

EQUITY, EARLY LITERACY, AND ENGLISH LEARNERS:
EQUIPPING ENGLISH LEARNER TEACHERS FOR CULTURALLY AND
LINGUISTICALLY RESPONSIVE EARLY LITERACY INSTRUCTION

by
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Abstract

The research study presented in this dissertation explores the problem of discrepant early literacy achievement between young English learners (ELs) and their non-EL peers. A review of literature in chapter one revealed several factors contributing to ELs' stymied achievement, including EL policy and programming, teacher knowledge and skills, home/school connections, and learner characteristics. The literature review identified such salient factors which were the subject of study in an empirical needs assessment presented in chapter two. The needs assessment examined how factors of EL instructional model, school location, and teacher beliefs informed ELs' academic achievement in the school system. Results evidenced low EL student achievement in early literacy and showed that teachers in the school system relied on ineffective EL instructional models and struggled with self-efficacy for culturally responsive teaching. Needs assessment results informed the design of a bilingual assessment and teacher training program grounded in Cummins' (1979) theory of linguistic interdependence and Pennycook's (2001) critical applied linguistics. The researcher conducted a quasi-experimental pretest-posttest convergent parallel mixed methods study to evaluate the program. The eight-week intervention program yielded significant increases to teachers' self-efficacy for culturally responsive instruction, language transfer strategy use, and Spanish language use in the early childhood classroom. Findings of the study suggest the program's efficacy for equipping teachers for culturally and linguistically responsive early literacy instruction, even among a largely monolingual English-speaking sample.

Keywords: English learners, early literacy, culturally responsive education, equity



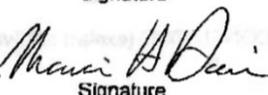
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**EQUITY, EARLY LITERACY, AND ENGLISH LEARNERS:
Equipping English Learner Teachers for Culturally and Linguistically Responsive Early Li**

The student has made all necessary revisions, and we have read, and approve this dissertation for submission to the Johns Hopkins Sheridan Libraries as partial fulfillment of the requirements for the Doctor of Education degree.

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Dedication

This dissertation is dedicated to the children and families who rely on our public schools. May we serve them with humble appreciation for the sacrifices so many have made so that their children could receive an education and honor those sacrifices by providing equitable access to all.

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Executive Summary

Language and literacy acquisition are complex learning processes. In the early childhood years English learners (ELs), like their non-EL peers, must navigate language learning and literacy acquisition in the classroom (August & Shanahan, 2008). Although all children acquire language and literacy in the early schooling years, ELs tend to underperform on measures of early literacy, creating discrepancies in achievement between ELs and their non-EL peers (August & Shanahan, 2008; Slavin & Cheung, 2003). The dissertation study outlined in this executive summary explored the factors that contribute to the gaps in early literacy achievement experienced by ELs and contextualized those factors in a large Maryland school system. The research ultimately employed an intervention study that aimed to address EL student needs by equipping EL teachers for culturally and linguistically responsive early literacy instruction.

Problem of Practice

When compared to their non-EL peers, English learners underperform on measures of early literacy in many public schools (August & Shanahan, 2008; Samson & Lesaux, 2015; Thomas & Collier, 2002). Despite rapid growth in EL populations, schools have not adjusted instructional practices to meet the unique cultural and linguistic needs of ELs (Mei Lin, 2015; Samson & Lesaux, 2015; Thomas & Collier, 2002). The discrepant early literacy achievement between ELs and their peers has lasting consequences for EL students throughout their educational careers, as measured by completion of high school (Bradley & Renzulli, 2011), reading and writing proficiency on standardized tests (August & Shanahan, 2008; Slavin & Cheung, 2003), and English language development (Thomas & Collier, 2002).

Factors Influencing Early Literacy Achievement Among English Learners

A review of research literature on EL student achievement in early literacy settings used Bronfenbrenner's (1994) ecological systems theory (EST) as a theoretical framework. Bronfenbrenner argues that human development is a complex process that involves the individual and their surrounding environments. Because problems in education are highly complex and driven by many systemic levels, Bronfenbrenner's model was especially appropriate for organizing the contributing factors relating to the problem of practice. Within ecological systems theory, there are five systems, which interact to affect the individual: the chronosystem, macrosystem, exosystem, mesosystem, and microsystem. Each system describes interactions between the target individual and their environment at differing levels, from macrosystemic issues in society to the microsystemic environment in which the individual lives. Organizing literature and factors contributing to problems of academic achievement within ecological systems offers a broad and multidisciplinary perspective on how factors beyond the classroom shape student experiences in schooling.

The review of research literature in this dissertation explored factors contributing to the problem of discrepant literacy achievement between ELs and their non-EL peers. Chronosystemic changes in education shaped how schools responded to increased accountability in public schools. Further, macrosystemic views on language minorities, immigrants, and education influence how schools and communities craft their education programs for ELs. Further, exosystemic policies in education have left EL services open to wide variances in implementation. Overall, factors of EL policy and programming (Samson & Lesaux, 2015; Thomas & Collier, 2002), teacher knowledge and skills

(Battey et al., 2013; Banks, 2015), home/school connections (Hindman & Wasik, 2015), and learner characteristics (Gee, 2002, Delgado & Stoll, 2015) emerged as notable drivers contributing to the problem of discrepant early literacy achievement experienced by ELs in early literacy settings.

The information presented within the synthesis of literature can help scholar practitioners better understand the discrepant achievement of ELs in today's school systems and respond to needs within school contexts. To situate the research literature on EL student achievement in the study context, the literature review summarized above informed an empirical needs assessment study which took place in the target school system. The needs assessment, discussed in the forthcoming section of this summary, aimed to contextualize the factors contributing to the problem of practice in the context of a local school system. Informed by the emergent drivers to the problem as illuminated by the literature review, the study investigated teacher attitudes and beliefs, student performance on local measures of early literacy, and teachers' perceptions of their EL instructional practices.

Context of the Study and Salient Needs Assessment Findings

The context of the dissertation study was a local school system the state of Maryland. Over the past decade, the system experienced a rapid increase to its EL student population, with the total number of EL students in the county nearly doubling between 2013 and 2019. At the time of the study, English learners comprised roughly 11% of the total student population in the county, but some city locale schools have much higher localized percentages of EL students, with some schools serving a student population that is more than 50% EL.

The needs assessment study found that EL students in the county underperformed on nearly all measures of early literacy in the 2017-2018 school year. Kindergarten reading achievement had the highest gap between EL students and their peers, with only 65% of EL students meeting the system target for reading as compared to roughly 81% of their peers. In the needs assessment study, a sample of 21 EL teachers reported on their instructional model. The results indicated that EL teachers across the county relied mostly on remedial English-only programs, which are among the least effective for ELs (Samson & Lesaux, 2015; Thomas & Collier, 2002), indicating a need for more effective EL instruction throughout the school system.

Further, the needs assessment included a teacher survey that used the existing valid Culturally Responsive Teaching Self Efficacy (CRTSE) scale (Siwatu, 2007). Respondents from city schools (n= 5) had the lowest mean scores on the CRTSE scale, and among that group, 40% of city school teachers scored in the low-average range compared within the sample. These key findings relating to Kindergarten EL student achievement, ineffective language programming, and low city school CRTSE informed the planning for an intervention study that targeted Kindergarten EL teachers from city schools for a bilingual assessment and training program to more closely align instructional practices in the system to research on effective EL programming and improve teachers' self-efficacy for culturally responsive teaching.

Theoretical Framework

Acquiring a new language is a complex cognitive and social process wherein an individual gains proficiency in listening, speaking, reading, and writing in a new language (Cummins, 1991; Krashen, 1982). The interventions explored for the study

drew upon Cummins' (1979) theory of linguistic interdependence and critical applied linguistics (Pennycook, 2001) to address both aspects of language acquisition in the classroom: the cognitive and the social. Cummins (1979) posits that the cognitive resources a child has in their first language (L1) can support their acquisition of a second (L2). This process, referred to as language transfer, is at the center of Cummins' (1979) theory of linguistic interdependence. In a language learning environment like the early childhood classroom, teacher mindsets about language use influence how students can apply language transfer in the learning environment. Critical applied linguistics (CALx), theorized by Pennycook (2001), addresses social mindsets about language use in English-dominant environments.

Together, they theory of linguistic interdependence (Cummins, 1979) and CALx theory (Pennycook, 2001) framed a review of research literature on potential interventions to the problem of practice. The intervention, grounded in the two theories, sought to increase teacher self-efficacy, which in turn would influence teachers' use of culturally responsive teaching and thereby influence student achievement. Cummins' (1979) theory of transfer between a child's L1 and L2 makes language interdependence theory an appropriate lens through which to discuss issues of early literacy and bilingual supports for ELs while CALx theory (Pennycook, 2001) addresses teacher mindsets and approaches to language use and linguistic equity in the language learning classroom.

Interventions Explored

A review of literature on potential interventions to address the problem of practice found that using research-based approaches to bilingual assessment and teacher training prepares EL teachers to leverage culturally and linguistically responsive practices to

increase literacy achievement among ELs in early childhood. The body of literature explored in the intervention literature review suggested that offering schools support for using bilingual supports even within largely monolingual environments could help schools meet the needs of increasingly linguistically diverse student populations.

The review of research literature explored options to implement a bilingual EL instructional model, bilingual assessment model, and implementing a teacher training program. Multiple studies reviewed found that implementing bilingual instruction programs can be highly efficacious in improving EL student outcomes long-term (Slavin & Cheung, 2005; Thomas & Collier, 2002). However, such programs are costly and require long-term implementation commitment, limiting the feasibility of such an intervention for use in a short-term dissertation study. Further review of intervention research literature found that even minimal use of native language supports in English-only instructional environments can improve student outcomes at no cost to English language acquisition (Cummins, 1979; Reyes, 2012; Thomas & Collier, 2002). Implementing a bilingual assessment program would allow even monolingual English-speaking teachers to measure and understand students' early literacy skills in a culturally responsive manner (Hopewell & Escamilla, 2014). The review of intervention literature suggested that implementing some bilingual assessment and instructional practices may help to address the problem of practice at the center of the study, but that building teachers' efficacy for understanding language transfer and appropriate strategy use would be important for implementation. Research reviewed for the study suggested that teacher training on culturally responsive instruction for ELs yields positive outcomes for EL students' success (Henson, 2001; Samson & Lesaux, 2015; Siwatu, Putman, Starker-

Glass, & Lewis 2017) and increased efficacy yields increased use of strategies and effective instructional practices (Siwatu, 2007; Tschannen-Moran & Hoy, 2007).

Ultimately, the review illuminated the potential efficacy of a combination of multiple strategies that emerged from the intervention literature to create a teacher training program that utilized bilingual assessments and culturally and linguistically responsive teaching learning experiences for EL teachers to improve instructional practice in the target school system. By assessing students bilingually and empowering teachers with the knowledge and skills to use those assessment results, the program sought to leverage aspects of linguistic interdependence (Cummins, 1991) and CALx (Pennycook, 2001) theory to change EL teachers' mindsets and practices the early literacy setting.

Intervention Study

Purpose and Research Questions

The purpose of the intervention study was to investigate the extent to which participation in a teacher training program changes EL teachers' efficacy for providing culturally and linguistically responsive instruction to EL students. The study also investigated the extent to which participation in the program influenced use of students' native language in the early literacy classroom. The research study explored five research questions as follows:

1. To what extent was the study implemented in adherence to the established procedures?
 - a. To what extent did the program adhere to the established timeline and number of sessions?

- b. To what extent were the stated goals for each teacher training session met?
2. To what extent does participation in a teacher training program change EL teachers' self-efficacy for providing culturally responsive instruction?
3. To what extent does participation in a teacher training program influence the use of language transfer strategies in the classroom among kindergarten EL teachers?
4. To what extent does participation in a teacher training program influence instances of Spanish language use in the classroom among kindergarten EL teachers?
5. What are kindergarten EL teachers' experiences in the teacher training intervention?
 - a. What were teachers' perceptions of the relevancy of the materials to their instructional practice?
 - b. What are teachers' lived experiences with successes and barriers to implementing the strategies learned in training sessions in the classroom post-intervention?

Research Design

Quasi-experimental pretest-posttest method. The intervention required manipulation of an independent variable (participation in the training program). To measure the change in teacher self-efficacy and strategy use (dependent variables), the study used a pretest posttest design. Because the study manipulated a variable but had no control group, it was categorized as a one-group pretest-posttest design (Shadish, Cook, and Campbell, 2002) that used a convergent parallel structure for mixed methods data collection and analysis (Creswell & Plano-Clark, 2018).

The study began with a pretest survey administration in the first month of the 2019-2020 academic year. Teacher training sessions offered teachers immersive and engaging learning experiences on topics like language transfer and culturally responsive instruction, contrastive linguistic analysis between Spanish and English, interpreting and responding to bilingual literacy assessments, identifying bias in assessment, and translanguaging in the kindergarten classroom. Based on research literature on effective training for EL teachers, the training sessions included modeled and immersive learning for teachers (Ramos, 2017) and incorporated opportunities for mastery and vicarious learning experiences (Tschannen-Moran & Hoy, 2007). Formative process evaluation measures were collected at the end of each session, while outcome evaluation posttest data collection and the culminating focus group occurred once in December of 2019 during the last in-person training session.

Convergent parallel design. The study used a convergent parallel mixed methods approach for analyzing both quantitative survey and qualitative focus group data, and took a nested approach to sampling, in which collection of data occurred within one group of purposively sampled participants (Pettus-Davis, Grady, Cuddeback, Scheyett, 2011; Small, 2011). Working within the mixed methods paradigm allowed researchers to offset the limitations of a single methodological approach (Creswell & Plano-Clark, 2018; Johnson & Onwuegbuzie, 2004), and offered insight into the empirical outcomes of the teacher training program as well as teacher experiences within the intervention.

Data and Analysis

Data collection for this study spanned the first semester of the 2019-2020 academic year. Measures included multiple quantitative datapoints and a qualitative culminating focus group. Portions of the quantitative data were collected from the intervention group as well as a comparison group of teachers in similar roles to offset some of the limitations incurred with the use of a purposive sample.

Pretest-posttest survey. The pretest-posttest survey was administered once in the first session of the training program and again at the last session. The survey was used to measure teacher self-efficacy for culturally responsive education, language transfer strategy use, and Spanish language use. The pretest/posttest survey included a set of demographic items and three additional survey scales, including Siwatu's (2007) culturally responsive teaching self-efficacy (CRTSE) scale and frequency scales that measured teachers' reported use of language transfer strategies and Spanish language use in the classroom.

Session feedback surveys. During the last five minutes of each in-person training session, participants in the intervention group completed a session feedback survey. The survey provided valuable formative process evaluation data that helped to adjust sessions throughout the intervention. The results from session feedback surveys were used to monitor fidelity of implementation and participant responsiveness throughout the study.

Focus group. The culminating focus group interview occurred once in December of 2019, and took approximately one and a half hours to complete. The focus group was audio recorded, and the researcher took detailed notes during and immediately after the focus group to supplement the audio recorded data from the interview. The focus group discussion used a semi-structured approach and asked teachers to share their experiences

in the training sessions, with implementing new learning from sessions, and report on changes in practice and mindsets after participating in the study.

Findings

Findings from the dissertation study showed that teachers who participated in a bilingual assessment and teacher training program experienced significant increases to their efficacy for providing EL students with culturally and linguistically responsive early literacy instruction. Results showed that participation in the bilingual assessment and teacher training program yielded a significant increase to teachers' self-efficacy for culturally responsive teaching ($p = .019$), language transfer strategy use ($p = 0.27$), and Spanish language use in the classroom ($p = 0.46$). These quantitative results, considered alongside the qualitative data suggest that teachers in the intervention group experienced increased efficacy for culturally and linguistically responsive instruction over the course of the study.

The study's findings are novel and notable, as they suggest that even a largely monolingual teacher population, when provided with specialized training and bilingual early literacy assessment data, can apply effective bilingual strategies to literacy instruction in early childhood, more closely aligning instructional practice with research on effective EL instruction. In sum, providing students access to culturally and linguistically responsive literacy learning can increase their opportunity to learn (Banks, 2015; Gee, 2008) and empower linguistically diverse students. Empowering teachers as stewards of culturally and linguistically responsive instruction may begin to mitigate the profound achievement gaps faced by even our youngest EL students and provide equitable access to early literacy learning.

