policymakers continue to research the means to provide access to proper grade-level content across United States public schools. This study seeks to add to this body of research through the action resulting from the findings.

Educational Needs of ELL Students

As ELL populations grew at the end of the twentieth century, literature emerged detailing the needs of ELL students inside an academic classroom. In his seminal work on English academic acquisition, Cummins (1980) declared, “there has been relatively little inquiry into what form of language proficiency is related to the development of literacy skills in school contexts and how the development of academic proficiency in L1 relates to the development of academic proficiency in L2” (p. 83). Cummins defined the language purpose of ELL students as basic interpersonal communicative skills (BICS) and cognitive/academic language proficiency (CALP), thus, establishing the bedrock of all ELL instructional programs. Cummins further explored the correlation of various factors affecting students' ability to acquire a second language. He cited a study from Sweden by Hanson (1979), which utilized a "language shelter" with specific strategies to transition students for three years to complete Swedish language acquisition. The work detailed by Cummins still undergirds most ELL philosophy and approaches 40 years later.

Sheltered Instruction

From the 1960s until 2000, seven states consistently held the designation of destination state with the highest immigrant population. Gandara et al. (2005) reported

that in such states, "the quality and extent of teacher preparation is therefore critical" (p. 3). The aforementioned positive association between staff development and teacher confidence in their abilities with ELL students' instruction provides a strong background for increasing teacher knowledge opportunities.

Concurrently, a seven-year research study sponsored by the Center of Research on Education, Diversity, & Excellence, funded by the US Department of Education, developed a five-point observation rubric to measure the implementation of sheltered strategies to aid language acquisition. The Sheltered Observation Instructional Protocol (SIOP) rubric evolved to provide sheltered instructional practices to teachers through intentional staff development around the eight main components of the SIOP rubric, ultimately becoming the SIOP® professional development program and model (Echevarria et al., 2017). The SIOP® model utilizes the following eight categories of sheltered instructional:

- Lesson preparation.
- Building background.
- Comprehensible input.
- Strategies.
- Interaction.
- Practice and application.
- Lesson delivery.
- Review and evaluation.

During the first part of the 2000s, the empirical validation of the SIOP® model of professional development and coaching emerged. Simultaneously, the population began shifting toward new states and locations completely unfamiliar with ELL best practices. The model is extensive and requires days of training accompanied by ongoing coaching support to sustain classroom practices.

While sheltered strategies remain a common way of helping ELL students acquire English through engaging academic content, several approaches exist to utilize sheltered strategies within the classroom. Guided Language Acquisition Design (GLAD) emerged in the 1980s from the research of Marcia Brechtel and Linnea Haley. Project GLAD requires seven days of professional development and further on-site coaching to equip teachers with five key focal points: focus/motivation, comprehensible input, guided oral practice, reading/writing, and closure. Project GLAD remains a critical instructional methodology in states like California, Oregon, and Washington. Genzuk (2011) defined Specially Designed Academic Instruction in English (SDAIE) "as the teaching of grade-level subject matter in English specifically designed for speakers of other languages" (p. 8). The SDAIE model focuses on strategies to aid in academic language acquisition. Whereas the English Language Development (ELD) model focuses on teaching language through the use of rigorous grade-level content. The three models above contain elements within the SIOP® model. Likewise, SIOP® provides a more extensive research base into its effectiveness, whereas the other three models lack the breadth of research. The SIOP® model approach to sheltered strategies informs in this study and aligns closely with

support programs within the district that provide scaffolded strategies for classroom teachers using SIOP® verbiage.

Professional development requires financial and time obligations that already-strapped rural districts cannot afford (McIntyre et al., 2010). As with the work of Echevarria and Short (2004), which turned into the SIOP Model® professional development program, the validation studies took place within urban locations with large populations of ELL students. In 2020, Coady called for a focused research agenda as "(O)nly 32% of rural high schools offered sheltered English instruction compared to 81% in cities" (p. 5). The call for a research agenda by Coady highlighted the gap in instructional practices as families move to rural new destination states.

A formal definition of supplemental services, as called for in *Lau v. Nichols* (US Supreme Court, 1974), left ELL professionals to work through various successive approximations of sheltered instructional strategies. Despite the growing acceptance of sheltered instructional strategies as a validated means to help ELLs gain access to grade-level academic content, research over the past two decades began to emphasize the importance of the efficacy of classroom teachers' cultural and linguistic responsiveness (Echevarria & Short, 2010).

Cultural Gap

The Department of Education publication, *Our Nation's English Learners* (2017) reported that during the 2014-2015 school year, 75% of the ELLs were Hispanic in the United States. Martin et al. (2020) reported general fertility rates of Hispanics at 65.3

births per 1,000 women and non-Hispanic white rates at 55.3 births per 1,000 women. The use of the Hispanic term for ethnicity throughout this study reflects the term used by the families I serve in Sassafras School District. Families I work with daily reject the Latinx terminology and request to be referred to as Hispanic (American Psychological Association, 2020). The birth rate statistics show sustained population growth over the next decade within public schools. Thus, the school system and teachers need urgent attention to understand the necessary means to provide ELL students the rights afforded to them under *Lau v. Nichols* (US Supreme Court, 1974).

In 1997, Cummins called for culturally and linguistically responsive (CLR) teaching strategies. The move towards intentionally incorporating culturally and linguistically responsive pedagogy seek to incorporate the student's cultural and linguistic background into the classroom as an asset rather than a deficit. The seminal work of Ladson-Billings (1995) sought to assist teachers with important knowledge for working with Black students. Likewise, the work of Hollie (2012) defined CLR pedagogy as "the validation and affirmation of the home (indigenous) culture and home language for building and bridging the student to succeed in the culture of academia and mainstream society" (p. 23).

By 1987, Cummins expanded his research to include non-White minority students experiencing academic difficulties. He discussed the impact classroom teachers could make on academic achievement for all students: "It is in the interactions with individual educators that minority students are either empowered or disabled personally and academically" (p. 3). Teachers' perceptions influenced by the deemed "school language"

compared to the use of nonstandard languages impact their abilities to move past deficit views to a more asset-based perspective (Hollie, 2012). The classroom teacher spends the majority of the school day with the student, thus having the most significant impact on the student. The interactions between the teacher and the students need to be in a safe supportive environment, and free from any deficit perceptions.

Since ELL students learn English as they learn academic content, language serves as the bridge between these paradigms. Hollie (2012) initiated three foundational concepts for linguistic responsiveness: "all language is good for communicative purposes," "all linguistic forms are rule-governed and systematic," and "as infants and toddlers, beginning as early as prebirth, we learn the language that is spoken in the home" (p. 37). Lucas et al. (2008) incorporated Cummins' work focused on the importance of the L1 ability to acquire BICS and CALP into Hollie's foundational concepts. To support the needs of ELL students' attention needs to be devoted to fostering rich opportunities to discuss academic and social English.

Linguistic Diversity

The integration of public schools established by *Brown v. Board of Education* (1954) sought to end segregation of schools based on color; however, 60 years after the groundbreaking precedent, public schools still resort to exclusionary practices for linguistically diverse students. Segregated practices often can be justified due to a need for more resources to adequately address ELL students' learning needs in the classroom. However, newcomer programs that pull students out of academic classes, often further

deficit mindsets among classroom teachers through the unintentional reinforcement of ideas if the classroom teacher cannot adequately address the needs of an ELL.

ELL students suffer triple segregation based on race, language proficiency, and poverty classification. In rural settings, ELL students receive additional educational support from an ELL specialist shaped by the availability of the specialist and other ELL students within the school (Vasquez Helig, 2013). Often combining students of vastly differing proficiency levels prevents individualized lessons directed at the student's English proficiency needs and limits the student's growth. Also, ELL specialists serve multiple schools leaving a limited amount of time each week to address the student's English acquisition needs instead of serving the students during an optimal time in their schedule.

The pursuit of equal educational opportunities that led to the landmark case of *Brown v. Board of Education* (1954) mirrors ELL students' plights in classrooms today. Smith (2021) echoed the parallelism of today's attitude towards immigrants with the difficulty of formerly enslaved persons. Public schools seek to provide an informed populace that can serve and maintain the foundational democratic principles established by the United States (Kober, 2007). Equipping teachers with linguistically responsive strategies extend the founding fathers' vision to further the education of all students within the public school system.

Linguistically responsive tenets provide a framework for the classroom teacher to scaffold academic instruction for the ELL student without compromising content. Lucas

and Villegas (2013) detailed the framework for preparing linguistically responsive teachers. The framework included

> sociolinguistic consciousness, value for linguistic diversity, inclination to advocate for ELL students, learning about ELL students' language backgrounds, experiences, and proficiencies, identifying the language demands of classroom discourse and tasks, knowing and applying fundamental principles of second language learning, and scaffolding instruction to promote ELL students' learning. (p. 302)

Inasmuch, using the student's background and experiences in the classroom parallels key ideas within a culturally responsive environment among the teacher and the students. Addressing academic and social English demands remains fundamental to linguistic responsiveness; likewise, the classroom teacher using sheltered instructional strategies supports the six tenets of linguistically responsive teaching in Figure 1.2.

Figure 1.2

Qualities of Linguistically Responsive Teachers

1. Orientations of Linguistically Responsive Teachers
    a. Sociolinguistic consciousness:
        i. Understanding the connection between language, culture and identify
        ii. Awareness of the sociopolitical dimensions of language use and language education
    b. Value for linguistic diversity
    c. Inclination to advocate for ELL students
2. Knowledge and Skills of Linguistically Responsive Teachers
    a. Learning about ELL students' language backgrounds, experiences, and proficiencies
    b. Identifying the language demands of classroom tasks
    c. Applying key principles of second language learning
        i. Conversational language proficiency is fundamentally different from academic language proficiency
        ii. ELLs need comprehensible input just beyond their current level of proficiency
        iii. Social interaction for authentic communicative purposes fosters ELL learning
        iv. Skills and concepts learned in the first language transfer to the second language
        v. Anxiety about performing in a second language can interfere with learning.

Source: Lucas et al. (2008, p. 57).

The parallelism of sheltered instructional strategies and linguistically responsive tenets creates an opportunity to prepare educators with practices that improve teacher confidence in providing appropriate access to academic content (see Appendix C). The interconnectedness deepens the impact sheltered strategies play within the academic classroom for advancing academic content and English acquisition. Meeting ELL

students' needs requires addressing classroom teachers' learning to grow their practice while strengthening their cultural and linguistic appreciation.

Classroom Teacher Impact

In his meta-analysis on the influences of student learning, John Hattie (2019) highlighted the classroom teacher's significance in the academic achievement of their students. The classroom teacher must be fully prepared to educate all students. However, unprepared classroom teachers relegate the primary role of educating ELL students to ELL specialists trained in CLR and sheltered instructional strategies. Bandura (1986) stated, "Those who believe themselves to be inefficacious constrain their option and fearfully avoid activities even though they are within their capabilities" (p. 42). This statement further stresses the importance of working with classroom teachers to build their self-efficacy around educating ELLs. Cummins (1997) noted that a teacher working in a classroom void of CLR strategies is "unlikely to promote either academic growth or affirmation of pupil identity" (p. 112). The disconnect between the predominantly White classroom teaching force and the rapidly changing student population across the United States, especially in South Carolina, demands that attention be devoted to classroom teachers' preparedness.

The disparity of the racial and ethnic backgrounds among teachers and the students within their classrooms brought about research on the impact it can have on classroom environments. Thus, building the case for further application of CLR ideas in twenty-first-century classrooms, Gay (2000) explored professional racism by highlighting the need for increased representation of various ethnic groups among the teaching force.

The need for a teaching force with increased diversity remains a focus of school districts across the United States; Gay cautioned against equating teachers of similar ethnic backgrounds as the only ones capable of teaching a diverse classroom. All teachers need a deeper understanding of CLR ideas and their role in bridging the diversity gap between teachers and students. Milner (2006) discussed how the appreciation of diverse cultures within the classroom impacts the interactions between teachers and. Teachers need to engage in exchanges centered on understanding the role of culture in the school at a level that encourages deep reflection about one's cultural experience. Milner's calls for professional interactions provide fertile soil for applying CLR strategies within the classroom. While this study focuses primarily on increasing linguistic responsiveness among the teachers, attention to cultural responsiveness occurred within the LRS tenet and concentrate on the safe and welcoming classroom environment.

Implicit bias among the majority White teaching force impacts their diverse classroom through their reactions to students during moments of stress or uncertainty. Understanding how this can affect students' learning trajectories becomes essential in the CLR classroom (Ladson-Billings, 2014). Greenwald and Banaji (1995) stated, "Implicit stereotypes are the introspectively unidentified (or inaccurately identified) traces of experience that mediate the attribution of qualities to members of a social category" (p. 15). In the podcast hosted by Sonofras (2020), Megan Fuciarelli, the Executive Director and Principal Consultant at US2, Inc., compared implicit bias to a second language speaker returning to their native language in times of stress. Teaching contains moments of pressure for each teacher, and in those moments, the teacher returns to the teaching

methods and practices from their homogenous educational backgrounds. Thus, leaving diverse students on the outside looking in on a system that does not reflect their identities.

Professional Learning Communities

School districts within many new destination states, especially rural communities, cannot offer the staff development and support documented in the original destination states. Coady et al. (2019) stated that rural school districts "need of professional collaboration, share ideas and strategies, and build as a social network" (p. 52). Louis et al. (1995) studied the conditions to advance learning within urban schools. Louis et al. stated that educators must devote optimal performance attention to what occurs outside the classroom. The lack of control by teachers over the work environment leaves many feeling like teaching is a semi-professional line of work.

Implementing professional learning communities (PLC) could elevate the practice among the population while providing more voice for teachers in their working environment. Through the establishment of a PLC, Louis et al. (1995) further reported increases in "cognitive and skill base, supportive leadership, trust and respect, openness to improvement, and sense of efficacy" (pp. 295-296). The PLC approach to increase teacher efficacy gained momentum during the late 1990s under DuFour and Eaker. DuFour and Eaker (1998) found that using PLCs as a means of staff development proved effective when the learning is research-based, the content focuses on generic and discipline-specific topics, and it causes teachers to expand their thinking to educate all students better. Within this DiP, the PLC framework was used as the vehicle to deploy the PDSA cycles of improvement science.

DuFour and Eaker (1998) characterized PLCs as spaces where "educators create an environment that fosters cooperation, emotional support, and personal growth as they work together to achieve what they cannot accomplish alone" (p. xii). The collaboration and personal accountability that transpires within effective PLCs build the collective efficacy of the participants. Collective efficacy earned the highest-rated strategy for affecting student achievement in a study by Hattie (2009). The application of PLCs within rural schools, in particular, provides a structure to equip teachers to engage in discourse around research strategies to affect their classrooms in real-time.

Rurality

Classroom teachers with minimal professional development around CLR pedagogy and sheltered instruction grapple frequently to maintain an asset-based view of the ELL students within their classroom. Despite well-intentioned efforts, classroom teachers can feel unprepared to work with ELL students; these inadequacies worsen within rural communities (Coady et al., 2019; Gandara et al., 2005). Rural schools educate one-third of all public school students in the United States (Hussar et al., 2020); however, the preponderance of research on ELL students examines urban school settings, which differ significantly in staff, size, resources, and funding from their rural counterparts (Coady, 2020).

The late twentieth century saw the emergence of ELL best practice strategies from large urban centers. Tenets such as sheltered instruction and culturally relevant instruction gained in popularity to best educate ELL students within public school settings. Large urban environments provide areas with concentrated populations and

resources necessary for wide-scale implementation. Coady (2020) stated that the preponderance of research on ELL students examines urban school settings, which differ significantly in staff, size, resources, and funding from their rural counterparts. Therefore, these best practices need to be adapted to address rural and rural-like school systems, similar to the district in this study and many others in South Carolina. Many regions within South Carolina experienced a shift from traditionally rural areas to town and suburb NCES classification. School systems, formerly identified as rural areas, still share many of the factors impacting rural systems, such as teacher shortages and higher incidents of poverty (United States Department of Agriculture, 2017).

Lee and Hawkins (2015) researched the ELL experience within rural Wisconsin. They found that the treatment of ELL students in Wisconsin was not unique to rural settings. Rural school districts in this study experienced a lack of ELL teachers, a lack of appropriate training for classroom teachers, and relegation of the education of ELL students to the ELL teacher. Implementing a push-in service model furthered deficit mindsets about ELL students and ELL teachers (Lee & Hawkins, 2015).

The rapid growth of ELL populations among the "New Destination" states leaves many school districts lacking the personnel and materials necessary to support ELLs adequately. Classroom teachers without the CLR framework to address the student's needs can view ELL students with a deficit mindset that defines the academic performance they can experience within the classroom (Rizzuto, 2016). Nearly 15% of the 2019 population in South Carolina lived in rural designations (State Data, 2020);

failing to address the impact rurality plays on the education students in these schools can be tantamount to educational malpractice.

The public school system in South Carolina continues to address the disparity of academic and social justice among culturally and linguistically diverse students. The disparities evidenced by Act 388 in 2006 widened the gaps in financial and human resources across the state (Dalto, 2008). Impoverished rural school districts within South Carolina fail to compete with the booming suburban and urban counterparts along the I-85 corridor. Although graduation rates have increased in South Carolina, thus fulfilling the purpose of the minimally adequate lawsuit *Abbeville v. South Carolina* court case, the question is whether a minimally acceptable education is sufficient (Tran et al., 2020).

The percentage of people aged 25 years or older that failed to complete high school in rural areas has decreased; however, the gap between rural and urban regions persists. Between 2014 and 2018, 18.1% of adults aged 25 years or older failed to complete high school compared to 11.9% of their counterparts in urban areas (State Data, 2020). Across South Carolina, rural counties struggle to mitigate an aging population due to increasing out-migration rates. At the same time, Hispanics continue to trend as the fastest-growing population within these rural areas (Cromartie, 2018). Since 2016, the Rural Recruitment Initiative, administered by the Center for Educator Recruitment, Retention, & Advancement (CERRA) and supported through South Carolina legislation, has been used to combat the excessive teacher turnover experienced in rural school districts (CERRA, 2019).

