EQUITY IN LEARNING: LINKING ORAL LANGUAGE TO PRINT

A disquisition presented to the faculty of the Graduate School of Western Carolina University in partial fulfillment of the Requirements for the degree of Doctor of Education.

By

April Lee Wright

Director: Dr. Catherine Andrews
Assistant Profession College of Education and Allied Professions
Committee Members: Dr. Brandi Hinnant-Crawford, Dr. Roya Scales, and Ms. Susanne Swanger

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

THE DISQUISITION: A CAPSTONE EXPERIENCE

Historically, doctoral students complete a dissertation to record research based on theory (PhD). Alternatively, the Executive Doctor of Education (EdD) opportunity was developed with the goal of developing school leaders and completing a dissertation based on application (Lomotey, 2018). The disquisition is about the application of theory (EdD). It focuses on exploring a problem of practice. The disquisitioner (scholar-practitioner) collaborates with colleagues to investigate the root causes of a problem and uses the reflection of causes to design an intervention or change initiative. Implementation of the change initiative involves monitoring change for improvement. The disquisition allows the doctoral student to maintain a hands-on approach in the daily efforts to affect change for improvement. The disquisition is a record of the process and leadership lessons attained. It is written for all stakeholders in the field to provide knowledge and results of educational leadership, practical application (Lomotey, 2018). Though the literature is skant, the EdD practitioner research approach seems to be a balance that is stretching educational professionalism (Archbald, 2008).

Doug Archbald (2008) writes about the history of the doctoral thesis framework. He suggests four qualities of an alternative EdD doctoral thesis approach: developmental efficacy, community benefit, intellectual stewardship and distinctiveness in form and function (Archbald, 2008). The Executive EdD Program in Educational Leadership at Western Carolina University embraces these four qualities throughout their capstone program (Lomotey, 2018).

The Carnegie Project on the Education Doctorate (CPED) is a consortium of over one hundred schools of education that have developed rigorous EdD programs. They understand the work of educational leaders and design programs to lift doctoral students' leadership skills. In 2014 The College of Education and Allied professions at Western Carolina University (WCU)

was accepted as a member of the CPED. This honor presents an opportunity for the faculty of WCU to collaborate with other CPED members across the globe to continue to enhance the WCU EdD experience and expertise of school leaders (Lomotey, 2018).

The scholar-practitioner chose the WCU Executive EdD Program in Educational Leadership program for two key reasons. The college's growth-minded partnership with CPED felt significant to ensure high impact activities for professional growth. Also, the potential opportunity to develop leadership skills to affect change through on-site application at the highest level of achievement, secured the decision to begin the professional journey (Lomotey, 2018).

ABSTRACT

EQUITY IN LEARNING: LINKING ORAL LANGUAGE TO PRINT

April Lee Wright, Doctor of Education

Western Carolina University (March 14, 2022)

Director: Dr. Catherine Andrews

There is a consistent pattern of low performing readers in elementary schools throughout the nation. This pattern also shows a consistent achievement gap between brown and white students as well as English as a first language and English as a second language students. The problem of practice addressed in this study is low literacy proficiency scores in kindergarten and first grade as measured by mandated assessments. The team explored potential root causes of consistent low scores, and then designed an improvement initiative. This study's theory of improvement suggested that capacity-building in integrated oral language and culturally responsive instructional practices, for teachers of kindergarten and first grade students would reduce the current reading proficiency gap at Woodfin Elementary school. The participants included 11 certified teachers and 45 students: 17 English language learners. The improvement initiative was focused on building teaching capacity in phonemic awareness instruction, sound wall implementation and culturally responsive instruction. The initiative involved two professional learning sessions and one coaching cycle for teachers. The methodology was a mix methods approach. Focus groups, surveys, and student assessments were used to measure change. The student literacy growth for the academic year could not be measured within the four months of this study. No significant difference was found in teacher knowledge of basic language constructs. There was a significant change in teachers' culturally responsive teaching self-

efficacy. The scholar-practitioner recommends that this study be replicated with a larger sample of participants, including a more diverse student population.

Keywords: phonemic awareness, sound walls, culturally responsive teaching

EQUITY IN LEARNING: LINKING ORAL LANGUAGE TO PRINT

Students read to learn about the world around them. They read to understand and explore mathematical and scientific ideas. They read to learn about people that are like them and different from them. Students read to learn about themselves, build sustaining relationships, and become capable citizens.

Some public-school systems continue to fail students with respect to providing adequate reading comprehension instruction and growth. Some instructional practices have failed to provide a clear connection between foundational literacy skills and application (Castles, Rastle, & Nation, 2018). Assessment practices are not always providing sufficient data to pinpoint literacy deficits (Kilpatrick, 2015). In addition, students of low-income households, students with adverse childhood experiences and students learning English as a second language often, continuously perform behind their literacy proficient peers (Snow, 2017). These groups of students show growth in early literacy skills, but the growth is rarely adequate to close the knowledge gap from non-proficient to grade level proficient. A major academic objective in early education is for students to learn to read and read to learn. Reading is foundational for K-12 achievement and for success in life (Castles et al., 2018). Educational leaders are charged with ensuring that this tool is soundly in the hands of all students (Grissom, Egalite, & Lindsay, 2021).

PROBLEM OF PRACTICE

There is a consistent pattern of low performing readers in elementary schools throughout the nation. The National Assessment of Educational Progress (NAEP) reports that thirty-five percent of fourth graders nationwide performed at basic reading levels in 2019 (Appendix A); down from thirty-seven percent in 2017 (The Nation's Report Card | NAEP, 2019). In other words, in 2019, sixty-five percent of our nation's fourth graders could not successfully apply reading skills to comprehend text.

Consistent with the national data, only thirty-six percent of North Carolina students performed at basic reading levels in 2019; down from thirty-nine percent in 2017 (NAEP, 2019). This left sixty-four percent of North Carolina fourth graders not performing at basic reading levels in 2019.

History of State Improvement Efforts

Therefore, to address low reading proficiency the Read to Achieve Program was written into North Carolina law in 2012 in an attempt to have every child reading at or above grade level by the end of third grade (North Carolina Read to Achieve Program Article 8 § 115C-83.1 - 83.11, 2017). Parts of the law dictated the materials, such as the reading assessment platform and the reading portfolio to be used in schools to instruct and assess students' literacy skills and growth. Even with all of this in place, *The Charlotte Observer* published that despite the Read to Achieve law which encompasses testing, materials, and instructional strategies, reading "proficiency has remained flat. Last year just under 58 percent of all third graders earned a grade level score, with pass rates well below 50 percent for Black, Hispanic and low-income

children"(*The Charlotte Observer*, 2018). The Read to Achieve (RtA) law provided *the what* (materials, assessment demands, summer school programs) but not *the how*.

The Read to Achieve Guidebook provided by North Carolina Department of Instruction (NCDPI) is a structural framework for implementing the Read to Achieve program. (Read to Achieve Guidebook: NC Read to Achieve Repository, n.d.). As seen in Table 1, the RtA Guidebook clearly identifies stakeholder roles. School districts or local education agencies (LEAs) and individual schools were charged with providing professional development on reading strategies for teachers, and teachers were charged with providing "appropriate reading instruction" for students (Read to Achieve Guidebook: NC Read to Achieve Repository, n.d.). But the question is how? How is appropriate reading instruction determined and more importantly, how is it determined that teachers have the full-scope knowledge to carry out this charge?

Table 1

North Carolina Read to Achieve Responsibilities of Stakeholder

Responsibilities of Stakeholders	State	Local Education Agency (LEA)	School	Teachers
	Develop Comprehensive Plan for reading Achievement Distribute and communicate plan to LEAs	Distribute and communicate the plan to each school in LEA	Schedule time for teachers to participate in professional development on reading instructional practices	Read the comprehensive Plan for Reading Achievement Provide appropriate reading instruction for students
	Offer professional development opportunities on reading instructional practices Distribute research-based literacy strategies	Offer LEA-level support and follow-up to professional development on reading strategies	Schedule time for teachers to participate in Professional Learning Communities	Utilize data and collaborative work with professional learning communities (PLCs) to determine which reading instructional strategies are needed

Note. Source: Read to Achieve Guidebook: NC Read to Achieve Repository, n.d.

In 2015, the state of North Carolina, to address low reading proficiency and support literacy learning birth through age eight, partnered with the North Carolina Early Childhood Foundation to create the North Carolina Pathways to Grade-Level Reading initiative. As seen in Figure 1, this team designed a framework that includes health and development from birth, high quality learning environments, as well as supportive families and communities (Pathways to Grade-Level Reading | North Carolina Early Childhood Foundation, 2022). A product of the initiative is an updated data dashboard to inform policy makers, educators and community programs that work to meet children's basic learning and behavioral needs. The data collection is

strong in some areas, non-existent in other areas and less than conclusive in others. (6 Things to Know… Pathways to Grade-Level Reading, 2020). “The work now is to fill those gaps so that leaders can make data-informed decisions about early childhood policy” (Ableidinger, 2020). While this partnership attempted to improve students’ development and readiness for early literacy learning, deficiencies and gaps still exist.

Figure 1

North Carolina Pathways to Grade Level Reading Measures of Success Framework

Note. A state initiative to support literacy learning from birth to age eight. (Pathways to Grade-Level Reading, 2022)

Researchers from The William and Ida Friday Institute for Educational Innovation write that North Carolina state policy makers should reconsider the Read to Achieve law for early literacy learning and "suggest that there is not only value in but also the need for a reconsideration of the state's overall approach to improving early-grade literacy" (Weiss, Stallings, & Porter, 2018). While Read to Achieve law is working on it, there is still a problem.

An evolution of this was, in the fall of 2021, North Carolina state superintendent released, *Operation Polaris: Navigating Students Toward a Brighter Future*, a strategic vision to address achievement and growth for public education. A component of the strategic vision was to strengthen literacy instruction through training in the Science of Reading. The idea is for the Science of Reading learning to take place in each school district for current educators and also in the UNC System educator preparation curricula, for pre-service educators (State Superintendent, 2021).

To complicate all of this, not only now is there a Science of Reading initiative but there are also multiple learning modes because of the COVID-19 pandemic. The teaching and learning modes are remote and hybrid (a combination of in person and remote). These modes of instruction are new for most teachers. The educational system must not only determine why our reading instruction continues to be less than adequate; the system must learn new models of instruction while maintaining a focus on the research of how children learn to read (Fofaria, 2021; State Superintendent, 2021).

How Children Learn to Read

Early literacy scholars have disagreed about the way children learn to read for over a century (Castles et al., 2018). Scholars have two schools of thought: Whole Language and The Science of Reading (Castles et al., 2018; Kilpatrick, 2015). Whole Language theorists posit that

students learn literacy by being immersed in reading, recognizing whole words, substituting unknown words with words that make sense, given context clues. The Science of Reading scholars' postulate that reading acquisition involves systematic phonics instruction. These scholars put forth that reading acquisition is a process that links to oral language acquisition. For example, students hear phonemes (units of sounds) and link phonemes to graphemes (letters representing the sounds) to read and write words.

Curriculum adoption decisions have filtered down to teachers and unfortunately, some teachers have been mandated by districts and schools to learn to teach an assigned Literacy program (Vaughn et al., 2019). In analyzing the systems in place for curriculum adoption, Vaughn and colleagues suggest that for equity in learning to exist, teachers' knowledge must be such that they can deviate from adopted literacy curriculum to meet the diverse needs of the students in front of them (Vaughn et al., 2019). Instead of learning and holding fast to an adopted curriculum, teachers need extensive knowledge of how children learn literacy: "a task of immense complexity" (Castles et al., 2018, p 6). These educator skills are paramount for moving students forward. The curriculum used is simply a resource, teacher expertise should be the investment. Teachers must be experts of literacy learning components not experts in implementing a purchased curriculum. The responsibility for supporting and developing teachers lies in the hands of district and school leadership (Goddard, Goddard, Kim, & Miller, 2015; Parsons et al., 2018).

Decades of research reports that there are early components of literacy that are prerequisites to reading and writing: phonological awareness, phonics, fluency, vocabulary, and reading comprehension (Foorman & Torgesen, 2001; Hulme & Snowling, 2011; Kilpatrick, 2015). Though, in public education, the data reveals that many educators still lack the

knowledge, skills and facilitation for proficient student outcomes (Adlof & Hogan, 2019; Kilpatrick, 2015; The Nation's Report Card | NAEP, 2019).

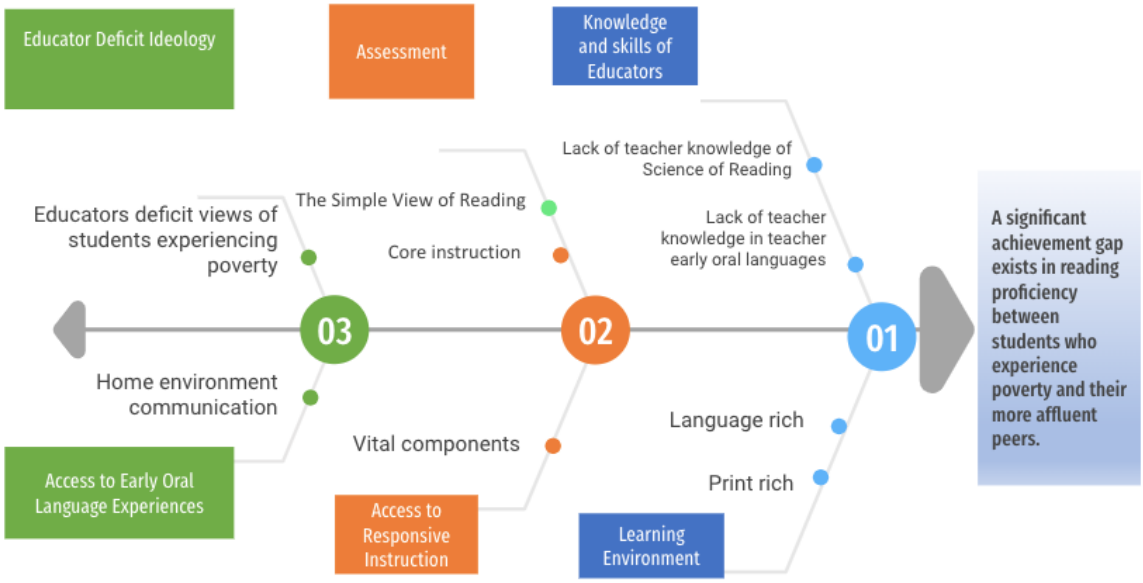
CAUSAL ANALYSIS

Typically, in public education, when data indicates a problem with academic proficiency, schools and school leaders seek support of a curriculum program for school improvement (Vaughn et al., 2019). However, the work of a scholar-practitioner is to gather stakeholders and reflect on the problem to determine possible root causes.

A change to literacy teaching and learning is imperative for student success. However, lasting change must be systemic and rooted in cause. To make systemic and lasting change there must be a thoughtful analysis of the current systems in place as well as a change in thought patterns (Crow, Hinnant-Crawford, & Spaulding, 2019). A fishbone diagram, originally referred to as the Ishikawa diagram is a tool that supports teams in identifying root causes for systemic problems (Ishikawa, 1986). Overarching systemic causes of low literacy achievement can be seen in Figure 2 below and include educator deficit ideology, student access to culturally responsive instruction, student access to early oral language experiences, student assessment and student access to knowledgeable and skilled educators.

Figure 2

Causal Analysis of Low Literacy Achievement



Note. Fishbone diagram or Ishikawa diagram (Ishikawa, 1986).

Educator Deficit Ideology

Deficit ideology is a belief that students, their families or their communities are lacking in some way, and this shortfall is the cause for poor student performance. Deficit ideology fails to look at the system(s) serving students and swiftly displaces blame. Rather than looking at societal systems to solve problems of disparities, deficit ideology considers individuals that need to be fixed or families that need to do more to contribute to their students' educational experience (Gorski, 2018a; Sensoy & DiAngelo, 2017a).

Deficit ideology is common with minoritized groups of students such as those living in poverty and those that are black and brown. It is also experienced by students of other cultures having English as a second language. When children arrive in public schools from other countries without English experience, they often encounter schools that are less responsive to the students' culture or personal narrative. Schools tend to enforce their own culture, structures and

expectations, and in this way, “a disproportionate number of culturally and linguistically diverse students are dependent learners” (Hammond, 2014). Rather than building on students’ cultural experiences and community cultural wealth for student advancement, educators, with their implicit biases, fail to use these foundational assets (Adair, Sanchez-Suzuki ColeGrove, & McManus, 2017; DeNicolo, González, Morales, & Romaní, 2015a; Ladson-Billings, 2014).

A common belief among many educators is that non-English speaking families and families experiencing poverty do not have the skills or desire to support their students’ education (Gorski, 2018a). Because of this deficit ideology, educators often do not accept the communication challenge and do not extend effort for family conferences, phone calls, etc., as they would with families that are easily accessible. Educators speak of families being the students’ best teachers and that families know their students best; however, actions reveal that the educational system does not recognize all families as valuable partners rather, it allows deficit mindsets and biases to get in the way of establishing “trusting relationships…grounded in ethics of equity and humility”(Gorski, 2018b, p. 150). The systems in place give evidence that there is room improvement. Deficit ideology inhibits teachers being able to teach effectively, thus contributing to the literacy gap.

Student Access to Culturally Responsive Instruction

Another barrier is lack of culturally responsive instruction. In a 2019 study, researchers found that school principals in general lacked awareness of the need for culturally responsive materials, although some of the principals served a high number of diverse populations (Vaughn et al., 2019). Because of this study, educational leaders must routinely consider how well instructional materials reflect the diversity of an individual school’s student demographic. All students deserve to have opportunities to read and talk about foods, events and everyday life that

mirrors their families and home environments. The learning environment can reveal the level of diversity in a classroom and school. Learning environments that are print-rich with culturally relevant materials allow students to develop a sense of belonging and engage in authentic world views which helps improve literacy (Adair et al., 2017). Students have a right to see, in their classroom and throughout the school, print that mirrors them. Culturally responsive school libraries would have an inventory that emulates the community of learners within the school. For example, an English language learner should have a plethora of media available to them that offers stories of their ethnicity, culture, and language. Culturally responsive school leaders must continuously ask themselves if all students are represented through instructional materials, the school's media center and classroom learning encounters (DeNicolo et al., 2015a; Ladson-Billings, 2014).

Student Access to Early Oral Language Experiences

Also contributing to literacy gaps is some students' access to early language experiences. Children have multiple experiences prior to arriving in kindergarten. Some have already experienced different households and cultures; some have experienced multiple adverse childhood experiences (ACES) (Bethell, Newacheck, Hawes, & Halfon, 2014); and some have inconsistent daycare experiences and social interactions with like-age children. Some children have had adults read to them daily, have engaged in turn talk conversations and have even had pre-school experiences. Opportunities for language immersion and learning vary greatly among students entering public school kindergarten. Rich opportunities for speech and oral language comprehension are key for students to effectively transfer speech to print and learn the alphabetic principle needed to further affect literacy growth (Adlof & Hogan, 2019; Elbro & de Jong, 2017; Murphy, 2018).

Children with fewer oral language experiences will require more intense instruction with oral language comprehension and phonemic awareness than their peers that come to school with only a lack of phonological ability (Hoff, 2013). Some early elementary educators are skilled with teaching children who have strong oral language skills. However, they may not be skilled with the early literacy learning process in such a way to provide explicit instruction and analyze student learning outcomes to diagnose for specific deficiencies in foundational literacy skills. (Spear-Swerling & Cheesman, 2012; Spear-Swerling & Zibulsky, 2014).

Intentionally increasing Kindergarteners' opportunity for multi-turn conversations will strengthen the development of their oral language skills, build vocabulary, and ultimately affect reading comprehension (Cabell, Justice, McGinty, DeCoster, & Forston, 2015). Providing professional development that builds teacher capacity in the use of strategies to prompt and extend student engagement in multi-turn conversations will support oral language development. Cabell, et al. (2015), found that teachers who prompted for extended talk had higher numbers of multi-turn conversations than those that did not use this instructional strategy. The volume and quantity of student talk opportunities broadens the oral language capacity for the learner, positively affecting future literacy growth.

Assessment for Personalized Instruction

Another obstacle is literacy assessment. Assessment is necessary for educators to plan personalized instruction for students. Adlof and Hogan (2019) state "If we don't look, we won't see" (p. 210). Assessing the critical components of reading comprehension gives educators the information to plan responsive instruction for groups of learners (Adlof & Hogan, 2019). The Simple View of Reading is a framework that suggests that reading comprehension is a product of word decoding and listening comprehension (Castles et al., 2018; Gough & Tunmer, 1986;

Verhoeven & van Leeuwe, 2012). These two skills are equally as important for reading comprehension. One skill without the other will not result in reading comprehension. However, the complete reading process is more complex (Catts, 2018). Oral language is a predictor of reading success also and must be in place for listening comprehension to be successful. Therefore oral language must be taught, monitored and assessed for learning progress (Adlof & Hogan, 2019; Dickinson et al., 2010; Lervåg, Hulme, & Melby-Lervåg, 2018).

Assessment results reveal as much about instruction as it does about student growth. Is the instruction effective? Is the instruction sufficient? North Carolina Department of Public Instruction Multi-Tiered System of Support (MTSS), put into place as a response to the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), suggests that the majority of students (80%) are predicted to make progress and reach state level proficiencies with core instruction alone, and if less than 80% of students make progress, educators must examine core instruction (NC MTSS Implementation Guide, 2021; Yell, Shriner, & Katsiyannis, 2006). Core instruction, also termed Tier I, refers to high quality instruction that is provided for all students - instruction that provides all students with a point of access so they can make links and add to their current knowledge. When student learning growth is not sufficient for at least 80% of students, the MTSS structure calls for an examination of the core instructional components; instruction, curriculum, environment. It is the responsibility of school leadership teams to assess and ensure that instruction, curriculum, and the environment align with student needs.

Knowledge and Skills of Educators

Knowledge and skills are essential for educators as they are for medical personnel. Taking a medical view, when a person presents with a chronic illness that the family medical

doctor cannot pinpoint, the medical doctor refers the patient to a specialist. The specialist performs a series of assessments. The specialist then makes a diagnosis and prescribes an intervention for improvement.

Some early literacy educators use a district or school purchased curriculum for teaching reading. Educators follow the structure, give assessments when indicated and continue with the timeline, often omitting the life-saving diagnostic piece. This is not because they do not care or are not dedicated to their students' learning, it could simply be because of a lack of pedagogy of the reading process (Tolman, 2017) or perhaps they do not feel that they can deviate from the prescribed curriculum for additional measurements (Scales et al., 2017). However, to have an impact on literacy growth, all early literacy components need to be assessed to inform personalized instruction (Castles et al., 2018; Kilpatrick, 2015).

Like the medical specialists, our early literacy educators must be experts in teaching language development for all students. They must become specialists so that they can provide explicit instruction, monitor and assess, and, if needed, immediately prescribe a diagnostic intervention to support sustainable student learning (Tolman, 2017).

Inadequate literacy instruction has contributed to the student opportunity gap (Fofaria, 2021; Gorski, 2018a). The connection between educator prep programs, school districts and school level administrators have not seamlessly supported the literacy learning journey through continuous, connected learning and professional development for teachers. They have not sufficiently built teacher capacity to teach and diagnose less than proficient early literacy skills (Johnston & Young, 2019).

There exists a relationship between language skills and reading comprehension that must be expanded upon in early literacy learning opportunities (Hjetland et al., 2019). Teachers must

collectively have the knowledge and skills to meet students where they are with language learning, recognize their strengths and help them move forward.

THE SCHOLAR PRACTITIONER

Once the root causes are explored, attempting to rectify a root cause has the potential for systemic improvement. Using Improvement Science and a team, the scholar- practitioner engages in goal and strategy setting, implements change and monitors and or adjusts the change for improvement (Crow et al., 2019). In this way, the researcher is not removed from the work but encounters the work firsthand, providing an intimate connection for improvement efforts.

The problem of practice identified in this disquisition is low literacy proficiency. It is important to the scholar-practitioner (the school principal) because of an empathetic connection with migrants and students that experience low socio-economic status (SES). This connection provides the scholar-practitioner with a curious lens for equity issues, particularly with language learning. For years, the scholar-practitioner has observed newcomers enroll in school. Many newcomers only know their native language and sometimes, they arrive without any previous school experience. These observations strengthen a conviction that school leaders, teachers and school communities can make this transition for students better. If students could see themselves in literature, their learning environment and if students could experience their first language while learning, this could establish a sense of belonging. A sense of belonging supports safe learning (DeNicolo, González, Morales, & Romaní, 2015b).

As an elementary school principal, while having a degree of empathy for transient students and students experiencing low SES, the role affords the scholar-practitioner the opportunity to consider teaching and learning through an equity lens for all students. The role presents opportunities for defining problems, getting to the potential roots of the problems, collectively learning, educating others, implementing, and monitoring change.

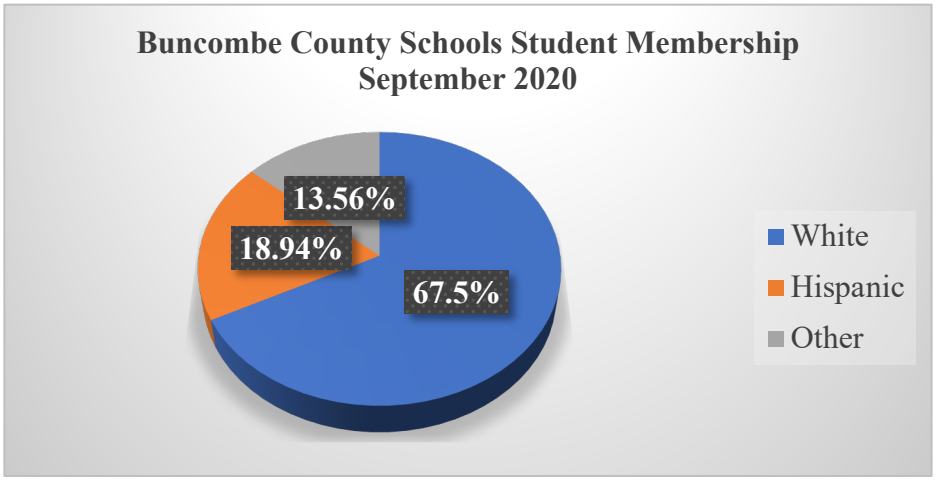
The scholar-practitioner's journey has been a drive of determination and intention. All students deserve access to culturally responsive literacy instruction. The data consistently shows that early education is not meeting the mark (Snow, 2017; The Nation's Report Card | NAEP, 2019). This study focuses on strengthening educator knowledge of how children learn to read and designing culturally responsive instruction to ensure all students learn.

LOCAL CONTEXT

The Buncombe County Schools system (BCS) is in the Blue Ridge Mountains of Western North Carolina. Within BCS there are six smaller districts: Owen, North Buncombe, Erwin, Reynolds, Robertson, and Enka. Total student membership in the second month of the 2020-21 academic year was 22,257. The student demographic makeup, as shown in Figure 3, consists of 67.5% White, 18.94% Hispanic (the school system's largest minority group) and 13.56% Other (PowerSchool, 2020).

Figure 3

Buncombe County Schools Student Membership September 2020



Note. Data retrieved from Buncombe County Schools Homebase (HOMEBASE, 2020)

The BCS system Full Time Employee Report for 2020-21 indicates 2,881 full-time employees (2,713 are White, 89 are Hispanic, 35 are Black, 21 are Asian, 11 multiracial, 9 Pacific Island and 3 Indian). Together, these minority groups (other than White) make up less than 6% of BCS employees (Buncombe County Schools Human Resources, 2020).