CHAPTER 1

Synthesis of Research Literature

English learners (ELs) are one of the fastest growing student groups in the United States (Samson & Lesaux, 2015; Sugarman & Geary, 2018). This highly diverse group of students are an asset to school communities and represent a variety of cultural and linguistic backgrounds (Nai-lin Chang, 1993). As of 2017, there were 4.6 million EL students in the United States (National Center for Education Statistics [NCES], 2017b). Schools nationwide have seen an influx of ELs in recent years (NCES, 2017b). These demographic shifts mirror the increasing linguistic diversity of United States-born students and also global immigration patterns (U.S. Census Bureau, 2017). The vast majority of ELs in the United States are Spanish-speaking, at 77.1%. Roughly 78% of EL students identify as Hispanic, and 34.5% of that group are foreign-born (U.S. Census Bureau, 2017). Maryland, the state with the largest increase in EL enrollment over the past decade, experienced a dramatic 4.4 percentage point increase to their EL student population between 2005 and 2015 (NCES, 2017b). In the same decade, increasing numbers of EL students in public schools nationwide rose from 4.3 to 4.6 million students (NCES, 2017b).

Rapid changes in student demographics have outpaced some Maryland schools' capacity to offer quality EL programs commensurate with the growth of EL populations (López, Mceneaney, & Nieswandt, 2015; Samson & Lesaux, 2015). These shifting demographic trends are especially prevalent among students in early childhood settings (Park, O'Toole, & Katsiaficas, 2017). Since the year 2000 in the United States, the population of children aged eight and under who speak a language other than English in

the home has increased by 24%, making this group of linguistically diverse students a full one third of young children in the nation (Park et al., 2017). As schools become more culturally and linguistically diverse, they struggle to adapt to changing demographics, contributing to gaps in academic achievement faced by ELs (López et al., 2015; Ramos, 2017). The way that schools provide English language instruction for ELs continues to contribute to lasting discrepancies in achievement for even the youngest ELs on measures of early literacy like reading performance, foundational skills, and early writing ability (Hopewell & Escamilla, 2014; Thomas & Collier, 2002).

The long-term academic trajectories of ELs are problematic. Literacy is a key precursor for academic success, and ELs underperform non-EL peers on literacy measures (Hopewell & Escamilla, 2014). English learners experience discrepancies in literacy achievement when compared to their non-EL peers through the early childhood grades and beyond (Hoff, 2013; Jung et al., 2016). These discrepancies in achievement are at odds with research describing how all young children acquire language at an early age (Ansari et al., 2016; Delgado & Stoll, 2015; Hopewell & Escamilla, 2014), and therefore require ongoing investigation by researchers in education. Gaps in early literacy persist throughout students' educational careers, with lasting consequences including lower high school completion rates and fewer opportunities in higher education as compared to non-EL peers (Bradley & Renzulli, 2011).

Because language and literacy are so closely related, issues of language proficiency often impact how educators respond to ELs' needs in early literacy instruction (Hoff, 2013; Hopewell & Escamilla, 2014). The National Early Literacy Panel published a report in 2008 which detailed how early language skills influence literacy

development. The panel found that precursors for reading and writing include a child's ability to produce, listen to, and comprehend spoken language (Shanahan & Lonigan, 2010). Supporting the findings of the National Early Literacy Panel, many studies (e.g., Durán, Roseth, & Hoffman, 2010; Shanahan & Lonigan, 2010; Sonnenschein, Metzger, Dowling, and Baker, 2016) have found correlations between students' early language ability and literacy achievement long-term. Measures of early literacy often include multiple skills and assessments. Sonnenschein et al. (2016) operationalizes early literacy using a composite measure of expressive vocabulary, conceptual vocabulary, and language comprehension as well as print concepts and phonological awareness. Sonnenschein et al. (2016) and Farver, Lonigan, & Eppe (2009) used the Test of Preschool Early Literacy to create a different composite measure including vocabulary, phonological awareness, and print concepts. Other studies rely on reading benchmark data (Hopewell & Escamilla, 2014) and vocabulary assessments (Mulligan, Carlivati McCarroll, Denton Flanagan, & Potter, 2016). Measures of early literacy vary widely, therefore, within this literature synthesis, the term early literacy will include any measures of reading and writing used to indicate a child's reading and writing skill acquisition in pre-kindergarten and kindergarten.

This synthesis of research literature centers around the problem of discrepant literacy achievement for ELs. The problem, as it exists in today's contexts, has been shaped by historical events in education policy. In the early 21st century, schools faced a new culture of accountability brought on by the No Child Left Behind (NCLB) Act of 2001 (Mehta, 2013, 2014). Under NCLB, schools were required to maintain adequate yearly progress, a measure of overall student achievement on standardized tests used to

determine the amount of federal funding provided to schools (No Child Left Behind Act [NCLB], 2002). This spurred schools to focus on student groups that underperformed on standardized tests (Altshuler & Schmautz, 2006; Mehta, 2013). To boost student achievement on standardized tests, schools prioritized rapid English acquisition to prepare ELs for the assessments by which schools' adequate yearly progress was monitored (Hong & You, 2012; Kim, Hutchison, & Winsler, 2015). In an effort to promote quick English language acquisition, many schools opted for English immersion models for ELs. As a result, the age of accountability brought on by NCLB helped create a culture which emphasized English-only instruction (Hong & You, 2012; Shin, Leal, & Ellison, 2015; Thomas & Collier, 2002), the vestiges of which remain visible in EL policy today.

With quickly changing demographics and high accountability shaping schools' responses to ELs, researchers in education have explored the factors that influence EL student achievement. Such research is presented in this review of research literature to inform future study. Research in changing school systems can allow scholar practitioners to better understand how ELs acquire literacy and the factors that contribute to their discrepant achievement in early reading and writing. As school demographics continue to shift, research should seek to understand the needs of more diverse students and investigate how schools can most effectively serve ELs. Because ELs are such a large and fast-growing demographic in today's schools (NCES, 2017b), research on how these students access education can inform how schools adapt to their changing populations and serve the growing body of EL students and their families.

Problem of Practice

English learners consistently underperform on measures of early literacy compared to their non-EL peers, gaps which are pervasive and widespread (August & Shanahan, 2008; Samson & Lesaux, 2015; Thomas & Collier, 2002). Even in the early childhood years, when all young students are acquiring language, ELs struggle to make adequate gains in early literacy (Hoff, 2013; Hopewell & Escamilla, 2014; Slavin & Cheung, 2003). Though many have attempted to address the demands of changing student populations, the cultural and linguistic needs of ELs remain unmet by many of today's schools (Durán et al., 2010; López et al., 2015; Mei Lin, 2015; Thomas & Collier, 2002). Stymied literacy perpetuates achievement gaps for ELs and impacts success for these students throughout their educational careers as measured by completion of high school (Bradley & Renzulli, 2011), reading and writing proficiency on standardized tests (August & Shanahan, 2008; López et al., 2015; Slavin & Cheung, 2003), and English language development (Thomas & Collier, 2002). The problem of discrepant EL student achievement in early childhood is especially prevalent in one large, central Maryland school system that has experienced rapid growth to the EL student population in recent years. The research presented in this dissertation aims to better understand and intervene on the problem of discrepant early literacy achievement among ELs in the target school system. Among school-aged children aged five to 17 in the county school system, the largest language minority group are speakers of Spanish who comprise 1.5% of the population (U.S. Census Bureau, 2017). As such, much of the extant research on EL best practice in the United States focuses on the needs of Spanish-speakers and forms the foundation for the research presented in this dissertation. Although it is understood by the researcher that Spanish-speaking ELs comprise only one

portion of the EL student population, this research aims to meet the needs within the student population of the target school system and therefore focuses specifically on supports for EL students who speak Spanish, who comprise the largest student group within the EL population in the target system.

Theoretical Framework: Ecological Systems Theory

Bronfenbrenner's (1994) ecological systems theory serves as the theoretical framework for this review of research literature. Bronfenbrenner argues that human development is a highly complex process that occurs as an individual interacts with their environment. Because problems in education are highly complex and driven by many systemic levels, Bronfenbrenner's model is appropriate for organizing the contributing factors relating to the problem of practice. Within the ecological systems theory, there are five systems, which interact to affect the individual: the chronosystem, macrosystem, exosystem, mesosystem, and microsystem. Each system describes interactions between the target individual and their environment at differing levels. Figure 1.1 depicts a nested model of Bronfenbrenner's ecological systems theory as it relates to education.

Organizing literature and factors contributing to problems of academic achievement within ecological systems offers broader perspectives on how factors beyond the classroom shape student experiences in schooling.

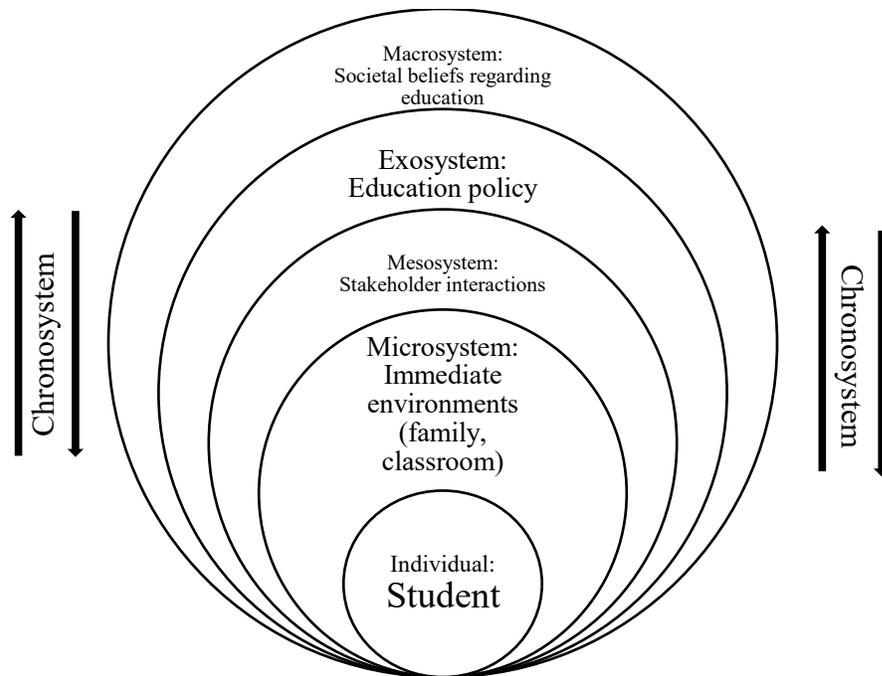


Figure 1. 1. A nested model of Bronfenbrenner’s ecological systems pertaining to educational contexts. This figure shows nested ecological systems with a student as the focal individual. Adapted from “Ecological models of human development” U. Bronfenbrenner, 1994.

Factors within Bronfenbrenner’s (1994) chronosystem describe passage of time across all other systems. In many models of Bronfenbrenner’s ecological systems theory, the chronosystem stands alone, as chronosystemic interactions influence each of the nested systems as well as the target individual. Macrosystemic factors include overarching forces within society and describe such factors as cultural and societal beliefs, social customs and mores, and social constructs. In educational research, macrosystemic factors include those social constructs which govern education and the structure of a society’s educational system (Neal & Neal, 2013). The macrosystem also includes the cultural beliefs and customs, which affect how students and stakeholders interact in schools and the community.

Exosystemic factors include the interactions that take place between systems but do not include the focal individual. These factors in education include federal, state, and local education policy. Similarly, interactions in the mesosystem describe inter-systemic interactions, though mesosystemic interactions in the mesosystem do include the focal individual. Mesosystemic interactions can occur between families, schools, peers, and/or the focal individual (Bronfenbrenner, 1994, Neal & Neal, 2013). In education, the mesosystem can describe interactions between a student's family and their school.

The innermost system in Bronfenbrenner's nested ecological systems model is the microsystem, which describes the individual within their immediate environment and includes family, classroom, peer, and workplace interactions. The microsystemic level includes the regular and sustained interactions experienced by the focal individual (Bronfenbrenner, 1994). In many educational research contexts, these interactions describe a student's direct contact with family, teachers, and classmates. Each of the higher systems inform interactions within the microsystem.

Ecological systems theory is useful for structuring the study of problems in education. Factors from within every ecological system impact the educational experience of ELs. The macrosystemic societal beliefs, exosystemic policies in education, and the stakeholder interactions of the mesosystem and microsystem influence the daily educational experiences of ELs. Research in the highly nuanced and complicated realm of student achievement and equity in education requires thoughtful consideration of each system's influence on students. Bronfenbrenner's ecological systems offer a framework for organizing such systems thinking. Throughout the literature synthesis in this chapter, ecological systems levels describe each factor

contributing to the problem of practice and serve to situate factors within the research literature on ELs and early literacy.

Review of Research Literature

As argued by Boote and Beile (2005), a strong review of literature on a research topic in education sets the foundation for thorough and sophisticated research. Literature reviews aid researchers in understanding the complexities of problems in education.

Boote and Beile write that the literature review should investigate a problem in depth and breadth and seek to understand the factors relating to a topic from a multidisciplinary lens.

The following review of research literature addresses many factors contributing to the discrepant achievement of ELs in early literacy. As Boote and Beile (2005) suggests, the literature reviewed in this synthesis offers varied disciplinary perspectives on the problem. The studies presented in this synthesis articulate the important variables contributing to educational outcomes of ELs in early childhood and form a foundation of research upon which to build future research.

Societal and Political Views on English Learners

At the macrosystemic level, societal views on ELs have shaped language instruction policy in public schools and continue to disenfranchise ELs through policy and practice (Shin et al., 2015). How schools respond to the needs of linguistically diverse students reflects cultural mindsets about language, school accountability, and civil rights (López et al., 2015; Shin et al., 2015). The 1974 Supreme Court decision *Lau v. Nichols* set the precedent for schools to provide instructional support to students with limited English proficiency. The court ruled that not providing English language support

was discriminatory and in violation of the Civil Rights Act of 1964 (*Lau v. Nichols*, 414 U.S. 563, 1974). With these legal precedents set, public schools began serving ELs using a variety of instructional models, which continue to vary widely across states and school districts.

English learner programs are often characterized by their language of instruction, location of services, and allocation of instructional time. The language of instruction can include the use of students' native language (L1) and the use of the target language (L2). Despite current legislative efforts to establish English as the official language of the United States, there is currently no such policy in place (English Language Unity Act, 2017). However, per federal policy regarding ELs, the target language of instruction in the United States is English (Every Student Succeeds Act [ESSA], 2015). A review of instructional programs by Thomas and Collier (2002) found that EL programs typically fall within four categories. Category One includes remedial bilingual programs, in which students receive some L1 support to facilitate English acquisition. Category One models are typically short-term or transitional programs from which students are expected to exit within two to five years. Programs in Category Two are remedial English-only programs, including traditional push-in and pull-out English language instruction. This model of instruction for ELs is among the most common, though evidence suggests that it is less effective than other service models (Durán et al., 2010; Thomas & Collier, 2002). Category Three includes enrichment bilingual programs, which provide instruction on grade-level academic content in both students' L1 and L2. Category Four programs are enhanced English-only programs, wherein ELs are instructed in English only with supports embedded through academic content. These programs offer sheltered language

instruction within grade-level content with the use of strategic language scaffolds and supports (e.g., explicit vocabulary instruction, modeling, visuals).

A wealth of research supports the efficacy of EL programs that fall within the transitional, enrichment bilingual, and enhanced program types (Echevarría, Vogt, & Short, 2000; Greene, 2013; Slavin & Cheung, 2005; Thomas & Collier, 2002). However, despite the body of research extolling the benefits of bilingual and enhanced instructional models, many schools continue to implement remedial English-only instruction (Samson & Lesaux, 2015). As schools continue to rely on some of the least effective models of EL instruction for students, ELs fall behind their non-EL peers (Durán et al., 2010; Thomas & Collier, 2002).

A review of literature on EL programs and policy yielded one contradictory study that contradicted the findings of others presented in this synthesis. The work of López et al. (2015) found that implementing English-only policy at the macrosystemic and exosystemic levels limited schools' use of bilingual supports for ELs despite their efficacy. By contrast, Linton (2004) suggested that English-only legislation does not impact the acceptance of bilingual programs in schools, contradicting the findings of López et al. (2015). However, Linton's findings are likely due to the inclusion of 40% of the sample of school systems with Dual Immersion programs from California in the study. California's Proposition 227 English-only legislation, paired with high levels of transitional bilingual programs already in existence throughout the state likely skewed the findings of the study. It is likely that other states with English-only policies would not have a comparably high number of bilingual programs, which gives the findings of Linton's (2004) study questionable validity.

Societal views on education and language minorities, rather than research on the most effective models of EL instruction, inform education policy for ELs (Shin et al., 2015). Macrosystemic views on language minorities and education influence how schools respond to student needs. Anti-immigrant mindsets and deficit views of languages other than English shape how schools educate ELs (Borden, 2014; Calvo & Bialystok, 2014; Menken, 2013). Borden (2014) explains how immigration patterns impact language status and use in education. Borden's work argues that, for many Americans, "the English language symbolizes a national identity, and English-only measures seek to target linguistic and ethnic groups via education" (Borden, 2014, p. 229). The macrosystemic views described in Borden's work may contribute to the sustained use of English-only programming despite the lacking empirical evidence for its effectiveness as an instructional model. English learner policy sustains the high status of the English language by creating a system wherein ELs acquire English at the expense of their native language (Lutz, 2006; Reese & Goldenburg, 2006). Societal views on school accountability and English acquisition have cultivated a system which disenfranchises other languages and the students who speak them by limiting the availability of native language support in schools, despite the research which provides evidence on the benefits of such instructional practice (Rios-Aguilar, 2011; Shin et al., 2015).