With the growing Hispanic population and the absence of equitably allocated resources, rural and previously identified rural school districts struggle to recruit and retain certified teachers. Coady (2020) called for a focused research agenda around ELL students in rural locations. Drawing further attention to the impact of limited resources in rural schools, Coady (2020) reported that "only 32% of rural high schools offered sheltered English instruction compared to 81% in cities" (p. 5). The conflation of rurality and ELL education uncovers an emerging research field.

Theoretical Framework

In this study, I utilized tenets of transformative learning from Mezirow and transformative leadership from Shields to explore the research question: *how can classroom teachers' use of linguistically responsive strategies be increased to meet the educational needs of their ELL students?* The increase of linguistic responsiveness includes measuring current levels of responsiveness within the classroom and incorporating formative mixed methods data to determine areas of learning to strengthen practices. Mezirow (1997) discussed the "frame of reference" adult learners bring to shape their perspectives and expectations on topics. Applying "frame of reference" to a predominantly White teaching force explains why some teachers possess deficit mindsets when working with linguistically diverse populations. Therein lies the power of applying a transformative learning framework.

The transformative framework provides a mechanism to enact social justice and challenge adult perspectives about ELL students. The infusion of Mezirow's four learning processes adds further implications to rural ELL instruction. The four processes

consist of "elaborating an existing point of view," "establish[ing] new points of view," "transform[ing] our point of view," and "becoming aware and critically reflective of generalized bias" (Mezirow, 1997, p. 7). During the professional development of teachers, the intentional incorporation of discourse in an environment where participants are free from worries of retaliation, open to challenge and expand on issues discussed, and a search for common ground emphasizes the impact transformative learning can create in social justice. Although this study does not focus on social justice as part of the research question, the implications of increasing linguistic responsiveness ultimately enacts social justice for equal access to academic content for all students.

Classroom teachers educating a diverse group of students experience stress over uncertainty on how to serve these learners, leaving them to resort to traditional practices. The uncertainty leaves teachers to second-guess their classroom approaches, thus impacting their efficacy. The ability to enact social justice and help empower educators to overcome deficit mindsets provides a context for the importance of transformative leadership (Shields, 2010). The application of transformative learning within building ELL instructional support provides real-time context-related learning.

Furthermore, Mezirow's (1997) discussion on the habits of mind provides a vehicle for disrupting non-linguistically diverse teacher practices and attitudes. Engaging teachers in professional development centered on discourse creates fertile soil for viewing students from an asset-based viewpoint and ultimately improves ELL students' interactions. Short (2013) detailed the keys to sustaining the rigorous transformative learning of LRS to increase ELL content knowledge and English acquisition. Several of

the keys discussed by Short centered around the importance of job-embedded education and ongoing support of professional learning in context. In this study, I sought to test the intervention depicted in Figure 1.3 through the lens of a PDSA cycle from improvement science (Bryk et al., 2008). The research question this DiP investigated: *how can the classroom teachers' use of linguistically responsive strategies be increased?*

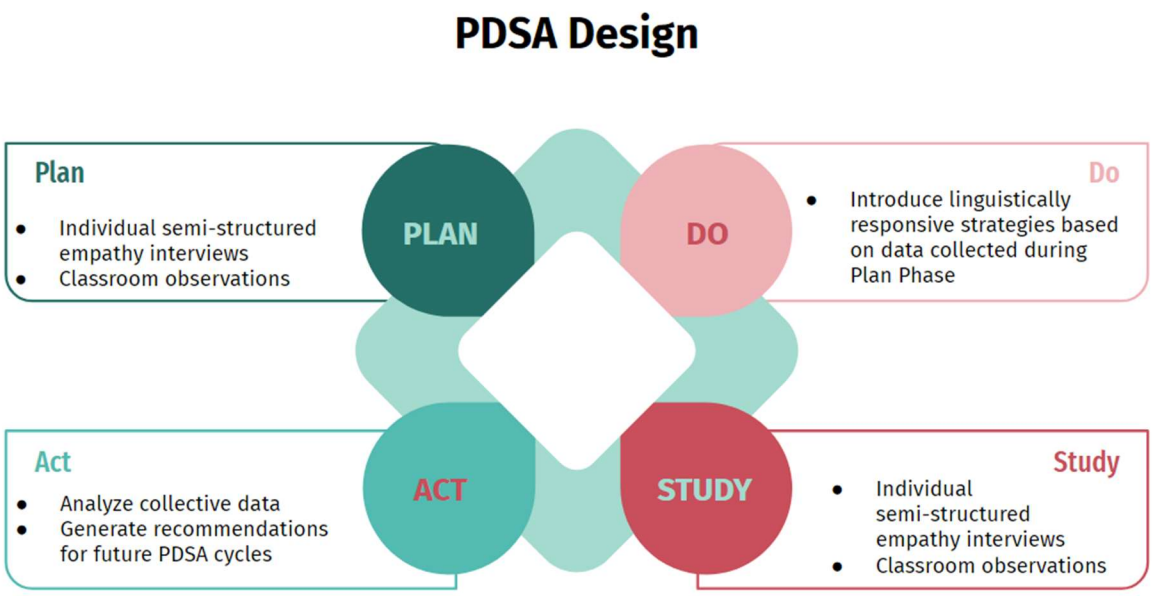
Research Design

The plan portion of the PDSA cycle within this DiP commences with semi-structured empathy interviews and classroom observations to shape the focus of PLC meetings. Before the empathy interviews, I gathered demographic information about the participants in this study. Introducing LRS within the PLC meetings constitutes the do portion of the PDSA cycle within this DiP. Repeating the interviews and classroom observations after the PLC meetings include the work within the study portion of the PDSA cycle. Ultimately, the analysis of the data gathered and the development of recommendations constitute the act portion of the PDSA cycle.

Focusing on linguistically responsive strategies deemed necessary from the interviews and classroom observations provides a natural connection between the teachers and relevance to their practice in the classroom. Utilizing the South Carolina 4.0 Teaching Rubric domains focused on linguistically responsive ideals reinforces the idea that the strategies enhance their praxis for all students, not just ELL students.

Figure 1.3

PDSA Cycles



Research Site

The research site for this study is Sassafras School District (all names are pseudonyms). Since 2011, Sassafras's Title III/ESOL program has grown from servicing a little over 250 students to 470 students. Sassafras contains three high schools, three middle schools, and eight elementary schools. The NCES (2020) designated Sassafras as a suburb: a large locale during the 2019-2020 school year. The school district maintains an enrollment of 10,000 students and over 500 educators. Ninety-two and a half percent of the educators identified as White during the 2015-2016 school year, while over 10 percent of the student population identified as non-White.

Positionality

I have worked within Sassafras for 17 years, creating a familiarity with classroom teachers and administrators. This familiarity lends itself to the ease of recruiting participants; however, it breeds the possibility of bias in participants' responses. While working at the district office, I have led professional development opportunities to transition to interactive whiteboards within the classroom, the transition of mathematics standards to Common Core and back to South Carolina-specific standards, and the transition of school accountability models used to score the effectiveness of schools. The history I have of providing professional learning to educators in the Sassafras School District creates familiarity and trust for quality learning.

In 2015, the federal government enacted greater accountability for ELL growth and performance within public schools through Every Student Succeeds Act (ESSA). This act requires states, districts, and schools to be held accountable for ELL growth toward English proficiency. The accountability for ELL growth heightened a sense of vulnerability among the ELL specialists; however, they approach student growth wholeheartedly and accept the vulnerability (Brown, 2015). The interconnectedness between myself and the ELL specialists remains delicate to navigate for research purposes; however, our trust level is high, as evidenced by the fact that they often feel very comfortable expressing dissenting opinions with me.

I have coordinated the Title III/ESOL program within Sassafras for the past 10 years. Working intricately with this program has provided numerous opportunities for informal action research. The struggles of meeting the state requirement of a 45:1

student-teacher ratio and providing support for ELL students have proven to be a very demanding. While serving as the district's Title III coordinator, I have experienced turnover in the state Title III leadership position. This turnover limited the growth of ELL specialists and teachers across the state. I have worked in Sassafras School District since 2005, and starting in 2012, I took over the coordination of the ELL program within the district. As coordinator, my role entails working closely with the ELL specialists to ensure equity in educational opportunities and access to academic content while acquiring English proficiency. With a 26% increase in the state ELL population from 2010 to 2020 (NCES, 2022), Sassafras School District experienced equal growth during my tenure in this role.

Additionally, in this role, I oversee Title III federal funds, which stipulate teacher professional development. Working within this field for an extended time in Sassafras School District provided me with insights that an outside researcher would find challenging to make from the data generated. Creswell and Poth (2018) stated that the "longer researchers stay in the field or get to know the participants, the more they 'know what they know from firsthand experience" (p. 21).

During my purview of Title III, Sassafras School District provided traditional professional learning opportunities in sheltered instructional strategies and strategies for students with limited or interrupted formal education. Traditional professional learning lacked the sustainability for the teaching to carry beyond the short term. Short (2013) detailed the keys to sustain the rigorous transformative learning of sheltered instruction to increase ELL content knowledge and English acquisition. Several of the keys discussed

by Short center around the importance of job-embedded education and ongoing support of contextual professional learning. Implementing professional learning through the professional learning communities (PLC) structure focuses on job-embedded learning. In Sassafras School District, I serve as a member of the district learning team charged with implementing PLCs in all schools to ensure high levels of learning for all students; as a member of the district, the learning team provides a high level of trust among the classroom teachers and myself a researcher participant. Creswell and Poth (2018) discussed that the researcher within a problem enhances qualitative data analysis.

While coordinating the Title III program within the district, I have worked tirelessly to create a distributive leadership model with the ELL specialists. The ELL specialists participate in monthly professional learning sessions through this model that focuses on shared learning. The teachers bring their cases and ideas to share with the group for collective problem-solving. Joint problem-solving enacts a spirit of shared accountability (Fletcher, 2004). A published calendar of topics to be addressed during the learning sessions provides a backdrop for discussion; however, teachers often bring ideas to the group to advance their learning. Lastly, ELL specialists focus on improving the student's English proficiency and language skills. The specialists eagerly await standardized test results to measure student progress each year.

Definitions

The words defined within this section represent foundational principles within this study. The words are as follows:

culturally responsive teaching - viewing students' cultural influences such as response patterns, behavior, and communicative structures as an asset to further the student's participation within the classroom (Gay, 2018).

deficit mindset - reliance on preconceived thoughts, attitudes, and behaviors toward culturally and linguistically diverse individuals that result in low expectations within the classroom (Milner, 2016).

English language learner (ELL) - The term English Learner takes on many forms, such as English Language Learner, Multi-language Learner, and English for Speakers of Other Languages, and usage can be determined by widespread consensus. Currently, the WIDA organization and others advocate for the term multi-language learner (MLL) to promote a more asset-based label.

According to ESEA section 9101(25) an EL (or "limited English proficient" child, per the ESEA) is "an individual—

A. Who is aged 3 through 21
B. Who is enrolled or preparing to enroll in an elementary school or secondary school;
    i. who was not born in the United States or whose native language is a language other than English;
    ii. (I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and

(II) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or

iii. who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and

C. whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual—

i. the ability to meet the state's proficient level of achievement on state assessments described in section 1111(b)(3) [of the ESEA];

ii. the ability to successfully achieve in classrooms where the language of instruction is English; or

iii. the opportunity to participate fully in society." (OELA, 2018, p. viii-vii)

Professional learning community (PLC) - a term assigned to a group of educators working together to "achieve common goals linked to the purpose of learning for all" (DuFour et al., 2006, p. 3).

Conclusion

Since 2005, when I began my teaching career in Sassafras, the growing ELL population within the district resulted in the need for ongoing, relevant staff development for classroom teachers. Understanding ELL students and strategies to advance their academic and English acquisition appear on the administrative support list, the teacher of the year forum, and other professional development surveys. No teacher starts each day

desiring to do a poor job educating students or intentionally ignoring cultural and linguistic diversity within the classroom. However, teachers have been placed in a situation they must be prepared to address because ELL growth exceeded the rate of change in preservice and in-service teacher professional learning opportunities. The rampant "solutionitis" detailed by improvement scientists, such as Bryk et al. (2015), creates an environment where school administrators and teachers look for a quick-fix program or routine to fix ELL students. Working within existing structures in schools and utilizing teachers' internal drive as professional learners to mold their practice to better respond to ELL students' needs provides an opportunity to enact sustainable change.

CHAPTER TWO

METHODS

The focus of this chapter is the methodology utilized to answer the research question: *How can classroom teachers' use of linguistically responsive strategies be increased to meet the educational needs of their ELL students*? In answering the research question, I sought to use PDSA cycles from improvement science to address the problem of practice that classroom teachers struggle to use LRS to meet the educational needs of ELL students. The combination of an exploratory sequential mixed methodology during the PDSA cycles yielded results for the research question. In this chapter, I discuss the methods through the lens of the PDSA cycles.

Improvement Science Approach

The problem of practice I am investigating in this study is how to increase the use of LRS by classroom teachers to meet the educational needs of English Language Learning (ELL) students. Kruse et al. (1995) researched professional communities in urban schools to advance teacher learning. Their work laid the groundwork for the widely utilized PLC framework across the United States as a means for continuous improvement. Bryk et al. (2015) continued their academic endeavors in professional communities for continuous improvement through the field of improvement science. Parallels between improvement science within education and PLC models (Woodland, 2016) provide a natural connection to action research. PLCs, give a structure to connect research to practical applications through collective discourse among teachers centered on advancing student learning. This focus aligns with the pragmatic approach of "situated

problem solving" (Ormerod, 2020, p. 6). DuFour (2004) detailed three quintessential questions centering on the work within a PLC:

- What do we want each student to learn?
- How will we know when each student has learned it?
- How will we respond when a student experiences difficulty in learning? (p. 8)

Within a PLC, teachers collaborate around the most effective means to advance learning for all students. Educators focus on academic standards, marginalized populations, or specific interventions. Grissom et al. (2021) recently released a report on a principal's impact on students and schools. The study found that one of the four fundamental principles contributing to a positive impact on students and schools through their support of PLCs was the time devoted to teachers building collective efficacy and focusing on continuous improvement. DuFour et al. (2004) stated, "a learning community is not created by completing a series of tasks but rather by beginning a process of perpetual renewal" (p. 284). The use of PLCs to enact improvement science within the educational realm lends itself to a natural partnership. The parallel language from Langley et al. (2009) and improvement science emerges from the three questions posed during PDSA cycles:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in an improvement? (p. 24)

The questions studied as the foundation of PLC meetings take on a lens centered around classroom practice, while the PDSA cycle questions take on a lens centered on the target of improvement. Within this study, PLC meetings provided a means by which classroom pedagogy and praxis can improve linguistically responsive tenets identified from the formative data.

Utilizing PDSA cycles to enhance LRS within the confines of PLC meetings provides relevant, on-the-job support for classroom teachers to meet the needs of ELL students. Figure 1.3 illustrates the PDSA cycle utilized within this study.

I utilized combined qualitative data from the empathy interviews and field notes with quantitative data from the observations to create the focus of the learning in PLC meetings. During the PLC meetings, I introduced sheltered strategies determined from the combined data to enhance LRS (see Appendix D) for the classroom teacher based on the mixed methods data analysis.

Plan

For the plan portion of the PDSA cycle, I used an exploratory sequential mixed methods approach to shape the data collection process. To determine the change factor within this study, I collected qualitative and quantitative data to inform the focus of the learning during PLC meetings. The qualitative data originated with the empathy interviews. Through the empathy interviews, I sought to understand the teachers' perceptions regarding linguistically responsive ideas. Through the plan portion, activities like participant selection, empathy interviews, and classroom observations guided the work to find a way to increase LRS among classroom teachers.

Participants

The initial step within the plan phase came from identifying participants in this study. Convenient, purposeful sampling served as a basis for identifying the participants of this study (Merriam & Tisdell, 2015). The teachers received initial contact about the study through written correspondence that detailed the research and the benefits to their practice in the communication (Appendix C). Teachers understood there would be no possible retribution for declining to participate in the study.

Empathy interviews

The primary data sources originated from empathy interviews and classroom observations. Nelsestuen and Smith (2020) defined empathy interviews as "one-on-one conversations that use open-ended questions to elicit stories about specific experiences that help uncover unacknowledged needs" (p. 59). Using empathy interviews, I sought to uncover insights into the teacher's classroom practice while exploring underlying cultural and linguistic diversity perceptions. The qualitative data acquired during the empathy interviews shaped my knowledge of tenets of LRS among the participants. Teachers answered questions about preparedness to instruct ELL students, professional learning opportunities for ELL students, and their practice in the classroom in terms of linguistically responsive strategies.

One school in the Sassafras School District experienced an 84% increase in ELL students over the past five years, Sunshine Middle School. Sunshine Middle School provided a location prime for participation in this study. I emailed the entire classroom teaching staff of Sunshine Middle School detailing the study's goals and the informed

consent document. From the responses, several teachers indicated that they would love to participate, but they did not have any ELL students in their classes. Five teachers indicated that they wanted to participate in the study. A table contained in Appendix J details demographic information about each participant. The teachers represent English language arts, mathematics, and social studies content areas. Four of the five teachers have earned a master's degree, and two have completed Sheltered Instruction Observation Protocol (SIOP®) training within the district. One teacher participated in Mutually Adaptive Learning Paradigm (MALP) training to further strategies for students with limited or interrupted formal education. At the time of the study, the mean years of teaching experience among the participants equaled 13.2 years.