The school system is comprised of the BCS Board of Education, Central Office leadership (Superintendent, Associate Superintendent, Assistant Superintendent, Chief Financial

Officer, 16 program Directors) and individual school building leadership teams. The BCS Strategic Plan outlines 4 Guiding Principles: 1) Academic Excellence, 2) Safety and Support Systems, 3) Leadership Development, 4) Family & Community Engagement.

District level professional development is designed for instructional coaches, teachers, and principals. Support staff receive professional learning at the school level, and schools plan individual professional learning based on needs-assessments and data dives.

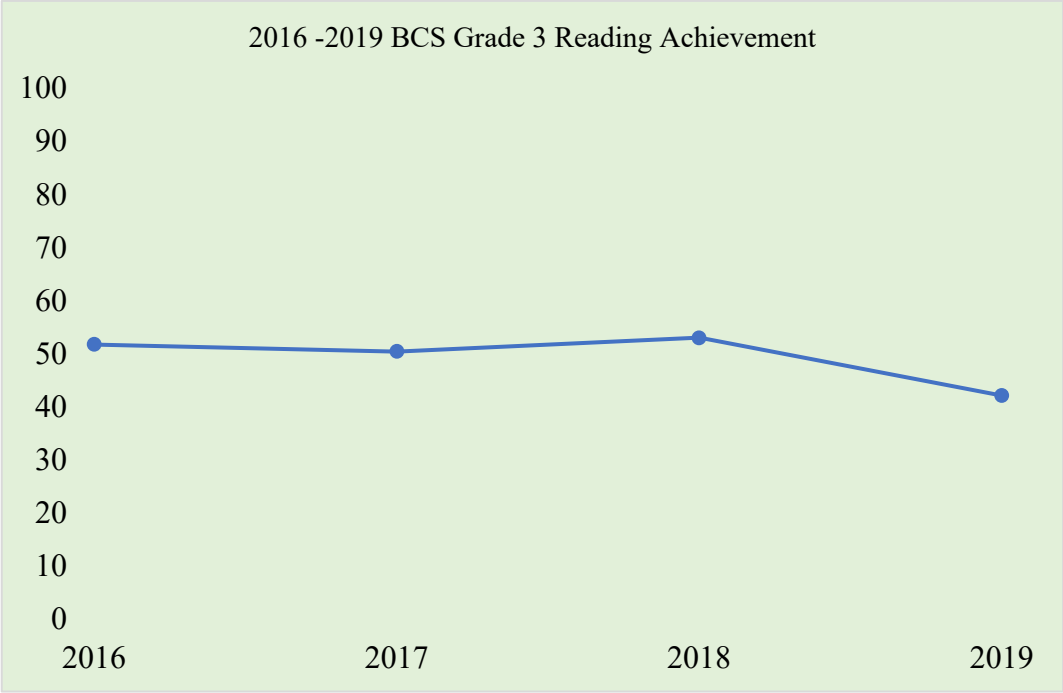
Review of the Problem within the Local Context

The national and state literacy learning scenarios are similar to Buncombe County Schools' experience with Grade 3 reading data.

As reported by North Carolina Department of Public Instruction through the Education Value-Added Assessment System (EVAAS), reading data has stagnated around the 50% mark between 2016 and 2018, ending slightly lower than where it began (Figure 4).

Figure 4

Buncombe County Schools Grade 3 Reading Achievement



Note. Buncombe County Schools Grade 3 Reading Achievement as indicated by North Carolina Education Value Added Assessment (EVAAS, 2021).

Buncombe County Schools had performed above the state in Grade 3 Reading Level Proficiency until falling slightly in 2018-19. Table 2 illustrates more than 40% of 3rd grade students are being promoted to 4th grade without proficient literacy skills.

Table 2

North Carolina Internal Ready Review Reports: Grade 3 Reading Grade Level Proficiency (GLP) All Students

District	2016-2017	2017-2018	2018-2019
Buncombe County Schools	59.7%	62.2%	55.7%
State of North Carolina	57.8%	55.9%	56.8%

Note. More than 40% of Buncombe County School's 3rd grade students are being promoted to 4th grade without proficient literacy skills (NCDPI EVAAS, 2019).

North Carolina Department of Public Instruction (NCDPI) District Value-Added report is a tool that reports the kind of gains and growth students are making. For BCS K-2 Text Reading and Comprehension, growth measures showed a three-year average of .4 for Kindergarten (evidence that students made progress), -0.6 for 1st Grade (significant evidence that students made less progress than the Growth Standard), and -1.0 for 2nd Grade (significant evidence that students made less progress than the Growth Standard)(NCDPI EVAAS, 2019). This outcome data shows that there is room for improvement in literacy instruction.

Over a period of three years, and in line with the state of North Carolina, less than 50% of Hispanic third graders in Buncombe County Schools have reached grade level proficiency in Reading, while 70% of their demographically dominant, White peers reach proficiency repeatedly (Table 3). A goal of North Carolina public education is that all students learn the foundations of literacy so that they can succeed in their educational career and then contribute in positive ways to the greater society (State Superintendent, 2021). The data suggests that a pause is necessary to consider overall improvement in K-3 literacy instruction. However, there is an even greater cause to consider the 30-point continuous achievement gap between Hispanic students and White students.

Table 3

North Carolina Internal Ready Review Reports: Grade 3 Reading Grade Level Proficiency (GLP) Hispanic Subset

District	2016-2017	2017-2018	2018-2019
Buncombe County Schools	37.5%	45.3%	38.2%
State of North Carolina	42.6%	41.7%	42.6%

Note. Buncombe County Schools Grade 3 Hispanic population Reading proficiency scores were lower than the state for two years and exceeded the state in 2017-2018 (NCDPI EVAAS, 2019).

Buncombe County Schools works to make connections with second language families. The school system contracts district level translators to translate all documents for families, such as student information, student transportation, newsletters, etc. English as a Second Language (ESL) teachers spend at least forty-five minutes per week with English language learners to help them learn the language of content areas. ESL teachers use World-Class Instructional Design and Assessment (WIDA), an English language development standards-framework, to guide instruction (WIDA Consortium, 2021). Also, interpreters are contracted to interpret at parent-teacher conferences. Because of these provisions, there is a belief that the system is adequately serving and accommodating our multilanguage learners. This scholar-practitioner believes that it is not enough. Public education must honor first languages and cultures by lifting them up and intertwining them with the teaching and learning of English (DeNicolo et al., 2015a). Schools must have multilingual staff on site to be responsive to English learners' family needs and to support staff forging relationships with students' families. Families are their students' best teachers. Staff must interact with English learners' families, asking for feedback and support of the systems in place, as well as collaborating with them to improve the systems for students' education. This task demands a system change (Adair et al., 2017; DeNicolo et al., 2015a).

Woodfin Elementary: The School for the Study

This study was conducted at Woodfin Elementary, one of 23 elementary schools in the BCS system. The school has been an integral part of the local community for over 100 years. The school continues to have local businesses and civic groups contribute to teaching and learning through financial and volunteer contributions.

Woodfin Elementary is a small school located north of Asheville, serving learners in grades Kindergarten through fourth grade, with a total daily average membership of 130 students. On average, Woodfin Elementary student attendance rate has trended at 97%. However, during the 2020-21 school year the attendance rate dropped to 92% (PowerSchool, 2021). Woodfin Elementary also experiences a transient population. Over the past three years the school has had a student average of 12% enter mid-year and a student average of 10% exit mid-year (PowerSchool, 2021). Absences lead to academic challenges for students that miss continuous instruction whether at one school or across many. Absences also hinder teachers' ability to grow student knowledge by not having the opportunity to build on sequential lessons (Attendance Works, 2022).

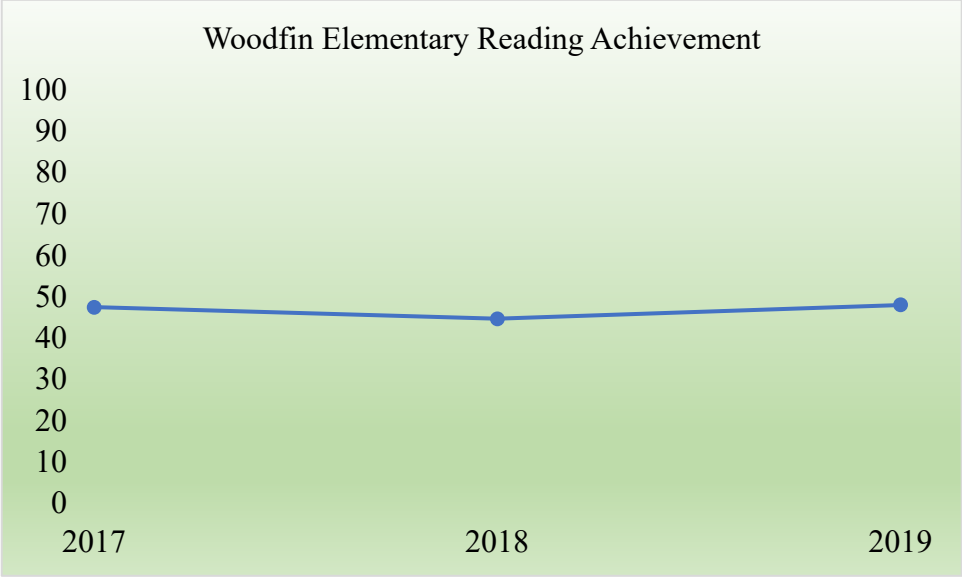
Woodfin Elementary continues to make or exceed expected growth in Literacy K-4 as measured by North Carolina Education Value-Added Assessment System (NCDPI EVAAS, 2019). However, Literacy proficiency remains stagnant with little rise in overall achievement percentages. Deficit ideology would suggest that this is the case because of the high percent of low socio-economic population (90%) or because of the percent of English language learners (30%), but the school leadership maintains that the school must deviate from this and rather evaluate the effectiveness of instruction (Gorski, 2018b; Sensoy & DiAngelo, 2017b). While there are pockets of high teacher effectiveness and growth (NCDPI EVAAS, 2019) throughout

the school, the school needs intentional opportunities for highly effective instructional practices to filter through the building into all classrooms. Working to build equitable learning opportunities and decrease the learning variance among all classrooms could build collective efficacy and contribute to higher learning growth outcomes for all students (*John Hattie: Collective Teacher Efficacy*, 2018)

Woodfin Elementary's scores indicate that student K-4 reading proficiency trends around 50% (Figure5). Closer evaluation of the past three years reveals that Woodfin Elementary's Kindergarteners are leaving their first year of school with only 50% of the cohort scoring at a proficient level, as measured by the state assigned assessment. At Woodfin Elementary, the achievement gap remains steady from kindergarten to fourth grade.

Figure 5

Woodfin Elementary Schools Reading Achievement History



Note. Woodfin Elementary School Grades 3 and 4 Reading Achievement as indicated by North Carolina Education Value Added Assessment (EVAAS, 2021).

A window of opportunity exists within the elementary years to expose students to the best learning opportunities suitable to their abilities and needs before poor reading skills have a compounding deficit effect (Kilpatrick, 2015). Often, instruction is delivered with one set of children in mind, when realistically there are multiple sets of children, given their various experiences. Some experiences are filled with conversation and exploration of the world around them. For some children, their first years are filled with fear and situations of survival. Knowing that students enter public school with varied personal narratives and opportunities to learn and speak language means that students begin school with wide ranging abilities and teachers require the expertise to meet all of those abilities (Gorski, 2018b; Sensoy & DiAngelo, 2017b). With consistent 50% proficiency scores school-wide, current teaching methods are not working for all students. In fact, one could say that it is only working for half or a select few.

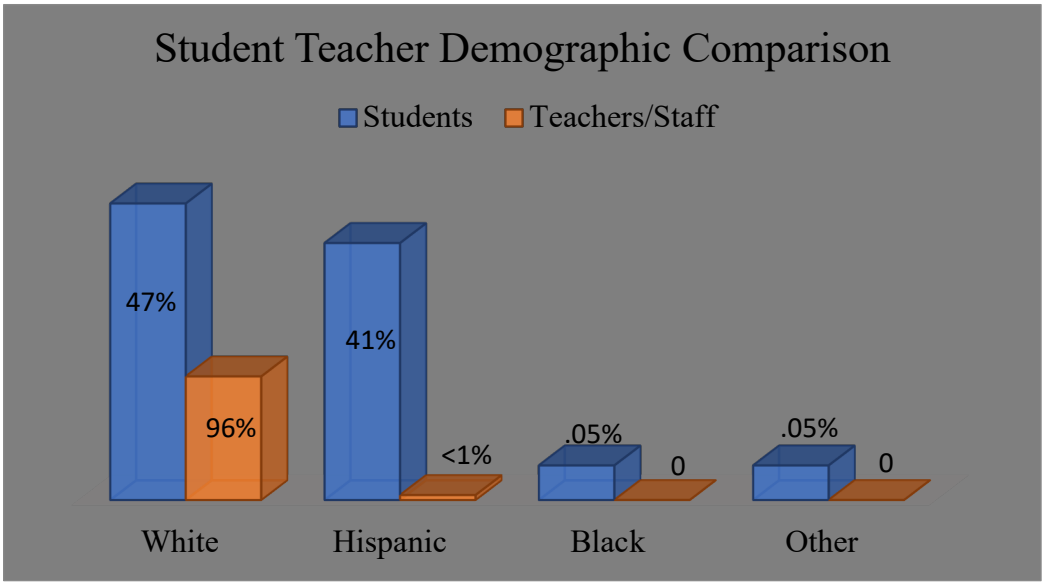
Low literacy proficiency is a problem in Woodfin Elementary classrooms, Buncombe County Schools, North Carolina, and the Nation as a whole. This study focused on solidifying teacher knowledge of early literacy development, culturally responsive instruction, professional development, and considered appropriate tools necessary to build strong equitable literacy foundations for kindergarten and first grade students.

Rather than working to fix students, public education leaders and teachers must improve the system serving them. Many teachers in the school district look different and speak differently than the student demographic (Figure 6). They also have different life experiences than many of the students they serve (Carey, Yee, & DeMatthews, 2018). Thus, it is essential that teachers are provided dedicated time to gain knowledge and to reflect to combat their conscious and unconscious biases. They need knowledge and the capacity to motivate, teach, and encourage students to excel while simultaneously acknowledging and supporting students in developing

their identities (DeNicolo et al., 2015a; Gorski, 2018b; Ladson-Billings, 2014). To do this work effectively, given the demographics of the students served, a social justice lens must be used. Becoming aware of personal biases is a step for change. Educator reflective work to support developing awareness is a critical step that was included in this study. Carey et al. (2018) urge administrators to "possess a well-developed level of critical consciousness" (p.122) to model unbiased thinking in decision making. Educators and leaders in the field must model policy and decision making in a response to equity. This would mean having sample representation actively at the table when developing policy and making changes for positive, inclusive outcomes.

Figure 6

Woodfin Elementary Demographic Comparison



Note. Woodfin Elementary Student Teacher Comparison *(PowerSchool*, 2022)

THE IMPACT OF COVID-19

As the scholar-practitioner planned for the implementation of this study, the COVID-19 global pandemic saw an increase of cases due to the Delta Variant. Many School Boards of Education were making decisions regarding in person versus hybrid learning models. BCS, like

surrounding school systems, chose an in person learning model with moderate social distancing and mask mandates for everyone entering school buildings. In BCS the decision for in person learning was received by stakeholders with both joy and some fear. Many children's circumstances rendered them inactive during the months of virtual learning. Having the option for in person 5 days a week learning was long overdue (Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Students, 2021). Additionally, during this time children under 12 were not yet eligible for a vaccine thus contributing to the higher risk for contraction of the COVID-19 virus.

The BCS system put into place COVID-19 safety protocols, excluding staff and students with COVID like symptoms from in person learning. Excluded teachers and students were encouraged to engage in synchronous and asynchronous teaching and learning. In September 2021, all school campuses had access to rapid COVID testing kits and a trained staff member to administer them. Accessibility to testing allowed COVID negative individuals to remain in the building for teaching and learning; unlike the prior 2020-2021 academic year when individuals experienced isolation or quarantine for COVID symptoms. Rapid testing allowed for staff and students to take advantage of in person student learning days.

The impact of COVID-19 on personnel was greater than generally expected. Some individuals choose to retire or resign to avoid continued high risk exposure of the school buildings, which created a shortage of manpower. Woodfin Elementary began the school year short staffed and remained short staffed throughout the course of this study. The K-1 instructional staff absences from August 23 to December 17 totaled 64 days. Individual absences ranged from 2 to 7 days with one staff member totaling 19 days absent. K-1 student absences from August 23 to December 17 totaled 166 absences. Individual absences for the 45 students

ranged from 1 to 10 days. Those data points provide evidence of the lack of continuous, uninterrupted, learning for all (Frontline Education, 2022; PowerSchool, 2022).

COVID-19 and the resulting break down of typically fully functional systems hindered the originally planned follow up coaching session for the first professional development. The K-1 instructional team were noticing among themselves, celebrating what they noticed about how children engaged with literacy learning and how instruction impacted day-to-day learning growth.

The impact of COVID-19 on the budget for public education was positive. Elementary and Secondary School Emergency Relief Funds (ESSER) were allocated for school systems nationwide. BCS ESSER allotments totaled $81,077,248. This funding allowed BCS to restructure personnel to attempt to meet the changing needs of the school system. However, because of the lack of applicants, only 39.25 full time employee (FTE) positions were filled as of the second semester of the 2021-2022 academic year. This lack of personnel impacted teaching and learning. To retain personnel, school districts throughout the state used a portion of ESSER funds to entice personnel to remain committed to employment for the entirety of the school year (*CMS Retention Bonuses Will Cost $48 Million, Funds Will Come from American Rescue Plan*, 2021). Like other school districts, BCS also put retention incentives in place for all employees employed through the first and second semesters of the 2021-2022 academic year (Buncombe County School Finance, 2022).

Additionally, the ESSER funding allowed BCS to purchase a new K-8 English Language Arts curriculum (ELA). The intent of this curriculum was to provide consistency and equity of ELA learning throughout the school system K-8, something that the district had not experienced

in over a decade. However, this purchase and along with a new K-8 math screener brought months of new learning for already overloaded administrators and teachers.

THEORY OF IMPROVEMENT & IMPROVEMENT INITIATIVE

Bryk et al. (2015) encourage scholar practitioners to view problems from a system perspective and to consider the "three voices" (p.73) when designing a theory for improvement: knowledge of how the system is working; knowledge of scholarly research; and knowledge of what is reasonable for educators implementing change. As previously stated, the educational system's current literacy instructional practices are not yielding equitable and high proficiency results.

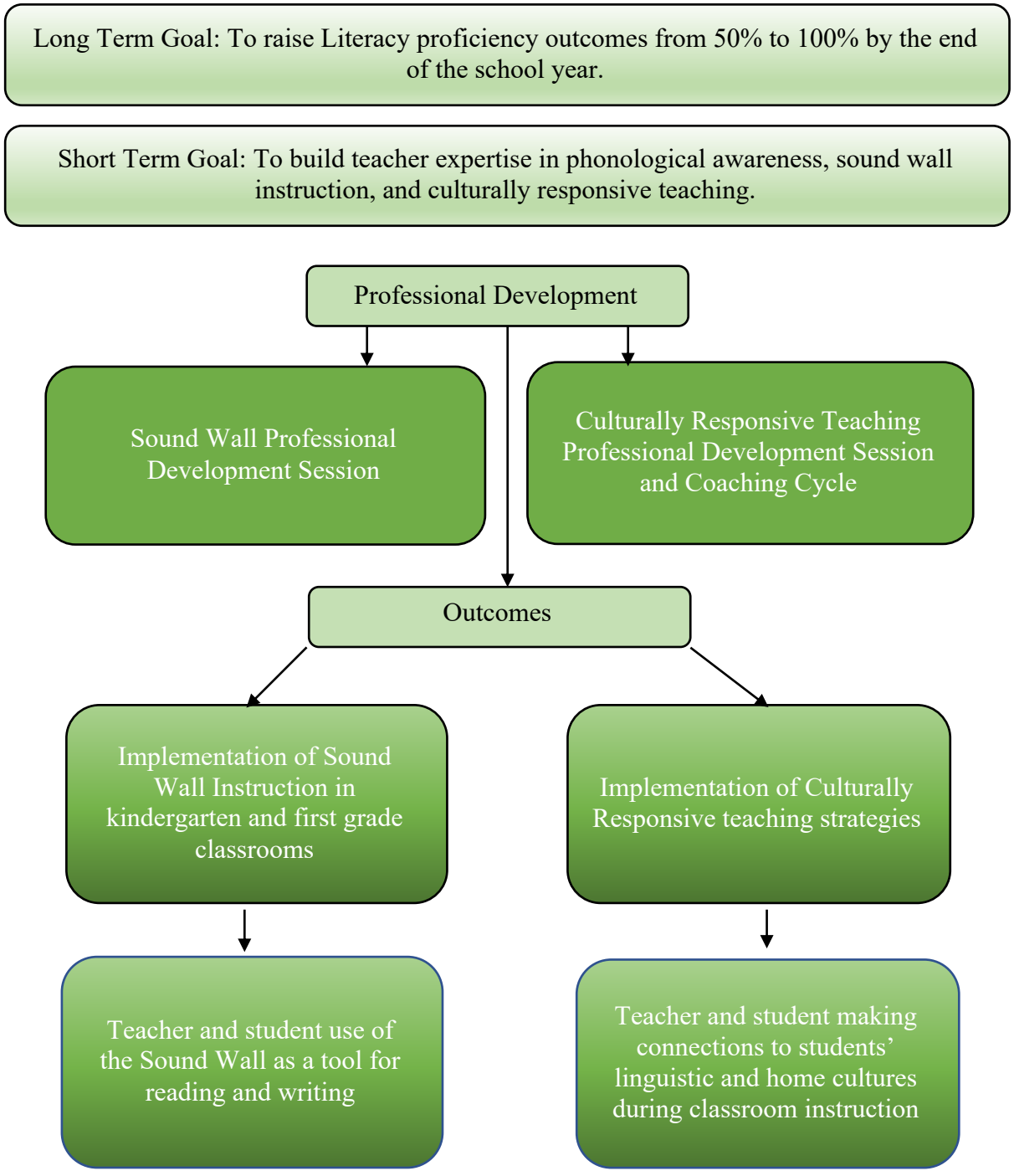
To address the low literacy proficiency at Woodfin Elementary, the school addressed academic vocabulary as a focus in 2014 (*EngageNY*, 2012). Teachers engaged in learning about academic vocabulary through district lead professional learning sessions. Academic vocabulary became a focus for classroom discussions, writing and word walls. In 2017 the school adopted Fundations as the core phonics curriculum in grades K-3 (Fundations® | Wilson Language Training, n.d.). Teachers were trained in how to implement the multisensory, systematic curriculum. To further improve literacy proficiency, in 2019 the school implemented Heggerty curriculum in kindergarten and first grades. However, with all these initiative efforts, the school still experienced a literacy achievement gap.

Given that oral language is a prerequisite to learning the alphabetic principle, automatic word recognition and reading for understanding, it became imperative to develop teachers' expertise of the reading process. This would support teachers in diagnosing and adjusting curriculum to meet students' progressing needs as they learn the connection of sounds, letters, phonic decoding, and orthographic mapping. Student access to expert literacy instruction is key for their early literacy development (Kilpatrick, 2015; Wilson, Dickinson, & Rowe, 2013).

As noted in Figure 7, this study's theory of improvement suggests that capacity-building (professional development) in integrated oral language and culturally responsive instructional practices, for teachers in the primary grades (K-1) will reduce the current reading proficiency gap at Woodfin Elementary.

Figure 7

Theory of Practice Improvement



Note. The flow chart denotes the improvement initiative.

Long Term Goal

The aim of this study was to increase literacy proficiency at the kindergarten and first grade level from 50% to 100% by the end of the academic year as measured by North Carolina state literacy assessment mCLASS Dibels 8 (Amplify, 2021).

Short Term Goal

The short-term goal of the study was to build teacher expertise in phonological awareness, sound wall instruction and culturally responsive teaching. Students' access to expert literacy teachers would allow them to experience explicit literacy instruction and be efficiently monitored for learning progression and personalized instruction. Additionally, student access to culturally responsive teaching would ensure a learning environment that reflects and sustains their cultural identities. If teachers become experts in the reading process (how children learn to read), then they can adequately design inclusive instruction and respond to learning in a manner that yields high literacy proficiency outcomes (Adlof & Hogan, 2019; Tolman, 2017).

Professional Development for the K-1 Instructional Team

This study included two sessions of professional development. One session focused on teacher capacity of phonemic awareness and early literacy learning through sound wall instruction. The second session targeted teacher biases, how those biases shape classroom learning and how to intentionally plan for culturally responsive instruction.

Before detailing the improvement initiative, it is necessary to define phonological awareness. The term phonological refers to sounds made by spoken language. Being aware of something means that something is known. Therefore, phonological awareness is having the awareness of sounds in spoken language: syllables, onsets, rimes, or individual phonemes (Kilpatrick, 2015, 2016). Children enter kindergarten with a range of oral communication skills.

While they hear and speak language, some have yet to learn that language is made of phonemes and for each phoneme there exists a subsequent letter or letters in print that, when joined together, represent words. This is referred to as phonological awareness. Phonological awareness is a skill that supports word reading development.

A subcategory of phonological awareness is phonemic awareness, a knowledge of individual sounds in spoken language. Students must become proficient with phonemic awareness so they can later map phonemes to letters (orthographic mapping) when learning to spell, decode and write. Focusing explicit instruction on phonemic awareness allows students to recognize, segment and manipulate sounds (Kilpatrick, 2016). David Kilpatrick (2015) refers to phonemic proficiency as a skill that is a missing piece in early literacy instruction, "It was well established by 1980 that phonemic awareness was an essential element for successful reading, but there were nearly two decades in which it was not being incorporated into literacy instruction" (p.4). Though reading research is plentiful, Kilpatrick (2015) postulates that there is a gap between reading research and classroom practice. Of the many reasons cited for this gap, inadequate training of teachers is one (Kilpatrick, 2015). Building teacher expertise in early literacy instruction, specifically phonemic awareness, was an intent of this study.

In their research of cognitive processes and early reading development, Hulme and Snowling (2015) found "teaching that involves letter-sound knowledge and phonemic awareness training can bring about statistically reliable improvements in word reading skills with moderate effect sizes" (p.6). This builds on Kilpatrick's (2012) call for researchers to further the work of providing practitioners with precise phonological awareness tests that would be most useful to diagnosing where foundational instruction needs to occur. This study builds on Hulme and Snowling's (2015) work while addressing Kilpatrick's (2012) call. Providing professional

learning, and putting explicit instruction in place with specific, diagnostic early reading assessments, are needed to improve early literacy achievement.

As a result of their study on the ELA instructional block in grades K-1, Adlof and Hogan (2019) called for a policy change in early literacy instruction. Referring to over 30 years of research, they affirm that oral language skills are foundational for reading comprehension. Adlof and Hogan (2019) called for three actions: classes on "language development and language facilitation" (p. 215), in teacher preparation programs, ELA blocks in early education to include oral language instruction in kindergarten, and research monies allocated to the development and monitoring of oral language in early education (Adlof & Hogan, 2019).