English Learner Policy

Policy dictating the service type and level of support available to ELs falls within the exosystem. Education policy regarding EL instruction is multifaceted and complex. Although federal policy dictates that states must serve ELs, each state defines additional parameters for local education agencies to guide program implementation. At the district

and school level, leaders in education rely on federal, state, and local policies for guidance in crafting the instructional models used to serve ELs locally, creating wide variance in the instructional models employed by schools.

Title III of the Every Student Succeeds Act. Title III of the Every Student Succeeds Act, which replaced NCLB in 2015, is the federal statute that dictates how states structure EL services. Like the legislation that preceded it, Title III of the Every Student Succeeds Act mandates that schools provide language supports for ELs, though it offers little guidance to states on how to structure those services, contributing to ineffective instruction (Barrow & Markman-Pithers, 2016). Language within the law is vague in that it allows for individual states to determine how schools service ELs and does not offer clear parameters (e.g. amount of time spent on EL instruction or instructional model) for providing English language services (Barrow & Markman-Pithers, 2016). Models of EL instruction, therefore, remain inconsistent across states and districts. The language of Title III therefore contributes to the inconsistent and biased nature of EL programming (Barrow & Markman-Pithers, 2016; Samson & Lesaux, 2015).

The limitations of Title III are especially notable in early childhood settings. Although it is permissible for states to support ELs in early childhood, states are not required by law to serve ELs prior to their kindergarten year (ESSA, 2016). Contributing to the gaps in early literacy faced by ELs is the inconsistent servicing of ELs in the early childhood years (Ansari et al., 2016; Delgado & Stoll, 2015; Farver et al., 2009). The lack of EL service at the pre-kindergarten level is central to understanding the problem of practice, as ELs begin to underperform their non-EL peers even in early childhood

settings (Jung et al., 2016). These discrepancies in early literacy achievement impact ELs' literacy development over time (Greenfader & Miller, 2014; Hindman & Wasik, 2015; Slavin & Cheung, 2005).

English learner instructional models. English learners are one of the largest and quickest-growing student groups in American public schools, yet they are one of the most underserved (August & Shanahan, 2008). Thomas and Collier (2002) compared the literacy achievement of ELs receiving services across multiple service delivery models. The study provided descriptive analysis of student performance data in reading from five school districts across the United States from 1996 through 2001. Their finding that English-only programs are among the most ineffective has guided much research on EL instruction and has since been supported by myriad other studies in the field (e.g., Barrow & Markman-Pithers, 2016; Durán et al., 2010; Slavin & Cheung, 2005). Research on EL program effectiveness suggests that students benefit most from instructional models that are responsive to their specific cultural and linguistic needs, such as programs that encourage native language use, bilingual supports, and culturally familiar tasks (Cavendish, Harry, Menda, Espinosa, & Mahotiere; López, 2016). In their 2010 Study, Durán et al. drew upon the work of Thomas and Collier to further investigate the impact of EL programming on language acquisition and student achievement. The findings of the experimental study compared an English-only model to bilingual instruction and showed that bilingual programming was more effective than English-only instruction for fostering language acquisition in ELs. Further, Durán et al. (2010) found that bilingual programming improved Spanish language ability at no cost to English. Findings of other studies have since replicated the cost-neutral nature of bilingual programs as described by

Durán et al., including the studies by Jepsen (2017), Ortega and Tangerås (2008), Proctor, August, Carlo, and Snow (2006), and Slavin and Cheung (2005). However, the models of instruction used in schools often lack a foundation in such evidence-based best practices (Barrow & Markman-Pithers, 2016; Samson & Lesaux, 2015; Slavin & Cheung, 2005; Thomas & Collier, 2002).

To further support the body of work discussing EL best practice, Slavin and Cheung (2005) reviewed research literature including 17 studies on EL instructional models and student achievement. Of the 17 studies reviewed, none favored English-only instruction, and the majority favored bilingual models (Slavin & Cheung, 2005). Findings presented by Kim et al. (2015), Slavin and Cheung (2005), and Thomas and Collier (2002) suggest that EL instructional model not only has an impact on students long-term, but that the programs in place in most schools today are ineffective. Understanding that many ELs are not provided with the most effective methods of instruction lends deeper insight into the factors contributing to discrepancies in early literacy achievement among ELs in early childhood.

Family Factors

Much research has sought to address how family characteristics impact a child's development in the early schooling years. These mesosystemic interactions between families, school, and communities influence students' early learning, and lend insight into the factors that impact EL student achievement in early childhood. Several studies have focused on ELs and their home environments, and the findings of many show that how families engage with language and literacy in the home influences students' success in school (Hindman & Wasik, 2015; Sonnenchein et al., 2016).

Research on reading outcomes in early childhood addresses the importance of literacy in the home. Factors associated with increased student outcomes in early literacy include increased levels of family literacy and access to print in the home (Hindman & Wasik, 2015; Reese & Goldenburg, 2006; Rios-Aguilar, 2011). Hindman and Wasik (2015) also found that factors of family literacy significantly impacted students' early literacy skills in both English and their native language as they began school.

High levels of family engagement with school has a positive impact on student achievement in early literacy (McWayne, Melzi, Limlingan, & Schick, 2016). However, many families of ELs face barriers in maintaining regular involvement and communication with their child's school (McWayne et al., 2016). McWayne et al. (2016) found that Spanish-speaking families of EL children had significantly lower levels of engagement with schools as measured by the Preschool Family Engagement Scale. The survey, administered in both English and Spanish, showed that fewer than 20% of Spanish speaking caregivers had high levels of engagement, in stark contrast with their English-speaking counterparts, 48% of whom showed high engagement. The disconnect between EL families and schools stems, in part, from a lack of cultural awareness and culturally responsive practice in schools (McWayne et al., 2016; Siwatu, 2007). As family engagement is positively related to literacy outcomes, lower levels of interaction and collaboration between EL families and schools may contribute to the gaps in early literacy experienced by ELs in early childhood.

The broad body of literature on family factors and literacy helps researchers understand how family factors shape ELs' early literacy experiences as they enter school. Issues of family engagement, parent and teacher communication, and literacy in the home

all impact student success in early literacy (Hindman & Wasik, 2015; Reese & Goldenburg, 2006; Rios-Aguilar, 2011). As students enter schooling, they bring with them knowledge from their home experiences. These factors, though not controlled by teachers in the classroom, contribute to how ELs acquire literacy. Skillful instruction is needed to address the unique needs that ELs bring with them into the classroom. It is, therefore, paramount that researchers address how teacher capacity and beliefs can impact EL student achievement.

Teacher Knowledge and Skills

Teacher capacity for instructing ELs is a key factor contributing to the literacy achievement of ELs in early childhood (Battey et al., 2013). Teachers' attitudes, beliefs, and preparation for working with diverse student groups impact student success in the classroom (Battey et al., 2013; Cavendish et al., 2016; Hindman & Wasik, 2015). In a summary of the National Early Literacy Panel, August and Shanahan (2008) states:

Becoming literate in a second language depends on the quality of teaching, which is a function of the content coverage, intensity or thoroughness of instruction, methods used to support the special language needs of second-language learners and to build on their strengths, how well learning is monitored, and teacher preparation (p. 3)

Therefore, to meet the diverse language acquisition and early literacy development needs of ELs, teachers must be adept at providing intentional and explicit language instruction throughout content learning (August & Shanahan, 2008; Echevarría et al., 2000).

Teacher preparation. Research on teacher preparation for working with linguistically diverse students highlights the importance of teacher qualification and

effectiveness (Delgado & Stoll, 2015; Farver et al. 2009; Hindman & Wasik, 2015; Jung et al., 2016). Early childhood educators with higher levels of education and mindsets that emphasize the importance of kindergarten readiness foster improved early literacy performance in ELs (Delgado & Stoll, 2015). High-quality instruction and teacher preparation are associated with improved student outcomes in early childhood (Delgado & Stoll, 2015; Farver et al. 2009; Hindman & Wasik, 2015; Jung et al., 2016).

However, the preparation required to work with ELs is minimal, and many teacher preparation programs offer only limited instruction to pre-service teachers for working with EL students (Montano, Ulanoff, Quintanar-Sarellana, & Aoki, 2005). Beginning in the 1970s, some states with high EL populations began to include EL-centered instruction in teacher preparation programs. For example, California, which has a high EL student population, set guidelines for teacher preparation programs that require teachers to receive training on supporting ELs, and has regularly updated teacher preparation policies since the 1970s (Montano et al., 2005). Today, teachers in California must complete several courses relating to ELs and cultural competency throughout the credential and renewal process (California Commission on Teacher Credentialing, 2018). Unlike California, many states are just beginning to require EL-related coursework for pre-service teachers (Ramos, 2017). This lack of adequate teacher preparation exists despite evidence suggesting that teacher preparation for working with linguistically diverse students can have positive outcomes on teachers' in-service work with ELs (Ramos, 2017).

Beyond mainstream teacher preparation, there are also inconsistencies in how EL teachers prepare for their work with students. In the state of Maryland, for example,

certification for teaching ELs only requires passing a licensure exam for teachers who already hold a teaching certificate. The exam, offered by a national education testing service, allows teachers to sit for one testing session and, upon passing, add an EL endorsement to a current, valid teaching certificate (Maryland State Department of Education, 2018a). Therefore, any certified teacher can take and pass an exam to earn the EL teaching endorsement and begin working with EL students without taking additional teacher preparation courses at a graduate level (Maryland State Department of Education, 2018a).

In a study on teacher preparation and work with ELs, Ramos (2017) found that learning opportunities for preservice teachers specific to teaching ELs had a positive impact on teacher views of ELs, even among largely white monolingual teacher populations in geographically homogeneous areas. Such research on the topic of teacher preparation shows that how teachers prepare for work with ELs impacts their work in the classroom (Ramos, 2017; Siwatu, 2007).

Opportunities for professional learning. Beyond preparation programs, teacher access to professional learning regarding EL best practice also impacts their interactions with ELs (Henson, 2001; Samson & Lesaux, 2015; Siwatu, Putman, Starker-Glass, 2017). Teacher's preparation and training for work with ELs impacts their success in meeting ELs' diverse needs in the classroom. Teachers' access to ongoing in-service training on how best to serve diverse student populations contributes to student success in early childhood settings (Henson, 2001; Samson & Lesaux, 2015; Siwatu et al., 2017). Though preparing teachers to serve ELs has positive effects on instructional outcomes, it

is also important to consider how individual student complexity factors relate to teachers' ability to implement such responsive instruction.

Culturally responsive instruction. Offering students with culturally responsive instruction helps ensure equitable access to content and language learning (Banks, 2015; Mei Lin, 2015; Ramos, 2017; Siwatu, 2007). For the purposes of this literature synthesis, culturally responsive instruction is defined as the use of students' cultural backgrounds, prior experiences, individual learning preferences, and aspects of diversity to engage students in a learning environment that facilitates multiple opportunities for expression and encourages respectful interaction (Banks, 2015; Siwatu, 2007). The definition also includes that culturally responsive instruction provides “students with the knowledge and skills needed to function in mainstream culture while simultaneously helping students maintain their cultural identity, native language, and connection to their culture” (Siwatu, 2007, p. 1087). Culturally responsive education provides diverse student groups with more equitable and engaging access to learning (Gee, 2008; Kelley, Siwatu, Tost, & Martinez, 2015; Siwatu, 2007). Using culturally responsive practices including culturally familiar tasks and the use of additive language during instruction yielded improved outcomes in reading among ELs (F. Lopez, 2016). Lopez's study relied on mixed methods to measure student outcomes on a reading assessment, student self-efficacy, and teacher beliefs. Findings of the study support the use of culturally responsive practice for increasing students' self-efficacy and bolstering reading performance (F. López, 2016). A seminal researcher in the field of multicultural education, Banks (2015), extols the importance of providing culturally and linguistically responsive instruction for ELs and

argues that providing equitable access to high quality instruction through such learning supports is an essential part of culturally responsive programs.

Building on the work of Siwatu (2007), additional studies on EL student achievement have espoused the effectiveness of culturally responsive teaching (López, 2016; Ramos, 2017). However, the literature regarding culturally responsive practice is often limited to samples of mainstream and pre-service teachers (e.g. Kelley et al., 2015; Ramos, 2017; Siwatu, 2007). In fact, review of the research literature on ELs and culturally responsive education only yielded one such study that addressed EL teachers' role directly: Akbari and Tavassoli (2014), though even their study included other teachers in the participant sample. To better understand how culturally responsive practice relates to the academic achievement of ELs, additional research should address how EL teachers specifically can incorporate culturally responsive practice in their work with the students they serve.

Teacher Attitudes and Beliefs

Providing students with culturally responsive instruction relies on educators' ability to differentiate for students' individual cultural needs (Banks, 2015; Gay, 2002). Educators working with ELs may struggle with providing culturally responsive instruction due, in part, to their personal attitudes and beliefs. Battey et al. (2013) found that many teachers of language minority students equated English language proficiency with intelligence. Qualitative measures within the study illuminated the deficit mindsets held by many teachers regarding ELs and their academic ability. In a similar qualitative study, Cavendish et al. (2016) found that teacher perceptions of ELs influenced how they respond to struggling ELs, contributing to the gaps in EL student achievement. Although

the nature of qualitative data limits the generalizability of the findings of Battey et al. (2013) and Cavendish et al. (2016), the studies provide some evidence of a possible barrier to providing culturally responsive instruction and can inform research on meeting the needs of linguistically diverse students. Because work with ELs requires teachers to offer responsive and differentiated instruction, issues of teacher preparation and professional development are factors central to the academic achievement of ELs in early childhood settings.

Teacher self-efficacy. Beyond teachers' beliefs about ELs and culturally responsive instruction, teachers' self-efficacy is a key factor contributing to student outcomes. Teacher self-efficacy for culturally responsive practice could be a major microsystemic factor relating to how ELs perform in school. According to Bandura's (1986) work on social cognitive theory, self-efficacy impacts an individual's cognitive processes and behavior. Further, high levels of self-efficacy are a characteristic of effective teachers (Henson, 2001). Efficacious teachers produce higher levels of student achievement and foster higher self-efficacy in students (Henson, 2001). Siwatu et al. (2017) argues that teachers are less likely to implement culturally responsive practice if they feel as though they will be unable to or unsuccessful in doing so. In sum, if EL teachers do not feel as though they will be successful in offering culturally responsive teaching to ELs, they likely will not attempt to do so.

To better understand how teachers can better serve diverse students, several studies address the intersection between culturally responsive practice and self-efficacy. These studies include the initial validation of two instruments that measure teachers' self-efficacy for culturally responsive teaching (Siwatu, 2007) and classroom management

(Siwatu et al., 2017). Siwatu (2007) and Siwatu et al. (2017) draw upon Bandura's (1986) work as applied to early research on self-efficacy to diverse student populations within today's schools (Siwatu et al., 2017).

Specific to ELs, Akbari and Tavassoli (2014) sought to establish the connection between EL teacher self-efficacy and teacher performance. The study, which used qualitative interviews and observations, focused on a sample of 18 EL teachers and 13 EL students in varied educational settings. Within Akbari and Tavassoli (2014), EL teachers participated in a survey to measure self-efficacy for working with their students. Similarly, Ramos (2017) sought to establish how teachers can best serve ELs with a sample of 18 white classroom teachers in a rural, linguistically homogeneous community and did not include any EL teachers. Although research on ELs and responsive practice exist, there is a gap in the existing body of literature. Studies on EL teacher practice and efficacy for serving ELs specifically are virtually nonexistent. Additional research that focuses on EL teachers and their students would allow scholars and practitioners to better understand how EL teachers' self-efficacy for culturally responsive teaching impacts the academic success of ELs in literacy development in early childhood.

Stereotype threat. Stereotype threat refers to a social condition wherein negative stereotypical beliefs about a particular group influence the behavior of individuals within that group (Steele, 1998). Within stereotype threat theory, individuals fear that they will confirm a negative stereotype and subsequently underperform, thus perpetuating the stereotypical belief, resulting in perpetuated inequities and hinderances to performance. A common example of stereotype theory in action is the performance of female students in math (Steele, 1998). Girls in math settings fear that their struggles with math content will

confirm negative stereotypes that girls are bad at math. Fear of confirming the stereotype leads girls to disengage with the content and underperform on math tasks, thus perpetuating the negative stereotype (Steele, 1998).