Within an exploratory sequential design, the qualitative strand serves as a critical component in the formation of the intervention (Creswell & Plano Clark, 2019). The qualitative data generated in this study resulted from empathy interviews and field notes. The empathy interviews provided the context of the qualitative data. Administrators and classroom teachers within the Sassafras School District yearly request support for educating ELL students from the central office, but they need help to specify the nature of the support needed. Empathy interviews uncovered the participants' specific needs for educating ELL students. I used empathy interviews to understand teachers' classroom experiences (Meyer, 2021) with ELL students. To fully understand the perspectives and attitudes of teachers, Nelsestuen and Smith (2020) discussed the need for "listening closely" (p. 60) to the words of the participants. In addition, conducting empathy

interviews established a relationship between the researcher and the participants—the trust within this relationship is a component of building meaningful interventions.

I conducted 30-minute, one-time, semi-structured empathy interviews with each participant. I developed an interview protocol (see Appendix G) with open-ended questions, and, if necessary, I posed follow-up questions for further elaboration around the responses given. I conducted the interviews at a time and place selected by the participants via Zoom. I recorded the interviews and transcribed them in their entirety for analysis. I completed two rounds of coding. In the first round, I used the six tenets of linguistic responsiveness to assign deductive codes (see Appendix L). I inductively coded the data in the second round to identify emerging themes. I recorded the data in an Excel spreadsheet and stored it on a password-protected storage device.

Classroom observations

In this study, I used the exploratory sequential mixed methods to synthesize qualitative data from the empathy interviews and field notes with the quantitative data gathered from the classroom observations to determine the learning focus during PLC meetings. Creswell and Clark (2018) stated, "researchers collect qualitative data before an experiment; they can use that information to plan specific intervention activities that will be appealing or useful to the participants" (p. 108). The scores from the classroom observations originated from the Inclusive and Culturally Responsive Teaching of the South Carolina Teaching Standards (Appendix E). The rubric pulls from the SC 4.0 Teaching Rubric (South Carolina Department of Education, n.d.) used to evaluate all certified teachers in South Carolina. The Inclusive and Culturally Responsive Teaching

Rubric includes seven domains on the SC 4.0 Teaching Rubric. Those domains include activities and materials, questioning, teacher knowledge of students, thinking, problem-solving, environment, and respectful culture. Appendix D maps the interconnectedness between LRS, South Carolina 4.0 Inclusive and Culturally Responsive Rubric, and sheltered instruction strategies. The mapping served throughout this study as the basis for first-round coding, observations, and the nature of professional learning in PLCs. The classroom observation protocol (see Appendix F) served as a way to record notes from the statement concerning the LRS. The classroom observations sought to quantify the presence of LRS in each participant's classroom.

Classroom observations transpired in a way to be minimally intrusive and evaluated the use of LRS in a typical classroom setting. Participants selected class periods that contained ELL students for the observation. Students received informed consent for parents of students to take home with them (Appendix B). The letter informed parents that the study focused on the instructional strategies deployed by the classroom teacher; however, they could opt their students out of participation. As a certified SC 4.0 Teaching Rubric evaluator, I scripted the lesson throughout the observation as trained for proper scoring. As the observer, I sat in a non-obtrusive location in the classroom. I generated detailed field notes upon concluding the classroom observations that lasted thirty to fifty minutes, depending on the class length.

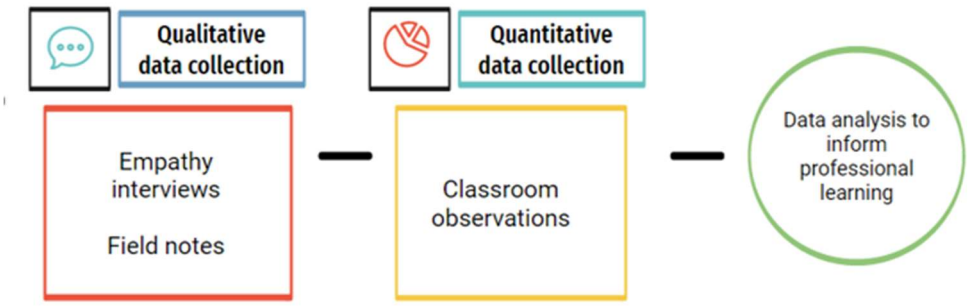
During the classroom observations, common structures existed across grades and classrooms within Sunshine Middle School. Students used interactive notebooks for guided notes and classroom practice. The familiarity among the students with the

notebooks provided a scaffold for the students to enable them to focus on the content rather than on where and how to take notes. The consistent use of interactive notebooks across content areas provided a structure for facilitating the use of realia and visual components of academic vocabulary.

The observations provided quantitative data in the study by scoring the rubric values assigned for each indicator. The observational rubric provided a score of one to four for each hand observed based on the prevalence of characteristics demonstrated during the class. With the small sample size of participants to understand the majority of LRS within the classrooms, I utilized a box-and-whisker plot. The visualization aided in the convergence of the qualitative and quantitative data to indicate the focus of strategies later introduced during PLC meetings. The exploratory sequential design (Figure 2.1) provided a deeper understanding of LRS by carefully examining words and actions among the participants.

Figure 2.1

Exploratory Sequential Design Utilized During the Plan Portion of the PDSA Cycle



Note. Adapted from Creswell and Clark (2017, p. 96).

Do

For the do portion of the PDSA cycle, I implemented the intervention of supporting the classroom teachers' linguistically responsive strategies. Hinnant-Crawford (2020) best described the work within the do phase of a PDSA cycle, “The do phase is a combination of implementation and documentation of what is happening” (p. 168). Through converging the exploratory sequential data with a joint display, I determined which LRS to discuss with the participants during the PLC meetings. From the mixed methods data analysis, the participants utilized several classroom strategies such as video clips to support academic content and grouping strategies; however, the strategies needed to be honed for maximum impact. During the PLC meetings, I shared with the participants the data infused with sheltered strategies to increase responsive linguistic practices in their praxis. Appendix K includes the slides discussed with the participants during the PLC meetings. The participants and I discussed the strategies in light of the classroom observations. The discussion part of the PLC meetings discussed how the ELL specialist helps with some of these suggestions, and the strategy benefits all learners.

Merriam and Tisdell (2016) explained the importance of immediately penning notes to paper after study events. Upon conclusion of the meetings, I recorded field notes from the interactions to aid in documenting the nature of the change introduced. I followed the same procedures as the semi-structured interviews in coding the field notes. Saldaña (2016) discussed the importance of coding detailed field notes by stating the interpretations of natural phenomena to gain "analytic insights" (p. 17). Coding the field notes provided evidence of incorporating the linguistically responsive tenets into their

language and practice. Field notes taken after PLC meetings provided insight during the study phase of the PDSA cycle. The compilation of data gathered during the plan and do phases of this study provided the focus of the study phase.

Study

For the study portion of the PDSA cycle, I used an exploratory sequential mixed methods approach to understand the data of this study and generate findings. During the study phase, participants completed a semi-structured interview and classroom observation using the protocols from the plan phase (see Appendices F and G). Merriam and Tisdell (2016) stated, "Observations are also conducted to triangulate emerging findings; that is, they are used in conjunction with interviewing and document analysis to substantiate the findings" (p. 139). Utilizing the mixed methods data provided comparative insights into the impact of the learning during the PLC meetings. Creswell and Plano Clark (2018) discussed the integration of mixed methods data for interpretation and said, that data can "assume the form of visual displays that combine both quantitative and qualitative results" (p. 221). To integrate the data from this study, display of the qualitative data on a box plot provided a picture of the spread of responses, while the selection of supporting qualitative data gave a full view of the analysis. The use of the box plot helped the smaller sample size of participants, where changes could go undetected. Construction of the joint display (see Appendix J) with both sets of interviews and observations provided findings from this study, leading to conclusions in terms of the problem of practice investigated. The joint display in Appendix J displays the shift in approach through the implementation of the PDSA cycle. Determining if the

theory of improvement yielded results worthy of sharing with a larger audience characterized the work within the study phase.

In addition to analyzing data through the joint display, I conducted second-round inductive coding on the collective data gathered in this study. Merriam and Tisdell (2016) stated, “the focus in the analysis is on the unfolding of the findings in stages and phases over time” (p. 235). The initial round of deductive coding sought to understand the presence of the linguistically responsive tenets among the participants, whereas, the second round of coding sought to understand the totality of the PDSA cycle through a lens of linguistic responsiveness. To advance the analysis of the quantitative data collected, I conducted statistical significance tests on the variation of the values from the classroom observations. The chi-squared calculation determined if the differences indicate a statistically significant difference. The selection of the chi-squared distribution for statistical significance best suited the small n-size and the lack of a normal distribution among the data points measured. The chi-square distribution applied to data gathered from the classroom observations utilized the null hypothesis (H_o) states no difference in variation between the data collected during the first and second observations.

The deductive codes emerged from the words of the participants. Using the terms of the participants' words provided a voice for them to advocate for their peers. The feeling of advocacy for colleagues emerged during the first round of empathy interviews; Participant Four remarked, “especially when a school reaches a certain population with

ESOL, it would be helpful for all teachers to get some type of training." The following lists the inductive codes:

- I want to understand how to respect the other cultures in my class.
- It would be helpful for all teachers to get some type of training.
- I am always wanting to find ways to help my ESOL friends.
- These strategies can help all of my students, not just ESOL students.

The data coding with these four codes provided the framework for the findings in this study. The statistical analysis of the quantitative components and the analysis of the qualitative features of this study sought to answer the research question: *how can classroom teachers' use of linguistically responsive strategies be increased to meet the educational needs of their ELL students?*

Trustworthiness

Merriam and Tisdell (2016) discussed the role of triangulation in strengthening the trustworthiness of a study through "the use of multiple methods, multiple sources of data, multiple investigators, or multiple theories" (p. 244). Within this study, multiple methods and multiple sources of data served to increase trustworthiness. The various methods used in this mixed methods study provided multiple sources of data to center around the answer to the research question. Due to my position within Sassafras School District, the interpretation of the results reflects my reflexivity as the researcher. Creswell and Clark (2018) discussed the unique nature of the researcher in interpreting qualitative results and the lens reflexivity casts on the findings. Using an exploratory sequential design that took qualitative data from semi-structured interviews and combining it with

quantitative data from observations provided a deeper understanding of the participants' linguistic responsiveness.

The tenets of linguistically responsive strategies (Lucas et al., 2008) served as the basis of the first round of deductive coding. My role as researcher and participant group member allowed me to seek participant feedback through field notes and informal participant feedback through varied interactions. Throughout this study, the participants knew I sought input about the process and how it was helping inform their practice. Another dimension of trustworthiness within this study focused on procedural acuity. The classroom observations served as a critical component to quantitative data; thus, being a certified evaluator of the South Carolina 4.0 teaching rubric strengthens the validity of the quantitative data. As a certified evaluator, I have passed rigorous assessments to demonstrate proficiency in scoring educators using the rubric. Eisner (1991) stated, "The aim of the research enterprise, from a methodological perspective, is to use a procedurally objective set of methods to gain an ontologically objective understanding of events and objects under study" (p. 49). Combined with procedural acuity, the triangulation of methods, and multiple data sources, the trustworthiness of this study leads to a compelling whole the methods and data utilized in this study support the findings and recommendations.

Limitations

Working within Sassafras School District to complete this DiP provided access to information and trust with the participants to comprehensively analyze the data collected and accurately portray their practice. Understanding the stress and the strain placed on

educators during the COVID-19 pandemic caused me to be mindful of the stress levels of teachers as I recruited participants for this study. Initially, I had hoped for; however, I had five participants willing to participate in the study. The smaller number of participants proved to be a limitation. The limited number impacted the ability to distinguish a quantifiable change among classroom observation scores. However, the work of improvement science becomes personalized to those in the rapid PDSA cycles (Bryk et al., 2015). Conducting small rapid PDSA cycles can be more easily carried out with a smaller participant pool. The participants in this study reflected positives from their participation through sharing ideas with colleagues to further the reach of the linguistically responsive strategies developed through participation.

Another limitation of this study centered around the ELL students at Sunshine Middle School remaining homogenously Hispanic students. Despite a majority of Hispanic students in the ELL population in South Carolina, ELL students represent diverse backgrounds. The diverse backgrounds across school backgrounds could prove to be a limitation for the transferability of the findings in this study. However, I sought to develop linguistic responsiveness within the participants, which is proven to support students with diverse backgrounds.

CHAPTER THREE

FINDINGS

In this chapter, I discuss the findings from this study in response to the research question: *How can classroom teachers' use of linguistically responsive strategies be increased to meet the educational needs of their ELL students?* The findings as a result of implementing the PDSA cycle remain the focus of this chapter. The convergence of qualitative and quantitative data generated formative data to assist in understanding the prevalence of LRS within the classroom. The increase of linguistic responsiveness in classroom teachers remains multifaceted, requiring more than just teaching a few techniques. Thus, using PDSA improvement cycles to address the problem of practice provided a framework to develop a plan from mixed methods data, implement the plan, study the results, and adjust the plan for further action. The data generated from this study led to three findings with localized impact, in addition to state-level implications: create professional learning opportunities, focus on teaching academic vocabulary, and promote scaffolds for teachers.

Professional Learning Communities (PLCs)

The use of PLCs as the delivery method for the intervention within the PDSA cycle proved instrumental to the development of the findings. The mixed methods data gathered provided the direction of the PLC meetings. To inform the intervention, the convergence of data played out during the PLC meeting as can be seen in the following example.

When asked about strategies used to provide access to the academic content during the empathy interview, Participant Two's answer centered around a reading program used in the class and single-gender classes. However, Participant Two completed formal SIOP ® training and coaching and did not discuss any of the strategies learned, but did comment on the enjoyment of the SIOP® training. During the classroom observation, Participant Two taught students how to use context clues to find the meaning of unknown words in a text. The students engaged with the content in their textbooks and on the classroom interactive whiteboard; however, the task required students to write a definition of the word from the passage. Therefore, during the PLC meeting, which Participant Two attended, the conversation centered around the use of sentence frames to support students.

During the PLC meeting, we discussed how the sample sentence frames could be taught using an anchor chart to remove the pressure on the students to structure a sentence correctly. This strategy allows students to focus on demonstrating their academic knowledge. I shared content-specific sentence frames (Zwiers & Crawford, 2011) using Google Slides during the PLC meeting. During this meeting, Participant Two stated, "That is great. I could definitely put it in their notebooks for the class. It would be really helpful for all the kids in the class." The learning provided for the participant, although small in its scope, remained targeted from the perspective of the teacher within the context of the academic content being delivered to the students. Through this intervention, I sought to enact small changes with lasting potential for the participants.

The frequency of PLCs and the targeted nature of the work within each PLC fostered an environment where teachers enacted small changes relevant to their immediate classrooms to ensure high levels of learning for all students. This approach is in contrast to traditional professional development, which typically occurs outside of the classroom context, and generates the perception the content is one more thing for the teacher master on an already overcrowded plate of obligations. Thus, the teachers in this study increased their use of linguistically responsive strategies meet the educational needs of their ELL students through learning that primarily occurred during their PLC meetings.

Create professional learning opportunities

The need for various job-embedded professional learning opportunities for classroom teachers emerged from the empathy interviews conducted during the plan phase. Professional learning opportunities and purposes exist in various formats. One space for advocacy exists to promote professional learning for teachers during the recertification process to equip the teachers with the knowledge to enter the classroom with a changing demographic. The LRS tenet of establishing a safe classroom environment appeared in the interviews with only three of the five participants. Conversely, the data from the study portion of the PDSA cycle reflected that all five participants discussed elements of providing a safe classroom environment. Offering ongoing professional development using the district learning management system created a space for teachers to seek advanced learning on their timetable around the importance of fostering a safe and welcoming environment through understanding cultural and linguistic diversity.

Developing linguistic responsiveness requires teachers to enter the classroom aware of diverse student perspectives. Gaining the perspective of the participants in terms of sociolinguistic awareness, an underlying concept of linguistic responsiveness, served as the focus of questions four and five of the interview protocol. The participants that completed initial certification in South Carolina stated that their pre-service learning did not prepare them for meeting the needs of ELL students. Participant Four said, "It didn't, like nothing, nothing. I mean, I had a great education. We were taught how to teach different socioeconomic statuses, how to teach gifted learners, IEPs, 504s, behavioral plans, all that but there was nothing about ESOL." In 2020, the South Carolina Department of Education created an optional add-on teaching certificate endorsement in English for Speakers of Other Languages (ESOL). The South Carolina certificate endorsement requires teachers to complete courses in cultural and linguistic diversity for ESOL educators and principles for teaching ESOL to PK-12 Learners. Numerous states require similar courses as part of recertification to better equip the teaching force. Within the past five years, South Carolina has remained one of a few states with no regulation or requirement to educate certified classroom teachers on meeting the needs of ELL students.

The data collected through qualitative means supported the finding of advocating for systematic change at the state level. Starting in 2019, ELL educators in South Carolina banded together to form the SC ESOL Network; before 2019 South Carolina ELL educators joined the network of educators from North Carolina for professional collaboration. Subsequently, strong leadership from the state department strengthened the

focus across the state on shoring up practices among ELL coordinators. With the growing momentum within state organizations coupled with the emphasis on ELL student growth in the Every Student Succeeds Act (ESSA), the state stands prime for reform in ELL policy.

During the interviews, the teachers' passion for wanting to help all students emerged in responses similar to one from Participant One, "the other day we had a guest speaker, those times it makes my heart really happy because (the student) is able to participate." Additionally, the participants frequently referred to the ELL students as “buddy” or “friends,” indicating familiarity toward the students. During the interviews conducted as part of the Plan and Study portion of the PDSA cycle, participants called for various professional development opportunities. Participant Two stated that she would love to see all teachers in her school receive training on sheltered strategies while providing ongoing refresher courses for teachers previously trained. Participant Three called for Spanish for Educator courses. The participants recognized the need for additional support for all teachers in a way that is applicable to current classroom needs. All participants reflected that historically limited ongoing professional development opportunities prohibited access for all classroom teachers to advance their praxis; however, training like SIOP® and MALP, though limited in size, provided support to classroom teachers.