Our brains are hardwired for language but not for reading and writing (Kilpatrick, 2015, 2016; Sousa, 2005). To explicitly teach children to read and write, teachers must have a firm understanding of the language system and the reading process. Understanding language gives teachers the ability to anticipate how children are thinking about sound and how sounds are being articulated. For example, sounds that are voiced have a vibration in the vocal cords that can be felt with the palm of a hand. Sounds that are unvoiced have no vibration in the vocal cords and simply give a push of sound. Knowing this information will support teachers with explicit phonemic awareness and phonics instruction (PaTTAN, 2017). The English language system is comprised of multiple phonemes. When we speak, we blend sounds together to make words; therefore, it is essential that students hear, see, feel, and articulate where in the mouth and how sounds are being made.

A Change from Word Walls to Sound Walls

The use of word walls and sound walls are two instructional strategies to support students in learning to transfer speech to print. However, at the kindergarten and first grade level, a word wall can be an inconsistent tool for learning (Dahlgren, 2020a; PaTTAN, 2017).

As "well-intentioned efforts" teachers have used word walls to support word learning for decades (Snow, 2017, p. 5). A word wall is typically organized from A to Z. Words are categorized by the first letter in the word and listed under that letter. For example, the words cat, corn and come would all be positioned under the letter C. However, an example of the inconsistency of this traditional word wall would be, if a student were to write about a bike accident where they scraped their knee, and they wanted support spelling the word knee, looking at the A-Z word wall is not going to support this spelling. They look at the first sound they hear when they say the word knee, which is /n/. However, knee is spelled 'knee' beginning with the letter K (PaTTAN, 2017). A word wall presses the concept of print to speech, but the language learning process is speech to print.

Wall space is limited in some classrooms and considering what to display for student learning tools can be perplexing for a teacher. Considering transitioning from static word walls (lists of words) to interactive word walls has been a recent topic of discussion in education (Coppens, 2018; Jackson, 2018; Jackson, Swinton, Kinney, & Cantu, 2017). Rather than displaying words in alphabetical lists, displaying words on a wall that connect to a concept allows students to make connections and build knowledge around an idea, theme, or discipline. This way of displaying words holds more potential impact for building and expanding knowledge than words posted and organized by the first letter in the word spelling. All students can benefit from having vocabulary posted on walls but English language learners have the

potential to benefit most as they are developing language and consistent word exposure in language, concept and print can anchor their learning (Jackson, 2018; Jackson et al., 2017).

Additionally, a more effective tool for the process of early literacy learning is a sound wall (see Figure 8, PaTTAN, 2017). A sound wall provides visual cues that help students making connections from their oral language to print. A sound wall helps students differentiate between consonant sounds, vowel sounds and supports linking sound to print by associating phonemes (sounds) with graphemes (letters). On a sound wall, vowels are grouped by the position the mouth makes when articulating the sound. For example, in the English language, the 18 vowel sounds are positioned in a valley shape that corresponds with the shape that the mouth makes, with the mouth opening little with some sounds and more with others (Appendix D). Because of the mouth movement the vowels are often arranged in the shape of a 'v' on a sound wall. This is referred to as the vowel valley, depending on where the jaw is when articulating the sound of the vowel (Castles et al., 2018; Dahlgren, 2020b).

Figure 8

Sound Wall Articulation Pictures

Note. Sound Wall Kid Cards (Dahlgren, n.d.).

To enhance established explicit phonics instruction, in the first professional development session, teachers learned about sound wall implementation as a classroom tool to connect oral language to print in both reading and writing. A sound wall, in lieu of a traditional word wall in kindergarten and first grade classrooms, supports learners with linking the phonemes to graphemes; speech to print (Bottari, 2020).

Culturally Responsive Teaching

The second professional development session focused on teacher biases and how those biases can affect the learning environment.

"The achievement gap has denied underserved students of color and English learners' opportunities to develop the cognitive skills and process that help them become independent learners" (Hammond, 2014, p. 20). The learning focus has been on teaching the standards and curriculum without daily considering how all students will access learning or can make connections. For example, 30% of the families at Woodfin Elementary School are non-English speaking. The public school system embraces English language learners' families the 'public school' way - meaning, they are taught and expected to conform to learning and structures in place. English language learners do not have the opportunities to engage with their native language in the school setting. This practice devalues their language and therefore their culture (DeNicolo et al., 2015a) .

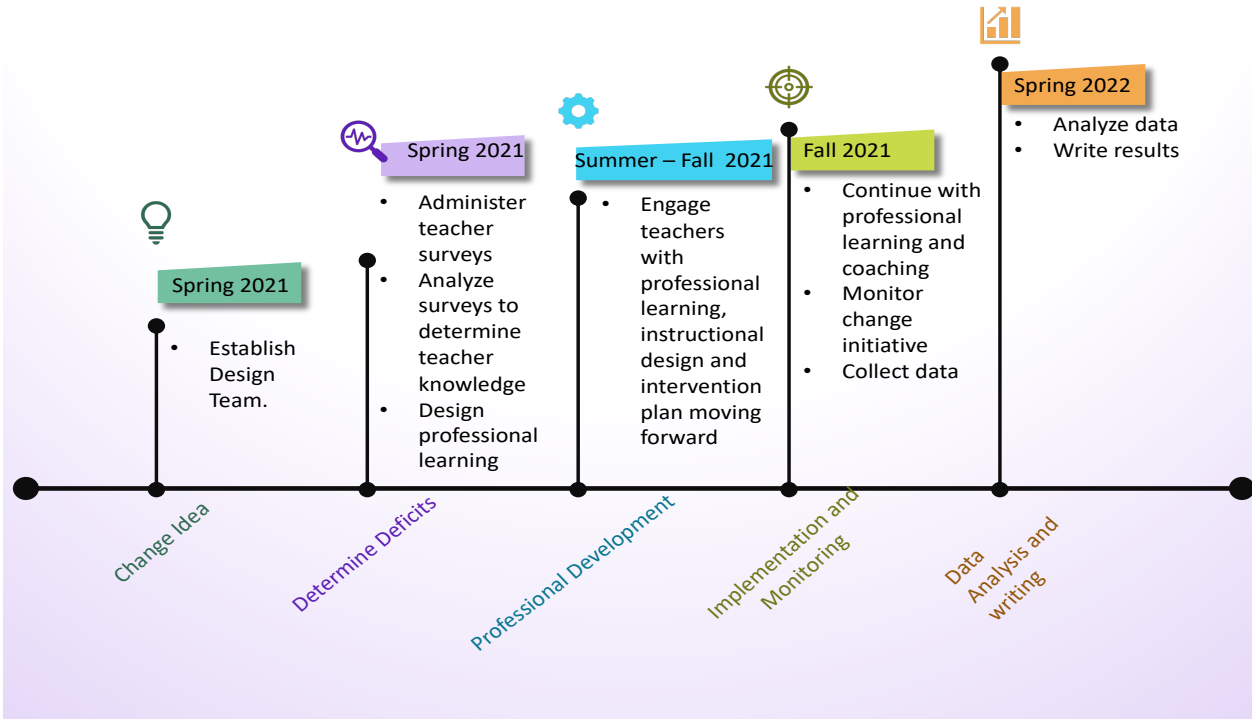
English language learners are more motivated and engaged in learning when their narratives are considered (DeNicolo et al., 2015a). Providing a culturally responsive learning environment that includes opportunities for students to speak their language and make links to their culture was the goal of this professional development session

IMPROVEMENT METHODOLOGY AND DESIGN

This study used the Improvement Science framework to implement change for improvement in teacher knowledge of early literacy development, culturally responsive instruction, and student literacy learning outcomes. Improvement Science is guided by three questions, (1) What is the problem? (2) What change can be introduced to address the problem? (3) How will change be measured and what determines improvement? (Crow et al., 2019; Hinnant-Crawford, 2020a).

Figure 9

Change Initiative Timeline



Note. The change initiative timeline guided forward movement and monitoring.

The improvement initiative focused on learning for teachers and students (Figure 9). The goal was to build teacher expertise so that teachers have the knowledge to effectively diagnose early literacy learning gaps and respond with culturally appropriate and timely instruction.

The Design Team

Improvement Science is a collaborative problem-solving approach. Bringing together professionals with various backgrounds and expertise to design and implement an improvement initiative adds a dynamic balance to attacking the problem (Bryk, Gomez, Grunow, & LeMahieu, 2015; Crow et al., 2019; Hinnant-Crawford, 2020b).

The design team for this study included expertise in curriculum, early literacy learning, second language learners and reading. Members included the school principal (scholar-practitioner), an instructional coach that collected data and reinforced instructional practice, a Title I reading coach that supported the phonemic awareness instructional component, and two English Second Language coaches that trained and coached teachers in exploring their implicit biases and examining instruction for equity and inclusiveness.

The scholar-practitioner chose to include the instructional coach on the design team because of the nature of their daily role. The instructional coach was on campus one day a week to work in person coaching teachers. The focus of a BCS instructional coach is to support teachers with development of high impact instructional practices, so it was significant that this person was a part of a team working toward achieving literacy proficiency with our kindergarten and first grade students. The instructional coach completed the CITI Human Subjects training and was therefore qualified by the Western Carolina University Institutional Review Board to collect the study's classroom observation data (*Human Subjects CITI Training*, 2022).

Including the BCS Title I Literacy coach was important because of the foundational literacy instructional skills that teachers needed to develop. The BCS Title I Literacy coach supports Title I lead reading teachers with continuous professional development while also attending to school-wide literacy instructional practices. This coach has many years of early literacy instruction experience and serves on a collaborative team for preschool literacy learning. The coach had acquired skills to lead professional development in phonemic awareness and sound wall instruction. This member of the design team was integral in analyzing the Basic Language Constructs (BLC) survey to determine the learning needs of the K-1 instructional team.

The focus of BCS English Second Language (ESL) coaches is to train teachers through classroom visits, co-planning, and co-facilitation to modify and differentiate instruction for English language learners. Because this study focused on recognizing individual teacher biases and how those biases can contribute to a learning environment, it was essential that these two ESL coaches were a part of the improvement initiative. Individually, they both brought years of experience in developing nondiscriminatory instructional practices and school-wide change. This team analyzed the Culturally Responsive Teaching Self-Efficacy (CRTSE) survey results prior to designing the culturally responsive learning that teachers experienced in the second professional development session.

The Study Participants

The K-1 instructional team consisted of eleven staff members: 2 kindergarten teachers, 1 first grade teacher, 1 teacher of a combined first and second grade class, 4 instructional assistants, the reading specialist, exceptional children's teacher, and the ESL teacher. The K-1 instructional team shared their years of teaching experience during focus groups, pseudonyms

were used to maintain participants' anonymity. Participation was voluntary and staff participants consented to engage in the study by completing a consent form (Appendix B). The team had a range of teaching experience from 2 to 26 years (Table 4). Because of the range of experience, it was important to tailor the professional development sessions to stretch each professional. Understanding individuals' conceptual knowledge of early literacy learning and culturally responsive teaching was an important step prior to designing the targeted professional development sessions.

Kindergarten and first grade students were also participants of this study. Students completed assent forms, students' families completed consent forms and received information about sound walls (Appendix C, Appendix E). Of the 45 students, 17 spoke Spanish and 28 spoke English as their first language (*PowerSchool*, 2022).

Table 4

K-1 Instructional Staff: Years of Educational Experience

K-1 Instructional Staff	Teachers	Years of Experience in Education
	Wilma	2
	Tina	10
	Ella	8
	Alvin	26
	Lee Ann	3
	Anna	16
	Maddie	4
	Anni	15
	Rae	11
	Macyn	8
	Sadie	7

Note. Woodfin Elementary K-1 instructional staff's years of experience in education (Focus Groups, 2021).

To gauge teacher understanding of the process of teaching early literacy and culturally responsive instruction, the design team administered two online, anonymous surveys to the K-1 instructional team (Figure 9). The BLC survey (see Appendix F), was developed to assess teacher knowledge of language and literacy (Binks-Cantrell, Joshi, & Washburn, 2012). The multiple-choice instrument asked focused questions about early literacy knowledge as well as phonological and decoding skills. To avoid participant fatigue, and to focus in on key skills, the survey consisted of 12 items. The CRTSE scale survey was developed to measure four competencies observed in culturally responsive classrooms: (1) curriculum and instruction, (2) classroom management, (3) student assessment, and (4) cultural enrichment (Siwatu, 2007). To prevent participant fatigue, this survey contained 11 items.

Professional Development Session 1: Implementing a Sound Wall

To provide a professional development specially designed for the specific needs of the K-1 instructional team, a survey was given to assess teacher knowledge of early literacy instruction. The BLC survey was emailed to the K-1 instructional team. Of the 11 participants, 10 completed the survey. The survey consisted of right or wrong answers about the English language constructs. The average score was 80%. The preliminary BLC survey results revealed that the K-1 instructional team held a clear understanding that a phoneme is a single speech sound (100%). There was evidence of confusion between segmentation and deletion tasks, reversing the sounds in a word, and understanding the difference between a morpheme and a phoneme. Using informative data from the BLCS, several planning sessions were held with the scholar-practitioner and the Title I Literacy coach to design the first professional development session for the K-1 instructional team. To bridge teacher knowledge gaps, the session was skillfully

constructed to address the instructional needs of the K-1 team and to introduce a component of the study's improvement initiative sound wall implementation.

The first learning session was held in early fall: *Implementing a Sound Wall in Your Classroom* (Appendix D). The K-1 instructional team attended the two-hour session and were given the Sound Wall curriculum and materials. The purpose of the first professional learning session was to address language constructs misunderstandings and to teach the sound wall as a tool for speaking and connecting oral language to print; reading and writing. The components of the professional learning session included phonological awareness tasks, a comparison of phoneme and morpheme, and the relationship between sound wall implementation and student learning of sequencing, combining and articulating phonemes. After the learning session, teachers began implementation of the Sound Wall curriculum. The curriculum involved consecutive lessons to be delivered across the span of twelve weeks. Students and teachers used the sound wall as a tool throughout daily learning.

Professional Development Session 2: Culturally Responsive Teaching

The purpose of the second professional learning session was for the K-1 instructional team to begin thinking about how their classroom learning communities were all-inclusive for each student. The K-1 team took the CRTSE survey digitally.

The CRTSE survey data revealed that, more than 50% of participants lacked culturally responsive teaching. Results indicated a mismatch between students' home culture and school culture. The scholar-practitioner and two district level ESL coaches considered the survey results to design a professional learning session based on connecting home culture and school culture; *Culturally Responsive Teaching: The Third Space* (Appendix L). This session encouraged

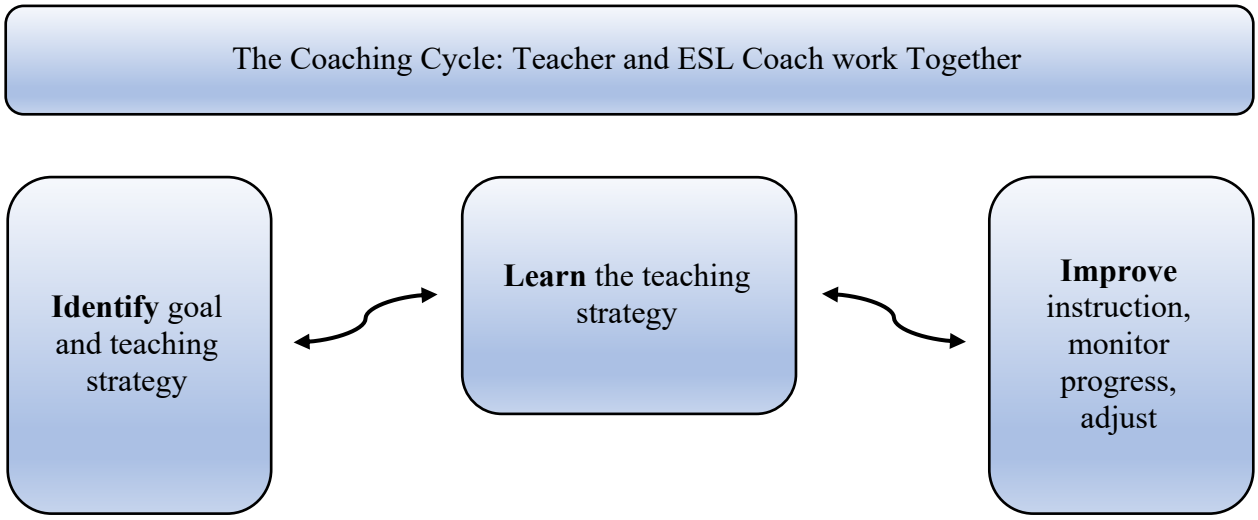
continued awareness of an impartial instructional environment, while integrating Hammond's (2014) work through materials and conversations.

The K-1 instructional team engaged in the responsively designed *Culturally Responsive Teaching: Third Space* professional learning session mid fall of the 2021-2022 academic year. Hammond (2014) refers to the classroom environment as being a Third Space for students, "a place for students to explore their individual and collective identities through different types of discourse, uses of language and emotional support" (p. 144). Components of the two-hour session included a reflection on the values communicated through the classroom environment, the experiences designed for the community of learners, the artifacts on the walls and what these artifacts communicate to students, parents, or to the teacher about what is important, and time to consider how the classroom environment (Third Space) teaches students.

After the second professional learning session, all teachers engaged in an instructional coaching cycle that led to a second cycle (Figure 10). The coaching cycle included three components: identify, learn, improve. Together, the teacher and the instructional coach identified a goal and teaching strategy that would support reaching the goal. The ESL coach provided individualized professional development by making the teaching strategy explicit for the teacher, either by modeling or using a checklist. To improve their practices, they later debriefed to monitor progress toward the professional goal and made adjustments for improvements based on the checklist and or modeling (3 Steps to Great Coaching - Learning Forward, 2015).

Figure 10

The Instructional Coaching Cycle



Note. The coaching cycle included three components (3 Steps to Great Coaching - Learning Forward, 2015).

Student Participants

The study included kindergarten and first grade students. At the beginning of the study, two student assessments were administered for baseline data collection. The Phonological Awareness Screening Test (PAST) modified by Kilpatrick (2015) from McInnis' earlier work with the Auditory Analysis Test (Forward, n.d.) was administered to the kindergarten students as customary within the school district. The State of North Carolina's K-3 Literacy adopted assessment, mCLASS Dibels 8 (Amplify, 2021) was administered to kindergarten and first grade students at the beginning and middle of the academic year.

FORMATIVE AND SUMMATIVE EVALUATION OF IMPROVEMENT METHODOLOGY

This study had a mixed-methods approach for data collection. Quantitative and qualitative research methods were used to learn specific understandings of teacher early literacy learning, culturally responsive teaching self-efficacy and the impact both have on kindergarten and first grade students' end of year literacy proficiency (Binks-Cantrell et al., 2012; Siwatu, 2007). Using both research methods provided a more in-depth view of the improvement process than one method alone.

The K-1 instructional team professional development series included two sessions and one coaching cycle over a period of nine weeks. To determine if the implemented change was an improvement, the data collection moderately followed the PDSA (plan, do, study, act) model (90-Day Cycle Handbook, 2013; Bryk et al., 2015; Crow et al., 2019; Hinnant-Crawford, 2020a). The PDSA cycle is a framework for learning. The design team understood that taking action along the way could include deleting the plan, altering the plan for another cycle or choosing to adopt the change initiative as a professional practice. The design team understood that the actions of implementing, monitoring and altering (if needed) could result in improvement, however, learning is not dependent upon improvement (Bryk et al., 2015; Langley et al., 2009).

The data collection involved four practical measures as indicated in Appendix F. Driver measures indicated if the work was driving change as intended. Process measures indicated how the change intervention was working. Balancing measures indicated if an established critical component was affected by the change intervention and ultimately, outcome measures answered if the change was an improvement (Hinnant-Crawford, 2020b).

Driver Measures

To determine if the intervention was prompting change in the direction for improvement (Crow et al., 2019; Hinnant-Crawford, 2020b) the design team collected baseline data to evaluate teacher understanding and capacity for early literacy instruction. Two pre and post surveys to measure teacher understanding of Basic Language Constructs (Binks-Cantrell et al., 2012, Appendix G) and Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) (Siwatu, 2007, Appendix H) to measure teacher beliefs and classroom practices linked to teacher implicit bias were modified and administered to the K-1 instructional team. Data were analyzed using one sample t-test (Appendix H, Appendix K). The CRTSE has been validated and shows evidence of strong reliability with .96, as estimated by Cronbach's alpha (Siwatu, 2007). The BLC reliablilty was documented as 0.90 using Cronbach's alpha (Binks-Cantrell et al., 2012). Each survey took less than 15 minutes to complete. The design team also measured teacher learning by analyzing focus group qualitative data. Teacher and instructional assistant focus groups (Appendix I) were conducted by the scholar-practitioner and transcribed with In Vivo coding (Saldana, 2016).

Focus Groups

The goal of the focus groups (Appendix I) was to further ascertain change for improvement in the K-1 instructional team's capacity for early literacy, speech to print learning, and teacher efficacy for culturally responsive instruction. The focus groups question set was developed considering broad and open-ended questions and were adapted from components of the teacher surveys; Basic Language Constructs (BLC) (Binks-Cantrell et al., 2012) and Culturally Responsive Teaching Self-Efficacy Scale (CRTSE) (Siwatu, 2007) to augment the survey data and fine tune the change process. Each focus group was structured and had a strong moderator involvement to keep discussions on topic and to encourage equitable contributions

(Morgan, 1997). Focus groups were chosen in lieu of 1:1 interviews because of the opportunity that a forum can have to incite conversations among participants.

Participants were all from the same school, aquainted and had the ability to confidently discuss the topics in ways that were beneficial for data collection (Morgan, 1997). The scholar-practitioner (school principal) had established relationships with each teacher that participated in the focus group sessions. Because of this experience, data analysis was more in-depth than if an outsider was analyzing participants' words. Four themes emerged from the focus groups: sound wall instruction impacts learning; culturally responsive teaching: relationships; culturally responsive teaching: visuals to support connections for learning; culturally responsive teaching: teacher beliefs (Table 5).

Sound Wall Instruction Impacts Learning. The K-1 instructional team considered changes in teaching and learning literacy throughout the study. When first asked to reflect, some participants shared awareness of sound production and the use of the sound wall as a tool. By the end of the study, participants observed that the knowledge of various mouth movements when articulating different sounds allowed students to access the sound wall daily to support their independent tasks (Table 5). Macyn noticed that students were using the sound wall to support writing. Macyn stated, "I'm seeing students starting to write words more quickly this year. So it's early December right now, and we already have kindergarten students who are writing sentences phonetically at this point." Ella echoed, "I'm seeing that being able to recongize the letter sounds is happening quicker and being able to write the sounds that are associated with the actual sounds is happening in the vowel distinction." Overall, teachers noticed students using the sound wall as a support with sound production, reading and writing.

Culturally Responsive Teaching: Relationships. Throughout the study, teachers' general idea of the differences between school culture and home culture remained the same with some broader views. Teachers identified home culture as being less structured than school but

developed their thinking with the importance of student relationship and family relationship building. Reflecting on personal growth, Rae commented,

> And I think that was something that I kind of entered into is that culturally, culturally responsive learning it has to do with teaching all kinds of cultures. But now I understand it's more about the relationship that you're building with the students, but also between the agencies of school and home and like the systems of support in those places.

Avin reiterated building relationships by stating, "I think together is the biggest word. Valuing conversations, sharing their own personal experiences from home, pulling that all into the classroom, giving them that chance to share from their home and then letting them speak." During the last focus group, teacher comments alluded to relationship building with families and students as being a daily effort that is crucial for an authentic culturally responsive learning environment (Table 5).

Culturally Responsive Teaching: Visuals to Support Connections for Learning.

Strategies for culturally responsive instruction also developed over the span of the study. When considering the use of visual aids in the learning environment, teacher perspectives seemed to change dramatically, moving from procedural to using visual supports in every aspect of learning. At the beginning of the study Maddie referred to the procedural hand washing sign as use of visual aids. By the end of the study, Maddie discussed having supporting anchors in the classroom such as the sound wall,

> The kids will look around the room to see if they can find that answer for the sound that they're thinking of or how to write that letter. And the kids will be looking over their shoulder, just kind of looking to see how their mouth should look and what that sound is like.

By the end of the study, teachers listed examples of daily uses of visuals to support student connections for learning word meaning, content and language. Macyn indicated, “The student’s creation of that visual or making that connection for themselves is super powerful. So especially if they’re coming from a culture that speaks a different language.” Participants began to refer to visual aids as being critical for students to make connections, support learning, and as an essential instructional strategy for supporting a culturally responsive learning environment (Table 5).

Table 5

Focus Group Themes

Themes	Teacher Quotes
Sound Wall Instruction: Impacts Learning	"…the sound wall is a tool that they're really excited about that they're also eager to use it, because I think coming back to that culturally responsive piece, I think that they see it as something relevant to them." -Tina
Culturally Responsive Teaching: Relationships	"It's a daily interaction and conversation with my students about their experiences and what they're bringing into this educational environment and how we can build on that together and move forward together toward what we're trying to teach and what we're trying to learn in this environment." - Macyn
	"And just touching base with them weekly, or bi-weekly. I think it helps with being more culturally responsive because you know the families a little bit better. And that helps you to serve the student more and understand them." -Alvin
Culturally Responsive Teaching: Visuals to Support Connections for Learning	"…it gives them access to the language they need in order to participate in the lessons, especially for those who have language processing difficulties or English is not their first language."- Rae
	"…it opened up a whole new window for all of my kids to be like, oh, that's that. And then to have that up on the focus wall throughout that book, they can go back and make that connection as they're reading, if they're not, if they have forgotten it. So, I think visual aids are so important." - Wilma
Culturally Responsive Teaching: Teacher Beliefs	"…I feel like it's something that I need to constantly be learning about, learning more about, and getting better at in the classroom. Because it's the connection that you can make with the kids that help them to learn." Ella

Note. Qualitative data from six focus groups (Focus Groups, 2021).

Culturally Responsive Teaching: Teacher Beliefs. Teacher beliefs changed over time from believing that they had a lack of cultural awareness to improving practice by listening to and getting to know students. Their approach to teaching and learning changed, although they admitted that there was not a foundational change. However, they needed reminders and supports to continue fostering relationships with students and families. Macyn reflected,

> So, about my ability to create that currently, I just feel like I need to have that constant reminder about what am I doing every day to engage my students, and to bring in their culture. Because the further we get into the school year, the further away I might drift from that if I'm not constantly thinking about how am I weaving this in, how am I bringing this in, and what am I doing for my students.

By the end of the study, there was a strong consensus that it was the teacher's responsibility to make daily commitments to make connections explicit for all students, to listen to students and to provide talk structure routines for building the culturally responsive classroom of learners. Wilma commented, "I thought that once you created a culturally responsive classroom, it just stayed that way. But I've learned that it's a daily thing you have to work on and work with every single day of every week." Also, by the end of the study, teachers expressed more confidence in their abilities to create a culturally responsive learning environment. Though they never alluded to the second professional development session, *Culturally Responsive Teaching: Third Space*, they did verbalize the strategies that they had been integrating into their daily practice (Table 5).

The focus groups served to capture change in beliefs and practices. Teacher comments indicated that they observed student learning being positively impacted with the sound wall instruction. Though teachers communicated that they needed reminders about the culturally responsive teaching and learning, thoughts around all-inclusive teaching practices came up frequently, indicating that change was on their minds.

Basic Language Constructs Survey

The Basic Language Constructs Survey was given to the K-1 instructional team for two purposes. The design team intended to create a professional development session that was in

response to the instructional team's needs. Therefore, the pre-survey was administered to gauge participates' knowledge. Secondly, the pre-survey served as baseline data to measure participants' change in knowledge of early literacy learning.