English learners are a highly diverse group, but stereotypical beliefs about immigrants and language minority groups often influence how teachers view ELs (Battey et al., 2013; Blanchard & Muller, 2015; Keengwe, 2010). Teachers sometimes see Spanish-speaking ELs as a homogeneous group despite their differences in educational, experiential, and even linguistic backgrounds (Blanchard & Muller, 2015; Murillo, 2017). In some cases, as documented in Blanchard and Muller (2015), EL students respond to the stereotypical beliefs that their teachers hold and ultimately underperform in academic settings, thus confirming the inaccurate and biased stereotypical views of their teachers. In a study on teacher stereotyping of linguistic minority students, de Abreu and Hale (2012) noted that teachers and students interact in contexts that are culturally specific and constructed (e.g. formal schooling). In such areas of contact between cultures, cultural characteristics influence how people interact, and can challenge teachers by posing barriers to communication and disrupting business-as-usual in the classroom (de Abreu & Hale, 2012). The findings of de Abreu and Hale's (2012) qualitative study showed that teachers relied on stereotypical beliefs about their students' cultures to determine how students required support. Much like the results in Battey et al. (2013), teachers in the de Abreu and Hale (2012) study equated intelligence with English proficiency and viewed students of the same linguistic group as having the same educational needs because their cultural differences were viewed as a disruption and deficit.

Stereotypical views of ELs may influence EL student performance through stereotype threat phenomena and contribute to the gaps in academic achievement faced by EL students. However, through culturally and linguistically responsive practice, teachers can combat stereotype threat and support EL students based on their individual educational needs (Blanchard & Muller, 2015). Research suggests that using cross-cultural instructional practices can help to develop cultural understandings among EL students and their teachers and help to mitigate the negative effects that stereotype threat can have on some students by encouraging cultural expression and celebrating linguistic differences as assets in the classroom (Banks, 2015; Blanchard & Muller, 2015; Keengwe, 2010; Murillo, 2017).

Student Factors

English learner students require specialized language supports to access learning in a second language (Krashen, 1982). Because of their rich diversity in background and language ability, individual characteristics of ELs contribute to their experiences in the classroom. Microsystemic factors of language distance (how close a child's native language is to English), impetus for immigration (Lutz, 2006), schooling background (Delgado & Stoll, 2015), and personality (Krashen, 1982) all contribute to how ELs engage in learning as they enter schooling in the United States.

Language acquisition. To better understand the microsystemic factors influencing ELs in early childhood, it is important to address the impact of language acquisition on literacy development. Language and early literacy are inextricably linked, as early language skills like vocabulary and exposure to language impact a child's literacy development (August & Shanahan, 2008; Sonnenschein et al., 2016). Although

most children acquire language rapidly in the early childhood years, complexity factors such as prior care environment and language use in the home can impact students' language acquisition (McWayne et al., 2016; Sonnenschein et al., 2016).

Researchers in education have found that bilingual children and ELs acquire language differently than monolingual peers (Farver et al., 2009; Hoff, 2013). Supporting literature discusses language acquisition in bilingual children, finding that children who are acquiring multiple languages at once tend to have lower language ability in English alone (Hoff, 2013). However, when considering development in a child's native language and English together, research shows that bilingual children do not acquire total language at a slower rate (Hoff, 2013). Rather, young ELs are simultaneously acquiring English and their home language, resulting in the same total level of language acquisition (García, Ibarra Johnson, & Seltzer, 2017; Hoff, 2013). As most EL programs focus on the acquisition of English only, development of early language skills in a child's home language is often overlooked when responding to student needs (Cavendish et al., 2016; Hopewell & Escamilla, 2014). This narrow focus of language development within and across languages becomes problematic when students enter school. Children coming from homes where the family speaks a language other than English are often placed into EL services. Because many of these programs focus on English-only instruction and assessment, bilingual children appear to have lower levels of language (Hoff, 2013; Hopewell & Escamilla, 2014), and ability in their native language goes unaddressed during instruction. Perceived low levels of language development can lead to an over-identification of ELs for additional learning supports, as educators only access a portion of EL children's linguistic abilities (Hopewell & Escamilla, 2014).

In a quasi-experimental study, Hopewell and Escamilla (2014) studied a sample of 286 bilingual third graders to investigate how the language of assessment impacted students' identification to receive additional support as struggling readers. The study found that children assessed monolingually on early reading skills were more likely than students assessed bilingually to be identified as low achieving and labeled as struggling readers. This finding supports the work of other studies investigating literacy gaps in ELs, including that of Cavendish et al. (2016), which found that social aspects of teacher bias and cultural understandings impacted teachers' efforts to intervene for struggling students.

English learners in early childhood acquire multiple languages simultaneously. As native English-speaking peers are acquiring the dominant English and applying it to early literacy learning in school, ELs are acquiring English in addition to their home language(s). Yet, ELs must engage in early literacy learning in English along with their monolingual peers. Because most EL programs do not offer bilingual supports for young learners, ELs in early childhood must navigate language and literacy learning while only accessing one linguistic repertoire in their learning environments (Beeman & Urow, 2013). Inequitable language instruction and assessment practices in early grades can therefore impact EL achievement long-term (Farver et al., 2009; Hoff, 2013; Hopewell & Escamilla, 2014; Proctor et al., 2006).

Language acquisition for ELs is a complex process impacted by myriad factors. Van Tubergen and Kalmijn (2009) discusses language acquisition in immigrants. The study found that age at migration, along with time instructed in the target language, and generational status all impact how an individual acquires language. Considering that

many of these complexity factors apply to older individuals and recent immigrants, and not young ELs, it would logically follow that ELs in early childhood settings would be less impacted by some factors that inhibit language acquisition. However, the gaps evident in early literacy achievement suggest that even the youngest ELs struggle with language acquisition when compared to their non-EL peers. This discrepant achievement in language acquisition impacts how ELs acquire literacy as well.

Motivation. As ELs engage with instruction in school, they often acquire English at the expense of their home language (Palacios, Kibler, & Simpson Baird, 2016). Studies show that exposure to English-only instruction results in the loss of native language ability (Lutz, 2006; Reese & Goldenburg, 2006). As students lose native language proficiency, they struggle to communicate with members of their family and communities (Reese & Goldenburg, 2006; Reyes, 2012). Language loss can influence students' motivation for language learning, as found in one study wherein the authors found that students who fear the loss of their ability to communicate in their native language may not be as motivated to learn English (Reese & Goldenburg, 2006).

Reese and Goldenburg (2006), an ethnographic study of native language maintenance, found that students were motivated to maintain their home language and apply less English learning outside of school for ease in communicating with family members and to maintain the linguistic and cultural connection between family and self. Unfortunately, there are gaps in research pertaining to the motivation of young learners, but using research completed with older students, like the Reese & Goldenburg study, can inform how scholars view issues of language maintenance and motivation even with the youngest students. Issues of motivation and desire to maintain native language

proficiency may contribute to EL student success in early language and literacy acquisition (Reese & Goldenburg, 2006; Reyes, 2012).

Affective filter. The term *affective filter* refers to the environmental factors that can inhibit learning (Gee, 2008; Krashen, 1982). Children come to school with background experiences that shape how they learn. These experiences can shape students' level of comfort and risk-taking-tolerance in the classroom, impacting their ability to learn and interact with others. The affective filter is especially impactful as learners acquire a second language (Krashen, 1982). As ELs enter into schooling, they often encounter barriers and stresses that can inhibit language acquisition and academic achievement.

In a seminal work on second language acquisition, Krashen (1982) hypothesized that affective filter can inhibit language acquisition. Aspects of motivation, along with self-confidence and anxiety, can inhibit the intake of new information and limit students' willingness to take intellectual and language risks. In describing the affective filter hypothesis, Krashen (1982) argues that high affective filter can lead to stagnation in ELs' progress, and that no amount of comprehensible input for language learning can be accessed or retained when affective filter is too high. Modern scholars have since elaborated upon the affective filter hypothesis. Gee (2008) offers insight into affective filter as it applies to learning environments, arguing that the learning environment itself can raise affective filter and inhibit access to learning. Considerations for how culturally responsive practice can limit affective filter and offer more responsive learning environments must be considered when seeking to address individual student needs (Gee, 2008; López, 2016; Ramos, 2017). When ELs experience feelings of anxiety, low self-

confidence, and perceived threat, language and content learning is inhibited (Gee, 2008; Krashen, 1982), making access to learning unavailable to ELs as they acquire literacy.

The concept of affective filter is a key element of the EL student experience. Multiple ecological system-level factors like language policy, cultural mindsets, family engagement, and teacher capacity all impact how ELs learn in early childhood settings. It is important for researchers to deeply understand how each factor, from the macrosystemic to microsystemic level, contributes to ELs' achievement in early literacy. To gain a holistic view of the factors contributing to discrepancies in early literacy faced by ELs, it is essential for researchers to build upon the foundation of existing literature on the topic and attempt to view the problem from multidisciplinary and systemic perspectives.

Summary

Within each of level of ecological systems theory are factors contributing to the problem of discrepancies in literacy achievement between ELs and their non-EL peers. Throughout this synthesis of research literature, studies from varied disciplines illuminate the depth and breadth of the problem of early literacy achievement for ELs. Chronosystemic changes in education shaped how schools responded to increased accountability measures with the advent of NCLB. Macrosystemic views on language minorities, immigrants, and education influence how schools and communities craft their education programs for ELs. Further, exosystemic policies in education have left EL services open to wide variances in implementation.

This synthesis of research literature served to provide context and insight into the factors that contribute to the problem, and informed future research within the context of

one Maryland school system. The information presented within this synthesis of literature can help scholar practitioners better understand the discrepant achievement of ELs in today's school systems and respond to needs within school contexts. Macrosystemic, exosystemic, and mesosystemic factors are beyond the scope of actionable intervention in the present short-term dissertation study. However, issues within the microsystem offer rich opportunities for empirical study. Factors of teachers' self-efficacy for culturally responsive instruction and instructional practices for ELs are observable and more easily measured, and further investigation in those areas can inform researchers about today's educational contexts. To situate the research literature on EL student achievement in the study context, the review of research literature presented here was used to guide an empirical needs assessment study which took place in the target school system. The needs assessment, detailed in chapter two of this dissertation, aimed to contextualize the factors contributing to the problem of practice in the context of a local school system. The study investigated teacher attitudes and beliefs, student performance on local measures of early literacy, and teachers' perceptions of their EL instructional practices.

CHAPTER 2

Assessing the Needs of English Learners and Their Teachers

To better describe the relationship between current instructional practices and EL student achievement, an empirical needs assessment study took place within a large school district in central Maryland. The needs assessment, detailed in this chapter, drew upon the existing body of research literature on ELs and early literacy instruction. Results from the descriptive study offered insight into the areas of need for ELs and their teachers in a target school system.

Teacher self-efficacy (Siwatu, 2007), implementation of culturally responsive instruction (López, 2016), and EL program type (Samson & Lesaux, 2015; Thomas & Collier, 2002) are important factors which impact EL student success. Research on teacher self-efficacy for providing culturally responsive instruction illustrates the impact that these teacher beliefs can have on student outcomes (López, 2016; Mei Lin, 2015; Siwatu, 2007). To better understand how these factors relate to student achievement in real contexts, an initial needs assessment was used to measure teacher attitudes and beliefs within the target school system. The study sought to investigate the EL instructional model in place across various school locales, measure teacher perceptions of self-efficacy for providing culturally responsive instruction, and gather student achievement data for ELs in early literacy. Collecting such data offers a foundational understanding of the current state of EL instruction in the county and serves to situate the problem of practice within the context of the target school system.

Research on complex problems in education requires careful planning from a foundation of empirical research (Boote & Beile, 2005). Prior to creating this plan for a

needs assessment study, research began with a thorough review of the research literature surrounding a problem of practice regarding literacy achievement in ELs, as presented in chapter one. The review of research literature illuminated myriad ways in which the problem of discrepant literacy achievement for ELs in early childhood settings has lasting consequences for ELs long-term, and established the research foundation for this needs assessment study.

Context of the Problem of Practice and Needs Assessment Study

English learners consistently underperform compared to their non-EL peers on measures of academic achievement. The gaps in achievement faced by these students are pervasive and widespread (August & Shanahan, 2008; Samson & Lesaux, 2015; Thomas & Collier, 2002). The early literacy needs of EL students remain unmet in many schools, as systems rely on ineffective models of language instruction to support EL students (Durán et al, 2010; López et al., 2015; Mei Lin, 2015; Thomas & Collier, 2002). The achievement gap between ELs and their non-EL peers is especially prevalent in literacy learning, and has lasting consequences for ELs (Berends & Peñaloza, 2010; López et al., 2015; Park et al., 2017). Stymied literacy perpetuates achievement gaps for ELs in the long-term and impacts success for these students throughout their educational career (August & Shanahan, 2008; López et al., 2015; Slavin & Cheung, 2003; Park et al., 2017; Thomas & Collier, 2002).

In Maryland, the gaps faced by ELs within a large school system in the state mirror national trends. School systems throughout the state of Maryland are experiencing changes in student demographics reflective of national trends, leaving some schools ill-equipped to meet the changing needs of their student populations (Sugarman & Geary,

2018). In one school district in central Maryland, a dramatic increase of ELs has left many schools struggling to meet the needs of ELs in the classroom. Throughout the district, ELs underperform compared to their non-EL peers in the early grades, and those gaps persist as students matriculate through their educational careers. Initial observations within several schools throughout the county yielded qualitative data indicating that issues of equity in instruction for ELs were present throughout the school system. In observations of student support meetings, staff described the inconsistent nature of EL instruction and supports and expressed discomfort with providing culturally responsive education to EL students. When asked about how one teacher had adjusted supports for an EL student who was struggling in reading, the teacher replied “[they] just don’t fit anywhere with my other students... I can’t spend all of my time just with this one [EL] student.” In all three observed student support meetings, teachers used deficit language to discuss the EL student’s needs, stating that the EL students of concern did not ‘fit’ with others in the classroom. In one meeting about a recently arrived refugee student who came to the United States fleeing devastation in Puerto Rico during Hurricane Maria in 2017, the team focused mainly on the child’s lack of academic progress rather than her cultural and linguistic background and experiences. Because of the perceived lack-of-fit and gaps in academic achievement, the child was pulled from her general classroom setting for one-on-one supports for up to three hours a day for English-only remediation and support. This occurring despite the fact that the child had attended school in Puerto Rico until the fifth grade and was a fluent reader in Spanish.

Such observations within the school system suggested that some factors contributing to the problem as described in the existing body of research literature could

also be impacting student achievement in the target school district, including teacher bias, ineffective EL instructional supports, and a lack of culturally responsive instruction, suggesting the need for further investigation through a needs assessment study. Empirical research on the nature of the problem, therefore, took place within the target school system, aiming to describe the factors contributing to these gaps in the context of one Maryland school district.

Purpose of the Study

To address the gap in extant literature on EL teacher self-efficacy for providing culturally responsive instruction, the needs assessment described in this chapter aimed to investigate EL teacher mindsets and practices in the target school system. Empirical study of these selected factors situated the problem of practice in a real context. The study measured the prevalence of discrepant early literacy achievement among ELs and their non-EL peers, as well as EL teachers' perceptions of self-efficacy for providing culturally responsive instruction to EL students. The needs assessment also gathered data on the models of instruction and supports available to ELs throughout the county.

For the purposes of this study, culturally responsive teaching self-efficacy is defined as teachers' beliefs that they have the capacity in both knowledge and skill to use students' cultural backgrounds, prior experiences, and individual learning preferences, to guide instruction. In the context of the study, culturally responsive teaching also includes the use of students' aspects of diversity to engage students in a learning environment which facilitates multiple means of expression, encourages respectful interaction, and "provides students with the knowledge and skills needed to function in mainstream culture while simultaneously helping students maintain their cultural identity, native

language, and connection to their culture” (Siwatu, 2007, p. 1087). English learner instructional model is defined as the method used to provide English language instruction and supports to EL identified students, as described by the location of the services and the instructional practices of EL teachers working with ELs (Durán et al., 2010; Thomas & Collier, 2002). Student achievement in early literacy in this study is defined as student performance on local measures of reading, writing, and foundational skills in English in pre-kindergarten and kindergarten.

In addition to describing the problem of practice in a particular context, this needs assessment also aimed to address the gap in extant research pertaining to EL instructional practice specific to EL teachers. As noted in chapter one, research on culturally responsive practice for ELs often relies on samples of mainstream teachers (Akbari & Tavassoli, 2014). This needs assessment focuses on the attitudes and beliefs of EL teachers specifically. The findings of the needs assessment study provided the empirical foundation for an intervention study in the study context, which is presented in the final chapters of this dissertation.