I used the naturalized transcription process to make this connection from Participant Four. Participant Four expressed this perspective, “the first couple of years honestly I did not know what I was doing (nervous chuckle) but I did not have as many

ESOL students." The nervous chuckle in the response reflected a lack of confidence in providing the support needed for the ELL students. Thus, unwittingly creating a supportive classroom environment for linguistically diverse students, which allowed them to engage in the learning.

Likewise, the participants echoed the role graduate coursework played in their ability to support ELL students. Several discussed coursework during graduate courses for completion of a master's degree and advanced certifications. Graduate-level coursework provides a deeper understanding for educators while pursuing advanced certifications, graduate degrees, or formalized education. Participant Four shared that participation in a book study changed her perspective of ELL students. The book study centered on a text detailing the plight of an immigrant family coming to the United States. Both pieces of evidence pointed toward other means of professional learning-graduate courses and informal book study groups. Creating professional development opportunities supported classroom teachers by building their sociolinguistic awareness upon which linguistic responsive strategies serve as a scaffold for ELL learners.

Focus on teaching academic vocabulary

A systemic methodology of teaching academic vocabulary emerged from the analysis of the classroom observations and semi-structured interviews completed during the plan and study portions of the PDSA cycle. Participants provided support for academic vocabulary; however, standard approaches for taking notes and classwork in interactive notebooks allowed for a focus on content through centralized learning structures. During the empathy interviews in the plan portion of the study, Participant

Five described using primary source documents within classroom instruction. Participant Five stated,

> I will run those through a translator and provide them in their language. I will also (umm) when we go through and do our words like big vocabulary words like "legislature" or "emancipation" things like that we use a cross out technique…replace it with a tier 1 word.

Then, as part of the observed lesson, an anchor chart display containing a detailed table of contents for the interactive notebooks was used within the class. The students completed a partner task asking for a "contradiction" from the manual of the Red Shirts organization. Multiple students asked for help with the word "contradiction." Participant Five addressed the entire class about the word "contradiction." When asked if anyone knew what it meant, no one responded. Participant Five then said, "What if I tell you jumbo shrimp is an example of a contradiction. Some students connected and responded with a definition.

All of the vocabulary discussion in this lesson occurred orally. Thus, during the PLC meeting, I commended Participant Five for their attention to content-specific vocabulary and for addressing the entire class around the academic vocabulary of "contradiction." However, I also shared that teachers can strengthen vocabulary practice within the class when a word like that appears by using written connections to strengthen retention. I demonstrated how using a Frayer model supports the work within the class and easily becomes a part of the student's glossary in their interactive notebook.

Participant Five said, “We could put this in their interactive notebooks to use throughout the year.”

The classroom observations conducted as part of the plan and study portions of the PDSA cycle provided more profound insights into the teachers' classroom practice. Participants scheduled the observations, and I used the South Carolina 4.0 Teaching Rubric methodology, which focused on the areas identified in the Inclusive and Culturally Responsive practices to ascertain the presence of LRS. The participants received scores from 0 to 4 based on the scripted observation. The scripted observation, in conjunction with field notes and the empathy interviews, developed a holistic view of the linguistic responsiveness of the participants.

During analysis, I created a joint display to aid in analyzing the convergence of the mixed methods data in Figure 3.1. The joint display (Creswell & Clark, 2018) provided the context of the LRS to introduce during the PLC. The joint display incorporates the six LRS tenets and a box-and-whisker plot to represent the distribution of scores from the Inclusive and Culturally Responsive Teaching and the South Carolina Teaching Standards. A box-and-whisker plot is valuable in mixed methods studies, especially within exploratory sequential designs (Williamson et al., 1989). Since the plot can be used to separate data into quartiles to compare the data spread, it promotes a deeper analysis of the quantitative scores by highlighting trends within the data set. Quantifying the prevalence of LRS within the classrooms from the SC Teaching Rubric and qualitative data from the semi-structured interviews provided strong evidence of the area to target during PLC time.

Figure 3.1 depicts the joint display completed in this study. The box-and-whisker graph and comments in black represent data gathered from the plan portion of the study. The range of the box-and-whisker graph consisted of ratio data values from 0 to 4. A value of 0 represents the absence of evidence within the observed domain. A value of 1 means "emerging" evidence within the observed domain. A value of 2 represents "approaching proficient" evidence within the observed domain. A value of 3 represents "proficient" evidence within the observed domain. And a value of 4 means "exemplary" evidence within the observed domain. A score of "exemplary" reflects mastery level evidence within the respective domain. The table in Appendix D details the interconnectedness between the key documents and concepts undergirding this study. Using the South Carolina 4.0 teaching rubric for inclusive and culturally responsive teaching and sheltered instructional strategies brought together a common language to bridge the gap for increasing linguistic responsiveness among classroom teachers. Within the environment domain, with a score of 3 proficient, the observer would see the following actions within the classroom:

- Welcomes most members and guests
- Is organized and understandable to most students
- Supplies, equipment, and resources accessible to most students
- Displays student work
- Is arranged to promote individual learning and group learning.

Sheltered strategies to support ELL students within this idea include grouping configurations that support the language and content objective of the lesson, frequent

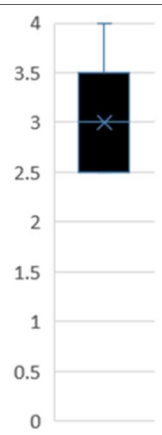
opportunities for interaction and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts, and clear explanations of academic tasks. The use of the South Carolina 4.0 teaching rubric domains in this study connected observers with actionable strategies that support ELL students while increasing linguistic responsiveness among teachers. All administrators in South Carolina must be certified in conducting observations using the observational rubric, thus opening a pathway for all administrators to support linguistic responsiveness regardless of their background.

The box-and-whisker graph indicates that half of the participants demonstrated a proficiency within this category; however, one participant achieved mastery-level performance. Thus, showing room for growth among the participants concerning promoting academic vocabulary. Advancing academic vocabulary included the discussion of sheltered strategies of varied grouping structures of ELL students and multiple points of interaction with academic content. During the observations, ELL students frequently partnered with other ELL students. As part of the intervention during PLC meetings, I discussed the benefit of fostering second language acquisition through partnering students with native English-speaking partners to allow ELL students the opportunity to hear grade-level academic English spoken. Participant Four discussed in the empathy interview the pairing of ELL students with a "buddy" that speaks the same language to help in the class, and during the observation, all of the ELL students were paired in one group. During the PLC meeting with Participant Four, the discussion centered around second language acquisition theories in which hearing native English

speakers communicate remains a crucial component of acquiring English. Participant Four went on to express that now knowing this groups will be assigned differently depending on the task at hand. Likewise, Participant Four shared previous concerns of only pairing ELLs with other ELLs to provide a "safety net" in the common language.

Figure 3.1

Joint Display for Academic Vocabulary

LRS Tenet	Graphical Display	Qualitative Support
Social interaction in which ELLs actively participate fosters the development of social and academic English.		Participant Three: (Verbal) What does y-intercept mean? stealing it from the other team, where two things come together, where two roads cross Participant Three: (text with hazards on board) You may have heard the word hazards before, how can context clues help me think about what hazards are? Use Google to help Participant Five: (Verbal) Who remembers what carpetbaggers are? Students respond with ideas

Note: The data collected from the plan activities of the PDSA cycle reflected above in the joint display adapted from Creswell and Plano Clark. (2018).

During the empathy interview, Participant Five discussed an approach for teaching academic vocabulary utilizing tiered vocabulary words. The approach centered

on replacing higher-tiered words with lower-tiered parallel words. Participant Five described the tiering process by saying,

> When it comes to my subject, American social studies, it is so hard. It's hard. How do you take something like the Constitution or the Emancipation Proclamation and tier it to where it is easy to understand? Because that language is hard for eighth graders that have been speaking English their entire life to understand.

The combination of the mixed methods data provides convergence in that the participants verbally presented vocabulary, making it relevant to the students with limited visual supports. The utilization of visual supports combined with verbal connections and definitions builds neural pathways for ELL students with academic vocabulary (Echevarria et al., 2017). During the PLC meetings with the participants, we discussed using the Frayer model to include in the unified interactive notebooks. The participants did not even realize how important the visual could be for a word like "intercept" which for Spanish-speaking students could be thought to sound like *intersep*. During the intervention, I discussed how incorporating a visual like the Frayer model in the guided notes or individually adding it to the interactive notebook gathers the key points of the term along with a definition in their own words. Subsequently, the observations within the study portion of the PDSA cycle yielded a difference within the variation on the box-and-whisker plot (see Appendix I).

To determine if the variation between the observation scores before and after the PLC meeting demonstrated a statistically significant variation, I utilized a chi-squared

distribution. The selection of the chi-squared distribution for statistical significance best suited the small n-size and the lack of a normal distribution among the data points measured. The chi-square distribution applied to data gathered from the classroom observation utilized the null hypothesis (H_o). The H_o states: No measurable difference between the evidence of social interaction of the students in which ELLs actively participate fosters the development of conversational and academic English in the academic classroom. A chi-squared test of independence showed no significant association between observational scores before and after the training, $\chi^2(4, df = 3) = 0.81$, $p > 0.05$.

Despite showing no statistically significant difference, the qualitative data supported a change in that all five participants remarked that the visual component supports the learning of all students, not just ELL students. At one PLC meeting, Participant Three focused heavily on the use of the Frayer model because the classroom observation uncovered robust discussion of academic vocabulary words like y-intercept; however, there was never a written component to reinforce the discussion. Participant Three remarked about having students use one before but could see the strength in using it as the common tool for academic vocabulary. Following the study, Participant Three reached out to me by email to share dry-erase Frayer models she would purchase for the upcoming school year. Participant Three shared with teaching colleagues how to use dry-erase Frayer models she purchased to teach academic vocabulary words. She shared how the Frayer model can support students based on the learnings from the PLC meeting. Classroom teachers utilizing a common approach to academic vocabulary and ELL

specialists using a common approach to pre-teaching academic vocabulary created an environment to advance ELL vocabulary.

Promote scaffolds for teachers

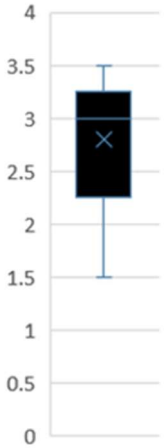
The third finding was foster ways to promote scaffolds for students in academic classrooms. Bruner (1983) defined scaffolding as "a process of 'setting up' the situation to make the child's entry easy and successful and then gradually pulling back and handing the role to the child as he becomes skilled enough to manage it" (p. 60). The limited ability of the participants to articulate the instructional scaffolds they utilize to support their ELL students highlighted a need for this study. Responses during the empathy interviews of the plan portion of the PDSA cycles indicated that the participants relied on translation devices and the ELL specialist to meet the educational needs of their students. During the semi-structured interviews in the study portion of the PDSA cycle, Participant Three stated, "I can use scaffolding such as Frayer diagrams to help ESOL students with content vocabulary; there are sentence starts I can use to help students answer questions or ask questions." This stands in contrast to the initial response from the empathy interview of Participant Three, "The different presentations saying it in different ways, showing it in different ways having a video or hands-on something." The classroom observations from the study portion of the PDSA cycle supported the prevalence of instructional scaffolds utilized within the classrooms (see Appendix K).

During the classroom observations in the plan portion of the PDSA cycle, the participants provided several instructional scaffolds despite limited responses during the empathy interviews. Participant Five discussed the definition of carpetbaggers with the

students in a verbal exchange. During this interchange, the students grasped the concept; however, the scaffold for ELL students never emerged. During the do portion of the PDSA cycle, I discussed with Participant Five, the interchange about carpetbaggers was outstanding, but to strengthen the learning for ELL students include a written version on the board, like the Frayer model. Upon returning for the study portion of the PDSA cycle the participant included the written expression of concepts discussed with the class, referencing the print text in conjunction with discussion. The participants were instructing social studies during observations in the plan and study portion of the PDSA cycles utilized closed-captioned enabled video segments to convey content and print primary source documents to support ELL students. Yet, no one discussed them as a strategy to support ELL students during empathy interviews. The joint display in Figure 3.2 combines the data gathered during the empathy interviews and the classroom observations. The LRS tenet in the joint display in Figure 3.2 focused on the use of comprehensible input for advancing academic content knowledge and English acquisition (Lucas et al., 2008) visually emerged as the area of focus. The box-and-whisker plot below illustrated almost three-quarters of the participants rated a three on the rubric. Performance at a three-level indicates proficiency.

Figure 3.2

Joint Display for Scaffolds

LRS Tenet	Graphical Display	Qualitative Support
Second language learners must have access to comprehensible input that is just beyond their current level of competence, and they must have opportunities to produce output for meaningful purposes.		Participants Four and Five: Video introduction to the topic Participant Four: Students use Google translate supports to translate primary source documents into Spanish Participants Two and Three: Students partner up to complete the lesson activity Participants One and Two: Use of translator earbuds to engage in class direct instruction

Note: The data collected from the plan activities of the PDSA cycle is reflected above in the joint display adapted from Creswell and Plano Clark (2018).

This finding focused on promoting scaffolds for students lies central to the research question of developing linguistic responsiveness. Teachers needed scaffolds provided during the intervention to meet the needs of the ELL students (see Appendix L). Prior to the intervention participants relied on translation support as a primary means to scaffold learning.

During the PLC meetings, I shared content-related examples of sentence and thought frames from the Zwiers and Crawford (2011) publication *Academic Conversations: Classroom Talk that Fosters Critical Thinking and Content*

Understandings. The sentence frames and graphic organizers utilized in the text provided specific tools for many academic behaviors like compare and contrast. Participant Four stated, "now understanding partner talk scaffolds learning; using it more frequently supports opportunities for students to practice speaking the language." Likewise, Participant Five said,

> I really love this because we start the year analyzing Roanoke and citing evidence about their theory for the disappearance. The sentence frames that focus on their topic really could help our kids. We could use this in their interactive notebooks throughout the year.

Participant Five connected the learning from the intervention to other units of study, that students traditionally struggle to demonstrate success. Several participants used video clips to engage students in learning for the day; thus, I discussed the importance of enabling closed captioning supports with videos to reinforce the visual connection with listening comprehension. The intervention sought to promote the classroom teacher's toolbox of scaffolds for students to use to gain access to academic content.

The study portion of the PDSA cycle yielded the use of the scaffolds suggested during the PLC meetings and renewed confidence in meeting the instructional needs of ELL students. The joint display for scaffolds (see Appendix K) demonstrates a more minor variation in observational scores. Although differences between observation scores existed, a chi-squared test determined if the difference was statistically significant. The H_o stated that: No measurable difference between the evidence that second language learners must have access to comprehensible input beyond their current level of

competence and they must have an opportunity to produce output for meaningful purposes present within the academic classroom. A chi-squared test of independence showed no significant association between observational scores before and after the training, $\chi^2(4, df = 3) = 0.81$, $p > 0.05$, therefore, resulting in the acceptance of the null hypothesis.

Despite the results failing to be statistically significant, the participants echoed that the direct information they received about scaffolds encouraged them. As Participant Five reported, “we are always told to support EL, but no one can offer any ideas other than just read more or write more.” This sentiment was representative of other participants and demonstrated the benefit of explicitly providing ELL specialists with instructional scaffolds to support classroom teachers. The intervention within this study resulted from the interaction of the participants and me. However, moving forward with future PDSA cycles, the ELL specialist can step into the role of promoting scaffolds for the students to the classroom teachers.

Through the introduction of scaffolds by the ELL specialist during PLC meetings, the explicit attention to scaffolds continues to grow among teachers. DuFour and Eaker (1998) characterized PLC meetings as a space where "educators create an environment that fosters cooperation, emotional support, and personal growth as they work together to achieve what they cannot accomplish alone" (p. xii). The collaboration and personal accountability that transpires within effective PLC meetings build the collective efficacy of the participants. Collective efficacy earned the highest-rated strategy for affecting student achievement in a study by Hattie (2009). For an ELL specialist to attend all the

PLC meetings, they would miss an entire day of instructional support with students. Due to scheduling and time constraints often, ELL specialists needed help to engage in the work of a PLC meeting. However, the ELL specialists stood equipped to offer the support that was lacking for the classroom teachers. Striving to find ways to include ELL specialists within PLC meetings needs to transpire.

Conclusion

The study to address the research question: *How can classroom teachers' use of linguistically responsive strategies be increased to meet the educational needs of their ELL students;* uncovered three important findings. The first finding is fostering a variety of professional learning opportunities serves as a way to increase the linguistic responsiveness of classroom teachers. The professional learning options need to include intentional ways to build the sociolinguistic consciousness of teachers. The second finding is creating a focus on teaching academic vocabulary among classroom teachers supports ELL students and builds awareness of language demands for the teachers. The third and final finding is that the work of increasing linguistic responsiveness transpires through connecting teachers with the strategies their students need in real-time preparation in PLCs. The findings provide context for advancing learning for impacting teacher efficacy around meeting the needs of ELL students through the use of linguistically responsive teaching strategies.

CHAPTER FOUR

DISCUSSION

In this chapter, I discuss the act phase of the PDSA cycles utilized within this study and the three key findings, followed by subsequent recommendations from each finding. The dissertation in practice that uses PDSA cycles from improvement science seeks to address a problem of practice in short recurring cycles of inquiry. The problem of practice I investigated in this study examined how to develop LRS with classroom teachers in Sunshine Middle School to meet ELL students' educational needs. The act phase of PDSA cycles requires the researcher to determine if the solution adequately addresses the problem of practice and informs future PDSA cycles. The findings that emerged from this study include the creation of professional learning opportunities, a focus on teaching academic vocabulary, and the promotion of scaffolds for teachers.