Table 6

Descriptive Statistics: BLCS One – Sample T-Test

	N	Mean	Std. Deviation	Std. Error Mean
BLCS	10	89	11.00	3.48

One – Sample Test t (9) = -.287, p= .390,.780 Cohen's. d=11.00

					Test Value = 90	95% Confidence Interval of the Difference	
	t	df	Sig. One-Sided p	Sig. Two-Sided p	Mean Difference	Lower	Upper
BLCS	-.287	9	.390	.780	-1.0	-8.8725	6.8725

Note. Descriptive statistics and One Sample T-Test results indicating means of pre and post BLC survey; no significant difference (Binks-Cantrell et al., 2012).

The results of the One Sample T-Test show that the mean of the pre and post Basic Language Construct Survey was not a significant difference (Table 6). Teachers took the BLC post-survey a week before winter break. Teachers were discussing the new COVID-19 variant and concerns around family, holiday and maintaining health. If the survey was administered again, without the added stressors of COVID-19, a different score most likely would have resulted. The data do not indicate that the K-1 team knew less than at the beginning of the study and the BLC survey data indicated no significant change of teacher understanding of the early literacy reading process.

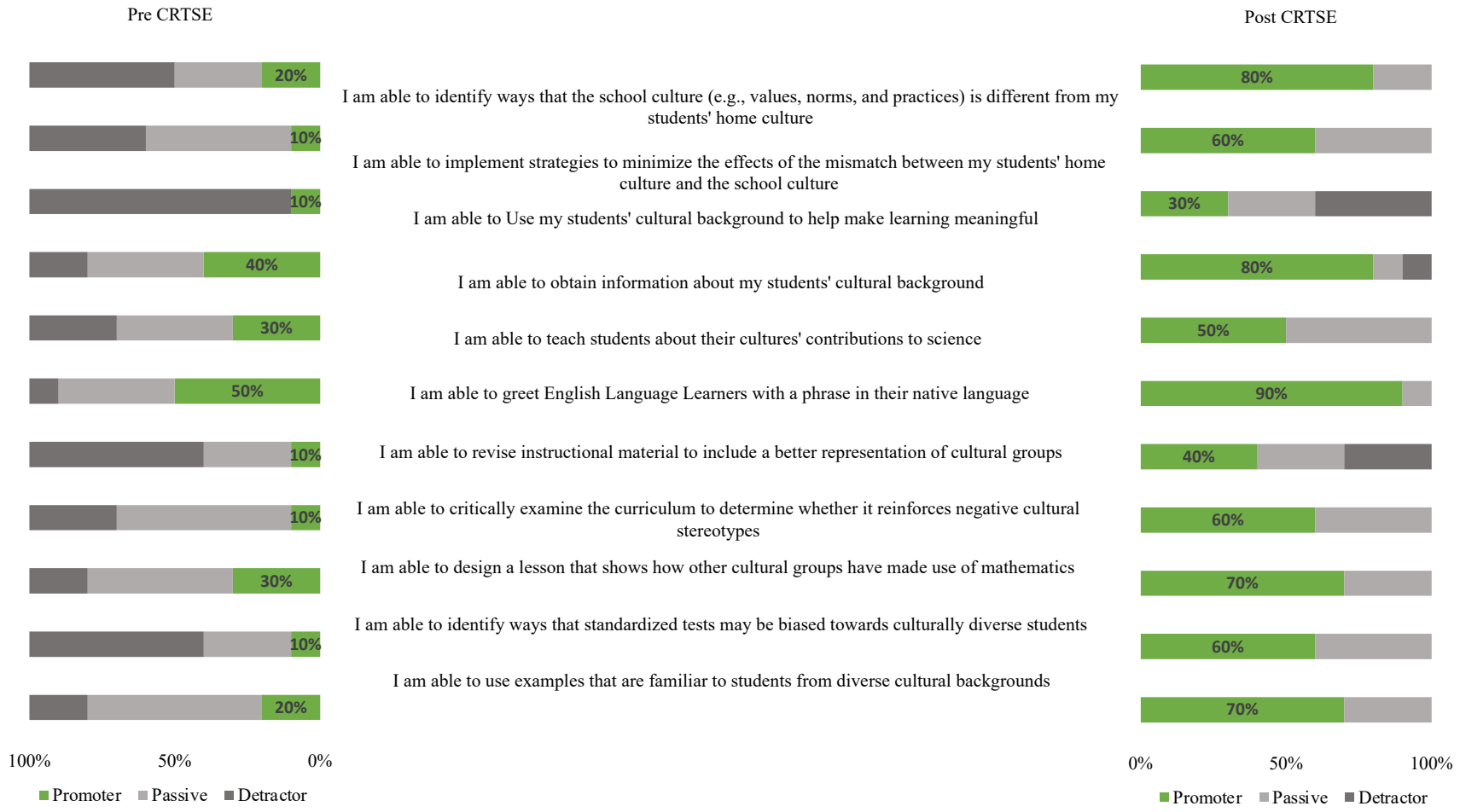
Culturally Responsive Teaching Self Efficacy Survey

The CRTSE survey was given to participants for two purposes (Siwatu, 2007). The design team projected to craft a professional development session that was in response to how teachers viewed themselves when it came to integrating students' cultural and linguistic background into instruction. Therefore, the pre-survey was administered to get a sense of teachers' culturally responsive teaching self-efficacy. Additionally, the post-survey served as a measure of difference in teachers' self-efficacy after participating in the professional learning and coaching cycle. It was important to capture teacher understanding and views from beginning of the study to end and indicate change, either intended or unintended. The CRTSE post survey gave an indication of change in culturally responsive teaching self-efficacy as viewed through the teacher lens (Figure 11).

The CRTSE survey offered a scale from 1 – 10. Participants that rated themselves a 9 or 10 were considered promoters, meaning they could perform tasks with confidence. Participants that rated themselves a 7 or 8 were considered passives, meaning they could perform tasks with some confidence and participants that chose a rating lower than a 7 were considered detractors (low confidence) (Net Promoter Score® (NPS), 2022). Teachers gained confidence in their ability to identify ways that students' home culture is different than school culture (pre 20% promoter; post 80% promoter) (Figure 11). Being aware of the differences in home and school cultures and understanding students' home cultures equips teacher with knowledge to integrate students' identities in to daily instruction. "When students have a chance to narrate their lives, put language to their experience, and process their thinking through discourse they begin to notice and name their own competence" (Hammond, 2014, p. 149)

Figure 11

CRTSE Pre-Post Survey Results



Note. Teachers' confidence grew with creating a culturally responsive community for learning.

Results of the One-Sample T-test showed that the mean of the pre and post *Culturally Responsive Teaching Self Efficacy Survey* [*Mean* = 8.40, *SD* = .76] was statistically significant at the .00 level of significance ($t = 6.19$, $df = 9$, $p = <.001$). The *Mean difference* = 1.49, 95% CI (2.03 - .94) From the analysis, it appears that teachers grew in their culturally responsive teaching self efficacy after attending professional learning and participating in the coaching cycle (Table 7).

Table 7

Descriptive Statistics: CRTSE One – Sample T-Test

	N	Mean	Std. Deviation	Std. Error Mean
Post CRT	10	8.49	.76	.24

One – Sample Test t (9) =6.19, p=0.00 Cohen's. d=.76

				Test Value = 6.918	95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Post CRT	6.197	9	<.001	1.49109	.9468	2.0354

Note. Pre and Post Culturally Responsive Teaching Self Efficacy Survey (Siwatu, 2007).

Process Measures

As indicated by The Professional Learning Association, *LearningForward*, gathering evidence of teacher efficacy and classroom practices informs improvement efforts (Learning Forward the Professional Learning Association, 2020). An observation tool (Appendix J) with elements of the professional learning cycle was used at least once after each of the two professional development session to collect implementation data to determine if the intervention happeded as the design team expected throughout the process. The observation tool was used to capture the frequency of teacher and student behaviors around the use of the sound wall and culturally responsive language (Dahlgren, 2020b; Ladson-Billings, 2014). Observational data were collected by a Human Subjects CITI Program trained, BCS instructional coach (*Human Subjects CITI Training*, 2022).

To determine if instructional change was taking place, the instructional coach collected observational data (Appendix J). Observations captured the frequency of teacher and student reference to the sound wall during instruction; how many times did the teacher or student use the sound wall to support reading or writing? Observations also indicated the frequency of teacher and student cultural or linguistic reference linked to instruction; how many times did the student or teacher refer to a student's culture or first language to make a connection to the learning?

In the primary grades, learning to speak, read and write is the underlying focus of each school day (Adlof & Hogan, 2019; Lervåg et al., 2018). Additionally, a culturally responsive classroom would refer to students' home culture for connections to anchor learning (Gorski, 2018a; Hammond, 2014; Ladson-Billings, 2014). During the study, it was expected that evidence of capacity building in sound wall and cultural responsive teaching would be observed at least 70% of the time in classrooms after the first round of professional learning.

Table 8

Classroom Observations N=14

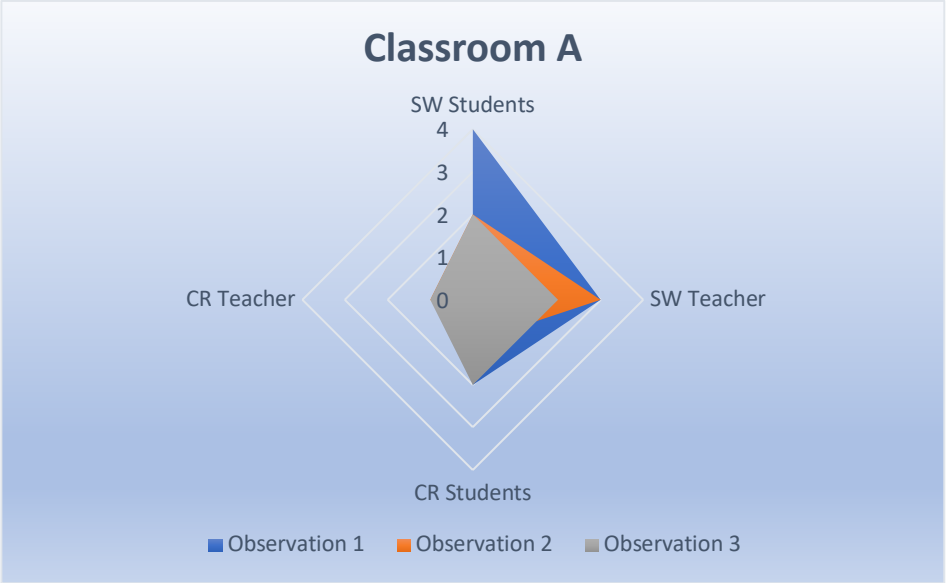
Observations	Sound Wall	Cultural and Language
Observation 1	100%	66%
Observation 2	75%	50%
Observation 3	100%	66%
Observation 4	100%	75%

Note. The percentages of references to the sound wall and culture or language by teachers and students during each round of observations.

After two rounds of observations, members of the design team evaluated the observational data. Numbers revealed that the intervention was ocurring as intended with some frequency (Table 8). Out of 7 classroom observations, teachers and students were referencing or interactively using the sound wall. Sound wall usage or reference was consistent among most observations as noted in Figures 11 -14.

Figure 12

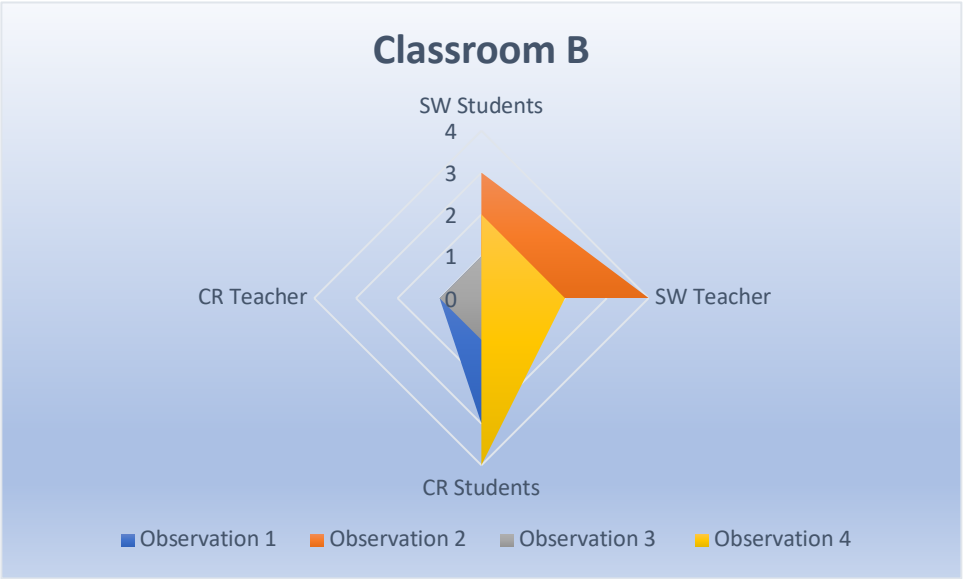
Classroom A Observations



Note. The sound wall is being used with some frequency by teachers and students.

Figure 13

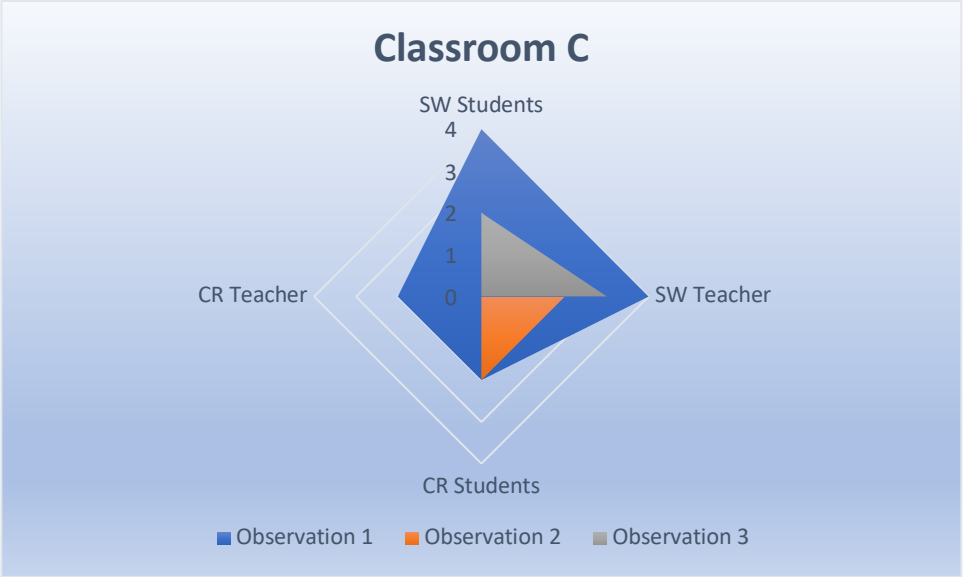
Classroom B Observations



Note. The sound wall is being used with some frequency by teachers and students.

Figure 14

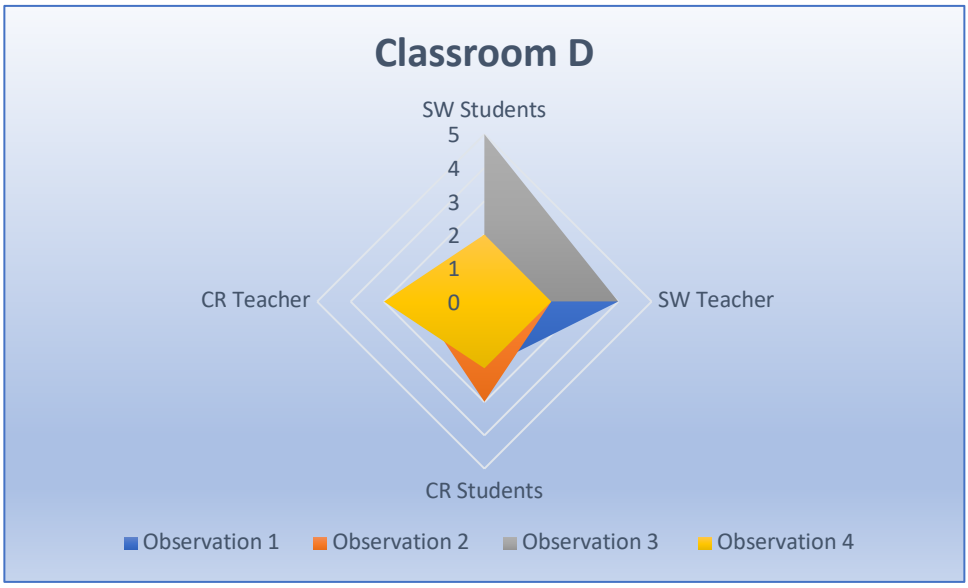
Classroom C Observations



Note. The sound wall and language connecting to cultural backgrounds are referenced with some frequency by teachers and students.

Figure 15

Classroom D Observations



Note. The sound wall and language connecting to cultural backgrounds are referenced with some frequency by teachers and students.

Students connecting learning to their culture happened with higher frequency than teachers linking learning to students' linguistic or cultural backgrounds. However, it was seldom observed that teachers nor students were using culturally responsive language (either refering to home culture or making explicit connections to student experiences outside of school) during learning sessions (Figures 12-15). To improve the frequency of culturally responsive language, after observation two, the scholar practitioner provided a reminder infographic (Appendix N) of the components from the second professional learning session: *Culturally Responsive Teaching: Third Space*. The infographic was a guick reference that teachers could consult for planning and instructional purposes.

All other components of the change intiative remained as designed. The third and fourth classroom observations captured an increase in culturally responsive language from students in

all classrooms and teachers in two classrooms (Figures 12-15). A fourth observation did not occur for Wilma and Ella due to their absence on the observation day and it was not appropriate to observe a substitute teacher. This did not have a significant effect on the outcome data.

The last round of observations showed the highest percent for references to culture and language. References to students' culture or language was observed in 75% of the classroom observations. This observation occurred immediately before winter break from school. Students were writing about how their family celebrated winter holidays. Other examples of culturally and linguistic references were students sharing about a location in their home where they would engage in certain tasks; making home connections to a book; linking a book character to someone in their family; making first language letter sound connections to second language. Cultural and linguistic connections are important to student learning. These cultural connections support students in becoming dependent learners and works to break the cycle of academic disengagement (Hammond, 2014; Ladson-Billings, 2014).

Balancing Measures

Balancing measures ensure that the intervention does not contaminate or inadvertently pause other necessary components and answers the question "Is it working as intended?" (Hinnant-Crawford, 2020, p.146).

BCS has adopted a multisensory, systematic approach to teaching phonics. The system uses the Fundations curriculum for grades K-3 (Fundations® | Wilson Language Training, n.d.). Because of the structure and research woven together in this curriculum, research finds that the program is most effective when taught in a systematic, exact manner (Goss & Brown-Chidsey, 2012). However, teacher experience and level of early literacy learning knowledge will impact the depth of instruction provided with this curriculum.

Currently, Woodfin Elementary K-1 teachers implement Fundations Wilson Language Basics Curriculum for early literacy learning. Fundations is a reading and writing curriculum structured for multisensory learning: speaking, writing, reading and movement (Fundations® | Wilson Language Training, n.d.). Daily lessons last for thirty minutes. Ensuring that this instruction was not compromised as teachers implement sound wall instruction was imperative for student learning.

To monitor Fundations instruction fidelity, teachers took a weekly, 1-minute, Qualtrics survey (Appendix K). Results of those surveys revealed that, of the 12-weeks of instruction, 79% of the time the teachers' responses were "yes" to the statement "I facilitated all components of the Fundations lessons this week." There were "no" responses 14% of the time due to absenteeism, running out of time and a short holiday week. The survey was not competed 6% of the time during the 12-week period (Appendix M).

Outcome Measures

The ultimate aim of this study was to raise literacy learning outcomes for all students, kindergarten and first grade, from fifty percent to one hundred-percent proficient by the end of their respective school years. The outcome measures link to this aim and should determine the effectiveness of the improvement initiative. One measure is a comparison of pre- and post-student assessments: mCLASS, Dibels 8 (Amplify, 2021)(Table 9). This measure is a composite score comprised of four assessments: Letter Naming Fluency; Phonemic Segmentation Fluency; Nonsense Word Fluency; Word Reading Fluency; Oral Reading Fluency (first grade only).

Table 9

K-1 mCLASS Dibels 8 Proficiency Scores N = 45

Grade	Number of Students Proficient: Beginning of Year	Number of Students Proficient: Middle of Year
Kindergarten	2%	11%
First	8%	17%

Note. Beginning and middle of year mCLASS Dibels 8 composite scores (Amplify, 2021).

Additionally, a Phonological Awareness Screening Test (PAST) (Kilpatrick, 2016) was administered for all kindergarten students as baseline data at the beginning of the study and again at the end of the first semester (Table 10). This test measures components of phonological awareness including letter sounds, phoneme isolation (initial sound), phoneme blending and phoneme segmentation. Knowing where students' understanding is with phonological awareness supports teachers in planning just in time instruction (Kilpatrick, 2015). Because the study ended before the end of the 2021-2022 academic year, data consisted of only beginning of year and middle of year scores for both measures.

Classroom teachers administered the mCLASS Dibels 8 assessment (Amplify, 2021). As seen in Table 9, the percent proficient of kindergarten and first grade students moved from 11% at the beginning of the academic year (5 out of 45) to 28% in the middle of the academic year (13 out of 45) (Table 10).

Table 10

Kindergarten Students PAST Proficiency Scores N=22

	Number of Students Proficient: Beginning of Year	Number of Students Proficient: Middle of Year
Letter Sounds	9%	81%
Phoneme Isolation Initial Sound	9%	63%
Phoneme Blending	0%	40%
Phoneme Segmentation	0%	31%

Note. Beginning and middle of year Phonological Awareness Screening Test proficiency scores (Kilpatrick, 2016).

The Phonological Awareness Screening Test (PAST) (Kilpatrick, 2016) was administered by the school reading specialist to all kindergarten students at the beginning and middle of the academic year. At the beginning of the academic year 9% of kindergartners were proficient with letter sounds and phoneme isolation (initial sound). No kindergartener showed proficiency with phoneme blending or phoneme segmentation. When students were assessed mid-year, 81% were proficent with letter sounds; 63% were proficient with phoneme isolation (initial sound); 40% were proficient with phoneme blending; 31% were proficient with phoneme segmentation (Table 10).

DISCUSSION

The problem of practice that this study focused on was literacy proficiency in kindergarten and first grade. Using Improvement Science methods, the design team worked with teachers to develop a deeper understanding of how students use their knowledge of language to connect speech to print. Because there was a significant group of English language learners at Woodfin Elementary School, the design team also sought to begin working to support teachers in uncovering their biases and implementing culturally responsive teaching strategies into classroom learning communities. The improvement initiative included a long-term and short-term goal.

Long Term Goal

The ultimate purpose of this study was to increase literacy proficiency at the kindergarten and first grade level from 50% to 100% by the end of the 2021-2022 academic year. While this goal could not be reached within the four months of this study, the data suggests student learning growth.

mCLASS and PAST

Classroom teachers administered the mCLASS Dibels 8 assessment at the beginning of the academic school year and then again before winter break. As measured by mCLASS Dibels 8 composite scores, student proficiency showed very little proficiency growth (Amplify, 2021). As seen in Table 9, the number of proficient kindergarten students moved from one to five. The number of proficient first grade students moved from four to eight. However, these learning gains occurred despite the absenteeism rates and consistent interruption in instruction.

The Phonological Awareness Screening Test (PAST) (Kilpatrick, 2016) was administered by the school reading specialist to all the kindergarten students at the beginning and middle of the 2021-2022 academic year. In hindsight, it would have been beneficial, for targeted instruction to administer this assessment to first grade students as well. However, this practice is not common within the school district. The PAST assessment results are where the data indicates the most gain. The PAST measures skills that the improvement initiative, implementing a classroom sound wall, would have directly reinforced. Letter sounds, phoneme isolation, phoneme blending, and segmentation are all foundational reading skills that the sound wall supports.

Phoneme blending is a skill that requires a student to hear the individual sounds in a word and put the sounds together to verbally pronounce the word. Phoneme blending is critical for the development of reading skills. If students can blend phonemes and attach letters to the phonemes, then they can read words or parts of words in print. Students who have solid phonemic awareness skills show literacy growth as these skills are prerequisites to reading (Adlof & Hogan, 2019; Hoff, 2013; Hulme & Snowling, 2015; Yeung & Savage, 2020) .

No kindergartener showed proficiency with phoneme blending at the beginning of the academic year. However, after implementing the improvement initiative 40% showed proficiency before winter break. The PAST assessment captured more growth for kindergarten students than the mCLASS Dibels 8 assessment (Amplify, 2021). One reason for this could be the focus of each assessment. While both assessments measure similar early literacy skills, the PAST is more granular with measuring specific components of phonological awareness. The mCLASS Dibels 8 collects a composite score of four skills combined: Letter Naming Fluency; Phonemic Segmentation Fluency; Nonsense Word Fluency; Word Reading Fluency (Amplify,

2021). Students with a firm control of phonological awareness would begin to show growth with decoding and decoding assessments like mCLASS Dibels. 8: Nonsense Word Fluency and Word Reading Fluency (Hoff, 2013; Hulme & Snowling, 2015).

Short Term Goal

The short-term goal of this study was to expand teacher capacity for early literacy skills teaching through a culturally responsive lens. If teachers become experts with how children learn to read, then teachers can adequately design inclusive, adaptive instruction and respond to learning in a manner that yields high literacy proficient outcomes (Adlof & Hogan, 2019; Parsons et al., 2018; Tolman, 2017). The study's CRTSE, Focus Group and process data suggest that teachers' confidence in building relationships with students and integrating various cultural and linguistic knowledge about students into instructional practice occurred with more frequency as the study progressed (Table 5, Figure 11, Table 8).

Teachers also learned about using the sound wall as a tool for speaking, reading, and writing. Data reveals that both teachers and students used the sound wall daily to enhance learning (Table 5, Table 8). Teachers methodically introduced sounds on the sound wall by teaching students to notice how the mouth moves as they articulate sounds. As articulation was practiced, students began to see and use the letter or letters that connects each phoneme to print (listed under each mouth picture on the sound wall). This supported students with anchoring sounds to print.

The two specially designed professional development sessions offered teachers learning in two main areas: Phonemic awareness and culturally responsive teaching. These sessions offered learning experiences that the BLC survey and the Culturally Responsive Teaching Self-Efficacy Survey suggested teachers needed. Having tailor-suited professional development

allowed teachers to engage in meaningful ways rather than participating in a professional learning session that they are already masters of.

The first professional development session, *Implementing a Sound Wall in Your Classroom* (Appendix D), targeted the importance of phonological awareness and how sound wall implementation connects oral language to print for students. The purpose of the pre and post BLCS survey was to measure change in teachers understanding of teaching early literacy skills. The post-survey did not indicate strong growth in teachers' knowledge of early literacy skills. This could be because of the stressful time that the post-survey was administered. Another reason could be that there was not an instructional coaching cycle that teachers experienced after the *Implementing a Sound Wall in Your Classroom* professional development session. The sound wall curriculum was implemented in all classrooms and data indicated evidence of frequent use. However, goal setting and reflection that accompanied the instructional coaching cycle were both integral to growing the professional practice but this did not occur due to lack of personnel (3 Steps to Great Coaching - Learning Forward, 2015; Johnson, 2016).

The second professional learning session, *Culturally Responsive Teaching: Third Space* (Appendix L) targeted teacher biases, how those biases shape class communities and affect classroom learning. Teachers also explored how to intentionally plan for culturally responsive instruction using high impact learning strategies (Hattie, 2016).