Research Design

The purpose of this needs assessment was to deepen the understanding of the prevalence of a problem of practice in the target school system and further contextualize the extant research literature on EL student achievement. The needs assessment aimed to describe the context of the target school system and the underlying factors contributing to the gaps in literacy achievement for ELs. The research questions listed in the section below informed the methodology of the study and serve as a foundation upon which to analyze needs assessment data.

Research Questions

This needs assessment addressed four research questions, which serve to establish the current state of EL instruction and teacher beliefs surrounding the problem of practice:

1. What evidence exists of discrepancies in early literacy between ELs and their non-EL peers in county student achievement data?
2. How do EL teachers characterize their instructional model for serving EL students?
3. To what extent do EL teachers feel confident in providing culturally responsive instruction to EL students?
4. What is the relationship between a school's location and EL teacher self-efficacy for providing culturally responsive instruction to ELs?

Method and Procedure

To identify the current state of EL achievement and instructional supports within the school system, the needs assessment employed a parallel mixed methods design (Creswell & Plano-Clark, 2018; Small, 2011). Mixed methods studies offer rich data that describes both the empirical and experiential aspects of a research study (Johnson & Onwuegbuzie, 2004; Lochmiller & Lester, 2017). Data collection for this study used a teacher survey with selected response and open-ended items and a review of pre-existing data. Due to limitations on time and resources, the survey included an open-ended item to gather qualitative data in lieu of focus groups or interviews. The teacher survey was distributed via the online survey platform Qualtrics. Appendix A includes a copy of the teacher survey downloaded from Qualtrics with the identifying information from the target school system redacted. The forthcoming sections of this report offer a detailed

roadmap of the methods and procedures used to investigate the research questions framing the study.

Sample. The sample for this needs assessment study included 30 EL teachers who serve students in pre-kindergarten and kindergarten. Teachers were identified for the study based on service schedules submitted to the central office EL department. The nature of the professional role of the researcher allows for easy and regular access to EL teachers in the county, and the researcher directly recruited teachers for the study by inviting participation via an emailed link. All participants accessed the survey using the same link, and the survey did not collect any personally identifiable information, ensuring the anonymity of participants.

The sample for the study was purposeful and self-selecting, as teachers were identified based on assigned grade level and chose whether to participate in the survey. The group of teachers invited to participate in the study, described in Table 2.1 below, represents teachers from varied locales across the county. The sample included teachers who work as the sole EL provider for a school and those who work in large teams of EL teachers. The sample included only EL teachers serving students in the early childhood grades, though some serve only kindergarten and other serve both kindergarten and pre-kindergarten students. The sample included both veteran and novice teachers with varying years of experience in EL, including three first year and 27 experienced teachers who have at least one year of EL teaching experience. The sample is mostly female, with only one male teacher included, which is representative of EL teacher demographics throughout the county. Most of the teachers included in the sample teach with at least one other teammate, and 10 work alone in itinerant or single-teacher schools.

Table 2. 1

EL Teacher Study Population Demographics

EL Teacher Characteristic	Number in Group
School Locales	7 Small City 2 Large Suburb 10 Midsize Suburb 3 Town Fringe 6 Rural Fringe
Position Type- Number of EL teachers on participant’s EL instructional team	10 Itinerant/Single 6 Pair 9 Small team (3-5) 5 Large team (6 +)
Gender	29 Female 1 Male
EL Experience	3 new to EL in 2017-2018 27 at least one year EL teaching experience

Following Johns Hopkins Institutional Review Board (IRB) protocol, the invitation emailed to participants included the consent statement provided by the Johns Hopkins IRB and stressed the voluntary nature of participation in the research study. In addition, the first item within the teacher survey (Appendix A) included the consent statement. As a professional courtesy, principals at each school received an email prior to distributing the survey to teacher participants notifying them that their EL staff may be recruited to participate in the needs assessment study. Beyond the initial invitation email, several reminder emails were sent to the teachers to encourage participation throughout the survey window, which spanned nearly one month. Each email communication included the consent statement and a description of the voluntary nature of participation.

In addition to survey data, pre-existing student achievement data at the aggregate level formed a portion of the needs assessment. Table 2.2 illustrates the student

demographics for the county and includes students’ ethnic and racial backgrounds as well as identification for special services. Pre-existing data included student performance for all students countywide who took each assessment as well as performance of students in the EL student group and helped establish the existence of achievement gaps for ELs within the county. The student population from which data were collected was diverse; the majority of students in the school system are white (61.84%), and the Hispanic and Black/African American populations have grown in recent years and represented 15.45% and 11.89% of the system’s student population, respectively at the time of the study.

Table 2. 2

Student Demographics in Target School System For the 2017-2018 School Year

Student Characteristic	Percent of Student Population Countywide
Racial and Ethnic Diversity	
American Indian	0.36
Asian	5.33
Black/African American	11.89
Hawaiian/Pacific Islander	0.19
Hispanic/Latino	15.45
White	61.84
Two or more races	4.93
Special Service	
Free and Reduced Meals	32.4
Limited English Proficient (EL)	9.2
Special Education	10.8

In the 2017-2018 school year, ELs constituted just over nine percent of the student population within the target school system (Maryland State Department of Education, 2018b). Students in the system are identified as part of the EL student group in achievement data based on their service coding in the county’s student information database. To qualify for EL services, families must first self-report that a language other than English is spoken in the home. Students must then demonstrate a need for language

supports in school based on their level of English proficiency as measured by an English language screener assessment. If a child meets all of the language and proficiency requirements, he or she is tagged electronically as an active EL student in the database and subsequently included in the EL student group for data reporting purposes.

When comparing EL student achievement in early literacy with that of their non-EL peers, the student sample is problematic. Schools are not required to offer EL services to students in Pre-kindergarten, and some schools may choose not to identify children as EL until they enter kindergarten. Therefore, the pre-kindergarten student achievement sample may be subject to some selection bias. Further, the student sample for this needs assessment study is complex because the state of Maryland is not a mandatory pre-kindergarten state. Although data from kindergarten students is representative of the county demographics in Table 2.2, pre-kindergarten student demographics are not equally representative of the county. Children in the target school system enter pre-kindergarten based on at-risk characteristics in a tiered system. Students qualify for pre-kindergarten placement based on low family income. If any remaining pre-kindergarten student slots remain available after all low-income children are placed, additional students enroll based on a tiered system wherein students who are special education or EL receive priority placement in pre-kindergarten. Only once all low-income, special education, and ELs who register enroll are other students offered placement in the county's public pre-kindergarten program. The process for placing students in pre-kindergarten ensures that student data on pre-kindergarten assessments would not be generalizable to the county as a whole, because at-risk students are over-represented in the sample.

Measures. Table 2.3 includes the operational definitions and measures for each construct addressed in the needs assessment study. The study used a teacher survey to collect most of the data necessary to answer the research questions. The survey instrument measured two constructs that may contribute to gaps in early literacy for ELs: EL instructional model and teacher self-efficacy for providing culturally responsive teaching. The survey, available in its entirety in Appendix A, measured several constructs and gathered information on EL teachers’ attitudes and beliefs as well as instructional practices in place for ELs at various school locales.

Table 2. 3
 Constructs, Definitions, and Measures for the Needs Assessment

Construct	Operational Definition	Measure
School locale	The location of a school based on its proximity to an urban center. Locales within the target school system include small city, large suburb, midsize suburb, town fringe, and rural fringe. Within this study, schools are described by their distance to an urban center and population of their geographic area (Table 2.4).	National Center for Education Statistics Urban-centric School Locale Codes; item on teacher survey (Appendix A)
EL instructional model	The method of instruction used to provide English language instruction and supports to native speakers of other languages.	EL program category survey item (Thomas & Collier, 2002) Open-ended qualitative survey item (Appendix A)
Teacher self-efficacy for culturally responsive instruction	Teachers’ beliefs that they have the capacity in both knowledge and skill to use students’ cultural backgrounds, prior experiences, individual learning preferences, and aspects of diversity to engage students in a learning environment which facilitates multiple means of expression, encourages respectful interaction, and “provides students with the knowledge and skills needed to function in mainstream culture while simultaneously helping students maintain their cultural identity, native language, and connection to their culture.” (Siwatu, 2007, p. 1087).	CRTSE Scale (Siwatu, 2007)
EL student achievement in early literacy	Student performance on local assessment measures of reading, writing, and foundational skills in English language arts in pre-kindergarten and kindergarten.	Kindergarten On-Demand Writing Rubric, Kindergarten reading Benchmark Assessment: Fountas and Pinnell Benchmark Assessment System, Pre-Kindergarten Stages of Writing Assessment, Pre-Kindergarten Oral Language Acquisition Inventory

School locales. The first item on the teacher survey after the consent statement asks teachers to identify their school’s locale code. Locale codes describe schools’ geographic location by proximity to urban centers and by population in a given area (National Center for Education Statistics [NCES], 2017a). A guide with each school’s code was included in the survey. As many teachers in the study population were the sole EL provider at a school, locale codes were used to describe the school location in lieu of school names to approximate school population characteristics without compromising the anonymity of the respondent. The purpose of the school locale item was to illuminate relationships between EL services, teacher mindsets, and teachers’ geographic location in the county. Descriptive definitions of school locale codes can be found in Table 2.4 below.

Table 2. 4

School Locale Codes

Locale	Definition
Small City	Territory inside an urbanized area and inside a principal city with population less than 100,000
Large Suburb	Territory outside a principal city and inside an urbanized area with population of 250,000 or more
Midsize Suburb	Territory outside a principal city and inside an urbanized area with population less than 250,000 and greater than or equal to 100,000
Town Fringe	Territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area
Rural Fringe	Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster

Note. Adapted from the “National Center for Education Statistics Common Core of Data”, National Center for Education Statistics, 2017a.

Instructional model. Items two and four in the survey sought to measure the instructional model used to serve ELs and ask teachers to describe the instructional model they most often use to serve EL students. Of the two questions, one was open-ended and one was selected response. Program model descriptions describe the physical location, structure, and language of instruction used by the EL teacher respondents to serve EL students at the school in compliance with Title III guidelines. The purpose of the open-ended item regarding EL instruction was to gather qualitative data from participants and lend deeper insight into how teachers describe their EL instructional model, teaching practices, and characteristics of instruction for ELs at varying locales across the county. In analyzing the open-ended survey data, prefigure/deductive coding identified program types based on the conceptual framework provided by Thomas & Collier (2002), a study wherein the location of services, content taught, and the language used during instruction were indicators of EL instructional program type. Further emergent/inductive coding illuminated patterns across teacher responses based on emergent codes pertaining to EL instruction.

Culturally responsive teaching self-efficacy. The teacher survey included the Culturally Responsive Teaching Self Efficacy Scale (CRTSE) in its entirety, plus one additional item addressing teachers' confidence to make instructional decisions informed by research on EL best practice. The full teacher survey with CRTSE items appears in Appendix A. Figure 2.1 below shows several sample items from the CRTSE scale as it appeared in the survey. The CRTSE, published and validated in Siwatu (2007), is an instrument that measures teachers' self-efficacy in providing culturally responsive instruction.

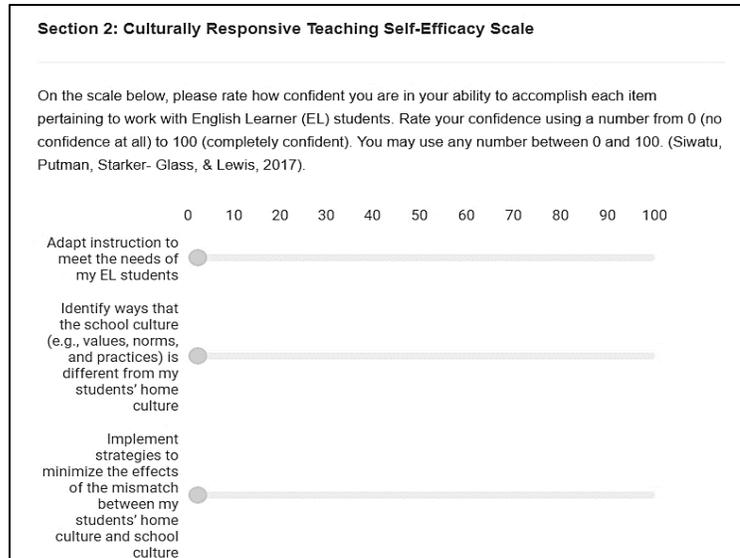


Figure 2. 1. Sample items from the Culturally Responsive Teaching Self Efficacy Scale (CRTSE). Sample items appear as they did in the online needs assessment survey powered by Qualtrics.

The CRTSE scale is applicable to the problem of practice, as it includes specific items pertaining to the instruction of ELs and strategies for providing culturally responsive instruction to diverse learners. In Siwatu (2007), analysis of the survey results using Cronbach's Alpha showed an internal reliability measure of .96, well above the .70 threshold for acceptable reliability in social science research (Santos, 1999). Additional correlational analyses indicated high validity for the scale, making it an appropriate tool for use within the survey. The initial validation of the CRTSE instrument used a psychometrically stronger 0-100 scale in lieu of a traditional 1-5 Likert. The scale allowed teachers to indicate their level of confidence in providing culturally responsive instruction to their EL students, with zero representing no confidence at all and 100 representing completely confident. To maintain validity and reliability of the existing scale, the 0-100 scale remained in the reproduction of the survey for use within this needs assessment.

Student achievement in early literacy. The measures of early literacy achievement presented in this needs assessment study include local county assessments in the areas of reading, writing, and foundational skills. The 2008 report of the National Early Literacy Panel, *Developing Early Literacy* presented the panel's findings regarding the foundational skills that predict success in literacy development. In their summary of the report, Shanahan and Lonigan (2010) present the key early literacy skills, including 11 precursor skills in young children that predict reading success. Among these skills were concepts of print, phonological awareness, and early writing skills. Based on the National Early Literacy Panel's work, foundational skills in reading are defined as the precursor reading skills and behaviors needed to access early literacy learning (Shanahan & Lonigan, 2010). For the purposes of this research, early literacy skills refer to concepts of print, phonological awareness, and early phonics skills.

Reading assessments in pre-kindergarten and kindergarten included running records, which require students to read aloud from a text while teachers note students' accurate reading and errors. The reading benchmark also includes comprehension questions that are administered in an interview after students have read the text. Once students read, teachers use the student's record of accurate reading to calculate an accuracy percentage using the total number of words in the text and the number of words read correctly by the child. The assessment used to measure concepts of print in this data set was the Oral Language Acquisition Inventory (OLAI) story elements subtest of the OLAI story retelling assessment. In the OLAI story elements assessment, students are read a story aloud and must retell the story after listening, including the main story elements of character, setting, and plot.

Writing data in this needs assessment reflects students' performance on an on-demand writing prompt for kindergarten or a stages of writing sample for pre-kindergarten. During the on-demand assessment, students are given a prompt to write a certain type of text. Students must draft, edit, and revise in one writing session to create a piece of writing, which is then scored on a county-created rubric. The writing rubric provides kindergarten students with a score from one through four on both writing craft and mechanics. Rubric items for craft include organization, clarity, and composition. Items measuring mechanics include capitalization, punctuation, and phonetic spelling of unfamiliar words. The pre-kindergarten stages of writing assessment follows a similar structure, but rather than using a rubric to assign a numerical score, student writing samples are analyzed using set of exemplars at each developmental writing stage to assign the child to a stage of writing development.

Data collection. The needs assessment employed mixed methods using a teacher survey and review of pre-existing student achievement data. The teacher survey yielded quantitative data using scales and selected response items as well as qualitative data from an open-ended item. Pre-existing data on student performance on literacy assessments came from the school system's online student data platform and already exists in the aggregate form necessary for use in this needs assessment. To ensure compliance with the requirements of the study's IRB protocol, the survey took no longer than 15 minutes for teachers to complete. In the forthcoming and final section of this chapter, data resulting from the needs assessment study are presented and analyzed in the context of the research questions guiding the study.

Results

The discussion presented below includes both quantitative and qualitative analyses of needs assessment results. Aggregate student achievement data is reported as it appeared in the school system’s online student information database, and other measures collected in the teacher survey are represented by construct. Each research question is addressed individually.

Descriptive Analysis

Analysis within the software program Statistical Package for the Social Sciences (SPSS) yielded descriptive data on selected response survey items, including the CRTSE scale. Table 2.5 below includes the demographic makeup of respondents by school code. During data collection, 30 teachers had access to the survey link. The link remained active for approximately one month; during that time, 24 surveys were started and 15 completed, resulting in a 63% completion rate. The sample included teachers from across four locale codes, with approximately one third of responses each from small city and midsize suburb schools. Over a quarter of the responses came from rural fringe schools; the remaining results came from town fringe schools, with no responses from large suburb schools.