The limited diversity of classroom teachers within South Carolina further widens the gap in teacher efficacy in meeting the educational needs of the rapidly growing ELL populations. As a former classroom teacher, I remember the feelings associated with having ELL students in my classroom and being unprepared to address their needs to learn the academic content. Since my time at the school, the Migrant Policy Institute (2011) declared that South Carolina had become the fastest-growing new destination state for immigrants in the United States. In this study, I sought to explore a means to support classroom teachers in meeting the educational needs of ELL students. Three findings arose from this study to impact Sassafras School District and, ultimately, ELL education

in South Carolina. Within this chapter, I discuss the three findings followed by recommendations from each finding.

Findings

Analysis of the data gathered during the PDSA cycle produced three findings with implications for the Sassafras School District and the State of South Carolina. Lucas et al. (2008) stated key components are necessary to prepare teachers to be linguistically responsive, such as developing sociolinguistic consciousness and addressing the skills required to meet the educational needs of ELLs. Creating a variety of professional learning opportunities crafted to address the zone of proximal development of teachers promulgates space to build sociolinguistic consciousness. Likewise, a centralized focus on teaching academic vocabulary equips teachers with skills to support ELL students and lessens the cognitive demand on teachers to implement individual approaches. To alleviate the demands on teachers, providing scaffolds for the teachers to bolster their knowledge of strategies to support ELL students emerged as an additional finding from this study. Using PLCs as a structure to deliver scaffolds for the teachers promotes an environment where professional learning seamlessly blends into daily practice. Together the three findings from this study serve as a basis to address the knowledge gap between classroom teachers and their linguistically diverse students. I will discuss the findings through the research perspective followed by the recommendations on each of the following themes: create professional learning opportunities, focus on teaching academic vocabulary, and promote scaffolds for teachers.

Create professional learning opportunities

All five participants echoed in their interviews the need for ongoing professional learning opportunities for supporting ELL students. Two participants discussed their prior experience with SIOP® training. The participants stated that the sessions helped them, but they needed to have a refresher on the learning. Participant One discussed how their first-year partner teacher struggled with their ELL students, feeling like they were letting them down because they did not know the best way to help them. Seeking to provide transformative learning for classroom teachers requires more than a multi-day staff development opportunity. Saunders (2013) discussed the connection between the emotional response generated during professional development and the transfer of ideas into the praxis of the teacher. Ultimately, traditional one-to-two-day staff development opportunities limited in follow-through fail to bring about change in praxis. Being able to provide professional learning in a variety of modalities furthers the ability of the learning to move beyond an impassioned plea.

Professional learning exists in several modalities, each addressing a specific purpose. Participant Four remarked that she participated in a book study that drastically changed her perspective and attitude about teaching ELL students. Addressing the classroom teacher's perspective lays the groundwork for a safe, welcoming classroom environment where the ELL student feels comfortable participating (Lucas et al., 2008). Participant Five first learned about strategies to support ELL students in her classes to earn an advanced degree; the delayed learning impacted participant five's ability to address the ELL students' needs. The access to graduate-level courses supports the goals

of some teachers; using the cohort model for these courses builds a network of teachers within the Sassafras School District to support other colleagues. Many teachers cannot fully devote the time to graduate courses to advance their professional knowledge; however, they can participate in a series of short-cycle asynchronous classes or a book study.

Addressing the needs within Sassafras School District only serves as a fix for the knowledge gap among teachers and their diverse classrooms. Looking to systemic measures across the state can provide a long-term solution to this problem of practice. The need for preservice and professional development remains a key finding within this study. As of 2020, South Carolina remains one of 11 states with no specific requirement or legislation regarding professional learning around the needs of ELL students (Education Commission of the States, 2020). The absence of such conditions creates a knowledge gap and, ultimately, a confidence gap with every teacher earning certification in South Carolina. Four of the five participants earned initial certification in South Carolina and echoed, "I had a great education and was taught how to teach different socioeconomic statuses, how to teach gifted learners, IEPs, 504s, behavioral plans; all that but there was nothing about ESOL." Several participants discussed the rapid growth of ELL populations and the absence of preservice requirements created a knowledge gap. Examining the 50-state comparison from the Education Commission of the States (2020), of the 14 new destination states (Terrazas, 2011), five require preservice or professional development for serving ELL students.

Currently, 13 of the 50 states require ongoing professional development to address strategies for the inclusion of ELL students (Education Commission of the States, 2020). Texas enacted Texas Administrative Code § 232.11 (Number and Content of Required Continuing Professional Education Hours, 2019) as part of the recertification process of every teacher's professional certificate. Professional development requirements for recertification address the knowledge gap of practicing classroom teachers. Reported by the NCES (2020), 63% of the classroom teachers had over 10 years of classroom experience. This leaves the majority of classroom teachers who began their careers before the rapid ELL population increase in South Carolina schools without professional learning about meeting the educational needs of ELL students.

PLCs for supporting ELLs

The connections between PLCs and the PDSA cycles of improvement science originated with Bryk et al. (2015). Kruse et al. (1994) published research discussing the conditions high achieving schools operate: collective focus on student learning for all students, collaboration, and shared values to influence teacher praxis. DuFour et al. (1998) published their seminal work that operationalized how to implement high-functioning PLCs within the public school setting. As referenced during the literature review, the use of PLCs to enact improvement science within the educational realm lends itself to a natural partnership. PLC meetings create an environment where teachers engage in ongoing collaborative cycles of inquiry focused on learning for all students. The constant collaborative cycles of inquiry utilize the PDSA cycles from improvement science. The teachers identify a problem within their context, develop a plan to address

the issue, study how the solution addresses the problem, and determine modifications for future iterations.

Recommendations for creating professional learning opportunities

Addressing the need for professional learning opportunities within Sassafras School District begins with a recommendation to the superintendent to provide multiple options to best support classroom teachers. I recommend creating a system of professional learning opportunities for classroom teachers in the Sassafras School District. These options include offering a yearly book study to expose participants to diverse perspectives, creating an asynchronous professional learning class for teachers to complete focused on understanding ELL students and strategies to support their needs, fostering graduate coursework opportunities with local universities, and finding ways to include ELL specialists within PLC meetings.

Lucas et al. (2008) stated, “For optimal learning to occur, teachers must give conscious thought to providing ELLs a safe and anxiety-free environment” (p. 364). Teachers need professional learning opportunities designed to address the diverse classroom population to develop linguistic responsiveness through a safe and anxiety-free environment. Through various opportunities, classroom teachers gain the knowledge necessary to maintain a safe and welcoming environment. The implementation of a book study offers the opportunity for teachers to interact with a different perspective in a context familiar to them. Thus, offering a book study increases the likelihood of shifting classroom teachers' “habits of minds.” The careful selection of texts for the book study that represent diverse populations within school settings promotes the opportunity to

engage with the mindsets of other perspectives. Offering a yearly book study opportunity allows the participants to share with colleagues and build momentum for others to join in the future.

The repeated calls from building administrators within Sassafras School District to address the need for teacher support in meeting the needs of ELL students further strengthen this recommendation. Providing asynchronous learning opportunities creates a space for all teachers to further their understanding. The district learning management system provides a structure to deploy fundamental on-demand learning for all teachers. Teachers looking to earn advanced degrees, certificate endorsements, or add-on certificates in the field of ELL seek graduate coursework from surrounding universities. Partnering with local universities to provide graduate courses at a discounted rate through federal Title III funds increases teacher interest in completing graduate courses. Offering district cohort opportunities for the coursework promotes collegiality among the participants to build upon for future networking.

The recommendations resulting from the finding about professional learning for classroom teachers require advocating for change at the state level for systemic professional learning structures. Advocating for systematic professional learning to support classroom teachers to meet better the needs of all students in the South Carolina public school system begins with awareness. Within the past 10 years, educators focused on the education of ELL students formed a group named South Carolina ML Educator Network. The purpose of this group is "to connect all educators of multilingual learners in South Carolina with instructional support, networking, and advocacy opportunities"

(South Carolina ML Educator Network, 2022). Having served on the first board for this organization, the network provides a space to share how increasing linguistic responsiveness in classroom teachers meets the needs of ELL students. Likewise, the Carolina Teachers of English to Speakers of Other Languages (TESOL) organization hosts a yearly conference. I intend to apply to present the findings and advocate for change in South Carolina. Presenting the results of this study at the South Carolina Educators for the Use of Practical Research (SCEPUR) creates an opportunity to broaden the message of the need for professional development requirements.

Policy change occurs after a variety of audiences in South Carolina learn about knowledge gap can bring about policy change. A similar gap existed around literacy instruction which led to the addition of recertification requirements. In 2014, South Carolina instituted a similar shift in the recertification of educator certificates with the requirement of grade-band-appropriate professional learning about literacy instruction. Currently, in South Carolina the school districts, which receive federal Title III money, use a portion of the funds to pay for teacher staff development. However, only some districts receive Title III funds and the plan for staff development does not have to be systemic for all teachers within the district. The State Department of Education initiated a statewide conference open to all educators in South Carolina, with nationally recognized leaders in the field sharing best practices. Recognizing the need for widespread ELL support at the State Department of Education provides a fertile ground for advocating for systemic professional learning for all educators in South Carolina.

Focus on teaching academic vocabulary

Through the data collection, the classroom observations validated the limited responses regarding direct instruction of academic vocabulary. Data collected during the observations yielded that only Participant Five utilized a systemic strategy to instruct academic vocabulary; consequently, during the plan phase of the PDSA cycle, participants related vocabulary to a tangible reference, but no structure emerged to enforce academic vocabulary. Thus, this leads to finding number two: implement a systemic approach to instructing academic vocabulary for classroom teachers and ELL specialists. Teng (2020) stated that incidental word growth during the curriculum often fails to retain the word within the student's memory, serving as a larger detriment to ELL students with a vocabulary almost half the size of a grade-level peer native English speaker. The intentional word growth through a systemic academic vocabulary model identifies words with impact across content areas and words that build to create other words. In addition, the systemic approach focuses on providing the students to engage with the word in seven to 10 encounters to increase the transfer of the word into the student's memory (Calderon, 2016).

During the classroom observations, Participant Four discussed the mathematical application of "intercept" by relating the word to sports and roads. However, the word discussion only took place verbally, leaving ELL students without a visual representation of the word. During the study's do phase, we discussed using a Frayer model to support academic vocabulary instruction. The Frayer model used to cover academic vocabulary could glue into the interactive notebooks, an existing structure used in educational

classes. During the summer, Participant Four contacted me to share whiteboard Frayer models she purchased for her class to use with her students. The introduction of a systemic academic vocabulary approach at Sunshine Middle School and with ELL specialists in Sassafras School District provides intentional support for increasing the vocabulary base of ELL students.

Recommendations for focusing on teaching academic vocabulary

The recommendation from the above finding requires implementing a systemic vocabulary methodology with ELL specialists. With a common approach to instructing academic vocabulary, the ELL specialists solidify a method to support classroom teachers. The common structure of interactive notebooks by all the participants supports the learning needs of all students; thus, implementing a common vocabulary structure can prove beneficial for all teachers. Participant Four sharing the Frayer model with all of her colleagues the following school year illustrates the desire to share and implement strategies to support the learning needs of the students. Lucas et al. (2008) stated, "academic language poses special challenges for learners" (p. 363). All students benefit from a focus on academic vocabulary.

Promote scaffolds for teachers

During the interviews, participant's desire to meet their ELL students' educational needs emerged in their responses. The participants discussed their ELL students' strong work ethic and the growth levels they accomplished during the school year. However, the instructional scaffolds mentioned during the interviews consisted of the translator earbuds

on a field trip, videos to support academic content, and leveled text passages. Lucas and Villegas (2010) defined scaffolding as "the form of temporary support helps a learner carry out learning tasks beyond his or her current capability" (p. 299). However, scaffolds like sentence frames and graphic organizers to build sentences for ELLs never surfaced during the interviews or observations.

Equipping the ELL specialists empowers those working directly with ELL students with actionable scaffolds to advance student learning. The intentional focus on providing scaffolds for ELL specialists to introduce during PLC meetings transpires during the monthly ELL specialists' meetings. Specific training needs to occur for ELL specialists to assist them during PLC meetings on applying scaffolds based on the WIDA 2020 standards. The ELL specialists advocating for appropriate sentence frames and language supports within the academic classroom provide classroom teachers with supports they can use. During the do phase of this study, Participant Five talked about how she often heard calls for incorporating reading and writing within social studies. Still, no one could ever tell how to do it for students who may not be reading on grade level. The sentence frames and linguistic support for expressing tasks during social studies provided Participant Five with scaffolds she used during her class to allow entry into complex content.

The inclusion of ELL specialists into PLC meetings serves as a means to introduce scaffolds into the classroom. Including ELL specialists within the academic teacher, PLC meeting serves a two-fold purpose: recommend instructional scaffolds for students while teacher teams plan instruction and bring awareness to strategies designed

to support ELL students. The ELL specialists maintain advanced certification credentials focused on second language acquisition, linguistics, content modification, and passing the Praxis assessment on teaching ELL students. Academic classroom teachers within South Carolina complete preservice programs with no formalized instruction on supporting ELL students within the classroom. As the classroom teachers determine the essential content to instruct and ways to monitor student learning, instructional scaffolds and strategies suggested by the ELL specialist integrate into the lesson. The explicit attention to specific strategies within this context directs teachers' attention to the purpose of strategies identified to support ELL students, thus, equipping them with particular knowledge of strategies they can utilize in various settings to meet the educational needs of ELL students.

Recommendations for promoting scaffolds for students

The recommendations resulting from the finding about promoting scaffolds for students require monitoring the need for resources such as leveled texts, translation devices, and texts from diverse authorship, as well as the inclusion of ELL specialists in PLC meetings. The ELL specialists participate in monthly "Lunch and Learn" professional collaborative time. During this time, the team participates in a book study, examines best practices, and shares strategies among the team. I facilitate this time of collaboration and learning with the ELL specialist. Previously, the team studied books on growth mindsets, co-teaching in the ELL field, and literacy supports. During the book study, the team practices instructional scaffolds while advancing their professional

learning. Thus, equipping ELL specialists to share how they can use the scaffold with their students in PLC meetings.

As coordinator of the ELL program, I promote a variety of electronic and physical collections of leveled texts—the participants teaching English language arts and social studies referenced using leveled text for ELL students. Through the promotion of leveled texts, ELL specialists add tools to their repertoire to share with the classroom teachers during the PLC meetings. Leveled texts support ELL students in engaging grade-level skills with an accessible text (Ferlazzo & Sypnieski, 2022). In addition to leveled texts, supporting culturally and linguistically responsive tenets transpires through texts of diverse authorship. The following statement from the WIDA 2020 standards asserted the importance of culturally and linguistically responsive teaching strategies: "Drawing on students' linguistic and cultural resources is essential to helping them navigate life in a diverse world, in addition to supporting them in meeting demands of academic content areas as they advance through school" (WIDA, 2020, p. 18). The Lunch and Learn meetings serve as a key time to monitor the needs of the ELL specialists.

Creating a structure by which ELL specialists within PLC meetings establish a system to equip classroom teachers with strategies to support the ELL student within the content. In the upcoming school year, Sassafras School District designated days for uninterrupted time for professional teams to work in collaborative teams. Empowering ELL specialists to share linguistically responsive strategies during PLC meetings yields a greater impact than using the time for ELL specialists to meet. Before the PLC meeting, the ELL specialists need explicit learning on scaffolds supporting access to academic

content. The designation of time for ELL specialists to participate in the PLC broadens the exposure of LRS, thus increasing the classroom teacher's awareness of specific strategies to meet the educational needs of ELL students.

Conclusion

The rapidly changing demographics of public school classrooms in South Carolina reflect a situation that cannot go

unnoticed. The research question in this study sought to investigate a means to increase linguistic responsiveness among classroom teachers to address the diversity gap between teachers and their students. Participants participated in an intervention designed to best support their current context using the PDSA cycle from improvement science to develop, deploy, and analyze an intervention to address the need. I utilized the PLC meeting structure to deploy the intervention and used data generated through a mixed methodology to determine the impact of the intervention. Parallels between the goals of PLC meetings and improvement science created a marriage of ideology to create a structure in which others could replicate this work. The three findings from this study represent a foundation for teachers to develop linguistic responsiveness to support ELL students and all students in their classrooms.

REFERENCES

American Psychological Association. (2020). *Publication manual of the American Psychological Association 2020: the official guide to APA style* (7th ed.). American Psychological Association.

Ballantyne, K. G., Sanderman, A. R., Levy, J. (2008). *Educating English language learners: Building teacher capacity*. Washington, DC: National Clearinghouse for English Language Acquisition.

Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Sciences*, *9*(3), 75–78. https://doiorg.libproxy.clemson.edu/10.1111/1467-8721.00064

Board of Regents of the University of Wisconsin System WIDA. (2020). *WIDA English Language Development Standards Framework, 2020 Edition.* https://wida.wisc.edu/teach/standards/eld

Brink, H. I. L. (1993). Validity and reliability in qualitative research. *Curationis*, *16*(2), 35–38. https://doi.org/10.4102/curationis.v16i2.1396

Brown, B. (2015). *Daring greatly: How the courage to be vulnerable transforms how we live, love, parent, and lead*. Avery.

Brown v. Board of Education, 347 U.S. 483 (1954). https://cdn.loc.gov/item/usrep347483.

Bryk, A., Gomez, L., Grunow, A., & LeMahieu, P. (2015). *Learning to improve: How America's schools can get better at getting better.* Harvard Education Press.

Center for Educator Recruitment, Retention, & Advancement. (2019). South Carolina annual educator supply & demand report (2018-19 School Year). https://www.cerra.org/uploads/1/7/6/8/17684955/2019-20_supply_demand_report.pdf

Coady, M., Harper, C., & deJong, E. (2011). From preservice to practice: Mainstream elementary teacher beliefs of preparation and efficacy with English language learners in the state of Florida. Bilingual Research Journal, 34(2), 223–239.

Coady, M., Lopez, M. P., Marichal, N., & Heffington, D. (2019). Preparing teacher leaders for English language learners in rural settings. *Theory and Practice in Rural Education*, 9(1), 44–60.