The pre and post CRTSE survey indicated changes in teachers' culturally responsive teaching self-efficacy. Teachers gained confidence in their ability to identify ways that students' home culture is different from school culture. This awareness of "students who come from different background, cultures, and life experiences; who have diverse interests and motivations; and who have varying levels of language proficiency" is critical for teachers to "be flexible and

creative in their approach as they adapt their instruction to support the various learners under their care" (Parsons et al., 2018, p. 206). The narrative from the teacher focus groups supported this change in self-efficacy. For example, Macyn said, "I feel like my beliefs have become more confident in my ability [to create a culturally responsive learning environment]." Ella followed by stating, "I feel more confident than I did in August. Definitely. I feel like a lot of my Els [English language learners] were very quiet and reserved and now they've come out of their shell." Maddie reflected, "I think it's more in the forefront of my mind. I look each day to make sure that we are including everyone and everyone's opinions and thoughts." Noticing this change in teachers' self-efficacy was a celebration of forward movement with the K-1 team establishing a culture of culturally responsive teaching (Hammond, 2014).

The purpose of the focus groups was to capture change in beliefs and practices. Teacher comments indicated that is a daily effort to learn about students' and families' experiences and integrate those with the learning environment. Although a small step toward changes and equitable learning opportunities for all, teachers' beliefs shifted from the beginning of the study to the end (Table 5).

In line with Improvement Science, practical next steps would be to continue growing the collective school practice of culturally responsive teaching, digging deeper into personal biases and monitoring change. The K-1 team will continue incorporating the sound wall as a tool into daily instruction. The team will also move forward in building on the culturally responsive teaching strategies as well as engaging in learning opportunities to establish a deeper awareness of their implicit biases. This professional learning will continue to be rooted in Hammond's (2014) work, closely considering culturally and linguistically diverse students. The Improvement

Science PDSA cycle will be used to monitor change along with all established balancing, process, and outcome measures.

School instructional staff who were not involved with the original study, will begin professional learning with the *Culturally Responsive Teaching: Third Space* professional development. Maintaining coaching cycles will be top priority so that teachers have support to implement new learning and grow their practice (3 Steps to Great Coaching - Learning Forward, 2015; Johnson, 2016).

Leadership Lessons Learned

Leading educational change requires a genuine inspection of the system, its structures and its results (Bryk et al., 2015). Systems will continue to produce what they are set up to produce. To expect a different outcome means to alter the system (Hinnant-Crawford, 2020b).

Lead by Example

In this study, altering the core instruction was the change initiative. However, in thinking about culturally responsive teaching and observing teachers grapple with their beliefs and biases, the scholar-practitioner began to view the school building as a classroom. Just as teachers are encouraged to know their students' stories (DeNicolo et al., 2015a; Hammond, 2014; Herrera, Porter, & Barko-Alva, 2020) leaders should work to know their staff. Not only will relationship building support an all-inclusive work culture, but understanding individuals' strengths, interests, values, and professional goals will guide the school principal with assigning leadership roles and planning for professional development. For this to occur, leaders must establish an environment built on trust, respect, and collectiveness toward forward movement (Blankstein & Noguera, 2016). Intentionally using strengths in the school community for change will have a greater impact than a well-developed improvement initiative alone (Blankstein & Noguera, 2016). Just as teachers in this study alluded to building relationships with students as being an intentional, daily endeavor, building relationship with staff is also a daily leadership effort. This effort will endorse an equitable work environment where faculty and staff needs are satisfied so they can perform at high levels. Ultimately the culturally responsive lens that teachers are encouraged to have and focus, educational leaders are not exempt from (Khalifa, Gooden, & Davis, 2016). Making genuine connections with all stakeholders, providing opportunities for learning and

growth are just as important for school leaders as for teachers as leaders in their classroom (Grissom et al., 2021).

Prioritize Instructional Needs

The scholar-practitioner also wavered on the idea to postpone the theory of practice improvement initiative. The onset of the academic year brought mandated changes. There were new initiatives from the state, the K-3 reading assessment platform changed. There were also new initiatives from the BCS district, a new K-8 ELA Curriculum, and new K-8 Math screener. As the scholar practitioner and the school administrator, asking more of teachers during an environment of change was a decision to be considered thoroughly. Many factors came into play as the design team considered readiness for the improvement initiative. Continuous low literacy proficiency remained a problem at Woodfin Elementary. The school also had experienced a year and a half of inconsistent instruction due to COVID-19. The North Carolina Department of Public Instruction was moving in the direction of increasing educators' knowledge of the Science of Reading which included implementing a sound wall into primary classrooms as a tool for connecting oral language to print. These factors combined presented a readiness for additional change at Woodfin Elementary school.

To meet and sustain the needs of students currently enrolled at Woodfin Elementary, the scholar-practitioner and design team moved forward with the improvement initiative. The school principal must keep staff focused on specific school improvement goals, driven by data, even when additional demands are handed down from other entities. School leaders must remain steadfast in improving the effectiveness of instruction and meeting the growth needs of students and staff in their immediate purview (Chitpin & Evers, 2015).

Collective Reflection Opportunities for Professional Growth

The scholar-practitioner expected to use qualitative data from the focus groups to capture change in teacher understanding and beliefs. However, the scholar-practitioner was surprised to notice the focus groups being a form of individual and collective reflection. This time and space not only provided qualitative data for the improvement initiative but provided teachers the opportunity to self-assess and to learn from their colleagues. The vulnerability that was observed throughout each session spoke to the power of focus groups throughout the school year as a form of individual and collective reflection. For example, when reflecting, some teachers communicated that they get caught up in schedules and teaching standards and that they needed reminders about the culturally responsive teaching piece of equitable instruction (Table 5).

Moving forward, the scholar-practitioner believes that implementing collective reflection opportunities as a part of the school improvement process would be advantageous to school-wide professional growth and collective teacher efficacy (*John Hattie: Collective Teacher Efficacy*, 2018). A component of collective reflection is individual reflection. Individual reflection is a valuable practice that can lead to positive outcomes for teachers and ultimately students (Hall & Simeral, 2015; Mathew, Mathew, Prince, & Peechattu, 2017). Providing teachers with designated opportunities for multiple application and growth reflections could work to establish solid momentum for school improvement outcomes (Derrington & Angelle, 2013; Kunnari, Ilomäki, & Toom, 2018).

Equity Goal for Continued School Improvement

The rising number of diverse students enrolled at Woodfin Elementary and throughout the Buncombe County Schools Systems gives evidence of the need for educational leaders to provide training, resources, and support on culturally responsive instruction. The scholar-

practitioner believes that school leaders should ensure that school improvement plans contain an equity goal that is responsive to and reflective of the staff and students in their buildings. Working to design and hold multiple opportunities each year for professional learning specifically focused on developing awareness of personal biases and skills to create culturally responsive learning environments is imperative to grow the students enrolled in each school (Hammond, 2014; Herrera et al., 2020; Khalifa et al., 2016; Ladson-Billings, 2014; Sensoy & DiAngelo, 2017a).

Teachers in this study applied new learning and experienced the impact on student learning within just a few weeks. After becoming more aware of their personal beliefs, thoughts, decisions, and talk, some teachers concluded that student-family relationship building and gaining a lens of students' culture, was work that they needed daily reminders of (Table 5). The scholar practitioner would argue that this work is never-ending and that each school improvement team should have a long- and short-term goal that establishes strategies to develop all educators in how recognize their biases and how to be culturally responsive. The scholar practitioner agrees with Khalifa and colleagues (2016), "It is the duty of the principal to ensure this is a priority for individual teachers in their instruction as well in the overall school culture" (p. 1288).

STUDY LIMITATIONS

It is recommended that the study be replicated with a larger sample and preferably not amid a worldwide pandemic. Overall, the effects of COVID-19 were felt throughout this study from the added pressures and concern in stakeholders' personal lives (students, families, staff, and community) to personnel vacancies and attendance rates.

Effects of Staff Shortage

The school year began with staff shortages throughout the school district and state. Because of the shortage, personnel took on added responsibilities and added COVID-19 safety protocol responsibilities which caused the availability of additional expertise for this study to be lacking. Woodfin Elementary, had one part-time instructional assistant position vacant throughout the duration of the study. Typically, this position supports small group reading instruction K-4, which would have offered additional support to the sound wall instructional intervention.

Inconsistent and Decrease Staff and Student Attendance

Staff absences at Woodfin Elementary created an additional challenge. From August 23 to December 17 there were 64 K-1 instructional team staff absences (AESOP, 2021). When personnel are absent, responsibilities fall on staff present to ensure that staff and students are served for the instructional day. This pushes the school staff to prioritize, be flexible and often omit planned instruction. As previously mentioned, K-1 student absences from August 23 to December 17 totaled 166 absences. Individual absences for the 45 students ranged from 1 to 10

days. Both data points give evidence of the lack of continuous, uninterrupted, learning for all throughout the duration of this study (Power School, 2021).

Ancillary Learning

As stated earlier, a positive effect of the COVID-19 pandemic was the ESSER funding. Because of this funding BCS, for the first time in years, purchased a new K-8 English Language Arts curriculum. The intent of the ELA curriculum was to provide consistency and equity of ELA learning throughout the school system in grades K-8. However, along with this purchase and the purchase of a new K-8 math screener, brought months of new learning for already overloaded administrators and teachers. The actual hours of attending online classes compounded with the additional time and energy that was expelled on daily planning was all a huge, unexpected, undertaking for school staff.

COVID-19 Effects on Daily Structures

COVID-19 and its effects on daily structures within the school building has been a limiting factor for this study. Daily management of students presenting with COVID-19 exclusion symptoms resulted in K-1instructional assistants being pulled from classroom instruction to supervise symptomatic students. These staff members monitored students exhibiting COVID-19 symptoms until the results of a rapid COVID-19 test were determined or until the students' guardians picked them up for check out. Instructional assistants were also pulled from their assigned classroom instruction multiple times to substitute for classroom teachers who experienced COVID 19 symptoms. The disruption of daily structures impacted continuous instruction.

A year and a half of interrupted instruction and situational traumas impacted some students' ability to maintain safe school behaviors. Frequently responding to unsafe student

behaviors dominated many moments that the scholar-practitioner would have otherwise engaged in classroom visits, learning interactions and reflection. One North Carolina principal summarized the current state of the job as being "stretched beyond their capacity…trying to fill the gaps and holes…and it is taking its toll…proving to be insurmountable, and it will undoubtedly impact the quality of the learning environment" (Prince, 2021, p.3).

CONCLUSION

Literacy is a lifelong skill. The public-school system must improve with respect to providing adequate reading comprehension instruction and growth. People read to learn about themselves, other people, and how they personally can contribute to, and function in, their community and the greater society. Current instructional practices have failed to provide a clear connection between foundational literacy skills and application (Prince, 2021). Current assessment practices are not providing sufficient data to pinpoint literacy deficits (Kilpatrick, 2015). Students experiencing poverty, students with adverse childhood experiences and students learning English often perform behind their literacy proficient peers (Gorski, 2018a; Snow, 2017). There is a sense of urgency for better early literacy teaching practices and better teacher capacity for culturally responsive teaching of literacy in early grades (Hammond, 2014).

Change to literacy teaching is inevitable for an increase in student success. However, lasting change must be systemic and rooted in cause. To make systemic and lasting change there must be a thoughtful analysis of the current systems in place as well as a change in thought patterns (Langley et al., 2009).

Using the Improvement Science approach to explore a problem of practice and strategically plan to adjust the system is the way scholarly practitioners (educational leaders, teachers, instructional coaches) can make gains in narrowing the research to practice knowledge differential. The tools outlined by Bryk et al. (2016) provide a process for getting to the root issues of practice, strategies, actions, and evaluations of planned intervention.

Considering continuous lower literacy achievement at Woodfin Elementary and this study's aim to increase literacy proficiency for kindergarten and first grade students, the

members of the design team brainstormed root causes, and implemented professional learning for teachers. The design team used professional learning sessions to build teaching capacity in teaching early literacy phonemic awareness skills and equity in instructional practices. The approach to improve the system serving students resulted in the emergence of change in teachers' culturally responsive perceptions and beliefs.

Direct professional learning and coaching that supports teachers with an equity lens, diagnostic skills and reasoning ability to design and implement intentional instruction for literacy learning are more effective than boxed curricula (Foorman & Torgesen, 2001). Increasing teacher capacity for early literacy instruction and culturally responsive pedagogy is crucial for all students to have access to successful literacy learning experiences that will affect the trajectory of their lives.

REFERENCES

3 steps to great coaching—Learning forward. (2015). *The Learning Professional: The Learning Forward Journal*. Retrieved from https://learningforward.org/journal/february-2015-issue/3-steps-to-great-coaching/

6 things to know… Pathways to grade-level reading. (2020, November 5). Retrieved December 29, 2020, from The Duke Endowment website: https://www.dukeendowment.org/story/6-things-to-know%E2%80%A6-pathways-to-grade-level-reading

90-day cycle handbook. (2013, October 1). Retrieved December 8, 2020, from Carnegie Foundation for the Advancement of Teaching website: https://www.carnegiefoundation.org/resources/publications/90-day-cycle-handbook/

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

Ableidinger, M. (2020, July 22). Perspective | NC Pathways to Grade Level Reading releases a new early childhood data dashboard. Retrieved December 29, 2020, from EducationNC website: https://www.ednc.org/perspective-nc-pathways-to-grade-level-reading-releases-a-new-early-childhood-data-dashboard/

Adair, J., Sanchez-Suzuki ColeGrove, K., & McManus, M. (2017). How the word gap argument negatively impacts young children of latinx immigrants' conceptualizations of learning. *Havard Educational Review*, *87*(No. 3), 309–453.

Adlof, S. M., & Hogan, T. P. (2019). If we don't look, we won't see: Measuring language development to inform literacy instruction. *Policy Insights from the Behavioral and Brain Sciences*, *6*(2), 210–217. https://doi.org/10.1177/2372732219839075

Amplify. (2021). North Carolina (mCLASS). Retrieved January 8, 2022, from Amplify website: https://amplify.com/north-carolina/

Archbald, D. (2008). Research versus problem solving for the Education Leadership Doctoral Thesis: Implications for form and function. *Educational Administration Quarterly*, *44*, 704–739. https://doi.org/doi: 10.1177/00131661X07313288

Attendance Works. (2022). Retrieved January 8, 2022, from Attendance Works website: https://www.attendanceworks.org/resources/

Bethell, C. D., Newacheck, P., Hawes, E., & Halfon, N. (2014). Adverse childhood experiences: Assessing the impact on health and school engagement and the mitigating role of resilience. *Health Affairs*, *33*(12), 2106–2115. https://doi.org/10.1377/hlthaff.2014.0914

Binks-Cantrell, E., Joshi, R. M., & Washburn, E. K. (2012). Validation of an instrument for assessing teacher knowledge of basic language constructs of literacy. *Annals of Dyslexia*, *62*(3), 153–171. https://doi.org/10.1007/s11881-012-0070-8

Blankstein, A. M., & Noguera, P. (2016). *Excellence through equity: Five principles of courageous leadership to guide achievement for every student*. ASCD.

Bottari, M. (2020, November 4). Why make the switch? Transitioning from word walls to sound walls [Teacher Resources]. Retrieved January 7, 2021, from Heggerty website: https://heggerty.org/blog/sound-walls/

Buncombe County Schools Human Resources. (2020). *Buncombe County Schools Full-Time/Part-Time Personnel Report* [BCS FT/PT Personnel Report].

Cabell, S. Q., Justice, L. M., McGinty, A. S., DeCoster, J., & Forston, L. D. (2015). Teacher–child conversations in preschool classrooms: Contributions to children's vocabulary

development. *Early Childhood Research Quarterly*, *30*, 80–92. https://doi.org/10.1016/j.ecresq.2014.09.004

Carey, R. L., Yee, L. S., & DeMatthews, D. (2018). Power, penalty, and critical praxis: Employing intersectionality in educator practices to achieve school equity. *The Educational Forum*, *82*(1), 111–130. https://doi.org/10.1080/00131725.2018.1381793

Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, *19*(1), 5–51. https://doi.org/10.1177/1529100618772271

Catts, H. W. (2018). The simple view of reading: Advancements and false impressions. *Remedial and Special Education*, *39*(5), 317–323. https://doi.org/10.1177/0741932518767563

Chitpin, S., & Evers, C. W. (2015). *Decision making in educational leadership: Principles, policies, and practices*. Taylor & Francis.

CMS retention bonuses will cost $48 million, funds will come from American Rescue Plan. (2021, December 10). Retrieved January 8, 2022, from Wcnc.com website: https://www.wcnc.com/article/news/education/charlotte-mecklenburg-schools-retention-bonuses-teachers/275-da625253-4a2e-4f68-a11a-9b58493e12e9

Coppens, K. (2018). Strengthening your word wall. *Science Scope*, *42*(4), 28–31.

Crow, R., Hinnant-Crawford, B. N., & Spaulding, D. T. (2019). *The educational leader's Guide to improvement science: Data, design and cases for reflection*. Myers Education Press.

Dahlgren, M. (2020a). *Sound wall and phonemes*. Retrieved from https://www.youtube.com/watch?v=Wws8Ghj0IJ0

Dahlgren, M. (2020b). *Sound walls and phonemes*. Retrieved from https://www.youtube.com/watch?v=Wws8Ghj0IJ0

Dahlgren, M. (n.d.). Kid lips™ picture cards only. Retrieved January 29, 2022, from Tools4reading website: https://www.tools4reading.com/product-page/kid-lips-picture-cards-only

DeNicolo, C. P., González, M., Morales, S., & Romaní, L. (2015). Teaching through testimonio: Accessing community cultural wealth in school. *Journal of Latinos and Education*, *14*(4), 228–243.

Derrington, M. L., & Angelle, P. S. (2013). Teacher leadership and collective efficacy: Connections and links. *International Journal of Teacher Leadership*, *4*(1).

Dickinson, D. K., Golinkoff, R. M., & Hirsh-Pasek, K. (2010). Speaking out for language: Why language is central to reading development. *Educational Researcher*, *39*(4), 305–310. https://doi.org/10.3102/0013189X10370204

Education in a Pandemic: The Disparate Impacts of COVID-19 on America's Students. (n.d.). Retrieved from https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf

Elbro, C., & de Jong, P. F. (2017). Orthographic learning is verbal learning: The role of spelling pronunciations. In K. Cain, D. L. Compton, & R. K. Parrila (Eds.), *Studies in Written Language and Literacy* (Vol. 15, pp. 169–190). Amsterdam: John Benjamins Publishing Company. https://doi.org/10.1075/swll.15.10elb

EngageNY. (2012). Retrieved from https://www.engageny.org/resource/common-core-in-ela-literacy-shift-6-academic-vocabulary

Fofaria, R. R. (2021, June 4). DPI maps out "science of reading" plan and returns to Amplify's mCLASS tool to assess readers. Retrieved February 5, 2022, from EducationNC website:

https://www.ednc.org/2021-06-03-dpi-science-reading-rollout-plan-amplify-mclass-tool-assess-young-readers/

Foorman, B. R., & Torgesen, J. (2001). Critical elements of classroom and small-group instruction promote reading success in all children. *Learning Disabilities Research and Practice*, *16*(4), 203–212. https://doi.org/10.1111/0938-8982.00020

Frontline Education [Aesoponline]. (2022).

Fundations® | Wilson Language Training. (n.d.). Retrieved January 21, 2021, from https://www.wilsonlanguage.com/programs/fundations/

Goddard, R., Goddard, Y., Kim, E. S., & Miller, R. (2015). A theoretical and empirical analysis of the roles of instructional leadership, teacher collaboration, and collective efficacy beliefs in support of student learning. *American Journal of Education*, *121*(4), 501–530.

Gorski, P. C. (2018). *Reaching and teaching students in poverty strategies for erasing the opportunity gap* (2nd ed.). Teachers College Press.

Goss, C. L., & Brown-Chidsey, R. (2012). Tier 2 reading interventions: Comparison of reading mastery and fundations double dose. *Preventing School Failure*, *56*(1), 65–74. https://doi.org/10.1080/1045988X.2011.565385

Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, *7*(1), 6–10. https://doi.org/10.1177/074193258600700104

Grissom, J. A., Egalite, A. J., & Lindsay, C. A. (2021). *How principals affect students and schools: A systematic synthesis of two decades of research*. Retrieved from https://www.wallacefoundation.org/knowledge-center/pages/how-principals-affect-students-and-schools-a-systematic-synthesis-of-two-decades-of-research.aspx

Hall, P., & Simeral, A. (2015). Teach, reflect, learn: Building your capacity for success in the classroom.

Hammond, Z. (2014). *Culturally responsive teaching and the brain: Promoting authentic engagement and rigor among culturally and linguistically diverse students*. Corwin Press.

Hattie, J. A. C. (2016). Learning strategies: A synthesis and conceptual model. *Learning Strategies*, 13.

Herrera, S. G., Porter, L., & Barko-Alva, K. (2020). *Equity in school–parent partnerships: Cultivating community and family trust in culturally diverse classrooms*. Teachers College Press.

Hinnant-Crawford, B. N. (2020). *Improvement science in education: A primer.* Stylus Publishing, LLC.

Hjetland, H. N., Lervåg, A., Lyster, S.-A. H., Hagtvet, B. E., Hulme, C., & Melby-Lervåg, M. (2019). Pathways to reading comprehension: A longitudinal study from 4 to 9 years of age. *Journal of Educational Psychology*, *111*(5), 751–763. (2018-62688-001). https://doi.org/10.1037/edu0000321

Hoff, E. (2013). Interpreting the early language trajectories of children from low-SES and language minority homes: Implications for closing achievement gaps. *Developmental Psychology*, *49*(1), 4–14. https://doi.org/10.1037/a0027238

HOMEBASE. (2020). *Buncombe County Schools year-to-date attendance percentages for school year 2019/2020.* [Year-to-Date Attendance Percentages]. BCS Central Office HOMEBASE.

Hulme, C., & Snowling, M. J. (2011). Children's reading comprehension difficulties: Nature, causes, and treatments. *Current Directions in Psychological Science*, *20*(3), 139–142. https://doi.org/10.1177/0963721411408673

Hulme, C., & Snowling, M. J. (2015). Learning to read: What we know and what we need to understand better. *Europe PMC Funders Group*.

Human subjects CITI training. (2022). Retrieved from https://www.wcu.edu/_files/provost/Research-CITITraningGuide.pdf

Ishikawa, K. (1986). *Guide to quality control*. Asian Productivity Organization.

Jackson, J. (2018). Build an interactive word wall. *The Science Teacher*, *85*(1), 42–46.

Jackson, J., Swinton, M., Kinney, B., & Cantu, R. (2017). Is it worth it? Can I do it? An interactive word wall professional development explores how to build language proficiency during a Science lesson. *Science & Children*, *55*(3), 84–89. https://doi.org/10.2505/4/sc17_055_03_84

John Hattie: Collective teacher efficacy. (2018). Retrieved from https://www.youtube.com/watch?v=UCMV692itfg

Johnson, K. G. (2016). Instructional coaching implementation: Considerations for k-12 administrators. *Journal of School Administration Research and Development*, 1(2) 37–40.

Johnston, W., & Young, C. (2019). *Principal and teacher preparation to support the needs of diverse students: National findings from the American educator panels*. RAND Corporation. https://doi.org/10.7249/RR2990

Khalifa, M. A., Gooden, M. A., & Davis, J. E. (2016). Culturally responsive school leadership: A synthesis of the literature. *Review of Educational Research*, *86*(4), 1272–1311. https://doi.org/10.3102/0034654316630383

Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. John Wiley & Sons.

Kilpatrick, D. A. (2016). *Equipped for reading success*. Casey & Kirsch Publishers.

Kunnari, I., Ilomäki, L., & Toom, A. (2018). Successful teacher teams in change: The role of collective efficacy and resilience. *Internation Journal of Teaching and Learning in Higher Education*, *30*, 111–126.

Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0: A.k.a. the remix. *Harvard Educational Review*, *84*(1). Retrieved from http://search.proquest.com/docview/1511014412?pq-origsite=summon

Langley, G. J., Moen, R. D., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: A practical approach to enhancing organizational performance* (2nd ed.). Jossy-Bass.

Learning Forward the Professional Learning Association. (2020). *Revised standards for professional learning discussion*. Learning Forward The Professional Learning Association. Retrieved from https://learningforward.org/standards/

Lervåg, A., Hulme, C., & Melby-Lervåg, M. (2018). Unpicking the developmental relationship between oral language skills and reading comprehension: It's simple, but complex. *Child Development*, *89*(5), 1821–1838. https://doi.org/10.1111/cdev.12861

Lomotey, K. (2018). *The disquistion at Wetern Carolina University: The capstone experience in the university's EdD program*. Western Carolina University.

Mathew, D. P., Mathew, D. P., Prince, M., & Peechattu, J. (2017). Reflective practices: A means to teacher development. *Asia Pacific Journal of Contemporary Education and Communication Technology*, *3*(1), 7.

Morgan, D. L. (1997). Focus groups as qualitative research: Planning and research design for focus groups. *SAGE Research Methods*, 32–46.

Murphy, V. A. (2018). Chapter 8. Literacy development in linguistically diverse pupils. In D. Miller, F. Bayram, J. Rothman, & L. Serratrice (Eds.), *Studies in Bilingualism* (Vol. 54, pp. 155–182). Amsterdam: John Benjamins Publishing Company. https://doi.org/10.1075/sibil.54.08mur

NC MTSS implementation guide. (2021). Retrieved January 18, 2021, from http://www.livebinders.com/play/play?id=2052295

NCDPI EVAAS. (2019). *North Carolina department of public instruction district value-added report.* [EVAAS]. NCDPI EVAAS.

Net Promoter Score® (NPS). (2022). Retrieved January 17, 2022, from https://www.qualtrics.com/support/survey-platform/survey-module/editing-questions/question-types-guide/specialty-questions/net-promoter-score/

North Carolina Read to Achieve Program Article 8 § 115C-83.1—83.11. , Pub. L. No. Article 8 § 115C-83.1-83.11, 14 (2017).

Parsons, S. A., Vaughn, M., Scales, R. Q., Gallagher, M. A., Parons, A. W., Davis, S., G., … Allen, Melony. (2018). Teachers' instructional adaptations: A research synthesis. *Review of Educational Research*, *88*(2), 205–242.

Pathways to Grade-Level Reading. (2022). Retrieved January 3, 2022, from North Carolina Early Childhood Foundation website: https://buildthefoundation.org/initiative/pathways-to-grade-level-reading/

Pathways to grade-level reading | North Carolina Early Childhood Foundation. (n.d.). Retrieved January 2, 2022, from https://buildthefoundation.org/initiative/pathways-to-grade-level-reading/

PaTTAN. (2017). *Sound Walls*. Retrieved from https://www.youtube.com/watch?v=ymw6aCp7m14

PowerSchool [Buncombe County Schools]. (2022). North Carolina.

Prince, S. (2021, October 4). Perspective | Staffing shortages stymie school leaders' plans. Retrieved December 28, 2021, from EducationNC website: https://www.ednc.org/perspective-staffing-shortages-stymie-school-leaders-plans/

Read to Achieve Guidebook: NC Read to Achieve Repository. (n.d.). Retrieved January 18, 2021, from https://ncdpi.instructure.com/courses/1524/pages/read-to-achieve-guidebook

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). SAGE.

Scales, Roya Q. (2021). Authentic, challenging tasks. In *Principals of effective literacy instruction, grades k-5*.