Table 2. 5

Sample Demographics by Locale Code

		Frequency	Percent
Locale Code	13- City, small	7	31.8
	22- Suburb, midsize	7	31.8
	31- Town, fringe	2	9.1
	41- Rural, fringe	6	27.3
Total		n= 22	

Question 1: What evidence exists of discrepancies in early literacy between ELs and their non-EL peers in county student achievement data? Aggregate student achievement data from the target school system is reported below in Table 2.6. Student data from the final testing window in the fourth quarter of the 2017-2018 year showed varied achievement on measures of early literacy. Student proficiency in early literacy was defined using county achievement targets established by the school system as well as the county’s scoring criteria for pre-kindergarten foundational skill assessments.

Table 2. 6

End-of-Year Student Achievement on Measures of Early Literacy

Measure	System Target	Percent of Students Meeting System Target		
		All students	Non-EL	EL
Running Record (Pre-K)	At least 85% of all students will meet enrolled grade level expectations on the Fountas and Pinnell Level A Running Record in quarter 4 of the 2017-18 school year	81.4 n= 998	---	80.1 n= 246
Stages of Writing (Pre-K)	At least 85% of all students will meet enrolled grade level expectations in writing at the Random Letters or Invented Spelling stage of writing in quarter 4 of the 2017-2018 school year	78.4 n= 1,104	75.6 n= 766	87.0 n= 247
Oral Language Acquisition Inventory (OLAI): Story Retelling- Story Elements	Proficiency Goal: All students will score a 2 or higher on the Story Retelling- Story Elements portion of the OLAI assessment in quarter 4 of the 2017-2018 school year	90.5 n= 726	90.8 n= 535	89.6 n= 191
Running Record (Kindergarten)	At least 85% of all students will meet enrolled grade level expectations on the Fountas and Pinnell Level D or E Running Record in quarter 4 of the 2017-18 school year	80.9 n= 2,777	---	65.0 n= 369

Measure	System Target	Percent of Students Meeting System Target		
		All students	Non-EL	EL
On-Demand Writing: Craft (Kindergarten)	At least 80% of all students will meet enrolled grade level expectations in writing on the On-Demand writing assessment at a score of 3 or 4 in writing craft in quarter 4 of the 2017-2018 school year	81.84 n= 2,561	84.01 n= 2,208	68.48 n= 349
On-Demand Writing: Mechanics (Kindergarten)	At least 80% of all students will meet enrolled grade level expectations in writing on the On-Demand writing assessment at a score of 3 or 4 in writing mechanics in quarter 4 of the 2017-2018 school year	76.66 n= 2,579	77.98 n= 2,225	68.57 n= 350

Note: System targets are goals set by the school system that dictate the percentage of students that must demonstrate grade-level proficiency on required local assessments. Every student group is expected to meet the system target for each assessment.

Performance in the final quarter of school year 2017-2018 showed discrepant achievement between ELs and their non-EL peers in the early childhood grades. Compared to the all students group, kindergarten and pre-kindergarten ELs underperformed on four out of five measures of early literacy in the 2017-2018 school year. Due to missing data and shifting enrollment throughout the assessment window, the number of cases reported for each student group varies by measure and goals are therefore reported using percentages.

Pre-kindergarten achievement data. Comparing ELs and their non-EL peers in pre-kindergarten showed that EL students underperformed on all but one measure of early literacy in the 2017-2018 school year. English learners outperformed both the all students and non-EL student groups in the stages of writing assessment in pre-

kindergarten, with 87.0% of ELs meeting the system target for proficiency as compared to 78.4% of all students and 75.6% of non-EL students. The discrepancy in student performance on grade level standards in pre-kindergarten was highest in reading (as measured on the reading benchmark assessment) with 80.1% of ELs meeting the system target (n= 246) as compared to 81.4% (n= 998) of the all student group.

Kindergarten achievement data. In kindergarten, reading benchmark assessment results showed the highest levels of discrepancy in achievement, with 80.9% (n= 2,777) of all students meeting the system target for proficiency as compared to just 65% (n= 369) of ELs. The discrepant literacy achievement among ELs and their peers is most evident on kindergarten assessments.

Question 2: How do EL teachers characterize their instructional model for serving EL students? Item two of the survey asked teachers to identify the instructional model that describes the program they use to serve EL students in their school(s). The frequency of instructional models reported on the teacher survey can be found in Table 2.7. The majority of teachers (71.4%) indicated that they rely on a remedial English-only model of instruction, followed by enhanced English-only programs at 23.8%. Only one teacher indicated the use of an enrichment bilingual program.

Table 2. 7

Frequency of EL Instructional Models in Survey Responses

		Frequency	Percent
Valid	Category 2: Remedial English-only Programs	15	71.4
	Category 3: Enrichment Bilingual Programs	1	4.8
	Category 4: Enhanced English-only Programs	5	23.8
Total		n= 21	

The teacher survey culminated with an open-ended question prompting teachers to describe the EL instructional model most frequently used in their context. Figure 2.2 illustrates the frequency how often teacher responses included certain descriptors of their EL instructional model.

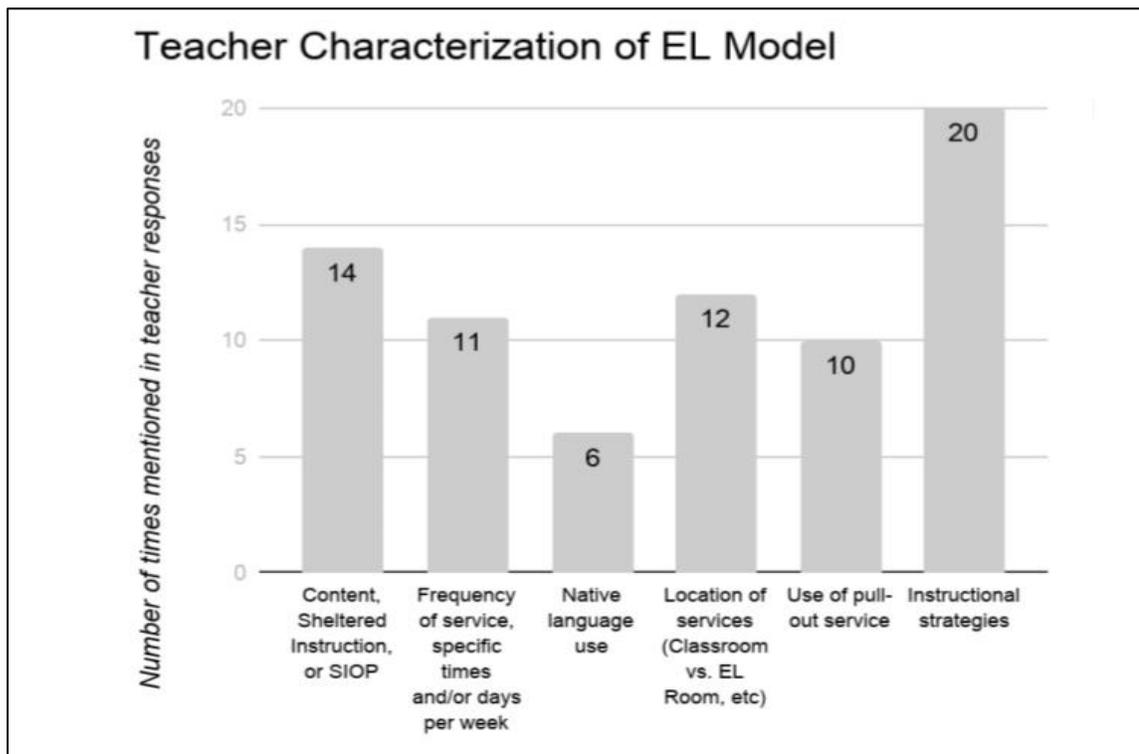


Figure 2. 2. Frequency of teacher mentions of EL instructional model characteristics in open-ended survey responses.

Note. All six mentions of native language use appeared in one teacher’s response.

Qualitative data from the open-ended survey item supports the conceptual framework presented in Thomas and Collier (2002) and showed that teachers, consistent with research literature (Thomas & Collier, 2002), characterize their instructional model using criteria of frequency, content, and language use. Emergent coding revealed that teachers also rely on descriptions of instructional strategies and location of services to define their model of instruction. Prefigure coding showed that teachers’

characterizations of EL instructional programs in the qualitative data showed frequencies consistent with responses on item two of the teacher survey, with eight teachers describing remedial English-only programs, one teacher describing an enrichment bilingual program, and two teachers characterizing their model consistent with the description of an enhanced English-only program.

Question 3: To what extent do EL teachers feel confident in providing culturally responsive instruction to EL students? Cronbach's alpha results indicated that teacher responses on the CRTSE items in the needs assessment survey had an overall reliability of .961, indicating acceptable reliability for use in social research (Santos, 1999). Appendix B includes Table B1 showing average scores and standard deviation for each item on the CRTSE scale. Results on the 100-point CRTSE Likert scale showed that EL teachers, on average, felt most efficacious in developing personal relationships with their students (mean= 95.07) and least efficacious in identifying cultural contributions to curriculum (mean= 59.47). The average composite score on teachers' CRTSE results was 81.0. Average individual participant scores on the scale ranged from 64.39 to 95.85.

Responses on items specific to language use in the classroom indicated that EL teachers are not generally comfortable communicating with ELs in a language other than English, as indicated by low average scores on item 11: *Greet English Learners with a phrase in their native language* (mean= 83.47) and item 12: *Praise English Learners for their accomplishments using a phrase in their native language* (mean: 73.87). These results are consistent with those in the initial validation of the instrument (Siwatu 2007),

wherein teachers expressed highest confidence in forming relationships and low confidence in communicating in students’ native languages.

Question 4: 4. What is the relationship between a school's location and EL teacher self-efficacy for providing culturally responsive instruction to ELs?

Instructional practice for ELs varies across school locations within the school system.

Instructional models used in each school location can be found in Table 2.8 below. Only one enrichment bilingual program exists in the county and is implemented in a city school. Midsize suburb schools and rural fringe schools overwhelmingly rely on remedial English-only programs, which are among the least linguistically responsive models available to ELs (Samson & Lesaux, 2015). Town fringe schools reported offering only enhanced English-only instruction to ELs, and respondents from city schools reported a mixture of the three models present in the results.

Table 2. 8

English Learner Instructional Model by School Locale

Locale Code	Category 1: Remedial Bilingual Programs	Category 2: Remedial English-only Programs	Category 3: Enrichment Bilingual Programs	Category 4: Enhanced English-only Programs	Total
13- City, small	0 0.00%	4 26.67%	1 100.00%	2 40.00%	7 33.33%
21- Suburb, large	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
22- Suburb, midsize	0 0.00%	6 40.00%	0 0.00%	1 20.00%	7 33.33%
31- Town, fringe	0 0.00%	0 0.00%	0 0.00%	2 40.00%	2 9.52%
41- Rural, fringe	0 0.00%	5 33.33%	0 0.00%	0 0.00%	5 23.81%
Total	0 100.00%	15 100.00%	1 100.00%	5 100.00%	21 100.00%

Results on the CRTSE illuminated some surprising discrepancies in teachers' perceived self-efficacy by school location. Research supports that teachers who have regular interaction with diverse learners report higher success with providing culturally responsive education (Ramos, 2017). Survey results from teachers in school locales with high numbers of EL students would, therefore, be expected to show higher perceived levels of self-efficacy on the CRTSE. However, needs assessments results indicated that teachers that serve the most diverse populations had the lowest CRTSE scores, as illustrated in Table 2.9 below.

Table 2. 9
Average CRTSE Scores by Locale Code

13- City, small	N	<u>Valid</u>	5
		<u>Missing</u>	0
	Mean		78.1512
	Std. Deviation		7.19013
	Minimum		67.22
	Maximum		84.20
22- Suburb, midsize	N	<u>Valid</u>	3
		<u>Missing</u>	0
	Mean		83.9593
	Std. Deviation		7.00617
	Minimum		79.83
	Maximum		92.05
31- Town, fringe	N	<u>Valid</u>	1
		<u>Missing</u>	0
	Mean		93.8049
	Minimum		93.80
	Maximum		93.80
41- Rural, fringe	N	<u>Valid</u>	6
		<u>Missing</u>	0
	Mean		79.7602
	Std. Deviation		15.02471
	Minimum		64.39
	Maximum		95.85

With an average score of 78.15 (n=5), teachers in city schools had the lowest average score on the CRTSE. By comparison, the town fringe school locale had the highest average score at 93.8 (n=1). Table 2.10 below shows the average composite CRTSE score by school locale code. On several items specific to culturally responsive work with ELs, teachers at city schools reported feeling less efficacious at making decisions based on EL best practice and adapting instruction to the needs of ELs.

Performing a high/low mean split revealed that teachers in town fringe schools had only high average self-efficacy scores compared to the 81.0 average for the entire sample (n=15). Rural schools had an even split among teachers with high and low average self-efficacy, whereas 40% of city school teachers fell in the low average range for overall CRTSE scores.

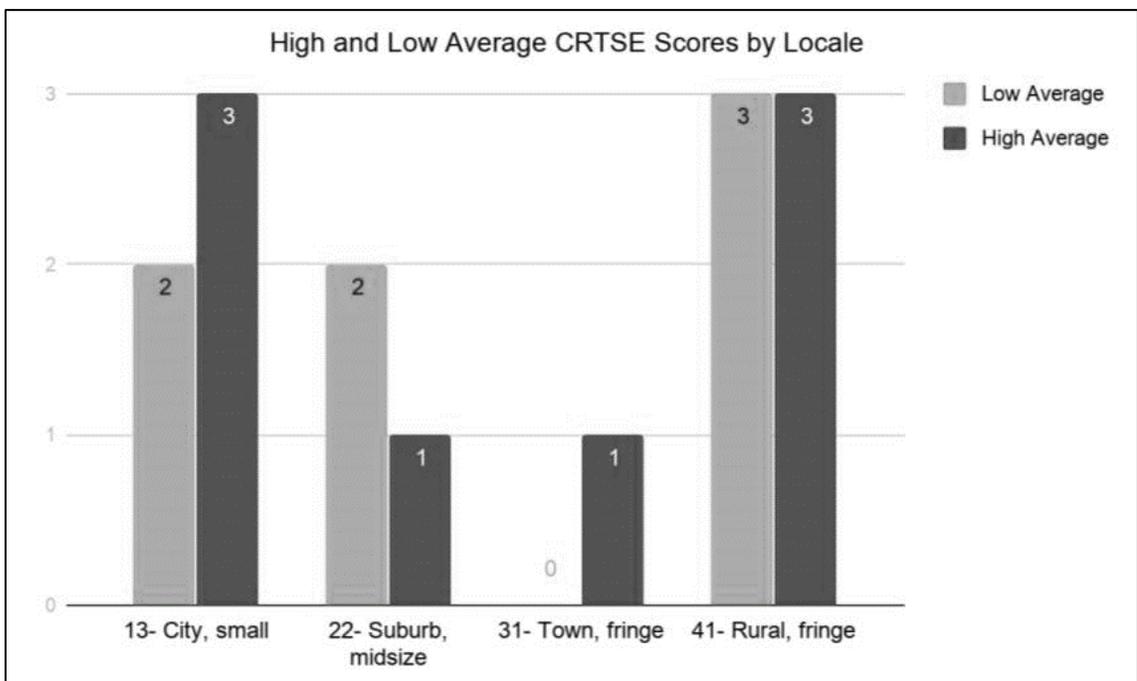


Figure 2. 3. Teachers with high and low average self-efficacy scores compared to the sample average by school locale code.

Discussion of Findings

Preliminary data analysis produced several relevant results with respect to the research questions framing this study. Results from this needs assessment yielded implications for next steps in research and identified salient needs for possible intervention within the target school system. The forthcoming portion of this analysis discusses the findings of the needs assessment and includes analysis of each research question.

Student Achievement

The percentages of EL children meeting enrolled grade level expectations on measures of early literacy showed evidence of discrepant achievement among ELs in the target school system. In kindergarten, ELs underperformed compared to the all students and/or non-EL student group in both reading and writing. This discrepant achievement was most evident on county measures of reading, wherein just 65% of ELs met grade level expectations in reading, as compared to 80.9% of all students. Gaps in literacy achievement per system targets were less pronounced in pre-kindergarten than kindergarten, and kindergarten reading results showed the largest gap in achievement between ELs and their peers. The difference in achievement among ELs between the kindergarten and pre-kindergarten years may indicate evidence of a widening achievement gap faced by ELs as they matriculate through the school system. The complexities of the student sample as described previously in this chapter are of note in regard to this finding, as pre-kindergarten students include an over-representation of students from low socioeconomic backgrounds and those with special learning needs. Because of the priority given to at-risk students for pre-kindergarten enrollment, students

in the kindergarten sample include a more representative group of students and include those from a wider variety of socioeconomic backgrounds and those without special education needs. However, despite this change in student samples between the pre-kindergarten and kindergarten years, the gaps in EL student achievement in reading appear to widen in kindergarten.