Coady, M. (2020). Rural English language learners: A review of research and a call for a national agenda. *Educational Researcher*. https://doi-org.libproxy.clemson.edu/10.3102/0013189X20931505

Cooper, C. (2009). Performing cultural work in demographically changing schools: Implications for expanding transformative leadership frameworks. *Education Administration Quarterly*. 45(5). 694-724. https://doi-org.libproxy.clemson.edu/10.1177/0013161X09341639

Crawford, L., Schmeister, M., & Biggs, A. (2008) Impact of intensive professional development on teachers' use of sheltered instruction with students who are English language learners. *Journal of Inservice Education*, 34(3), 327-342.

Creswell, J., and Creswell, D. *Research design: qualitative, quantitative, and mixed methods approaches.* (Fifth edition). SAGE Publications, Inc.

Cromartie, J. (2018). Rural America at a glance, 2018 Edition, 6.

Cruz, Luis. (2019, July 9-11). PLCs: A system to help English Learners flourish [Conference session]. PLCs At Work Summit, Atlanta, GA, United States. http://soltreemrls3.s3- 20 website-us-west-2.amazonaws.com/solution-tree.com/media/pdf/HOE_Cruz-PLCsandELCFF301.pdf

Cummins, J. (1987). *Empowering minority students.* University of Florida.

Cummins, J. (1997). Cultural and linguistic diversity in education: A mainstream issue?. *Educational Review*, *49*(2), 105-114. https://doi-org.libproxy.clemson.edu/10.1080/0013191970490202

Dalto, R. (2008, September 21). ACT 388: Property tax law limits options for area schools. *Herald-Journal* (Spartanburg, SC).

Daniel, S., & Pray, L. (2017). Learning to teach English language learners: A study of elementary school teachers' sense-making in an ELL endorsement program. *TESOL Quarterly*, *51*(4). https://doi.org/https://doi-org.libproxy.clemson.edu/10.1002/tesq.347

DeCapua, A. & Marshall, H. (2014). *Making the transition to classroom success: Culturally responsive teaching for struggling language learners*. University of Michigan.

de Jong, E. J., Harper, C. A., & Coady, M. R. (2013). Enhanced knowledge and skills for elementary mainstream teachers of English language learners. *Theory into Practice*, *52*(2), 89-97.

DeMatthews, D. (2014). Principal and teacher collaboration: An exploration of distributed leadership in professional learning communities. *International Journal of Educational Leadership and Management*, 2(2), 176-206. doi:10.4471/ijelm.2014.16

Dewey, J. (1938). *Logic: The theory of inquiry.* New York: W. W. Henry Holt.

DiAngelo, R. (2018). *White fragility: Why it's so hard for White people to talk about racism*. Beacon Press.

Dickerson, T. S., Fan, X., Pan, F., Kunz, G. M. & Hodges, T. E. (2020). Profile of the South Carolina teacher workforce for 2018-2019. https://sc-teacher.org

DuFour, R. (2004). What is a professional learning community? *Educational Leadership*. *61*(8), 6-11.

DuFour, R., & Eaker, R. E. (1998) *Professional learning communities at work: Best practices for enhancing student achievement.* National Education Service.

DuFour, R., Eaker, R. E., & DuFour, R. B. (Eds.). (2005). *On common ground: The power of professional learning communities*. Solution Tree.

Echevarria, J., Vogt, M., & Short, D. (2017). *Making content comprehensible for English learners: The SIOP Model*. Pearson.

EdSource Reports. (2008). *English learners in California: What the numbers say*. www.ed-data.k12.ca.us

Education Commission of the States. (2020). *50 state comparison-English learner policies*. https://www.ecs.org/50-state-comparison-english-learner-policies/

Eisner, E. W. (1991). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. Macmillan Publishing Company

Esch, K. (2018). Teacher leaders as agents of change: Creating contexts for instructional improvement for English language learner students. *The Elementary School Journal*, *119*(1), 152-178.

Ferlazzo, L., & Sypnieski, K. H. (2022). *The ESL/ELL teacher's survival guide: Ready-to-use strategies, tools, and activities for teaching all levels*. John Wiley & Sons.

Fletcher, J. (2004). The paradox of postheoric leadership: An essay on gender, power, and transformational change. *Leadership Quarterly*, *15*, 647–661.

Gandara, P., Maxwell-Jolly, J., & Driscoll, A. (2005). *Listening to teachers of English language learners: A survey of California teachers' challenges, experiences, and professional development needs*. Policy Analysis for California Education, PACE. https://eric.ed.gov/?id=ED491701

Gargani, J., & Strong, M. (2014). Can we identify a successful teacher better, faster, and cheaper? Evidence for innovating teacher observation systems. *Journal of Teacher Education*, *35*, 389-401. doi:10.1177/0022487114542519

Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice.* Teachers College Press.

Graziano, K. (2011). Working with English language learners: Preservice teachers and photovoice. *International Journal of Multicultural Education, 13*(1), 1-19.

Greenwald, A., & Banaji, M. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102*(1), 4-27.

Grissom, J. A., Egalite, A. J., & Lindsay, C. A. (2021). *How principals affect students and schools: A systematic synthesis of two decades of research.* The Wallace Foundation.

Hattie effect size list - 256 Influences related to student achievement. (2019). https://visible-learning.org/hattie-ranking-influences-effect-sizes-learning-achievement/

Himmel, J., et al. (2009). Using SIOP model to improve middle school science instruction. CREATE Brief. *Center for Research on the Educational Achievement and Teaching of English Language Learners.*

Hinnant-Crawford, B. N. (2020). *Improvement science in education: A primer.* Myers Education Press.

Hollie, S. (2012). *Culturally and linguistically responsive teaching and learning: Classroom practices for student success*. Shell Education.

Howard, G. R. (2007). As diversity grows, so must we. *Educational Leadership*, *64*(6), 16–22. http://libproxy.clemson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=24657419

Husar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., Smith, M., Bullock Mann, F., Barmer, A., & Dilig, R. (2020). *The condition of education 2020.* National Center for Education Statistics. https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2020144

Hutchinson, D. A. (1982). More substantive equal protection? A note on Plyer v. Doe. *The Supreme Court Review*, *1*, 167-194. https://www-jstor-org.libproxy.clemson.edu/stable/3109556?read-now%3D1%23page_scan_tab_contents=&seq=1#metadata_info_tab_contents

Junghas, T. (2018). Don't mind the gap! Reflections on improvement science as a paradigm. *Health Care Analysis*, 124-139. https://doi.org/10.1007/s10728-017-0353-7.

Kim, C. (2015). *ESOL strategies in STEM content classroom teaching*. Tri-TESOL 2015 Conference Proceedings.

Krashen, S. (1991). The input hypothesis: An update. *Georgetown University Round Table on Languages and Linguistics.* Georgetown University Press.

Krashen, S. (2013). Does SIOP research support SIOP claims? *Language Teaching*, *8*(1), 11924.

Kruse, S. D., Louis, K. S., & Bryk, A. S. (1995). An emerging framework for analyzing school-based professional community. In K. S. Louis & S. D. Kruse (Eds.), *Professionalism and community: Perspectives on reforming urban schools* (pp. 23-44). Corwin Press.

Ladson-Billings, G. (1995). *Educating for diversity: an anthology of multicultural voices.* Allyn and Bacon.

Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0: a.k.a. the remix. *Harvard Educational Review*, *84*(1), 74-84, 135.

Langley, G. J., Moen, R. D., Nolan, K. M., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: A practical approach to enhancing organizational performance.* John Wiley & Sons.

Lau v. Nichols, 314 U.S. 563 (1974). https://loc.gov/item/usrep414563.

Lee, A. (2019, March 13). More South Carolina teachers want to leave the profession, and it's affecting the students. *The Greenville News*.

Lee, S., & Hawkins, M. Policy, context and schooling: The education of English learners in rural new destinations. *Global Education Review*, *2*(4), 40-59.

Lucas, T., Villegas, A. M., & Freedson-Gonzalez, M. (2008). Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners. *Journal of Teacher* Education. 59(4), 361-373. doi:10.1177/0022487108322110.

Manner, J., & Rodriguez, D., (2012). Rural redesign: Delivering online professional development for rural teachers of ESL. *US-China Education Review*, *A*(3), 267-277.

Martin, J., Hamilton, B., & Osterman, M. (2020). *Births in the United States, 2019* (Data Brief No 387). National Center for Health Statistics. https://www.ed.gov/datastory/el-characteristics/index.html.

Marzano, R. (2012). The two purposes of teacher evaluation. *Educational Leadership*. *70*(3), 14-19.

Maxwell-Jolly, J., Gándara, P., & Méndez Benavídez, L. (2007). Promoting academic literacy among secondary English language learners: A synthesis of research and

practice. *UC Berkeley: University of California Linguistic Minority Research Institute*. https://escholarship.org/uc/item/5m14j4vp

McIntyre, K., Chen, C., Munoz, M., & Beldon, S. (2010). Teacher learning and ELL reading achievement in sheltered instruction classrooms: Linking professional development to student development. *Literacy Research and Instruction, 49*(4), 334-351. https://doi.org/10.1080/19388070903229412

Merriam, S., & Bierema, L. (2013). *Adult learning: linking theory and practice*. Jossey-Bass.

Mezirow, Z. (1997). *New directions for adult and continuing education*. Jossey-Bass.

Migration Policy Institute. (2020). *Profile of the unauthorized population: South Carolina.* https://migrationpolicy.org/data/unauthorized-immigrant-population/state/SC

Miles, M., Huberman, A., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (Fourth edition). Sage Publications.

Milner, IV, H. R. (2006). The promise of Black teachers' success with black students. *Educational Foundations, 20*(3/4), 89-104.

Miller, R., Liu, K., & Ball, A. (2020). Critical counter-narrative as transformative methodology for educational equity. *Review of Research in Education*, *44*, 269–300. https://doi.org/10.3102/0091732X20908501

National Academies of Sciences, Engineering, and Medicine; Division of Behavioral and Social Sciences and Education; Board on Children, Youth, and Families; Board on Science Education; Standing Committee on Emerging Infectious Diseases and

21st century health threats; Committee on guidance for K-12 education on responding to Covid-19. Schweingruber, H. et al. (Eds.) (2020). *Schools and the Pandemic*. National Academies Press (US). https://www.ncbi.nlm.nih.gov/books/NBK564026/

National Center for Education Statistics. (2020). *Digest of Education Statistics: 2020*. https://nces.ed.gov/programs/digest/d20/guide.asp

Nelsestuen, K., & Smith, J. (2020). Empathy interviews. *The Learning Professional.*, *41*(5).

Office of English Language Acquisition. (2020). *English learners demographic trends.* https://ncela.ed.gov/files/fast_facts/19-0193_Del4.4_ELDemographicTrends_021220_508.pdf

Ormerod, R. J. (2020). Pragmatism in professional practice. *Systems Research and Behavioral Science*. https://doi.org/10.1002/sres.2739

O'Neal, D. D., Ringler, M., & Rodriguez, D. (2008). Teachers' perceptions of their preparation for teaching linguistically and culturally diverse learners in rural Eastern North Carolina. *The Rural Educator, 30*(1). https://doi.org/10.35608/ruraled.v30i1.456

Our nation's English Learners. (2017). https://www2.ed.gov/datastory/el-characteristics/index.html#intro.

Perla, R. J., Provost, L. P., & Parry, G. J. (2013). Seven propositions of the science of improvement: Exploring foundations. *Quality Management in Healthcare*, *22*(3), 170-186.

Perry, J. A., Zambo, D., & Crow, R. (2020). *The improvement science dissertation in practice: A guide for faculty, committee members, and their students*. Myers.

Rizutto, K. C. (2017). Teachers' perceptions of ELL students: do their attitudes shape their instruction? *The Teacher Educator*, *52*(3), 182–202. https://doi-org.libproxy.clemson.edu/10.1080/08878730.2017.1296912

Saunders, R. 2013). The role of teacher emotions in change: Experiences, patterns and implications for professional development. *Journal of Educational Change., 14*(3). https://doi.org/10.1007/s10833-012-9195-0

Search for Public School Districts - District Detail for [Name of District]1. https://nces.ed.gov/ccd/districtsearch[Name of District]

Shields, C. (2010). Transformative leadership: Working for equity in diverse contexts. *Education Administration Quarterly*, *46*(4), 558–589.

Short, D. (2013). Training and sustaining effective teachers of sheltered instruction. *Theory Into Practice*, *52*, 118-127. http://www.tandf.co.uk/journals

Short, D., & Echevarria, E. The sheltered instruction observation protocol: A tool for teacher-researcher collaboration and professional development. *ERIC Digest EDO, 99.*

Short, D., Echevarria, E., & Richards-Tutor, C. Research on academic literacy development in sheltered instruction. *Language Teaching Research*, *15*(3). 363-380.

Sleeter, C. E. (2017). Critical race theory and the Whiteness of teacher education. *Urban Education, 52*(2), 155–169. doi:10.1177/0042085916668957

Smith, C. (2021). *How the word is passed: A reckoning with the history of slavery across America* (1st ed.). Little, Brown, and Company.

Sofronas, S. (2020, September 9). Managing implicit bias in EL education with Megan Fuciarelli (No. 124) *Highest aspirations.* Ellevation Education. https://anchor.fm/highest-aspirations/episodes/Managing-Implicit-Bias-in-EL-Education-with-Megan-Fuciarelli-ejciqk

South Carolina Department of Education. (2018). *Data files—SC report card.* https://screportcards.ed.sc.gov/files/2018//data-files/

South Carolina Department of Education. (2017). *2016-17 SC teachers by race and gender*. https://ed.sc.gov/data/reports/scde-educator-profession-reports/scde-educator-profession-reports/sc-teachers-by-race-and-gender/2016-17-sc-teachers-by-race-and-gender/

South Carolina Department of Education. District ESEA - South Carolina Department of Education. https://ed.sc.gov/data/report-cards/federalaccountability/esea/2012/district/?SID=0401

South Carolina Department of Education. Home-SC school report card. https://screportcards.ed.sc.gov/

Home. South Carolina Teaching Standards 4.0 - South Carolina Department of Education - 7/26/21 2:19 PM. (n.d.). https://ed.sc.gov/educators/educator-effectiveness/south-carolina-teaching-standards-4-0/.

Stanage, S. M. (1987). *Adult education and phenomenological research. New directions for theory, practice, and research*. Krieger.

State Data. (2020). https://data.ers.usda.gov/reports.aspx?StateFIPS=45&StateName=South%20Carolina&ID=1 7854

Stephens, C., & Johnson, D. C. (2015). Good teaching for all students? Sheltered instruction programming in Washington state language policy. *Language and Education*, *29*(1), 31-45. DOI: 10.1080/09500782.2014.924965.

Sugarman, Julie, and Courtney Geary. 2018. English Learners in California: Demographics, outcomes, and state accountability policies. Washington, DC: Migration Policy Institute.

Sugarman, S. D., & Widess, E. G. (1974). Equal protection for non-English speaking school children: Lau V. Nichols. *California Law Review*, *62*(1). 1-157. doi:10.15779/Z38ZT9H

Suter, W. N. *Introduction to educational research: A critical thinking approach.* Sage.

TEDx Talks. (2014, November 13). *Hiding in plain sight—my life as an undocumented American* [Video]. YouTube. https://www.youtube.com/watch?v=tBoBC3nBoFs

Terrazas, A. T. A. (2011, February 8). *Immigrants in new-destination states.* https://www.migrationpolicy.org/article/immigrants-new-destination-states.

Tran, H., Aziz, M., & Reinhardt, S. F. (2020). Rage against the machine: The legacy of education leaders' valiant struggle for social justice in Abbeville v. South Carolina. *Journal of School Leadership*, doi:1052684619899612.

United States Department of Education. (2001). *No child left behind.* https://www2.ed.gov/nclb/landing.jhtml

Vasquez, H. (2013). Nearly 50 years post-Jim Crow: Persisting and expansive school segregation for African American, Latina/o, and ELL students in Texas. *Education and Urban Society, 45*(5). https://doi.org/10.1177/0013124513486289

Verplaetse, L. S., & Migliacci, N. (Eds.). (2008). *Inclusive pedagogy for English language learners: A handbook of research-informed practices.* Routledge.

Wisconsin Center for Education Research. (2020). *WIDA English language development standards framework, 2020 Edition.* http://wida.wisc.edu/teach/standards/eld/2020

Wine-Snyder, M.; Brush, A.; & Ledford (Eds.). (2017). *Experiencing education* (11th ed.). Wentworth Printing.

Woodland, R. (2016). Evaluating PK–12 professional learning communities: An improvement science perspective. *American Journal of Evaluation*, 37(4), 505–521.

Zong, J., & Batalova, J. (2015). The limited English proficient population in the United States in 2013. *Migration Policy Institute*.

APPENDICES

Appendix A

IRB Approval

To: Hans William Klar
Re: Clemson IRB Number: IRB2022-0131
Exempt Category: D1
Determination Date: 05-Apr-2022
Expiration Date: 30-Apr-2027
Funding Sponsor: N/A
Project Title: Introducing linguistically responsive strategies to classroom teachers

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The Office of Research Compliance determined that the proposed activities involving human participants meet the criteria for Exempt level review under 45 CFR 46.104(d). The Exempt determination is granted for the certification period indicated above.

Principal Investigator (PI) Responsibilities: The PI assumes the responsibilities for the protection of human subjects as outlined in the Principal Investigator's Responsibilities guidance.

Non-Clemson Affiliated Collaborators: The Exempt determination only covers Clemson affiliated personnel on the study. External collaborators have to consult with their respective institution's IRB office to determine what is required for their role on the project.

Modifications: An Amendment is required for substantial changes to the study. Substantial changes are modifications that may affect the Exempt determination (i.e., changing from Exempt to Expedited or Full Board review level, changing exempt category) or that may change the focus of the study, such as a change in hypothesis or study design. **All changes must be reviewed by the IRB office prior to implementation.**

PI or Essential Study Personnel Changes: For Exempt determinations, submit an amendment ONLY if the PI changes or if there is a change to an essential study team member. An essential team member would be an individual required to be on the study team for their expertise or certification (i.e., health expert, mental health counselor). Students or other non-essential study personnel changes DO NOT have to be reported to the IRB office.