Scales, R. Q., Wolsey, T. D., Young, J., Smetana, L., Grisham, D. L., Lenski, S., … Chambers, S. A. (2017). Mediating factors in literacy instruction: How novice elementary teachers navigate new teaching contexts. *Reading Psychology*, *38*(6), 604–651. https://doi.org/10.1080/02702711.2017.1323056

Sensoy, O., & DiAngelo, R. (2017). *Is everyone really equal?: An introduction to key concepts in social justice education* (2nd ed.). Teachers College Press.

Siwatu, K. O. (2007). Preservice teachers' culturally responsive teaching self-efficacy and outcome expectancy beliefs. *Teaching and Teacher Education*, *23*(7), 1086–1101. https://doi.org/10.1016/j.tate.2006.07.011

Snow, C. E. (2017). The role of vocabulary versus knowledge in children's language learning: A fifty-year perspective / El papel del vocabulario frente al conocimiento en el aprendizaje lingüístico de los niños: una perspectiva de cincuenta años. *Infancia y Aprendizaje*, *40*(1), 1–18. https://doi.org/10.1080/02103702.2016.1263449

Sousa, D. A. (2005). *How the brain learns to read*. Corwin Press.

Spear-Swerling, L., & Cheesman, E. (2012). Teachers' knowledge base for implementing response-to-intervention models in reading. *Reading and Writing*, *25*(7), 1691–1723. https://doi.org/10.1007/s11145-011-9338-3

Spear-Swerling, L., & Zibulsky, J. (2014). Making time for literacy: Teacher knowledge and time allocation in instructional planning. *Reading and Writing*, *27*(8), 1353–1378. https://doi.org/10.1007/s11145-013-9491-y

State Superintendent. (2021). *Operation Polaris: Navigation students toward a brighter future.* Retrieved from https://www.dpi.nc.gov/media/12497/open

The Charlotte Observer. (2018).

The Nation's Report Card | NAEP. (2019). Retrieved December 8, 2020, from https://nces.ed.gov/nationsreportcard/

Tolman, C. (2017). The relationship between teacher knowledge and effective RTI: When we know better, we do better. *Perspectives on Language and Literacy*, *43*(3), 23–27.

Vaughn, M., Scales, R. Q., Stevens, E. Y., Kline, S., Barrett-Tatum, J., Wig, A. V., … Wellman, D. (2019). Understanding literacy adoption policies across contexts: A multi-state

examination of literacy curriculum decision-making. *Journal of Curriculum Studies*, (53)3, 333-352. https://doi.org/10.1080/00220272.2019.1683233

Verhoeven, L., & van Leeuwe, J. (2012). The simple view of second language reading throughout the primary grades. *Reading and Writing*, *25*(8), 1805–1818. https://doi.org/10.1007/s11145-011-9346-3

WIDA Consortium. (2021, April 7). Wida ELD standards framework. Retrieved from WIDA ELD Standards Framework website: https://wida.wisc.edu/teach/standards/eld

Wilson, S. J., Dickinson, D. K., & Rowe, D. W. (2013). Impact of an Early Reading First program on the language and literacy achievement of children from diverse language backgrounds. *Early Childhood Research Quarterly*, *28*(3), 578–592. https://doi.org/10.1016/j.ecresq.2013.03.006

Wright, T. S., & Neuman, S. B. (2014). Paucity and disparity in kindergarten oral vocabulary instruction. *Journal of Literacy Research*, *46*(3), 330–357. https://doi.org/10.1177/1086296X14551474

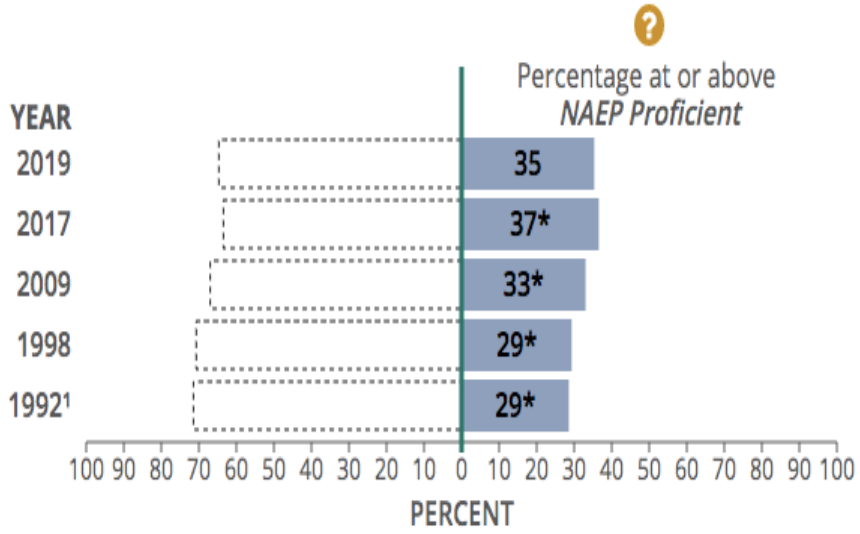
Yell, M. L., Shriner, J. G., & Katsiyannis, A. (2006). Individuals with disabilities education improvement act of 2004 and IDEA regulations of 2006: Implications for educators, administrators, and teacher trainers. *Focus On Exceptional Children*, (39)1, 24.

Yeung, S. S., & Savage, R. (2020). Teaching grapheme-phoneme correspondences using a direct mapping approach for at-risk second language learners: A randomized controlled trial. *Journal of Learning Diabilitites*, *53*, 131–144.

APPENDIX A

Trend in fourth-grade NAEP reading achievement-level results

BASELINE: ***NAEP PROFICIENT*** set at *NAEP Basic* Show NAEP achievement-level details



* Significantly different ($p < .05$) from 2019.

1 Accommodations not permitted.

NOTE: NAEP achievement levels are to be used on a trial basis and should be interpreted and used with caution.

APPENDIX B

Western Carolina University
Consent Form to Participate in a Research Study

You are being invited to participate in a research study of culturally relevant instruction as it relates to early literacy teaching and learning. You were selected as a possible participant because you are a part of the K/1 instructional team at Woodfin Elementary School. We ask that you read this form and ask any questions you may have before agreeing to be in the study. Participation is completely voluntary.

Project Title: Equity in Learning: Linking Oral Language to Print

This study is being conducted by: Western Carolina University (WCU) student: April Wright
WCU Faculty Chair: Dr. Catherine Andrews

Description and Purpose of the Research: You are invited to participate in a research study about early literacy, culturally responsive teaching. By doing this study we hope to learn about the English language construct and cultural awareness knowledge that K-1 teachers have and currently apply to their instruction. We also hope to add to teacher's existing knowledge to improve early literacy learning outcomes for all Kindergarten and first grade students, with a focus on English language learners.

What you will be asked to do: As a teacher or instructional assistant, you will be asked to:

1. Take two pre and post surveys (approximately 15 minutes each)
2. Attend two professional development cycles to add to your knowledge of early literacy, culturally responsive teaching (approximately two hours each)
3. Participate in two instructional coaching cycles to support application of learning to instruction (approximately one hour each)
4. Attend a focus group session to discuss your learning, application to instruction and student learning impact (approximately one hour)

Risks and Discomforts: There are no anticipated risks from participating in this research. The researcher will maintain the privacy of all participants. Pseudonyms will be used in all post research writing.

Benefits: There are no direct benefits to you for participating in this research study. The study may help us better understand the effects of early literacy, with a focus on phonemic awareness and culturally responsive instruction.

Privacy/Confidentiality/Data Security: The data collected in this research study will be kept confidential. Participation in research may involve some loss of privacy. We will do our best to make sure that the information about you is kept confidential, but we cannot guarantee total confidentiality. Your personal information may be viewed by individuals involved in the

research and may be seen by people including those collaborating and regulating the study. We will share only the minimum necessary information in order to conduct the research. Your personal information may also be given out if required by law, such as pursuant to a court order. While the information and data resulting from this study may be presented at scientific meetings or published in a scientific journal, your name or other personal information will not be revealed.

We will collect your information through surveys and focus groups. Digital information will be stored in a restricted access folder. Paper information will be stored in a locked file cabinet. There are two circumstances where we would be required to break confidentiality and share your information with local authorities. The first is if we become aware or have a reason to believe that a child, an elder, or a disabled individual is being abused or neglected. The second is if you make a serious threat to harm yourself or others.

The research team will work to protect your data to the extent permitted by technology. It is possible, although unlikely, that an unauthorized individual could gain access to your responses because you are responding online. This risk is similar to your everyday use of the internet.

We will request that all participants respect the confidentiality of the group and do not share any other participant's responses outside of the group. However, we cannot guarantee your privacy or confidentiality because there is always the possibility that another member of the group could share what was said. Pseudonyms will be assigned to each participant, and during the course of the interview and in all notes, you will only be referred to by your pseudonym.

Audio recordings will be collected during this study and used to transcribe focus group discussions. The recordings will be destroyed after transcription. The recordings will not be shared with the general public. You do have to agree to be recorded in order to participate in the main part of this study.

If you give the research team permission to quote you directly, the researchers will give you a pseudonym and will generalize your quote to remove any information that could be personally identifying.

Voluntary Participation: Participation is voluntary, and you have the right to withdraw your consent or discontinue participation at any time without penalty. If you choose not to participate or decide to withdraw, there will be no impact on your employment. If you decide to withdraw, write a letter to the researcher indicating your decision of withdrawal from the study.

Participants will not receive payment or other form of compensation for being in the study.

Contact Information: For questions about this study, please contact April Wright at 828-232-4287 or alwright9@catamount.wcu.edu. You may also contact Dr. Catherine Andrews the principal investigator and faculty advisor for this project, at andrewsc@email.wcu.edu

If you have questions or concerns about your treatment as a participant in this study, you may contact the Western Carolina University Institutional Review Board through the

Office of Research Administration by calling 828-227-7212 or emailing irb@wcu.edu. All reports or correspondence will be kept confidential to the extent possible.

You will be given a copy of this information to keep for your records.

I understand what is expected of me if I participate in this research study. I have been given the opportunity to ask questions and understand that participation is voluntary. My signature shows that I agree to participate and am at least 18 years old.

Participant Name (printed): _____

Participant Signature: _____ Date: _____

Name of Researcher Obtaining Consent: _____

Researcher Signature: _____ Date: _____

If you would like to receive a summary of the results, once the study has been completed, please write your email address (as legibly as possible) here:

_____

I do □ or do not □ give my permission to the investigators to quote me directly in their research.

The investigators may □ or may not □ digitally record this interview.

Participant Name (printed): _____

Signature: _____ Date: _____

APPENDIX C

Western Carolina University
Consent Form to Participate in a Research Study

You are being invited to participate in a research study of culturally relevant instruction as it relates to early literacy teaching and learning. You were selected as a possible participant because you have a Kindergartener or first grader that attends Woodfin Elementary School. We ask that you read this form and ask any questions you may have before agreeing to be in the study. Participation is completely voluntary.

Project Title: Equity in Learning: Linking Oral Language to Print

This study is being conducted by: Western Carolina University (WCU) student: April Wright
WCU Faculty Chair: Dr. Catherine Andrews

Description and Purpose of the Research: You are invited to participate in a research study about early literacy, culturally responsive teaching. By doing this study we hope to learn about the English language construct and cultural awareness knowledge that K-1 teachers have and currently apply to their instruction. We also hope to add to teacher's existing knowledge to improve early literacy learning outcomes for all Kindergarten and first grade students, with a focus on English language learners.

What you will be asked to do: Your student will be asked to:

1. Take pre and post Phonemic Awareness Screening Test (PAST)
2. Take pre and post mCLASS Literacy Test
3. Participate in literacy learning classroom activities

Risks and Discomforts: There are no anticipated risks from participating in this research. The researcher will maintain the privacy of all participants. Pseudonyms will be used in all post research writing.

Benefits: There are no direct benefits to you for participating in this research study. The study may help educators and educational leaders better understand the effects of early literacy, with a focus on phonemic awareness and culturally responsive instruction.

Privacy/Confidentiality/Data Security: The data collected in this research study will be kept confidential. Participation in research may involve some loss of privacy. We will do our best to make sure that the information about you is kept confidential, but we cannot guarantee total confidentiality. Your student's personal information may be viewed by individuals involved in the research and may be seen by people including those collaborating and regulating the study. We will share only the minimum necessary information in order to conduct the research. Your student's personal information may also be given out if required by law, such as pursuant to a court order. While the information and data resulting from this study may be presented at

scientific meetings or published in a scientific journal, your student's name or other personal information will not be revealed.

We will collect your information through surveys, focus groups and assessments. Digital information will be stored in a restricted access folder. Paper information will be stored in a locked file cabinet.

There are two circumstances where we would be required to break confidentiality and share your information with local authorities. The first is if we become aware or have a reason to believe that a child, an elder, or a disabled individual is being abused or neglected. The second is if you make a serious threat to harm yourself or others.

The research team will work to protect your student's data to the extent permitted by technology. It is possible, although unlikely, that an unauthorized individual could gain access to your responses because you are responding online. This risk is similar to your student's everyday use of the internet.

We will request that all participants respect the confidentiality of the group and do not share any other participant's responses outside of the group. However, we cannot guarantee your student's privacy or confidentiality because there is always the possibility that another member of the group could share what was said. Pseudonyms will be assigned to each participant, and during the course of the interview and in all notes, you will only be referred to by your pseudonym.

Audio recordings will be collected during this study and used to transcribe focus group discussions. The recordings will be destroyed after transcription. The recordings will not be shared with the general public. You do have to agree to be recorded in order to participate in the main part of this study.

Voluntary Participation: Participation is voluntary, and you have the right to withdraw your consent or discontinue participation at any time without penalty. If you choose not to participate or decide to withdraw, there will be no impact on you or your student. If you decide to withdraw, write a letter to the researcher indicating your decision of withdrawal from the study.

Participants will not receive payment or other form of compensation for being in the study.

Contact Information: For questions about this study, please contact April Wright at 828-232-4287 or alwright9@catamount.wcu.edu. You may also contact Dr. Catherine Andrews the principal investigator and faculty advisor for this project, at andrewsc@email.wcu.edu

If you have questions or concerns about your treatment as a participant in this study, you may contact the Western Carolina University Institutional Review Board through the Office of Research Administration by calling 828-227-7212 or emailing irb@wcu.edu. All reports or correspondence will be kept confidential to the extent possible.

You will be given a copy of this information to keep for your records.

My signature below indicates that I give consent for my child, _____, to participate in this study. I understand what is expected of my child and that his/her participation is voluntary.

Parent/Guardian Name (printed): _____

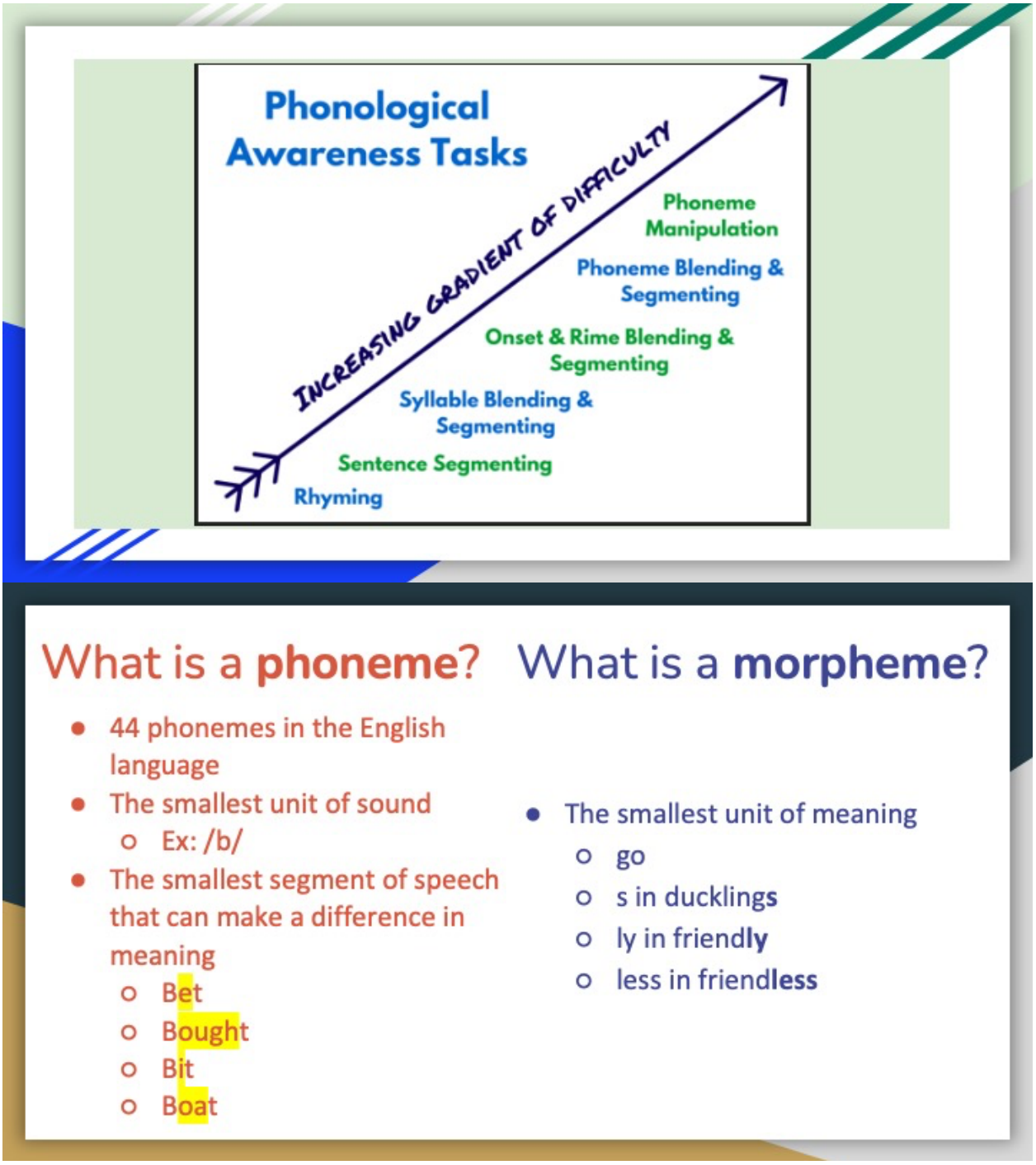
Signature: _____ Date: _____

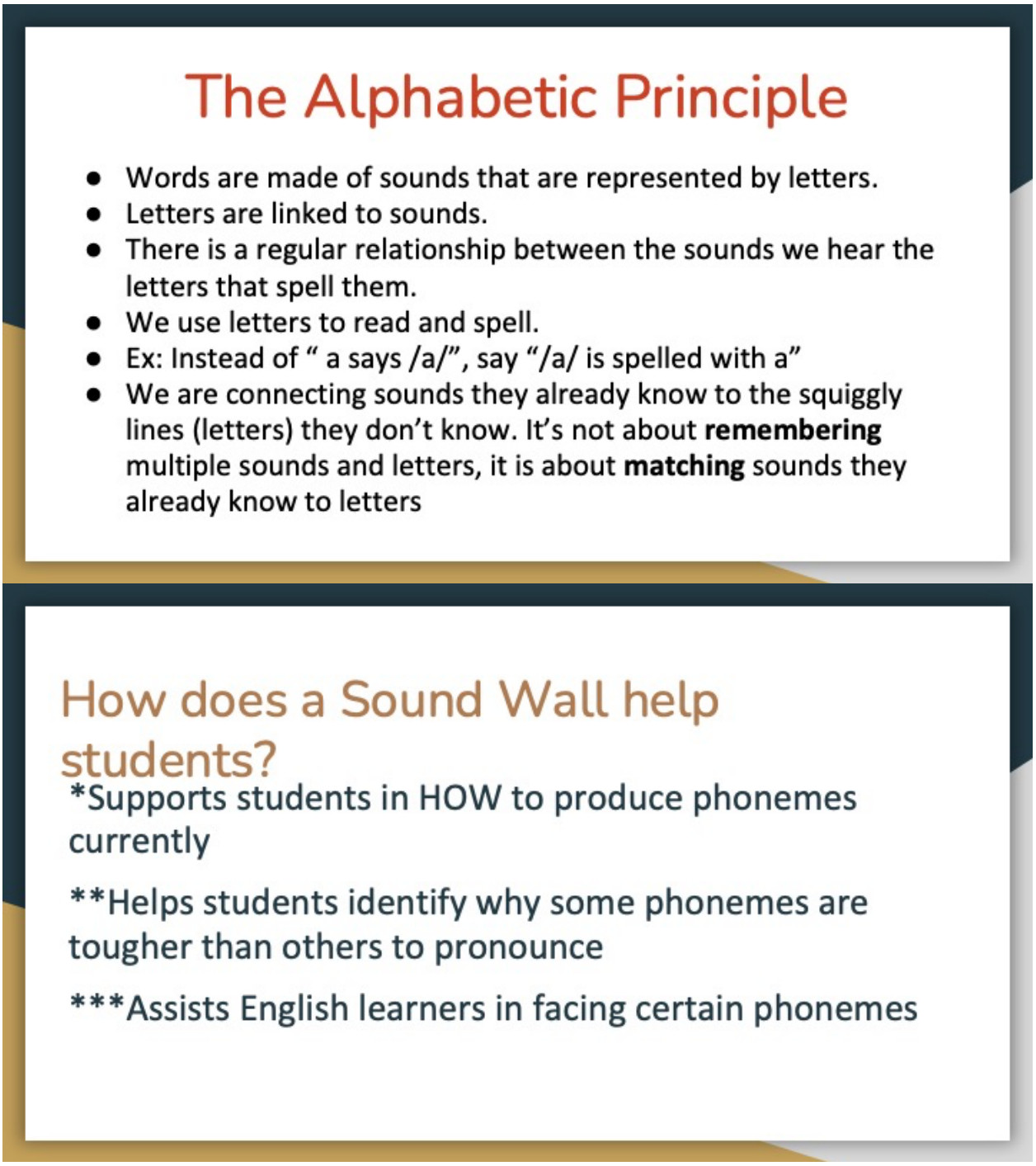
APPENDIX D

Implementing a Sound Wall in Your Classroom: Professional Development

Importance of Phonological Awareness

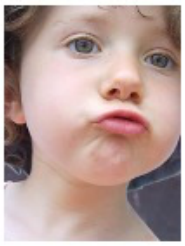
- Children are not born to read but they ARE born to speak
- Phonological Awareness is simply JUST an awareness of sound
- It is important because students must first attend to the sound structure of words
- We go from whole to part and part to whole
- Next, they learn how to connect/combine sounds & letter patterns to read and spell (This is phonics!)
- Letters are the code for the sounds


Phonological Awareness Tasks
INCREASING GRADIENT OF DIFFICULTY
Phoneme Manipulation
Phoneme Blending & Segmenting
Onset & Rime Blending & Segmenting
Syllable Blending & Segmenting
Sentence Segmenting
Rhyming
What is a phoneme?
44 phonemes in the English language
The smallest unit of sound
Ex: /b/
The smallest segment of speech that can make a difference in meaning
Bet
Bought
Bit
Boat
What is a morpheme?
The smallest unit of meaning
go
s in ducklings
ly in friendly
less in friendless


The Alphabetic Principle
Words are made of sounds that are represented by letters.
Letters are linked to sounds.
There is a regular relationship between the sounds we hear the letters that spell them.
We use letters to read and spell.
Ex: Instead of " a says /a/", say "/a/ is spelled with a"
We are connecting sounds they already know to the squiggly lines (letters) they don't know. It's not about remembering multiple sounds and letters, it is about matching sounds they already know to letters
How does a Sound Wall help students?
*Supports students in HOW to produce phonemes currently
**Helps students identify why some phonemes are tougher than others to pronounce
***Assists English learners in facing certain phonemes

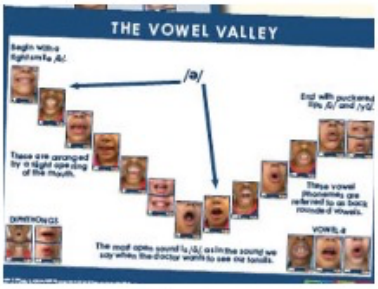
3 Components necessary for mastering English phonology:

1. Sequencing phonemes
2. Combining phonemes
3. Articulating phonemes



Let's build your sound wall!

Identify a space in your classroom



Vowel Valley

Consonant Wall

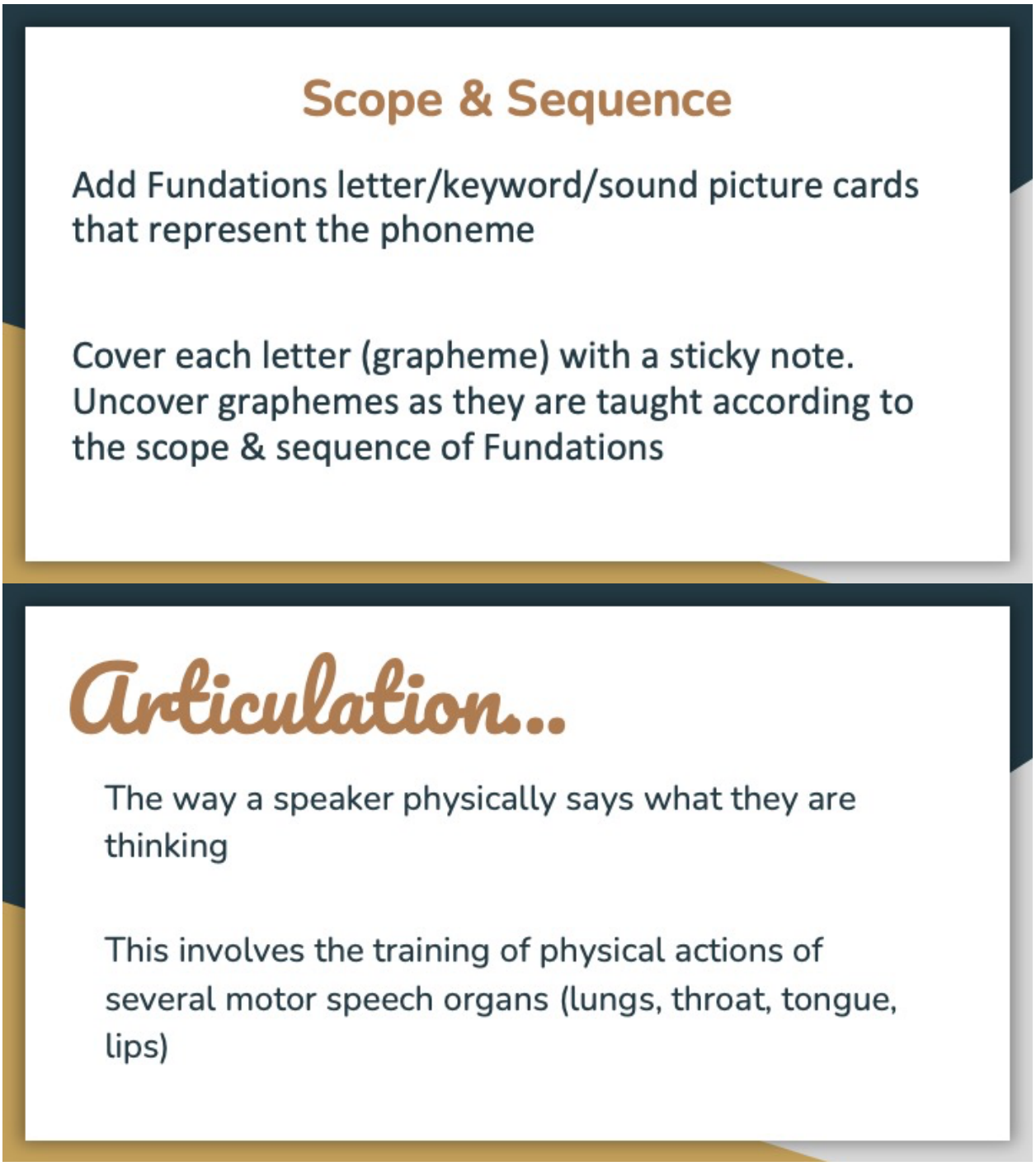
THese do NOT have to be next to each other

These DO need to both be visible to your students so that they can interact with them throughout the day

Turn & Talk:

1. Is your location easily accessible for both your students and you?
2. If placed out of reach, do you have a laser pointer or flashlight to highlight out of reach sounds?