Evidence of gaps in EL literacy achievement is widespread across many contexts (Samson & Lesaux, 2015). Student achievement data for ELs and non-ELs on measures of early literacy in this needs assessment reflected such national trends and showed that ELs in the target county underperform in early literacy when compared to their non-EL peers. The implementation of remedial English-only models of instruction for ELs in place in the target school system is likely a factor contributing to student achievement in early literacy (August & Shanahan, 2008; Thomas & Collier, 2002). Because implementation of ineffective programs is widespread across the county, the gaps in achievement presented by the needs assessment data are unsurprising. Evidence of discrepant achievement in this needs assessment suggested that reading in kindergarten presents the highest area of need for ELs in early childhood within the target school system.

Instructional Model

Per teacher survey results, roughly 63% of teachers in the sample described their model as remedial English-only programs, characterized by isolated language instruction often occurring outside of the mainstream classroom. Beyond the characteristics within the conceptual framework from Thomas & Collier (2002), teachers also used instructional strategies to describe their model for instructing EL students. Qualitative

data showed that teachers heavily rely on pull-out instructional models, where ELs are removed from grade-level content learning to receive English language services.

Teachers indicated that they attempt to plan for instruction based on student need, but other factors also influenced teachers' characterization of their EL instructional model.

For example, one teacher wrote:

I try to work with student groups based on needs and availability. I pull out some students for specific intervention groups which include non ELs as well. I go into some classrooms to help with whole group instruction and to support small groups in writing or building foundational skills.

This characterization suggests that EL teachers in the target school system balance more than just their EL caseload. Qualitative data showed that EL teachers serve both EL and non-EL students, balance push-in and pull-out models, and that their roles vary based on expectations specific to their school sites.

Overall, teachers in the target school system reported levels of self-efficacy similar to the sample used to validate the CRTSE instrument in Siwatu (2007). Teachers in city schools had the lowest average score on the CRTSE, followed by rural fringe schools, then midsize suburb schools, and finally town fringe schools. It should, however, be noted that the town fringe schools average was represented by only one complete CRTSE scale response, leaving the town fringe sample limited to one respondent.

Teacher Self-Efficacy for Providing Culturally Responsive Instruction

Results of the CRTSE scale within the teacher survey illuminated areas of strength and need within the target school system. Building a safe and mutually respectful learning environment is a tenet of culturally responsive instruction that has academic and

social/emotional benefits (Banks, 2015; Gay, 2002; Fernandez, 2002). Results suggest that teachers in the needs assessment study felt confident in their ability to build relationships with students, suggesting that teachers had the knowledge and skills to build an environment of respect. However, teachers indicated low levels of confidence in addressing specific pieces of curriculum when adapting to the needs of ELs. Specifically, many teachers indicated low levels of self-efficacy in identifying cultural groups' contributions in the fields of math and science, as well as in their ability to recognize bias in standardized assessments. Confidence in providing students with culturally relevant learning experiences was low among the sample; the lowest average item score on the CRTSE scale pertained to designing a lesson that shows how cultural groups have made use of mathematics. Delgado Bernal (2002) discussed the importance of additive mindsets on the success of ELs in the classroom, noting that teachers who are not aware of the contributions of students' cultural groups to specific fields of study are not able to offer asset-minded instruction to students, which may limit ELs' success in the classroom.

Teacher Self-Efficacy by School Locale

The finding that teachers in city schools had lower self-efficacy for culturally responsive instruction as compared to teachers at other locales was surprising for several reasons. Many city schools in the school system receive additional funding through Title I and are therefore offered more opportunities for professional learning regarding ELs. Ramos (2017) and Gay (2002) posit that professional learning on working with linguistically diverse students increases teachers' efficacy for instructing ELs. At the time of the needs assessment study, three of the largest city schools also housed on-site EL

teacher specialists to support all staff with professional learning and resources for working with EL students. It is therefore notable that EL teachers in city schools averaged lower levels of self-efficacy for working with ELs than schools with fewer targeted resources for EL students and teachers.

There are two possible explanations for why teachers in city schools may have reported lower perceived self-efficacy for teaching ELs. First, city schools serve a large number of students with diverse learning needs (Maryland State Department of Education, 2018b). Qualitative data from the needs assessment survey suggested that teachers in city schools may struggle to balance their EL teaching caseload with other obligations. For example, one teacher stated:

I service Pre-K students inside of their classroom... I also service 1st-grade newcomer students using the station teaching and 1 teaches 1 assist model. I service 3rd through 5th-grade newcomer students in a pull-out environment, in a sheltered learning space which makes use of both contextualization and schema-building...

As illustrated by this quote, EL teachers in city schools balance large caseloads and serve students across grade levels. Planning to meet the variety of needs for EL students across multiple grade levels and in a variety of instructional settings may contribute to teachers' feelings of self-efficacy if they feel that they cannot effectively meet the diverse needs of their many students. Second, the population of ELs in the county's city schools is highly complex and diverse. Because students in city schools may represent a wider variety of native languages and educational backgrounds (Maryland State Department of Education,

2018b), teachers in city schools may feel less efficacious in meeting the needs of such diverse student groups.

Results on the CRTSE indicated a need for ongoing training for teachers, as preparing teachers to work with culturally and linguistically diverse students has a positive impact on teachers' self-efficacy for offering culturally responsive instruction and increases teacher performance in the classroom (Ramos, 2017; Siwatu, 2007). Increased self-efficacy in teachers yields improved student outcomes and increases teacher performance (Henson, 2001). Results from the CRTSE portion of the survey therefore informed future research in the school system, as described in the forthcoming chapters of this dissertation.

Conclusion

The results of this needs assessment situated the problem of practice in the context of the target school system. Both pre-kindergarten and kindergarten data showed evidence of discrepant achievement in early literacy, and indicated that ELs in the county underperform compared to their non-EL peers on measures of early literacy. This discrepant achievement is further understood using the results of the teacher survey, which showed that a majority of teachers in the sample relied on ineffective models of instruction. Teachers felt comfortable implementing some aspects of culturally responsive instruction, but struggled with others relating content-specific instruction and offering native language supports. Results of the teacher survey also showed that EL teachers at the schools that serve the largest percentages of ELs had the lowest composite average self-efficacy for culturally responsive instruction.

The implications of these findings are many. Consideration should be given to interventions on the problem of practice that support teachers' access to opportunities for increasing their efficacy in providing culturally responsive instruction and offering the most responsive model of instruction to ELs. To better understand how schools can respond to EL student needs, additional research should consider ways to increase teachers' efficacy through instructional practice in schools with the highest need. To aid in identifying the most feasible and research-informed intervention, chapter three investigates potential interventions on the problem of practice situated in current research literature and the needs assessment findings.

CHAPTER 3

Intervention Literature Review

Many schools rely on ineffective models of instruction for ELs (Samson & Lesaux, 2015) and struggle to provide the culturally and linguistically responsive instruction that EL students require, creating persistent gaps in early literacy achievement (Hopewell & Escamilla, 2014; Siwatu, 2007). This chapter offers a review of research literature on potential interventions to address the problem of practice of lagging EL student achievement in one target school system. The chapter begins with a discussion of needs assessment findings as presented in chapter two and an overview of potential interventions within existing research literature, and concludes with a proposal for an intervention to address the early literacy needs of ELs in the school system. This review of research literature will contextualize the selected intervention and offer a rationale for its selection for use in the dissertation study grounded in research literature.

Overview of the Needs Assessment Study

In the spring of 2018, a needs assessment study in the target school system investigated the problem of practice of discrepant early literacy achievement in the context of one large central Maryland school system. The needs assessment followed an extensive review of research literature that illuminated several factors contributing to gaps in EL student achievement, including EL instructional models (Samson & Lesaux, 2015; Thomas & Collier, 2002) and EL teacher knowledge and skills (August & Shanahan, 2008; Delgado & Stoll, 2015). A mixed-methods needs assessment included review of existing student achievement data and administration of a teacher survey to all

EL teachers serving students in early childhood grades. The results from the study summarized below serve as the foundation for this review of intervention literature.

The needs assessment illuminated gaps in achievement on local assessment measures of early literacy between ELs and their non-EL peers on all but one writing measure in pre-kindergarten. Discrepant achievement was most profound in kindergarten reading, wherein only 65% of EL students met the system target for reading as compared to the roughly 81% of their kindergarten peers who met the expectation. Because kindergarten reading achievement data indicates a high need and high discrepancy between EL students and their non-EL peers, the interventions explored in this chapter focus on means of support to target kindergarten EL teachers and early reading instruction for kindergarten ELs. In addition to analysis of existing student achievement data, the needs assessment also included a teacher survey (Appendix A) that addressed such topics as school location, instructional model for ELs, and a included a scale for measuring teachers' self-efficacy for providing culturally responsive instruction to ELs.

Major findings from the needs assessment lent insight into EL instructional models and teachers' self-efficacy for providing culturally responsive instruction. The needs assessment study showed that teachers across the county rely most on remedial English-only programs, which are among the least effective for ELs (Samson & Lesaux, 2015; Thomas & Collier, 2002), indicating a need for more culturally and linguistically responsive instruction throughout the school system. The teacher survey portion of the needs assessment included the existing, valid Culturally Responsive Teaching Self Efficacy (CRTSE) scale (Siwatu, 2007). Results on specific items of the scale showed that teachers feel least efficacious in designing culturally relevant curriculum and in their

ability to support students in their native language. Respondents from city schools (n= 5) had the lowest mean scores on the culturally responsive teaching self-efficacy scale of those who participated in the survey, and among that group 40% of city school teachers scored in the low-average range compared within the sample. This needs assessment finding suggests that EL teachers in the target school system may benefit from opportunities to increase their self-efficacy for providing culturally and linguistically responsive instruction.

To best meet the needs of the target school system, interventions on the problem of practice sought to support the largest population of EL students enrolled in county schools. Among school-aged children aged five to 17 in the county, the largest language minority group are speakers of Spanish (U.S. Census Bureau, 2017). Overall, Spanish-speakers comprise the largest language minority group, representing 6.4% of the total population (U.S. Census Bureau, 2017). Therefore, the interventions discussed in this chapter focus on EL students who are native speakers of Spanish.

Overall, needs assessment results suggest that the instructional models used in the target school system are largely ineffective, and inconsistent with extant research literature on effective EL service delivery (e.g. Samson & Lesaux, 2015; Thomas & Collier, 2002). Because instructional models in the system are among the least effective for increasing EL student achievement, research in the target school system should consider ways to increase the use of research-based best practices in programming and instruction for ELs in the early childhood grades. Specifically, needs assessment results and county demographics suggest that the population with the highest need for intervention is Spanish-speaking EL students in kindergarten. This is evidenced by high

discrepancies in kindergarten reading compared to non-EL students as found in the needs assessment analysis and the high percentage of Spanish speaking children in the system. Further, building teacher capacity for culturally responsive instruction is paramount, as results from the needs assessment showed that EL teachers in city schools reported low self-efficacy for offering culturally responsive teaching to ELs.

The intervention literature review presented in this chapter focuses on potential interventions to address teachers' use of culturally responsive instruction in the early literacy setting. To explain why the selected intervention is a viable option in the study context, the review begins with discussion of the theoretical framework. The theoretical framework that underpins the intervention draws upon Cummins' (1979) theory of linguistic interdependence and Pennycook's (2001) critical applied linguistics theory.

Theoretical Framework

Acquiring a new language is a complex cognitive and social process wherein an individual gains proficiency in listening, speaking, reading, and writing in a new language (Cummins, 1991; Krashen, 1982). The interventions discussed in this chapter draw upon Cummins' (1979) theory of linguistic interdependence and critical applied linguistics (Pennycook, 2001) to address both aspects of language acquisition in the classroom: the cognitive and the social. Cummins (1979) posits that the cognitive resources a child has in their first language (L1) can support their acquisition of a second (L2). This process, referred to as language transfer, is at the center of Cummins' (1979) theory of linguistic interdependence. In a language learning environment like the early childhood classroom, teacher mindsets about language use influence how students can apply language transfer in the learning environment. Critical applied linguistics (CALx),

theorized by Pennycook (2001), addresses social mindsets about language use in English-dominant environments. To support teachers in using language transfer with students, interventions on the problem of practice should seek to leverage the cognitive benefits of language transfer while addressing teacher mindsets to encourage and capitalize on linguistic diversity in the classroom.

It is worth noting that since Cummins' seminal work, language acquisition theory has evolved to include more models of language learning. As discussed by Souto-Manning (2016), language learning has recently come to be viewed as a dynamic process that can include more than just two languages. Building upon Cummins' (1979) theory, some current researchers note the importance of addressing multilingualism in language learning theory. This shift in thinking about multilingual students and language acquisition is reflected in the labels that describe English learners in school. Such labels, like Limited English Proficient (LEP) focus on what individuals lack. Current theory that addresses multilingualism has given way to more inclusive labels like English for speakers of other languages (ESOL), which includes students learning multiple languages and highlights multilingual learners' potential rather than deficits (Souto-Manning, 2016). Although Cummins' (1979) theory of linguistic interdependence refers to an individuals' L1 and L2, modern theory recognizes that some ELs may already have multiple linguistic repertoires when they begin learning English as a new language.

Theory of Linguistic Interdependence

The theory of linguistic interdependence (Cummins, 1979) theorizes the impact that L1 proficiency has on L2 acquisition. Specifically, using existing knowledge in a child's L1 to transfer those cognitive resources into their L2 is addressed in Cummins'

(1991) iceberg model of language interdependence. Figure 3.1 offers a model of Cummins' (1991) second language acquisition iceberg model which depicts how individuals' L1 and L2 skills overlap at a deeper, more cognitively demanding level. Surface-level language, like basic interpersonal communication skills, are not cognitively demanding and are very context-rich. Interpersonal language develops quickly and naturally within the language environment with time and exposure, and is easily observed. There is little to no linguistic crossover between an individual's basic interpersonal language system. In contrast, the deeper cognitive academic language needed to gain literacy and apply content knowledge to learning in a second language requires deeper synthesis and language awareness skills (Cummins, 1991). Knowledge within the deeper cognitive level is language interdependent and can transfer between L1 and L2.

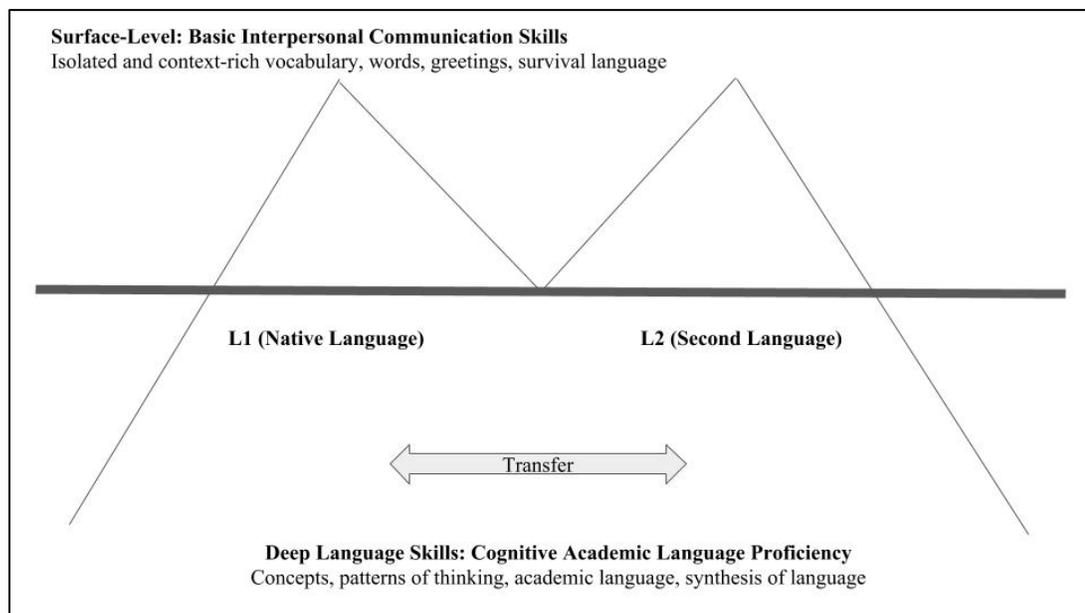


Figure 3. 1. Cummins' Iceberg model of Linguistic Interdependence. Adapted from Interdependence of First- and Second-language Proficiency in Bilingual Children (1991)

Consider the following example to illustrate the relationship between L1 cognitively demanding language and L2 acquisition: A child who already knows how to solve a certain type of complex math problem has those problem-solving and mathematical thinking patterns developed in their L1. When learning the same concept in their L2, they simply need to learn the new words related to the task. If a child knows how to solve an equation, the knowledge of that skill does not vanish in a new language system; Rather, the child now needs to learn the new vocabulary to demonstrate that knowledge in a new linguistic environment. The application of prior knowledge in a new language is where transfer takes place. A student leverages understanding in their L1 to apply it to the new L2 to make meaning. Remember again the math example. A child who lacks developed skills in their L1 must learn the complex math concept of solving an equation, the new words pertaining to the task, and train their brain to think like a mathematician in their new L2. Cummins (1979) argues that individuals with stronger L1 skills are better able to adapt to new language environments and make deep linguistic connections to their L2, where cognitive academic language overlaps.