Reportable Events: Notify the IRB office immediately if there are any non-compliance issues, unanticipated problems involving risks to participants, complications, adverse events and/or any complaints from research participants.

Closing IRB Record: Submit a Progress Report to close the IRB record. An IRB record may be closed when all research activities are completed. Research activities include, but are not limited to: enrolling new participants; interaction with participants (online or in-person); collecting prospective data, including de-identified data through a survey; obtaining, accessing, and/or generating identifiable private information about a living person.

New IRB Application: A new Exempt application is required if the research activities continue for more than 5 years after the initial determination. **Exempt determinations may not be renewed or extended and are valid for 5 years only.**

Non-Clemson Affiliated Sites: A site letter is required for off-campus sites. Refer to the guidance on research site/permission letters for more information. An Amendment is required to add additional sites to the study.

International Research: Clemson's approval is based on U.S. human subjects protections regulations and Clemson University human subjects protection policies. Researchers should become familiar with all pertinent information about local human subjects protection regulations and requirements when conducting research internationally. We encourage you to discuss any possible human subjects research requirements that are specific to your research site with your local contacts, to comply with those requirements, and to inform Clemson's IRB office of those requirements. Review the FAQs for more information about international research.

Contact Information: Please contact the IRB office at IRB@clemson.edu or visit our webpage if you have questions.

Clemson University's IRB is committed to facilitating ethical research and protecting the rights of human subjects. All research involving human participants must maintain an ethically appropriate standard, which serves to protect the rights and welfare of the participants.

Institutional Review Board
Office of Research Compliance
Clemson University

IRB Number: IRB00000481
FWA Number: FWA00004497

Appendix B

Parent Information about the Research Study
Clemson University

Introducing Linguistically Responsive Strategies to Classroom Teachers

KEY INFORMATION ABOUT THE RESEARCH STUDY

Mrs. Christie Shealy, Director of Testing and Accountability, invites your child to volunteer for a research study. Mrs. Christie Shealy is a Doctoral Candidate at Clemson University.

Mrs. Shealy coordinates the district English Speakers of Other Languages program in Anderson School District One. Likewise, she coordinates the state testing programs, such as SCReady, End of Course Exams, and SC PASS.

Study Purpose: This research aims to determine professional development for classroom teachers to ensure all students learn at high levels.

Voluntary Consent: Participation is voluntary, and your child has the option not to participate. You may tell us that you do not want your child to be in the study.

Your child's grades will not be affected by any decision you make about this study.

Activities and Procedures: Your child's part in the study will participate in the lesson provided by their regularly scheduled classroom teacher while Mrs. Shealy observes the teacher's actions. Mrs. Shealy will be observing the teacher strategies utilized during the lesson that increase student knowledge. During the observation, Mrs. Shealy will be taking notes of the lesson and the teacher's strategies.

Risks and Discomforts:

In this research study, we do not know of any risks or discomforts to your child [or replace with "your family"].

Possible Benefits: Your child may not benefit directly from taking part in this study; however, the observation results will inform professional development needs for the classroom teacher. The professional development will increase the ability of the teacher to ensure learning for all students at high levels.

S.C. MANDATORY REPORTING LAW
The research team includes individuals who are mandatory reporters. Your family's personal information may be disclosed if required by law. This means that there may be rare situations that require us to release personal information about your family, e.g., in case a judge requires such release in a lawsuit or if your child tells us of their intent to harm themselves or others (including reporting behaviors consistent with child abuse or neglect). In accordance with S.C. Code §63-7-310, we are required to report child abuse or neglect.

from the participants or legally authorized representative. No identifiable information will be collected during the study.
The information collected during the study will not be used or distributed for future research studies. No identifiable information will be collected during the study.

CONTACT INFORMATION

If you have any questions or concerns about your child's rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-0636 or irb@clemson.edu. The Clemson IRB will not be able to answer some study-specific questions. However, you may contact the Clemson IRB if the research staff cannot be reached or if you wish to speak with someone other than the research staff.

If you have any study-related questions or if any problems arise, please contact Mrs. Christie Shealy at (864)847-7344.

CONSENT

By allowing your child to participate in the study, you indicate that you have read the information written above, been allowed to ask any questions, and you are voluntarily choosing for your child to take part in this research. You do not give up any legal rights by having your child participate in this research study.

Appendix C

Informed Consent for Participants

Information about the Research Study Clemson University Introducing Linguistically Responsive Strategies to Classroom Teachers

KEY INFORMATION ABOUT THE RESEARCH STUDY

Christie Shealy is inviting you to volunteer for a research study. Christie Shealy is a doctoral candidate at Clemson University and is conducting the study with Dr. Hans Klar, who is a professor in the College of Education at Clemson University.

Study Purpose

The purpose of the study is to understand how classroom teachers can be provided with professional development that increases their use of linguistically responsive strategies to meet the educational needs of English language learning (ELL) students.

Voluntary Consent

Participation is voluntary, and the only alternative is not to participate. You will not be punished in any way if you decide not to be in the study or to stop taking part in the study.

Activities and Procedures

Participation in this study will require an interview, one classroom observation, and participation in three professional learning community (PLC) sessions. The interview component will consist of an individual, semi-structured interview via Zoom that will last up to 45 minutes, with a possible follow-up interview of not more than 15 minutes. The interview and possible follow up interview will be conducted by Christie Shealy and

occur at a time that is convenient for you. The purpose of the interview is to understand your use of linguistically responsive strategies in your classroom. The study also includes one, non-evaluative, one-hour classroom observation. The observation will be completed by Christie Shealy using the SC Department of Education 4.0 rubric at a time that is convenient for you. The final component of the study will require your participation in four, 30-minute PLC sessions where you will learn about linguistically responsive teaching strategies. Participation Time: It will take you about four hours to be in this study. Risks and Discomforts: We do not know of any risks or discomforts to you in this research study. Possible Benefits: You may not benefit directly from taking part in this study, however participating in this study may expand your knowledge of linguistically responsive teaching strategies, which may also benefit your students.

AUDIO/VIDEO RECORDING AND PHOTOGRAPHS

The semi-structured Zoom interview will be recorded and saved in the Zoom cloud that can only be accessed through Christie Shealy's password protected Zoom account. Christie will use the recording to develop a complete transcription. She will delete the recording once the transcription is complete. Participants reserve the right to request a copy of the transcription. Audio will not be shared publicly.

PROTECTION OF PRIVACY AND CONFIDENTIALITY

The results of this study may be published in scientific journals, professional publications, or educational presentations. Identifiable information collected during the study will be removed and the de-identified information could be used for future research studies or distributed to another investigator for future research studies without additional

informed consent from the participants or legally authorized representative. The maintenance of confidentiality of the participants will be a priority in this study. Christie will assign a unique 6-character alphanumeric code to all documents and recordings to protect your identity. All research documents developed or used during the study will be securely stored on Christie's password-protected computer. Christie will save the interview recordings on the Zoom cloud library until transcription. The Zoom cloud library can only be accessed through Christie's password-protected account. Upon completion of the transcription process, Christie will destroy the recording. The de-identified transcription, observation form, and any other data collected during the study, will be stored on password-protected cloud data storage program until completion of the study, at which time the documents will be destroyed. At any time during the study, you can request to view transcripts or any other documents specific to your participation in the study.

CONTACT INFORMATION

If you have any questions or concerns about your rights in this research study, please contact the Clemson University Office of Research Compliance (ORC) at 864-656-0636 or irb@clemson.edu. The Clemson IRB will not be able to answer some study-specific questions. However, you may contact the Clemson IRB if the research staff cannot be reached or if you wish to speak with someone other than the research staff. If you have any study related questions or if any problems arise, please contact Dr. Hans Klar at Clemson University at hklar@clemson.edu.

CONSENT

By participating in the study, you indicate that you have read the information written above, been allowed to ask any questions, and you are voluntarily choosing to take part in this research. You do not give up any legal rights by taking part in this research study

Appendix D

Interconnectedness between Linguistically Responsive, South Carolina 4.0 Teaching Rubric Inclusive and Culturally Responsive Teaching, and Sheltered Instructional Strategies

Linguistically Responsive Strategies (Lucas & et al., 2008)	South Carolina 4.0 Teaching Rubric Inclusive and Culturally Responsive Teaching	Sheltered Instructional Strategies (Echevarria, Vogt, & Short, 2008)
Conversational language proficiency is fundamentally different from academic language proficiency and it can take many more years for an ELL to become fluent in the latter than in the former.	Questioning	Sufficient **wait time for student responses** consistently provided Regular **feedback** provided to students on their output **Speech** appropriate for students' proficiency level A variety of **questions or task that promote higher-order thinking skills.**
Second language learners must have access to comprehensible input that is just beyond their current level of competence, and they must have opportunities to produce output for meaningful purposes.	Activities	**Meaningful activities** that integrate lesson concepts with language practice opportunities for reading, writing, listening, and/or speaking. **A variety of techniques** used to make content concepts clear. **Adaption of content** to all levels of student proficiency.
Social interaction in which ELLs actively participate fosters the development of conversational and academic English.	Environment	**Grouping configurations** support language and content objectives of the lesson Frequent opportunities for **interaction** and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts **Clear explanation** of academic tasks

ELLs with strong native language skills are more likely to achieve parity with native English-speaking peers than are those with weak native English speaking peers than are those with weak native language skills.	Teacher Knowledge of Students	**Scaffolding techniques** consistently used Assisting and supporting student understanding Activities integrate all **language skills** Ample opportunities for students to **clarify key concepts in L1** as needed with an aide, peer, or L1 text
A safe, welcoming classroom environment with minimal anxiety about performing in a second language is essential for ELLs to learn.	Problem Solving	**Frequent opportunities for interaction** and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts **Content concepts** appropriate for age and educational background level of students
Explicit attention to linguistic form and function is essential to second language learning.	Thinking	**Content objectives** clearly supported by lesson delivery **Language objectives** clearly defined, displayed, and reviewed with students Comprehensive review of **key vocabulary** **Supplementary materials** used to a high degree, making the lesson clear and meaningful

Appendix E

South Carolina 4.0 Teaching Rubric Inclusive and Culturally Responsive Teaching

	Exemplary (4)	Proficient (3)	Needs Improvement (2)	Unsatisfactory (1)
Activities and Materials	Activities and materials include all of the following: • support the lesson objectives. • are challenging. • sustain students' attention. • elicit a variety of thinking. • provide time for reflection. • are relevant to students' lives. • provide opportunities for student to student interaction. • induce student curiosity and suspense. • provide students with choices. • incorporate multimedia and technology which enhances student learning and thinking. • incorporate resources beyond the school curriculum texts (e.g., teacher made materials, manipulatives, resources from museums, cultural centers, etc). • In addition, sometimes activities are	Activities and materials include most of the following: • support the lesson objectives. • are challenging. • sustain students' attention. • elicit a variety of thinking. • provide time for reflection. • are relevant to students' lives. • provide opportunities for student to student interaction. • induce student curiosity and suspense. • provide students with choices. • incorporate multimedia and technology. • incorporate resources beyond the school curriculum texts (e.g., teacher made materials, manipulatives, resources from museums, cultural centers, etc).	Activities and materials include some of the following: • support the lesson objectives. • are challenging. • sustain students' attention. • elicit a variety of thinking. • provide time for reflection. • are relevant to students' lives. • provide opportunities for student to student interaction. • induce student curiosity and suspense. • provide students with choices. • incorporate multimedia and technology. • incorporate resources beyond the school curriculum texts (e.g., teacher made materials, manipulatives, resources from museums, cultural centers, etc).	Activities and materials include few of the following: • support the lesson objectives. • are challenging. sustain students' attention. elicit a variety of thinking. • provide time for reflection. • are relevant to students' lives. • provide opportunities for student to student interaction. • induce student curiosity and suspense. • provide students with choices. • incorporate multimedia and technology. • incorporate resources beyond the school curriculum texts(e.g., teacher made materials, manipulatives, resources from museums, etc).

	game-like, involve simulations, require creating products, and demand self-direction and self-monitoring			
Questioning	Teacher questions are varied and high quality providing a consistently balanced mix of question types: • knowledge and comprehension, application and analysis, and creation and evaluation. • Questions are consistently purposeful and coherent. • A high frequency of questions is asked. • Questions are consistently sequenced with attention to the instructional goals. • Questions regularly require active responses (e.g., whole class signaling, choral responses, written and shared responses, or group and individual answers). • Wait time (3-5 seconds) is consistently provided.	Teacher questions are varied and high quality providing a balanced mix of question types: • knowledge and comprehension, application and analysis, and creation and evaluation. • Questions are usually purposeful and coherent • A moderate frequency of questions asked. • Questions are often sequenced with attention to the instructional goals. • Questions sometimes require active responses (e.g., whole class signaling, choral responses, or group and individual answers). • Wait time is often provided. • The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and sex. • Students generate questions that lead to further inquiry and self-directed learning	Teacher questions are varied and high quality providing for some, but not all, question types: • knowledge and comprehension, application and analysis, and creation and evaluation. • Questions are sometimes purposeful and coherent. • A moderate frequency of questions asked. • Questions are sometimes sequenced with attention to the instructional goals. • Questions sometimes require active responses (e.g., whole class signaling, choral responses, or group and individual answers). • Wait time is sometimes provided. • The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and sex.	Teacher questions are inconsistent in quality and include few question types: • knowledge and comprehension, application and analysis, and creation and evaluation. Questions are random and lack coherence. • A low frequency of questions is asked. • Questions are rarely sequenced with attention to the instructional goals. • Questions rarely require active responses (e.g., whole class signaling, choral responses, or group and individual answers). • Wait time is inconsistently provided. • The teacher mostly calls on

	• The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and sex. • Students generate higher order questions that lead to further inquiry and self-directed learning			
Teacher Knowledge of Students	Teacher practices display understanding of each student's anticipated learning difficulties. • Teacher practices consistently incorporate student interests and cultural heritage. • Teacher consistently provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	Teacher practices display understanding of most student anticipated learning difficulties. • Teacher practices regularly incorporate student interests and cultural heritage. • Teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	Teacher practices display understanding of some student anticipated learning difficulties. • Teacher practices sometimes incorporate student interests and cultural heritage. • Teacher sometimes provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	Teacher practices demonstrate minimal knowledge of students anticipated learning difficulties. • Teacher practices rarely incorporate student interests or cultural heritage. • Teacher practices demonstrate little differentiation of instructional methods or content
Thinking	The teacher thoroughly teaches three types of thinking: • analytical thinking where students analyze, compare and contrast, and	The teacher thoroughly teaches two types of thinking: • analytical thinking where students analyze, compare and contrast, and evaluate and	Teacher practices display understanding of some student anticipated learning difficulties. • Teacher practices sometimes incorporate student	Teacher practices demonstrate minimal knowledge of students anticipated learning difficulties. • Teacher practices rarely incorporate student interests or cultural heritage.

	evaluate and explain information. • practical thinking where students use, apply, and implement what they learn in real-life scenarios. • creative thinking where students create, design, imagine and suppose. • research-based thinking where students explore and review a variety of ideas, models, and solutions to problems. The teacher consistently provides opportunities where students: • generate a variety of ideas and alternatives. • analyze problems from multiple perspectives and viewpoints. • monitor their thinking to ensure that they understand what they are learning, are attending to critical information, and are aware of the learning strategies that they are using and why.	explain information. • practical thinking where students use, apply, and implement what they learn in real-life scenarios. • creative thinking where students create, design, imagine and suppose. • research-based thinking where students explore and review a variety of ideas, models, and solutions to problems. The teacher regularly provides opportunities where students: • generate a variety of ideas and alternatives. • analyze problems from multiple perspectives and viewpoints.	interests and cultural heritage. • Teacher sometimes provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught	• Teacher practices demonstrate little differentiation of instructional methods or content.

Problem Solving	The teacher implements activities that teach and reinforce 3 or more of the following problem solving types: • Abstraction • Categorization • Drawing Conclusions/Justifying Solutions • Predicting Outcomes • Observing and Experimenting • Improving Solutions • Identifying Relevant/Irrelevant Information • Generating Ideas • Creating and Designing	The teacher implements activities that teach and reinforce 2 of the following problem solving types: • Abstraction • Categorization • Drawing Conclusions/Justifying Solution • Predicting Outcomes • Observing and Experimenting • Improving Solutions • Identifying Relevant/Irrelevant Information • Generating Ideas • Creating and Designing	The teacher implements activities that teach and reinforce 1 of the following problem solving types: • Abstraction • Categorization • Drawing Conclusions/Justifying Solution • Predicting Outcomes • Observing and Experimenting• improving Solutions • Identifying Relevant/Irrelevant Information • Generating Ideas • Creating and Designing	The teacher implements no activities that teach and reinforce any of the following problem solving types: • Abstraction • Categorization • Drawing Conclusions/Justifying Solution • Predicting Outcomes • Observing and Experimenting • Improving Solutions • Identifying Relevant/Irrelevant Information • Generating Ideas • Creating and Designing
Environment	The classroom • Welcomes all members and guests • Is organized and understandable to all students and encourages student collaboration • Supplies, equipment, and resources accessible for all students • Displays student work that frequently changes • Is consistently arranged to promote individual and group learning	The classroom • Welcomes most members and guests • Is organized and understandable to most students • Supplies, equipment, and resources accessible for most students • Displays student work • Is arranged to promote individual and group learning	The classroom • Welcomes some members and guests • Is organized and understandable to some students • Supplies, equipment, and resources accessible • Displayed student work is not updated regularly • Is sometimes arranged to promote individual and group learning	The classroom • Is somewhat cold and uninviting • Is not well organized and understandable to students • Supplies, equipment, and resources are difficult to access • Does not display student work • Is not arranged to promote group learning

Appendix F

Observation Protocol

Participants will identify a time for the classroom observation that fits their schedule. The one observation will cover the entire lesson.