Make a plan in your head


Scope & Sequence
Add Fundations letter/keyword/sound picture cards that represent the phoneme
Cover each letter (grapheme) with a sticky note. Uncover graphemes as they are taught according to the scope & sequence of Fundations
Articulation...
The way a speaker physically says what they are thinking
This involves the training of physical actions of several motor speech organs (lungs, throat, tongue, lips)

The Consonant Chart

Consonant Chart Sound Wall

Model Wall on p.9

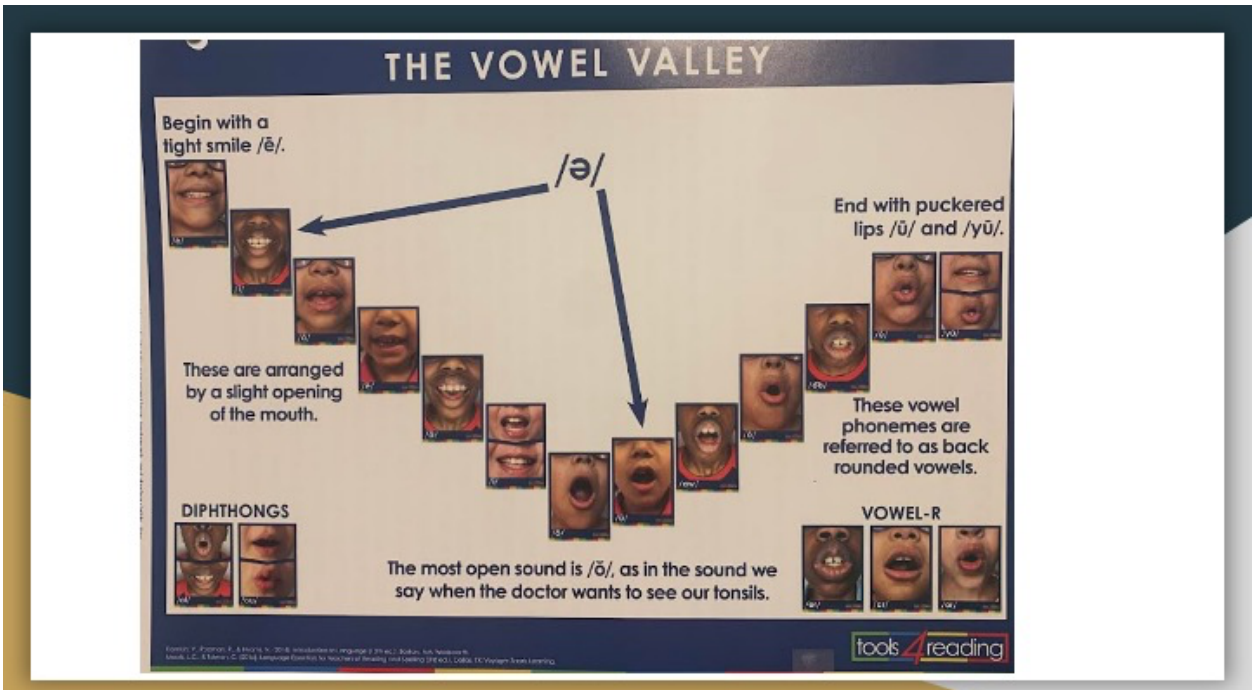
Lips Together	Teeth on lip	Tongue between teeth	Tip of tongue raised to bump behind top teeth	Lips rounded tongue pulled back	Back of tongue lifted	Back of throat
/p/ /b/	/f/ /v/	/th/ /th/	/t/ /d/	/sh/ /zh/	/k/ /g/	/h/
/m/			/n/	/ch/ /j/	/ng/	
/wh/ /w/			/s/ /z/	/y/		
			/l/	/r/		

Consonant Chart Sound Wall

Model Wall on p.9

Stop	/p/ /b/	/t/ /d/	/k/ /g/		
Nasal	/m/	/n/	/ng/		
Fricatives	/f/ /v/	/th/ /th/	/s/ /z/	/sh/ /zh/	/h/
Affricates	/ch/ /j/				
Glides	/wh/ /w/	/y/			
Liquids	/l/	/r/			

The Vowel Valley



4 Instructional Segments in each Lesson:

(p.5-6)

1. Special Notes for the Teacher
2. Tips to Apply
3. For the Native Spanish Speaker
4. Instructional Sequence
    a. I do
    b. We do
    c. I do
    d. We do
    e. YOU do

Scope & Sequence

- **Consonants Phonemes** p.24-73
- **Short Vowel Phonemes** p.74-83
- **Long Vowels** p.84-93
- **Dipthongs** (Vowel Teams) p.94-97
- **Variant Vowels** p.98-103

APPENDIX E

Participant Sound Wall Handout

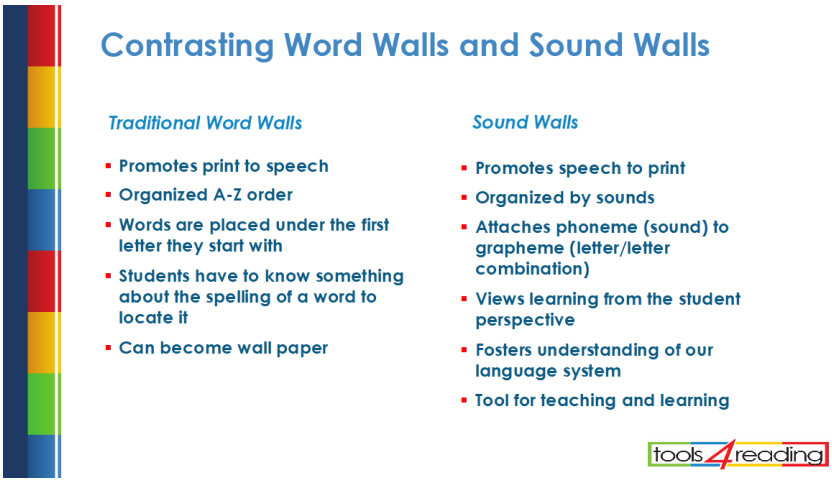
Sound Walls and Kid Lips

What is a Sound Wall?

- A sound wall is set up according to the articulation of speech sounds.
- Moving from the front of your mouth to the back of the throat
- Approaching things from a learner viewpoint rather than a teacher viewpoint
- Anchor to teach letter – sound knowledge and articulatory gestures
- Attaching phonemes to orthographic patterns
  - **This has everything to do with print**

Why Use a Sound Wall?

1. Articulatory gestures help to _____ phonemes.
2. Attention is focused on the various _____ and _____ representing phonemes.



Sound Walls: How to Begin

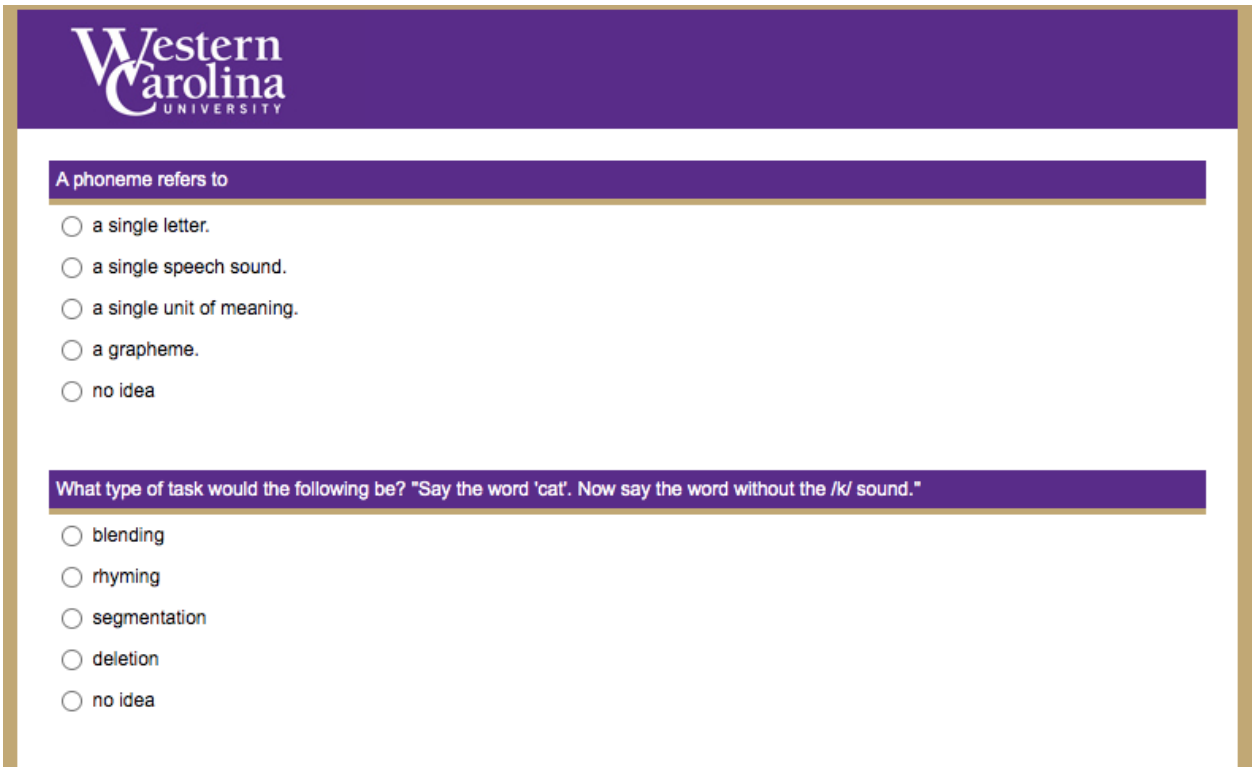
1. Begin with sounds by teaching the articulation of phonemes.
   - If you currently use a word wall, you are going to have to add more graphemes to match phonemes (44 phonemes)
2. Build a sound wall as you teach the phonemes, and add the graphemes as they are introduced.
   - If you teach Foundation, start with common consonants and short vowels.
3. If you have already introduced graphemes, add the mouth pictures, and review the articulation of each phoneme daily. The key is repetition!

13

Kid Lips© Tools4reading.com
mary@tools4reading.com

APPENDIX F

Basic Language Constructs of Literacy Survey



How many speech sounds are in the following words? For example, the word "cat" has 3 speech sounds 'k'-'a'-'t'. Speech sounds do not necessarily equal the number of letters.

box	
grass	
ship	
moon	
brush	
knee	
through	

0% 100%

For each of the words on the left, determine the number of morphemes.

disassemble	
heaven	
observer	
spinster	
pedestal	
frogs	
teacher	

Phonological awareness is:

- ◯ the ability to use letter-sound correspondence to decode.
- ◯ the understanding of how spoken language is broken down and manipulated.
- ◯ a teaching method for decoding skilss.
- ◯ the same as phonics.
- ◯ no idea

Phonemic awareness is:

- ◯ the sames as phonological awareness.
- ◯ the understanding of how letters and sounds are put together to form words.
- ◯ the ability to break down and manipulate the individual sounds in spoken language.
- ◯ the ability to use sound-symbol correspondences to read new words.
- ◯ no idea

If you say the word and then reverse the order of the sounds, ice would be:

- ○ easy
- ○ sea
- ○ size
- ○ sigh
- ○ no idea

If you say the word, and then reverse the order of the sounds, enough would be:

- ○ fun
- ○ phone
- ○ funny
- ○ one
- ○ no idea

For each of the words on the left, determine the number of morphemes.

disassemble	
heaven	
observer	
spinster	
pedestal	
frogs	
teacher	

A "soft c" is in the word:

- ○ Chicago
- ○ cat
- ○ chair
- ○ city
- ○ none of the above
- ○ no idea

Click to write the question text

- ○ Click to write Choice 1
- ○ Click to write Choice 2
- ○ Click to write Choice 3

Identify the pair of words that begin with the same sound:

- ○ joke-goat
- ○ chef-shoe
- ○ quiet-giant
- ○ chip-chemist
- ○ no idea

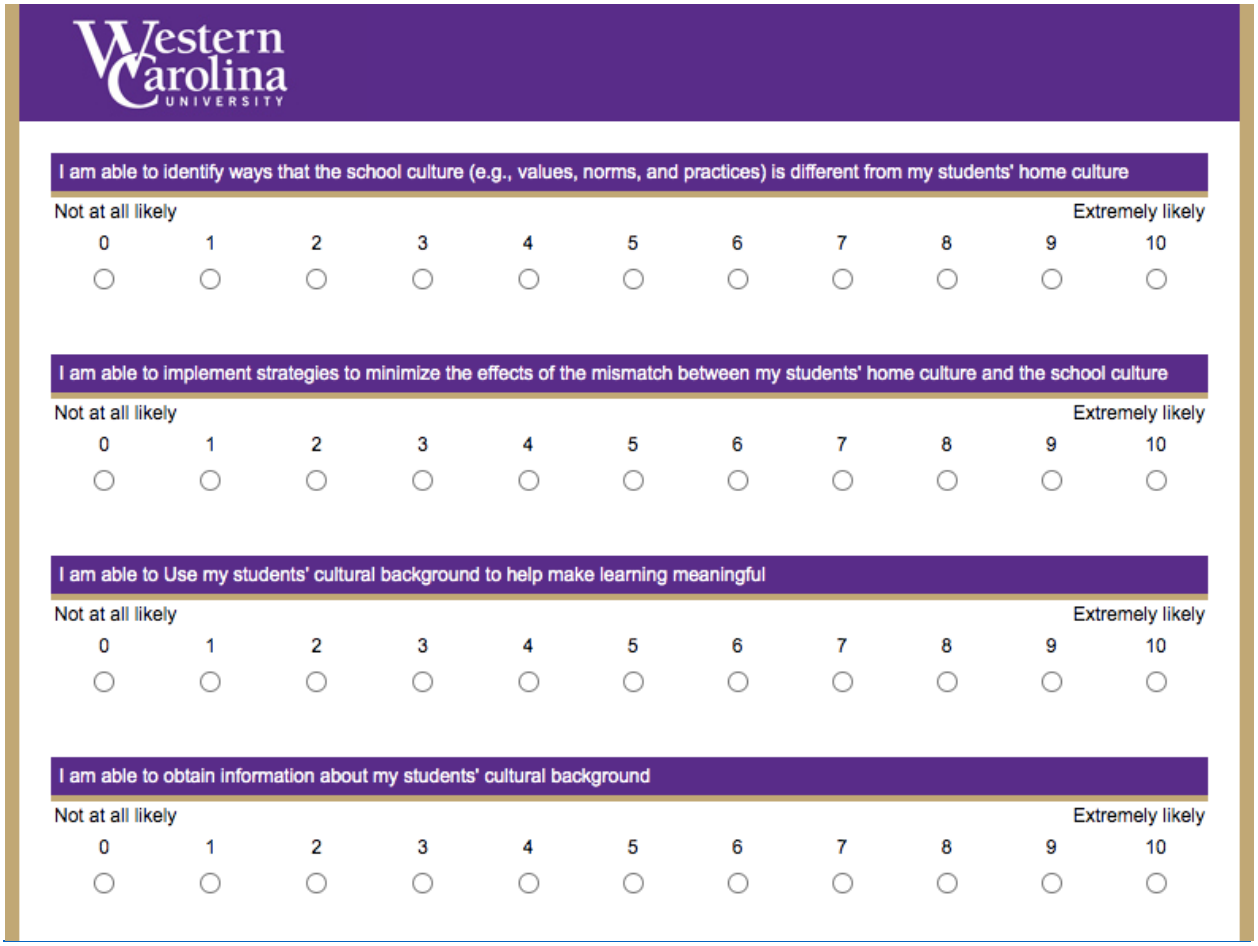
APPENDIX G

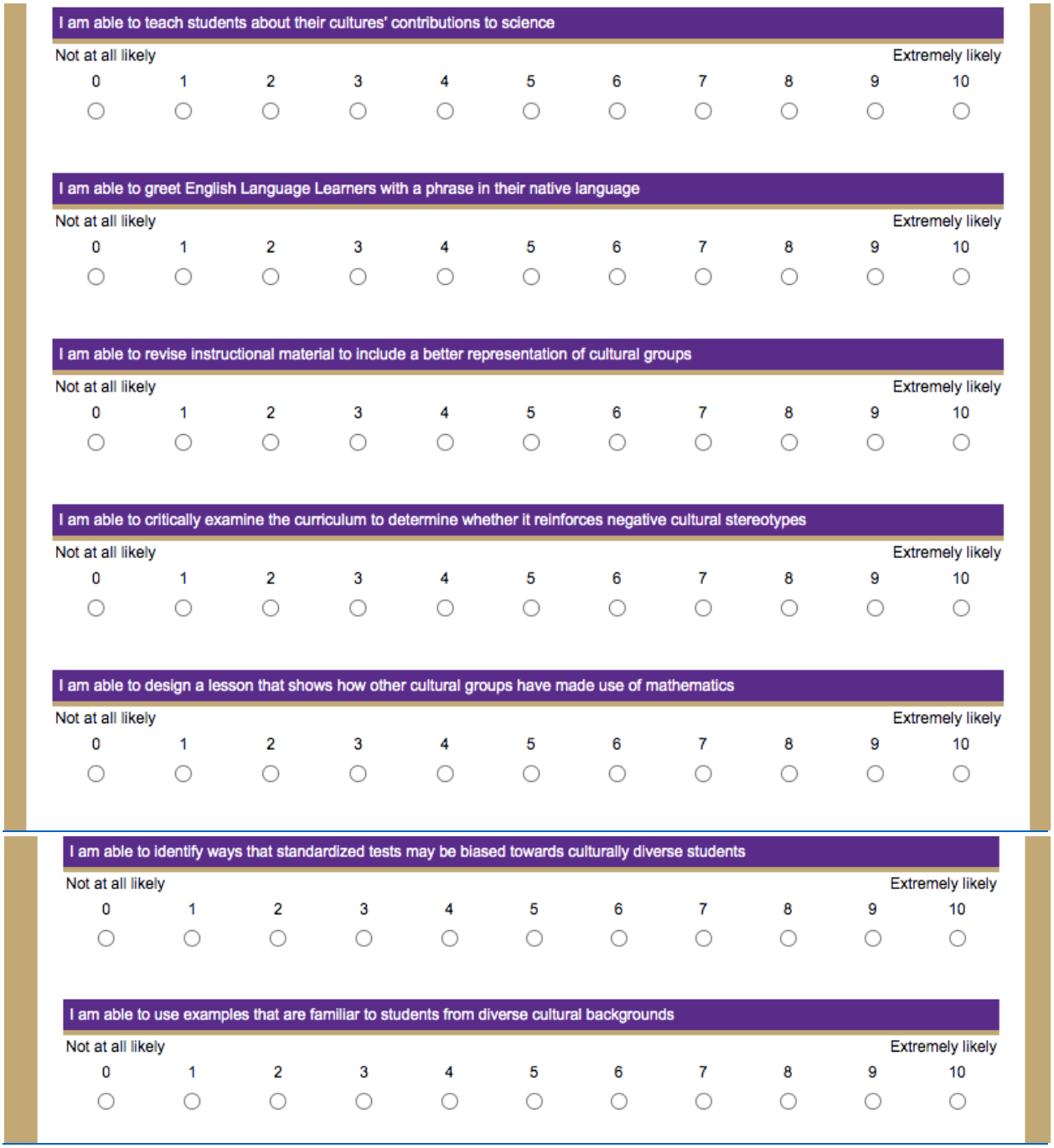
Improvement Science: Matrix Analysis

Improvement Science: Matrix of Analysis					
Improvement Effort	**Type of Measure**	**Type of Data Collected**	**Frequency /Threshold for Intervention Modification**	**Analytical Strategy / Data Displays**	**Rational**
AIM: Increase Literacy learning outcomes for K-1 students from 50% to 100% proficient by the end of the school year. **Improvement Initiatives**- Engage teachers in a serious of the Science of Reading with a focus on Phonemic Awareness	**Outcome**	Student Assessment Instruments: PAST and	Monthly	Quantitative descriptive / Chi Square	IS (Langley et al., 2009)
	Driver (To what extent does targeted professional learning increase teacher capacity for diagnosing student literacy skill deficits and impact student learning?)	1)Basic Language Constructs survey 2) Culturally Responsive Teaching Self-Efficacy survey 3) Interviews	1) 2 times- pre/post 2) 2 times- pre/post 3) 1 time per profession learning cycle (2 total)	Surveys: Quantitative descriptive Interviews: transcription with vivo coding	Binks-Cantrell, et. al. 2012) (Siwatu, 2007) Rubin and Rubin
	Process (How is it working?)	Observation Tool	2 times- 1 time during coaching cycle	Quantitative descriptive	IS(Hinnant-Crawford, 2020a) (Ladson-Billings, 2014)
	Balancing	Fidelity of current Fundations curriculum using Qualtrics/Pareto chart	weekly	Qualtrics / Pareto chart	IS(Langley et al., 2009)

APPENDIX H

CRTSE Survey





I am able to teach students about their cultures' contributions to science

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

I am able to greet English Language Learners with a phrase in their native language

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

I am able to revise instructional material to include a better representation of cultural groups

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

I am able to critically examine the curriculum to determine whether it reinforces negative cultural stereotypes

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

I am able to design a lesson that shows how other cultural groups have made use of mathematics

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

I am able to identify ways that standardized tests may be biased towards culturally diverse students

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

I am able to use examples that are familiar to students from diverse cultural backgrounds

Not at all likely — Extremely likely

0 1 2 3 4 5 6 7 8 9 10

APPENDIX I

Focus Group Questions

"When you answer, please preference with your name and role."

1. What changes in teaching and learning literacy have you noticed during this study?
2. How is school culture different from students' home culture?
3. In planning for early literacy instruction, what strategies do you have for incorporating examples that are familiar to students' varied cultures?
4. What are your beliefs about your ability to create a culturally responsive learning environment?
5. How are your beliefs about your ability to create a culturally responsive learning environment different than your beliefs in August of this school year?
6. How does the use of visual aids support literacy learning in your classroom?
7. How do you define the process of connecting oral language to print?
8. What step in the process of connecting oral language to print do you find most difficult to teach?
    a. For students to learn?
9. What area of early literacy teaching do you believe you need to develop?

APPENDIX J

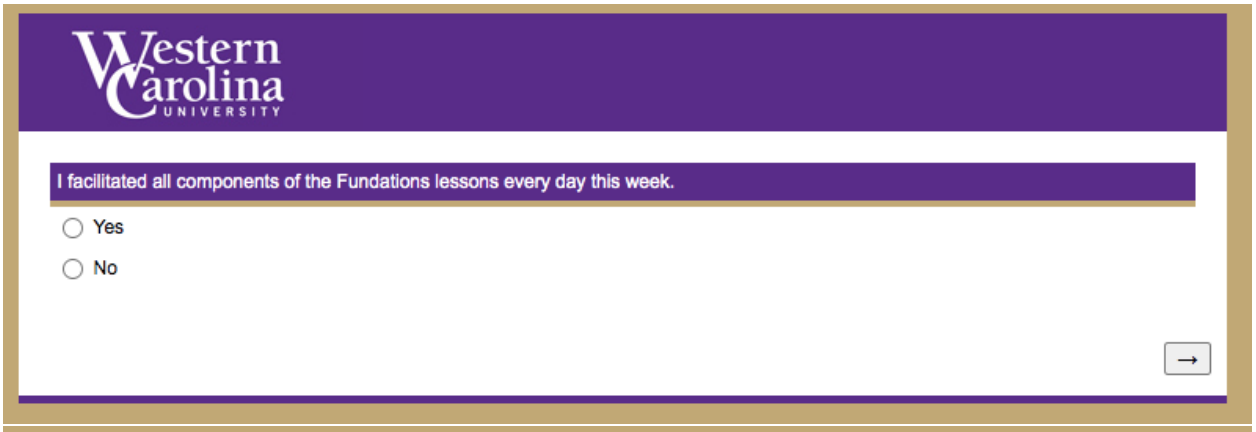
Culturally Responsive Pedagogy and Phonemic Awareness

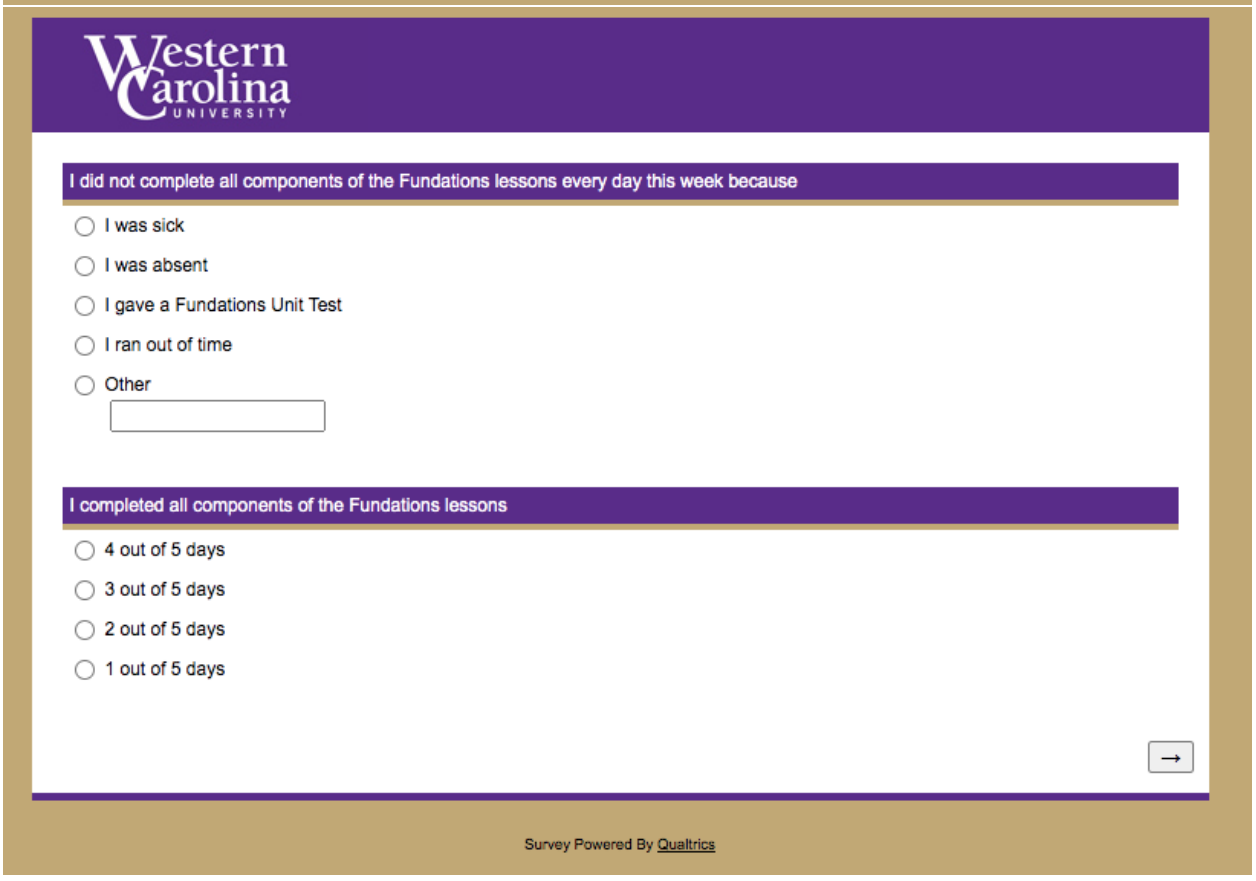
Observation Tool Evidences	Teacher behavior frequency (tallies)	Student behavior frequency (tallies)	Notes
Cultural / Linguistic background linked to instruction			
Sound Wall (used/reference)			

Please circle:
Classroom: 1 2 3 4
Instruction block: Morning Meeting Fundations ELA Math Science
Observation time: 10 20 30

APPENDIX K

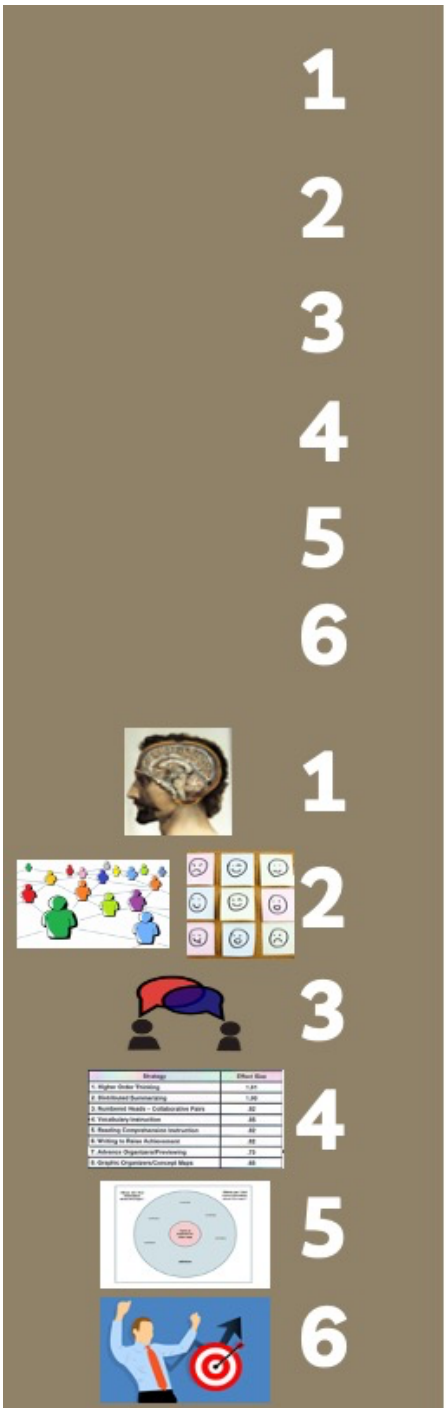
Balancing Measures Survey





APPENDIX L

Culturally Responsive Teaching: The Third Space Professional Development

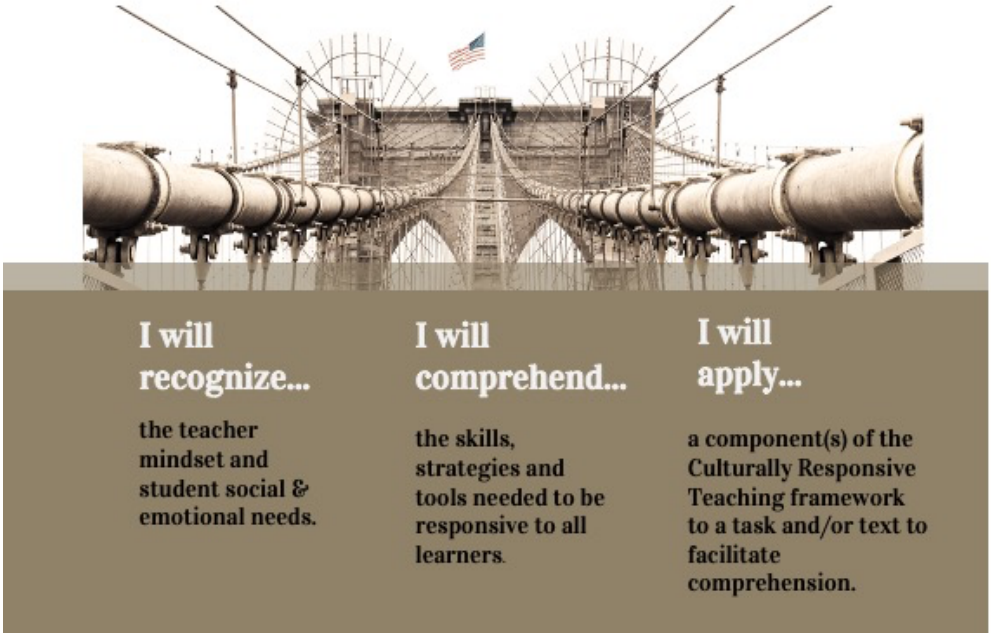


Framework

1. Mindset
2. SEL
3. Conversation Etiquette
4. High Impact Strategies
5. Graphic Organizers
6. Formative Assessment

Framework

1. Mindset
2. SEL
3. Conversation Etiquette
4. High Impact Strategies
5. Graphic Organizers
6. Formative Assessment


Today's Objectives
I will recognize...
the teacher mindset and student social & emotional needs.
I will comprehend...
the skills, strategies and tools needed to be responsive to all learners.
I will apply...
a component(s) of the Culturally Responsive Teaching framework to a task and/or text to facilitate comprehension.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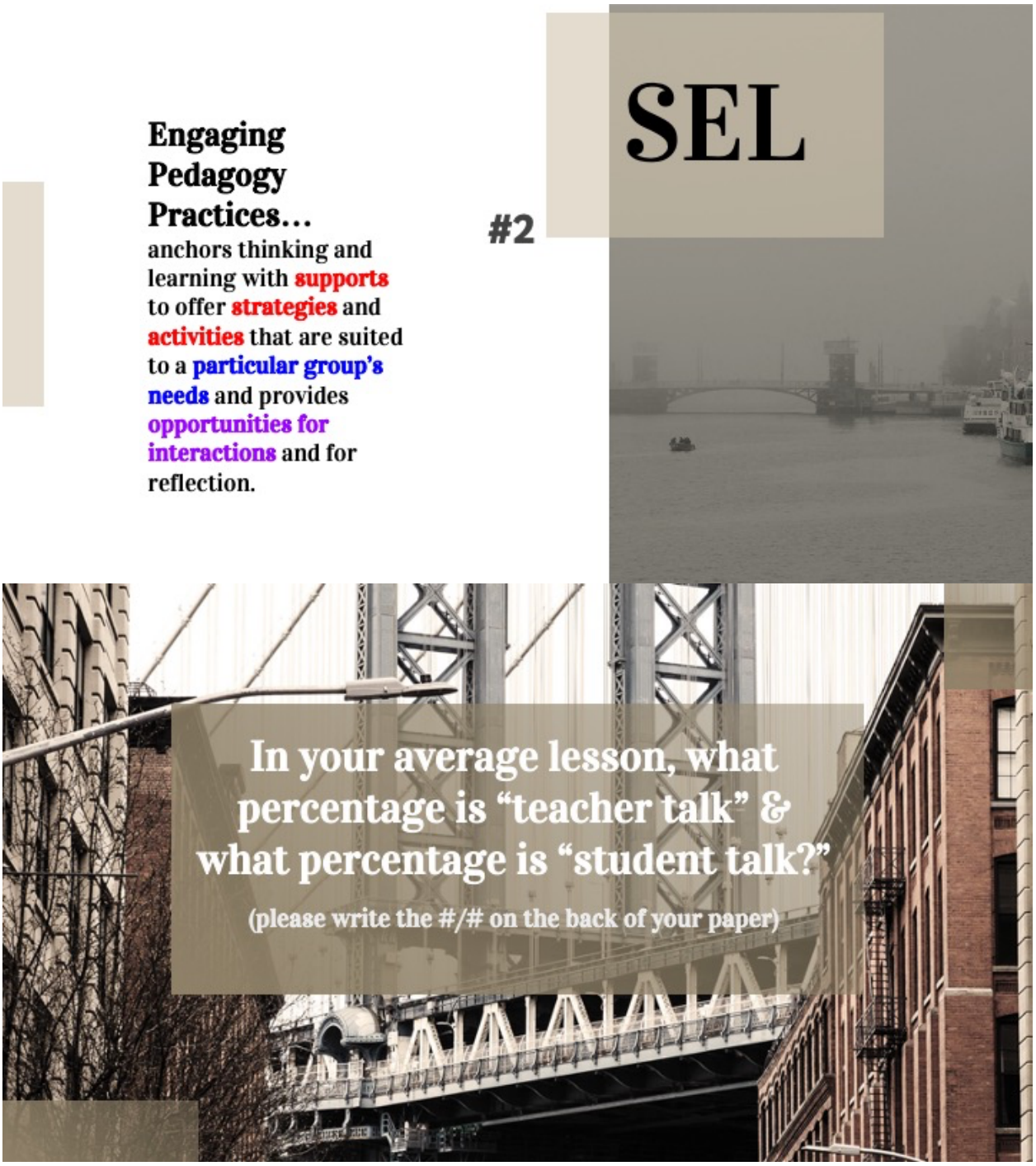
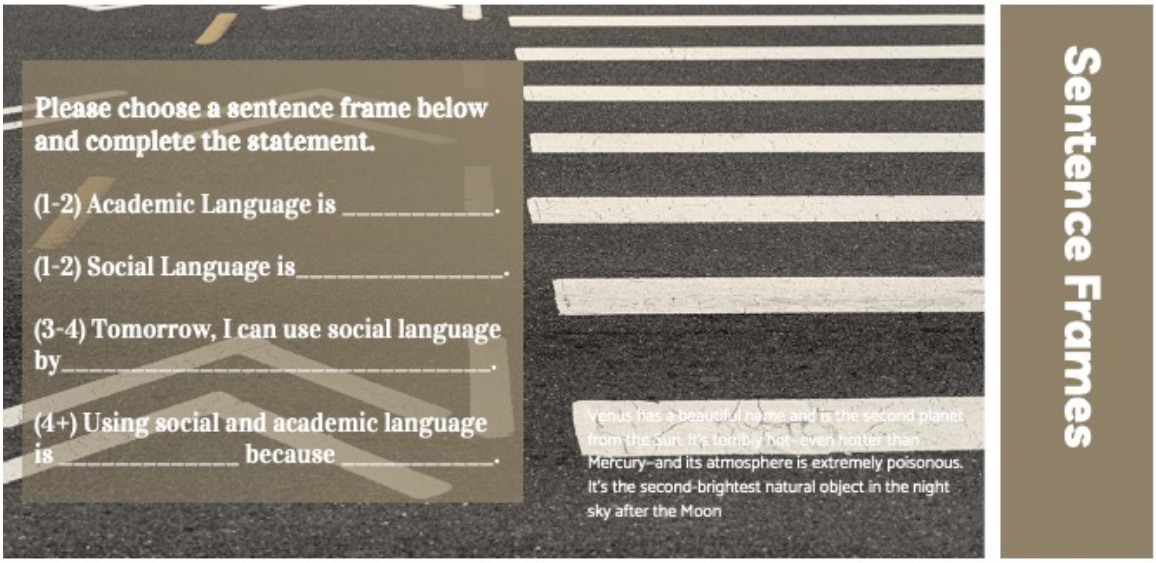
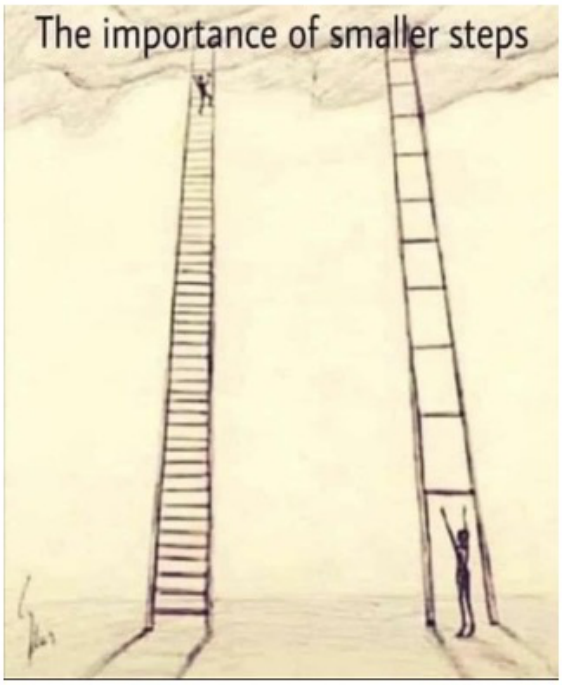
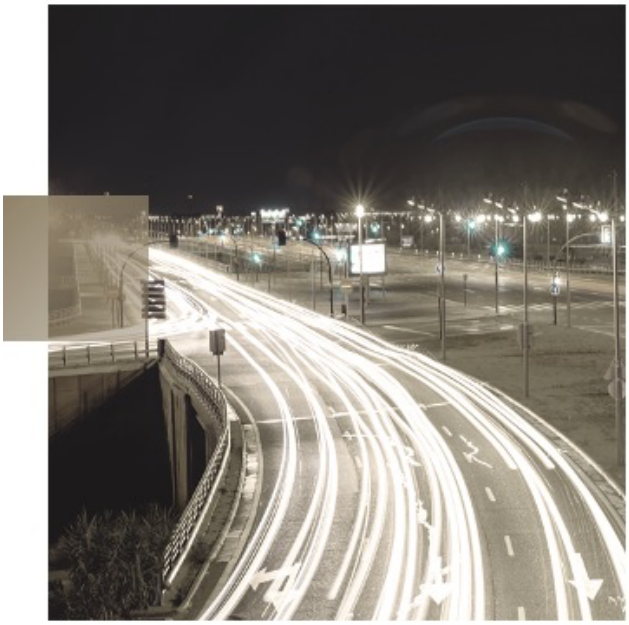

SEL
#2
Engaging Pedagogy Practices…
anchors thinking and learning with supports to offer strategies and activities that are suited to a particular group's needs and provides opportunities for interactions and for reflection.
In your average lesson, what percentage is "teacher talk" & what percentage is "student talk?"
(please write the #/# on the back of your paper)





Writing takes time...
(Speaking takes time.)



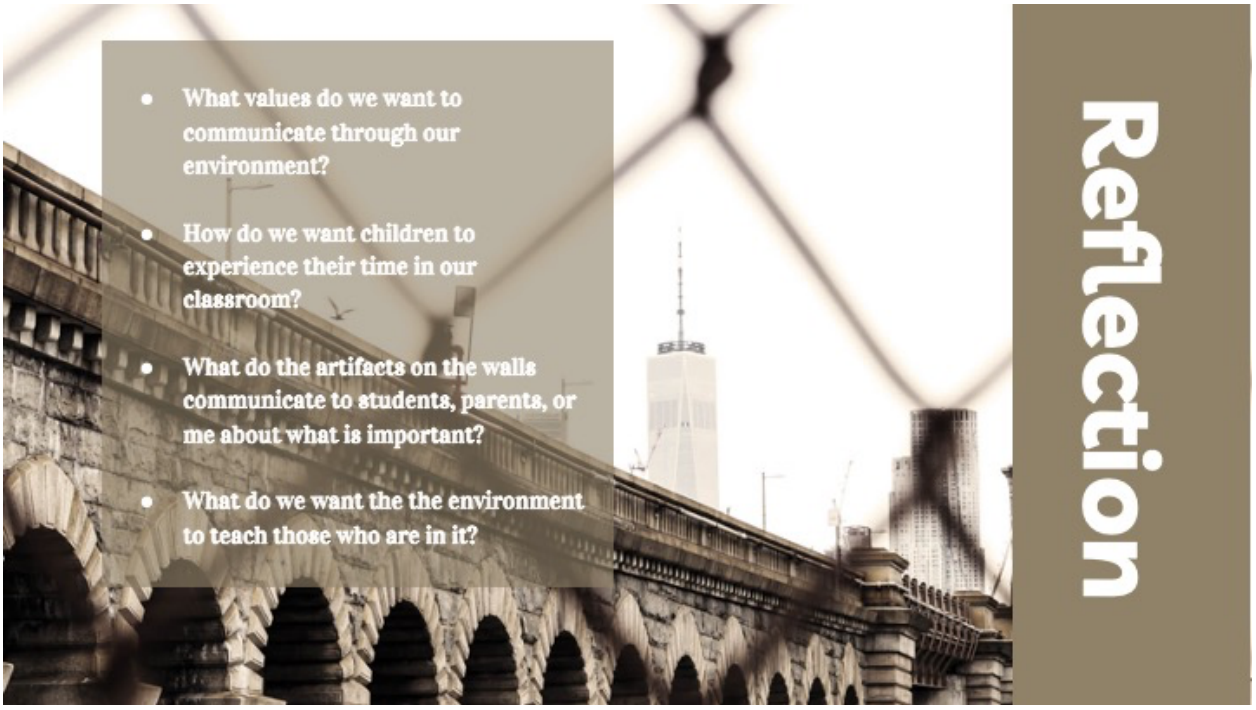
Write to Learn

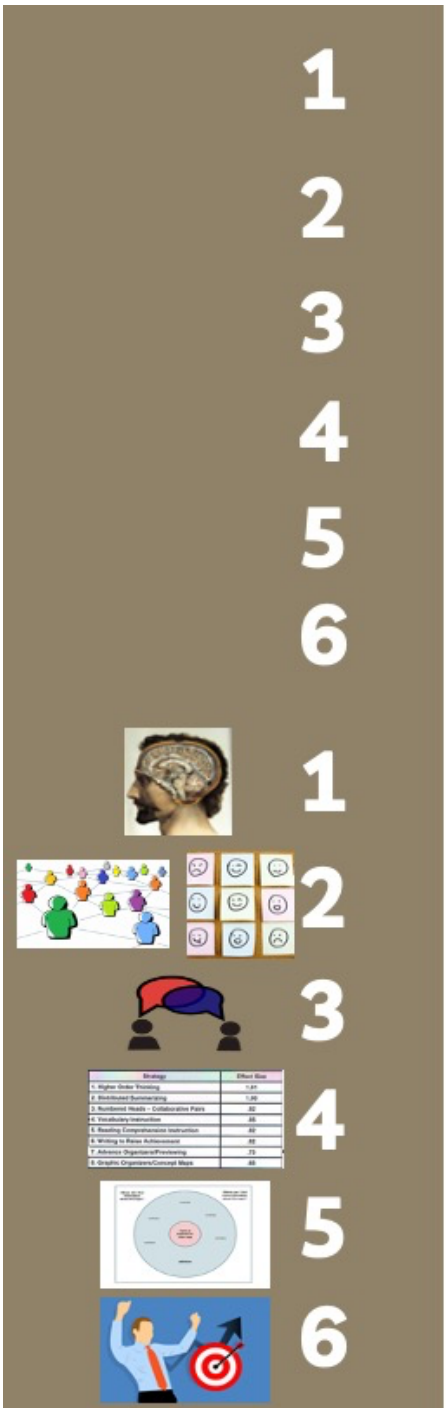
Please choose a sentence frame and complete the statement:

(1-2) An example of teacher mindset is _____.

(1-4) Some examples of mindset are _____, _____, and _____.

(3+) Conversation etiquette is important because _____.

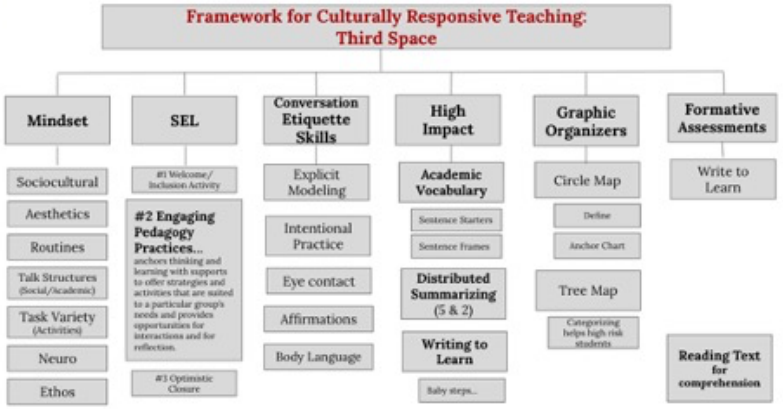




Framework

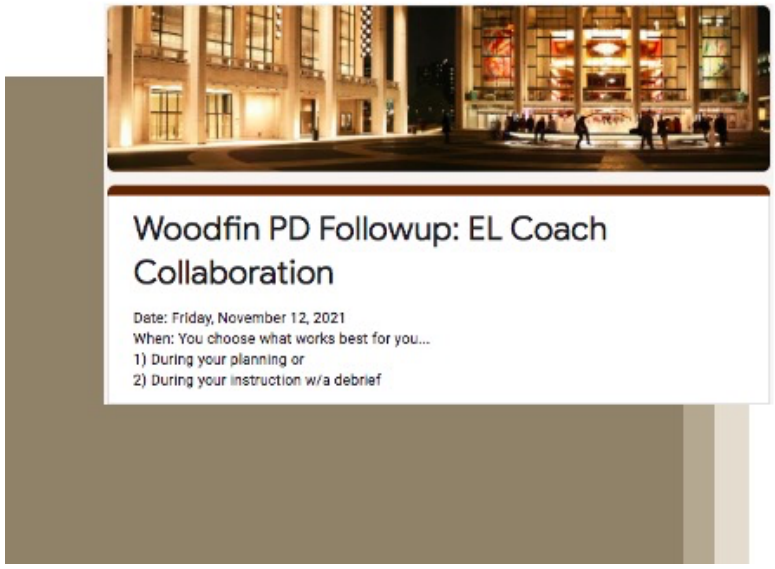
Framework

Framework



Framework Link

Google Survey



THANK YOU!

Dr. Thomas Destino
thomas.destino@bcsemail.org

Tsianina Tovar
tsianina.tovar@bcsemail.org

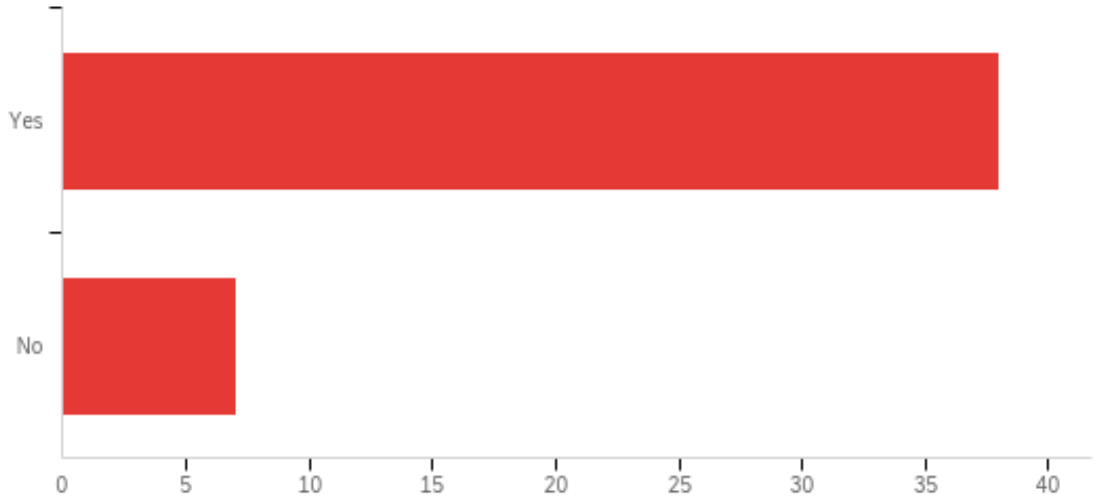
APPENDIX M

Balancing Measures Survey Results

Fundations Instruction
December 24th, 2021, 12:25 pm MST

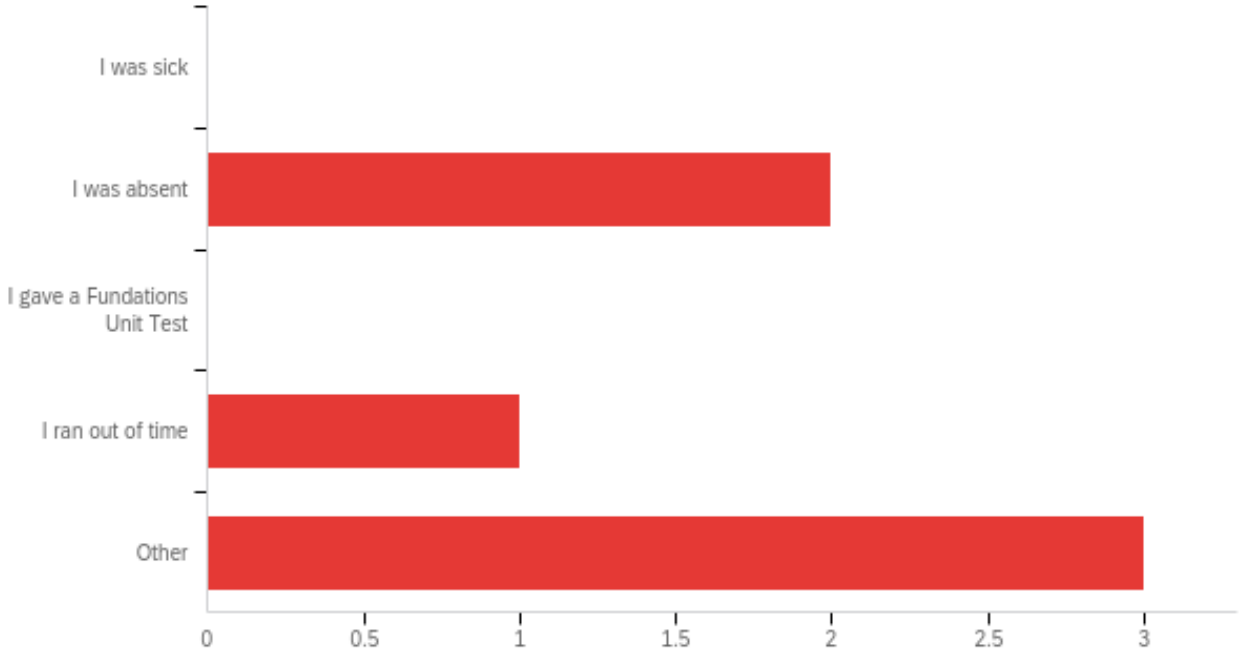
Q1 - I facilitated all components of the Fundations lessons every day this week.

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I facilitated all components of the Fundations lessons every day this week.	1.00	2.00	1.16	0.36	0.13	45



#	Answer	%	Count
1	Yes	84.44%	38
2	No	15.56%	7
	Total	100%	45

Q2 - I did not complete all components of the Fundations lessons every day this week because



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I did not complete all components of the Fundations lessons every day this week because - Selected Choice	2.00	5.00	3.83	1.34	1.81	6

#	Answer	%	Count
1	I was sick	0.00%	0
2	I was absent	33.33%	2
3	I gave a Fundations Unit Test	0.00%	0
4	I ran out of time	16.67%	1
5	Other	50.00%	3
	Total	100%	6

Q2_5_TEXT - Other

Other - Text
We had days off of school for the holidays
It was asynchronous learning two days and there was no school the other three days

APPENDIX N

Culturally Responsive Teaching: The Third Space Infographic