Adapted from Creswell, J. (2008). *Educational research: Planning, conducting, and evaluating qualitative and qualitative research.* (Third Edition). Pearson Prentice Hall.

Setting: _____ Time: _____

LRS	SC 4.0 Inclusive and Culturally Responsive Teaching Rubric
Conversational language proficiency is fundamentally different from academic language proficiency and it can take many more years for an ELL to become fluent in the latter than in the former.	Questioning Indicator
Second language learners must have access to comprehensible input that is just beyond their current level of competence, and they must have opportunities to produce output for meaningful purposes.	Activities and materials indicator
Social interaction in which ELLs actively participate fosters the development of conversational and academic English.	Environment indicator
ELLs with strong native language skills are more likely to achieve parity with native English-speaking peers than are those with weak native English speaking peers than are those with weak native language skills.	Teacher knowledge of students indicator
A safe, welcoming classroom environment with minimal anxiety about performing in a second language is essential for ELLs to learn.	Respectful culture indicator
Explicit attention to linguistic form and function is essential to second language learning.	Thinking indicator

Adapted from Lucas et al. "Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners." Journal of Teacher Education, vol. 59, no. 4, Sept. 2008, pp. 361–73, doi:10.1177/0022487108322110.

Scripting of classroom observations
TT
TS
Reflective notes:

Appendix G

Semi-Structured Empathy Interview Protocol

The classroom teacher will set interview times; when setting up the interview, the participants will complete a signed permission form.

Adapted from Creswell, J. (2008). Educational research: Planning, conducting, and evaluating quantitative and qualitative research. (Third Edition). Pearson Prentice Hall.

Date: _____
Participant:_____

Opening: Hello, I am a researcher from Clemson University. [Researcher introduces self]. Thank you very much for expressing interest in participating in my study, "Mixed Methods approach to Introduce Linguistically Responsive Strategies to Classroom Teachers." I have invited you to participate in this study because of your professional role at this school. The purpose of today's interview is to learn about your experiences with ELL students in your classroom. The interview will last approximately 60 minutes, and with your permission, will be recorded to ensure I accurately capture the conversation.

It is important to me to ensure you feel comfortable sharing your experiences, and so I will not include any information in my study that can be used to identify you. I have provided an informed consent document that gives you more details on your involvement and how we will use and protect your information.

Thank you very much.

1. Could you tell me about your experiences teaching ELL students in this district?
2. How do you view the classroom teacher's role in the ELL student's acquisition of English?
3. What, if any types of professional development do you need to best support ELL students?
4. To what extent did your preservice experience prepare you for teaching ELL students?
5. To what extent has in-service staff development prepared you to teach ELL students?
6. How do you use data about your ELL students to inform your classroom practice? (LRS #1)
7. What word would you use to describe your classroom and procedures? Why? (LRS #5)

8. Describe the strategies in your classroom to support your ELL students acquiring English. (LRS #3)
9. Describe how you provide intentional opportunities for ELL students to listen and speak English in your classroom. (LRS #6)
10. Describe how you have helped ELL students access the academic content who have limited school experiences in their native country. (LRS #4)
11. Describe how ELL students participate in academic content being taught within your classroom. (LRS #2)
12. Is there anything else you would like to tell me about ELL students in your classroom?
13. What questions do you have for me?

Appendix H

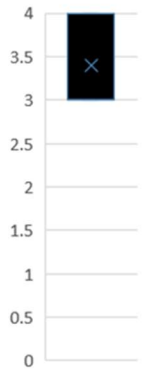
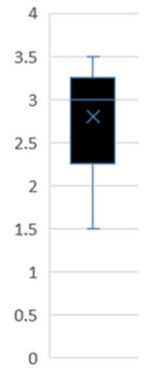
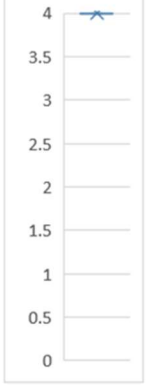
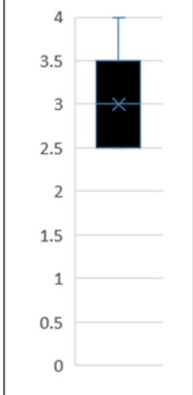
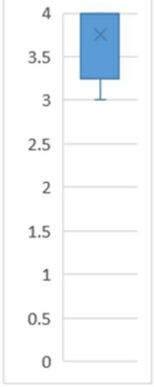
Correlation of Empathy Interview Questions and Linguistically Responsive Tenets

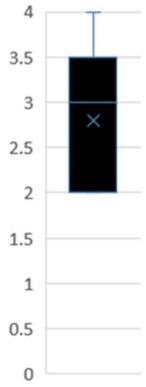
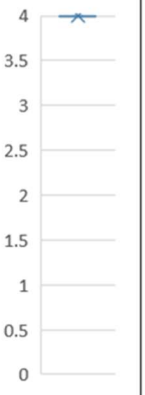
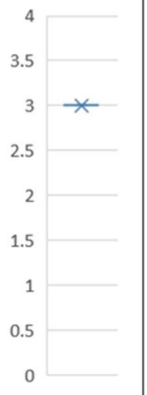
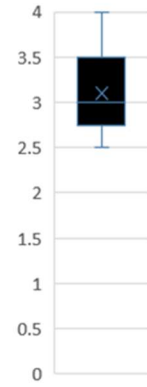
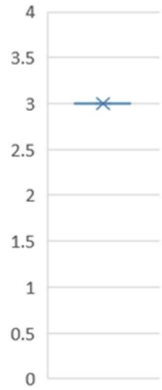
Empathy Interview Questions	Linguistically Responsive Tenets (Lucas et al., 2008, p. 363)
1. Could you tell me about your experiences teaching ELL students in this district?	
2. How do you view the classroom teacher's role in the ELL student's acquisition of English?	Conversational language proficiency is fundamentally different from academic language proficiency (Cummins, 1981, 2000). It can take many more years for an ELL to become fluent in the latter than in the former (Cummins, 2008).
3. How prepared do you feel to teach ELL students?	
4. To what extent did your preservice experience prepare you for teaching ELL students?	
5. To what extent has in-service staff development prepared you to teach ELL students?	
6. How do you use data about your ELL students to inform your classroom practice?	
7. What word would you use to describe your classroom and procedures? Why?	Explicit attention to linguistic form and function is essential to second language learning (Gass, 1997; Schleppegrell, 2004; Swain, 1995).

8. Describe the strategies you use in your classroom to support your ELL students in acquiring English. (Prompt for each of the 6 LRS)	Second language learners must have access to comprehensible input that is just beyond their current level of competence (Krashen, 1982, 2003), and they must have opportunities to produce output for meaningful purposes (Swain, 1995).
9. Describe how you provide intentional opportunities for ELL students to listen and speak English in your classroom.	ELLs with strong native language skills are likelier to achieve parity with native-English-speaking peers than those with weak native-language skills (Cummins, 2000; Thomas & Collier, 2002).
10. Describe how you have helped ELL students access the academic content who have limited school experiences in their native country.	A safe, welcoming classroom environment with minimal anxiety about performing in a second language is essential for ELLs to learn (Krashen, 2003; Pappamihiel, 2002; Verplaetse & Migliacci, 2008).
11. Describe how ELL students participate in academic content being taught within your classroom.	Social interaction in which ELLs actively participate fosters the development of conversational and academic English (Gass, 1997; Vygotsky, 1978; Wong-Fillmore & Snow, 2005).
12. Is there anything else you would like to tell me about ELL students in your classroom?	
13. Do you have any questions for me?	

Appendix I

Study Portion of PDSA Cycle Joint Display

Conversational language proficiency is fundamentally different from academic language proficiency, and it can take more years for an ELL to become fluent.		Second language learners must have access to comprehensible input that is just beyond their current level of competence, and they must have opportunities to produce output for meaningful purposes.		Social interaction in which ELLs actively participate fosters the development of conversational and academic English.	
					
"Spanish speaking students are the ones that make the most growth from the start of the year"	Mid-level English proficiency partnered with native English speaker to read passage for determining main idea	Multiple primary source documents to portray attitudes and beliefs about time period-students watched a short video with captions, pdf that could be Google translated easily	Classroom watching a video about the dustbowl with captions enabled	Students were paired with a student (ELL and non-ELL) to read a passage to summarize important facts.	ELL student presents to class project on planning a summer trip
18% of references from *a priori* coding	14% of references from *a priori* coding	26% of references from *a priori* coding	17% of references from *a priori* coding	13% of references from *a priori* coding	28% of references from *a priori* coding

ELLs with strong native language skills are more likely to achieve parity with native English-speaking peers that are those with weak native English speaking peers than are those with weak native language skills.		A safe, welcoming classroom environment with minimal anxiety about performing in a second language is essential for ELLs to learn.		Explicit attention to linguistic form and function is essential to second language learning.	
					
"we went on a field trip earlier this year and the other day we had a guest speaker…those times it makes my hearth really happy"	Students playing end of year review game where they each submitted topics to have classmates guess, could skip words not familiar	Classroom was quick to censor student who told another student to shut up. Teacher reinforced that is not how we talk to each other.	Students watching a film on a diverse student instead of a traditional film	Learning about context clues, teacher cited example from younger son reading a picture book used context clues to read the story.	Remember how we talked in class about crop rotation…what does that mean in terms of the Dust Bowl?
20% of references from *a priori* coding	10% of references from *a priori* coding	10% of references from *a priori* coding	21% of references from *a priori* coding	12% of references from *a priori* coding	10% of references from *a priori* coding

Appendix J

Study Participant Demographics

Participant	Experience	Degree	Certification	Gender	Ethnicity
T1	17 years	Bachelors	Early Childhood Elementary Middle-Level Language Arts	Female	White
T2	11 years	Masters	English Middle-Level Language Arts Middle-Level Social Studies	Female	White
T3	16 years	Masters	Elementary Middle-Level Mathematics Middle-Level Science	Female	White
T4	17 years	Masters	Elementary Literacy Coach Literacy Teacher Middle-Level Language Arts	Female	White
T5	5 years	Masters	Middle-Level Social Studies Social Studies	Female	White

Appendix K

PLC Meeting Slides

ELLs with strong native language skills are more likely to achieve parity with native English-speaking peers than are those with weak native English speaking peers than are those with weak native language skills.

TABLE 2

TIPS FOR RESPONDING TO LINGUISTIC DIFFERENCES

Establish clear expectations and state them in writing as well as in spoken language.
Use focused reading assignments—most textbooks have too much information for learners who do not know what is important—and review the assignments for reading load and word complexity, modifying as necessary.
Teach students how to make outlines and study guides.
Encourage students to form study groups that include a mix of students with varying linguistic abilities.
Speak slowly and distinctly; avoid jargon, colloquialisms, and slang.
Use PowerPoint® slides with key words and a definition.
To encourage language use, create small-group opportunities for students in which to speak.
Allow extra time when students volunteer to speak in class.
Use small groups for the application of course concepts and include an assessment activity at the conclusion of the work.
Encourage students to keep lists of words they do not understand and to review them frequently.
Incorporate writing assignments in each lesson; use 1-minute papers or reflection papers of two to three sentences.
For assignments that require writing, structure a preliminary peer review of the assignment and provide feedback to written work prior to students' submission of a final written assignment.
Include assignments in which learners practice charting and review them for spelling and word use.
Use teaching strategies, such as role-play or simulation, that provide opportunities for learners to use spoken language, particularly during interactions with patients.

Billings. (2015). Culturally and linguistically responsive teaching: Part I. The Journal of Continuing Education in Nursing., 46(2). https://doi.org/10.3928/00220124-20150121-14

Conversational language proficiency is fundamentally different from academic language proficiency and it can take many more years for an ELL to become fluent in the latter than in the former.

TABLE 1

TIPS FOR RESPONDING TO LEARNING STYLE DIFFERENCES

Help students to understand their own learning style and what helps them to learn; provide suggestions for ways to support their learning style if it is different from strategies used in the classroom.
Provide options for how students can complete assignments, such as multimedia presentations, written work, stories, or group presentations.
Use a variety of modes to communicate course concepts, such as visual, auditory, or text. Make or encourage students to make videos or audio recordings of lectures for review later.
Provide structure and support for students who benefit from having a teacher or expert present.
Use strategies such as storytelling, reflection, and narratives to facilitate learning for high-context learners.
Give clear and frequent feedback to practice (nongraded) learning activities.
Use assessment (nongraded) techniques (e.g., practice tests, 1-minute papers) frequently to ensure that all students are mastering course concepts.

Billings. (2015). Culturally and linguistically responsive teaching: Part I. The Journal of Continuing Education in Nursing., 46(2). https://doi.org/10.3928/00220124-20150121-14

Second language learners must have access to comprehensible input that is just beyond their current level of competence, and they must have opportunities to produce output for meaningful purposes.

Clarify an Idea

Prompt/Question	*Response Starters*
Say more about....	What I mean is...
What do you mean?	In other words...
I have a question about....	I can explain it by....
I'm confused about....	An analogy might be...
I understand ... but I want to know more about....	More specifically, it is ....
Can you be more specific?	Let me see if I heard you right...
Does that make sense?	To paraphrase what you just said,
Do you know what I mean?	A different way to say it is ....
Are you saying....	

Support or Challenge an Idea

Prompt/Question	*Response Starters*
Where does it say that?	In the text it said that....
What is your evidence?	Remember when we read...
How does it support this idea?	Strong supporting evidence is....
My opinion is different because....	It sounds like you are saying that...
I don't agree because....	I would like to challenge that idea because....
Can I suggest a different idea?	That is a valid point, but....
I agree because....	Thanks for saying that because....

Zwiers, J., & Crawford, M. (2011). *Academic conversations: Classroom talk that fosters critical thinking and content understandings*. Stenhouse Publishers.

Paraphrasing and summarizing

- So to sum up...
- What I hear you saying is...
- The main point seems to be...

Building on others' ideas

- I'd like to add another point...
- That reminds me...
- I would add that...

Disagreeing without being disagreeable

- I disagree because on page x...
- I see how that makes sense, but...
- Then again, I think that...

Applying and connecting through active listening

- That's a really good point because...
- What I've heard makes me rethink...
- I would add that...

Elaborating and clarifying with questions

- Can you tell me more about...?
- Where does the text say that?
- What do you think about...?

Zwiers, J., & Crawford, M. (2011). *Academic conversations: Classroom talk that fosters critical thinking and content understandings.* Stenhouse Publishers.

The Expert and the Novice

Students Will:

- Take turns being the Expert and the Novice
- As an Expert, verbally explain a topic to the Novice
- As a Novice, listen to the Expert and ask questions
- Switch roles

Log in - welcome to ellevation. Log in - Welcome to Ellevation. (n.d.). from https://login.ellevationeducation.com/

Same Scene Twice

Students Will:

- Discuss a content topic briefly with a peer
- Research the same topic and prepare notes with more specific, academic language
- Discuss the topic a second time, using academic language

Log in - welcome to ellevation. Log in - Welcome to Ellevation. (n.d.). from https://login.ellevationeducation.com/

Directed Discourse

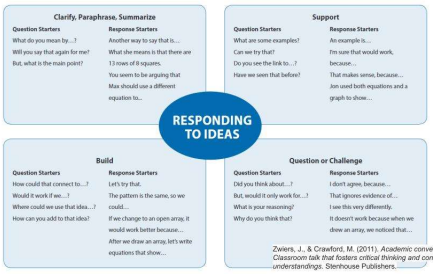
Students Will:

- Engage in an authentic academic conversation with partner or peers
- Actively listen and respond
- Practice using "conversation moves"

Log in - welcome to ellevation. Log in - Welcome to Ellevation. (n.d.). from https://login.ellevationeducation.com/

	Who/What	Does/Is	How	Where	Why
Basic	Charlie	got mad.			
Notes for Elaboration	Charlie	became furious	suddenly	at the restaurant	others were laughing at the boy
Elaborated Sentences	Charlie became furious suddenly at the restaurant because others were laughing at the boy. Because others were laughing at the boy in the restaurant, Charlie suddenly became furious. Suddenly, Charlie became furious at the people who were laughing at a boy who had dropped dishes in the restaurant.				

Zwiers, J., & Crawford, M. (2011). *Academic conversations: Classroom talk that fosters critical thinking and content understandings.* Stenhouse Publishers.



Zwiers, J., & Crawford, M. (2011). *Academic conversations: Classroom talk that fosters critical thinking and content understandings.* Stenhouse Publishers.

Appendix L

NVivo Codebook

- Conversational language proficiency is fundamentally different from academic language proficiency (Cummins, 1981, 2000). It can take many more years for an ELL to become fluent in the latter than the former (Cummins, 2008).
- Second language learners must have access to comprehensible input that is just beyond their current level of competence (Krashen, 1982, 2003), and they must have opportunities to produce output for meaningful purposes (Swain, 1995).
- Social interaction in which ELLs actively participate fosters the development of conversational and academic English (Gass, 1997; Vygotsky, 1978; Wong-Fillmore & Snow, 2005).
- ELLs with strong native language skills are more likely to achieve parity with native-English-speaking peers than are those with weak native-language skills (Cummins, 2000; Thomas & Collier, 2002).
- A safe, welcoming classroom environment with minimal anxiety about performing in a second language is essential for ELLs to learn (Krashen, 2003; Pappamihiel, 2002; Verplaetse & Migliacci, 2008).
- Explicit attention to linguistic form and function is essential to second language learning (Gass, 1997; Schleppegrell, 2004; Swain, 1995).

Note. from Lucas, T., Villegas, A. M., & Freedson-Gonzalez, M. (2008). Linguistically responsive teacher education: Preparing classroom teachers to teach English language learners. *Journal of Teacher Education,* 59(4), 361–373. https://doi.org/10.1177/0022487108322110