The same concept of transfer in early literacy is complex, as the cognitive and academic precursors to literacy are not as easily observable as in the example of complex mathematics. Precursors to reading like phonological awareness (the ability to hear and manipulate sounds in words), orthographic awareness (understanding that letters are symbols that form words), and comprehension strategies (how children make meaning from oral and visual input) transfer between a child's L1 and L2 (Beeman & Urow, 2013; García, et al., 2017; Hopewell & Escamilla, 2014). Consider, here, the example of orthographic awareness. A child who understands that letters are symbols that represent

sounds, and that those sounds can be combined to create words, can transfer that knowledge into literacy learning in a new language and apply that knowledge when tackling unknown words in a text. Building on children's early reading knowledge and behaviors from their L1 allows educators to leverage those skills for transfer into the L2. The brokerage of literacy skills between each language allows students to access the cognitive benefits of language transfer.

Developing a child's deep L1 proficiency through cognitively demanding academic tasks creates an accessible linguistic repertoire upon which to build skills in their L2 (Cummins, 1979). Research suggests that bilingualism improves cognitive function by allowing students to make deep connections across two language systems (Cummins, 1979; García et al., 2017). Individuals with a strong command of both linguistic repertoires can make deeper meaning and synthesize language skills when encountering new and challenging tasks. This process, referred to as translinguaging, explains the process by which language transfer occurs (Beeman & Urow, 2013; García et al., 2017).

Researchers García, Ibarra Johnson, and Seltzer (2017) detail the translinguaging process in their book *The translinguaging classroom: Leveraging student bilingualism for learning*, which discusses the cognitive and social benefits of engaging in the translinguaging process in the classroom. García et al. (2017) argue that engaging in language transfer in the learning environment allows for the use of both of a bilingual child's linguistic repertoires, allows them to make deeper meaning of complex academic concepts, and allows children to learn how to leverage their bilingualism for learning in the classroom and beyond. This ability to transfer learning from a child's native language

to their second language illustrates the importance of offering students access to native language supports so they can leverage their existing language understanding into learning in their L2 (Beeman & Urow, 2013; Cummins, 1979; García et al., 2017).

Finally, there is a wealth of research that shows that L1 instruction allows students to strengthen their L1 skills at no cost to L2 acquisition (Cummins, 1979; Reyes, 2012; Thomas & Collier, 2002), a concept which is important to consider in the highly accountable and institutionalized nature of today's public schools. By strategically promoting native language use and offering explicit instruction on language transfer, teachers can improve outcomes for EL students while allowing them to maintain their native language proficiency (Beeman & Urow, 2013; López, 2016; Ramos, 2017) and simultaneously acquire English proficiency (Cummins, 1979).

Critical Applied Linguistics Theory

Teachers play an important role in facilitating students' ability to transfer knowledge and skills from their first language into their second (Beeman & Urow, 2013). However, as established in the literature review for this dissertation, some teachers equate English language proficiency with intelligence, rather than acknowledging students' L1 abilities (Battey et al., 2013). Such bias regarding language use and status in the socially constructed environment of a classroom can limit teachers' ability to effectively leverage students' language abilities for learning. Pennycook's (2001) Critical applied linguistics (CALx) theory offers a framework for addressing issues of bias and language use in the realm of English language instruction.

The transferability of native language skills to reading in English is particularly important for early literacy learning. By facilitating transfer in young ELs, teachers can

leverage early literacy skills in a child's L1 in early childhood to improve student outcomes as they begin to read in English (Beeman & Urow, 2013; Cummins, 1979; García et al., 2017). Accessing the cognitive benefits of language transfer requires teachers to understand how language use and status impacts learning in English-dominant environments (Pennycook, 2001; García et al., 2017).

As a critical theory, CALx seeks addresses language learning from the lens of systemic inequalities and explicitly confronts the bias and social implications for EL students learning in an English-only environment (Pennycook, 2001). CALx addresses the role of global English in establishing English's elevated linguistic status worldwide and highlights the, at times, problematic nature of the focus on English language acquisition for individuals who speak another language. Because CALx takes this critical stance to address linguistic equity and long-held biases and mindsets regarding language use, incorporating it into the theoretical framework for this study sought to address issues of language bias and teacher mindsets through teacher training sessions.

Conceptual Framework: Integrating Linguistic Interdependence and CALx

Theories

Together, the theory of linguistic interdependence (Cummins, 1979) and CALx theory (Pennycook, 2001) frame the following review of research literature on potential interventions to the problem of practice. The two theories can be integrated into a conceptual framework as depicted in Figure 3.2, and used to connect linguistic interdependence and CALx theories to the intended outcomes of the intervention. The intervention, grounded in the two theories, aimed to increase teacher self-efficacy, which in turn would influence teachers' use of culturally responsive teaching and thereby

influence student achievement. Ultimately, teacher reflection on their work with students, along with *praxis*, or application of theory, will reinforce the theoretical tenets that frame the study. Cummins' (1979) theory of transfer between a child's L1 and L2 makes language interdependence theory an appropriate lens through which to discuss issues of early literacy and bilingual supports for ELs while CALx theory (Pennycook, 1991) addresses teacher mindsets and approaches to language use and linguistic equity in the language learning classroom. The interventions explored in this chapter offer pathways for teachers to capitalize on language transfer between students' native languages and English and provide culturally responsive instruction to ELs.

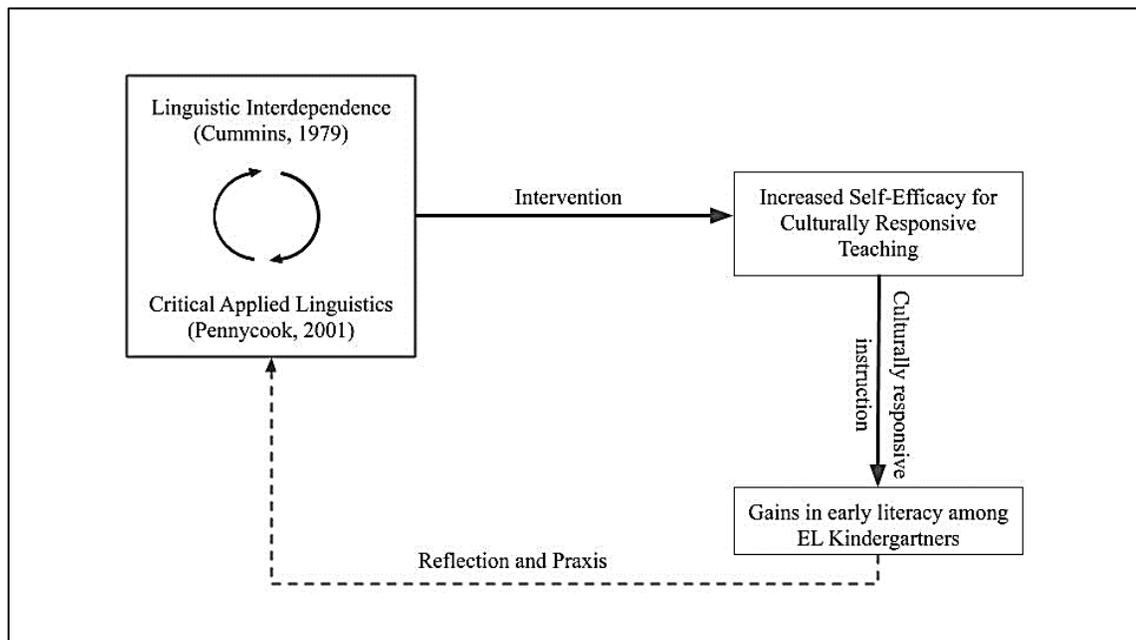


Figure 3. 2. Conceptual framework connecting the goals of the intervention to linguistic interdependence and CALx theories (Cummins, 1979; Pennycook, 2001).

Addressing the Needs of English Learners in Early Childhood

The problem of discrepant literacy achievement in ELs has a rich foundation of research literature seeking to address the issue (August & Shanahan, 2008; Durán et al., 2010; Hopewell & Escamilla, 2014). Most studies, however, focus on mainstream

classroom teachers and fail to address issues relating to EL services. Under the auspices of Title III of the Every Student Succeeds Act, schools must respond to the instructional needs of ELs with services provided by a certified EL teacher (Every Student Succeeds Act [ESSA], 2016), making the role of the EL teacher paramount in supporting EL students. The needs assessment and interventions considered in this chapter focus on the role of EL teachers specifically- making a contribution toward closing the gap in existing research.

The review of research literature presented here begins with a discussion on implementing bilingual instructional models under Title III guidelines for ELs and highlights the limitations and barriers to implementing such an intervention in the study context. Later, the discussion presents and evaluates the use of bilingual assessments and teacher training to guide research-based culturally responsive instruction. The review of research literature concludes with the argument that, although schools may not be able to offer a fully-fledged bilingual program to support ELs, the school system can leverage human resources and opportunities for teacher training to offer creative bilingual supports consistent with recommendations from the research literature.

Implementing a Bilingual English Learner Instructional Model

Studies on EL program effectiveness indicate that students benefit most from instructional models that respond to the specific cultural and linguistic needs of ELs, such as programs that encourage native language use, bilingual supports, and culturally familiar tasks (Cavendish et al., 2016; Ramos, 2017; Samson & Lesaux, 2015; Thomas & Collier, 2002). Specifically, research suggests that implementing a full bilingual instructional model for ELs is highly efficacious (Cavendish et al., 2016; Cummins,

1991; Durán et al., 2010; Slavin & Cheung, 2005). In a review of research literature, Slavin and Cheung (2005) analyzed 17 studies on EL instructional models and student achievement. Of the 17 studies reviewed, none favored English-only instruction, and the majority favored bilingual models (Slavin & Cheung, 2005). This work supports the widely-cited research of Thomas and Collier (2002), a longitudinal study that spanned from the year 1985 to 2001 and used over 210,000 individual student records from across five school districts in the United States. The study found that EL students instructed in a bilingual program outperformed even their native English-speaking peers on reading tasks in the long-term. Such studies (Slavin & Cheung, 2005; Thomas & Collier, 2002) highlight the efficacy of bilingual instruction for ELs and support the argument that native language support and opportunities for language transfer can improve literacy outcomes for EL students.

One potential intervention to improve early literacy performance among ELs in the target school system would require a shift in instructional models to implement a bilingual program for ELs. This intervention would require schools to implement a two-way bilingual immersion program, one-way bilingual immersion program, or transitional bilingual program in some city schools where the EL population in early childhood grades exceeds 20% of all students at the school (López et al., 2015; Thomas & Collier, 2002). The established 20% threshold is based on the work of López et al. (2015), a policy-oriented study that made bilingual programming recommendations for states with changing demographics. In the target school system, the intervention would impact nine of the county's 37 elementary schools.

Despite the support for bilingual programming in research literature, many barriers limit the viability of a bilingual program mandate in the county under study. Bilingual programs face complex and highly nuanced issues of political support (Cavendish et al., 2016). Research shows that political contexts and mindsets about immigrants and language use in the community impact how school systems support and fund language instruction programs (Cavendish et al., 2016; López et al., 2015; Menken, 2013; Shin et al., 2015), and suggests that political opposition in the target system could significantly impact a bilingual program's potential for implementation.

In contexts where schools have the political and financial resources to implement a bilingual program, issues of human resources may further limit any such intervention's long-term scalability and maintenance (López et al. 2015). Nationwide, school systems face a shortage of qualified, bilingual teaching staff (Gold, 1992; Samson & Lesaux, 2015). One reason for this shortage is the limited availability of preparation programs for teachers in bilingual programs (Samson & Lesaux, 2015). It can be costly for schools to offer teachers the required training to effectively support bilingual programs, as there is little to no pre-service training available (Gold, 1992). The lack of available bilingual staff for teaching positions in early childhood makes it difficult to start and maintain bilingual programs in some areas of the United States, posing an additional barrier to any such program's viability in the target school system for the purposes of this short-term dissertation study. Further, Thomas and Collier (2002) emphasize the long-term commitment needed to implement a bilingual program. Bilingual instructional models require several years of sustained effort before gains in student achievement become evident (Thomas & Collier, 2002). Bilingual programs are costly, difficult to scale, and

require long-term commitment. The limited timeframe for completing the present study, and the political and resource barriers to implementation in the school system, eliminate it as a viable intervention option. However, there are aspects of bilingual programming that can be incorporated into the school system in novel ways to support ELs in the study context, as will be discussed in forthcoming sections of this literature review.

Despite the lacking bilingual staff and political support for large-scale bilingual programming, schools may have opportunities to incorporate native language instruction for ELs in creative ways. Schools can educate EL teachers on how to support language transfer in students to increase student success in early reading. Therefore, the next section of this chapter presents a discussion on the use of bilingual assessments and instructional strategies to facilitate transfer even in monolingual English learning environments.

Bilingual Supports in English-Only Environments

School systems must balance the existing empirical support for bilingual programs and the limited availability of bilingual program infrastructure (Hopewell & Escamilla, 2014) to consider ways to use creative methods to incorporate bilingual supports in the classroom despite the lack of resources. Research on language use in school settings shows that even minimal use of native language supports in English-only instructional environments can improve student outcomes at no cost to English language acquisition (Cummins, 1979; Reyes, 2012; Thomas & Collier, 2002). Implementing a bilingual assessment program, for example, would allow even monolingual English-speaking teachers to measure and understand students' early literacy skills in a culturally responsive manner (Hopewell & Escamilla, 2014).

In a longitudinal quantitative study on young EL students in early literacy environments, Hopewell and Escamilla (2014) found that using bilingual assessments in the early childhood classroom reduced over-identification of young readers for struggling reader interventions by allowing teachers to measure literacy knowledge in Spanish and English. The study analyzed the performance of Spanish/English bilingual third graders (N=268) during the 2007-2008 academic year. All students in the sample received free and reduced meals and came from predominately Spanish-speaking homes. The study found that EL students were vulnerable to over-identification as struggling readers when their reading performance was evaluated from a monolingual English lens. In the study, researchers found that using bilingual assessments to guide identification for reading supports resulted in a significantly lower number of EL students identified as struggling readers (Hopewell & Escamilla, 2014). Whereas 83.6% of students would qualify as a struggling reader based on English-only assessments alone, only 39.6% of the same sample qualified as struggling readers when Spanish language assessments were taken into consideration (Hopewell & Escamilla, 2014). The study results suggest that the use of bilingual early literacy assessments for young EL students allow teachers to better respond to students' literacy needs in a culturally and linguistically responsive manner, even in monolingual learning environments.

Based on the work of Hopewell and Escamilla (2014), one potential intervention on the problem of practice would be to implement a bilingual assessment model in kindergarten literacy classrooms. A bilingual assessment model would draw upon Cummins' (1979) theory of linguistic interdependence and equip teachers with valuable information on students' native language literacy skills. Using bilingual assessments

would, as described in Cummins' (1979) theory of linguistic interdependence and García et al.'s (2017) work on translanguaging, allow ELs to transfer their existing early literacy skills from their first language (L1) into the target English (L2). Because many early literacy skills transfer between Spanish and English (Beeman & Urow, 2013; Cummins, 1979; Freeman & Freeman, 2004; Proctor et al., 2006), bilingual assessments offer one opportunity for teachers to draw upon students' linguistic skills and respond with differentiated instruction (Cummins, 1979; Durán et al., 2010) and potentially increase students' achievement on measures of early literacy (Hopewell & Escamilla, 2014). However, teacher preparation programs do not often address effective bilingual instruction for EL students (Gold, 1992; Samson & Lesaux, 2015). Because teachers in the target school system are largely monolingual and have limited access to training on bilingual literacy teaching strategies, they may require additional training on how to interpret bilingual assessments and respond appropriately in the classroom.

Training for English Learner Teachers

Teacher training on culturally responsive instruction for ELs yields positive outcomes in EL student achievement (Henson, 2001; Samson & Lesaux, 2015; Siwatu et al., 2017). The needs assessment found that some teachers in the target school system had low self-efficacy for offering EL students culturally responsive instruction. Results on specific needs assessment survey items highlighted areas of need for EL teachers in the district, including increased awareness of bias in language instruction and assessment, comfort with native language use in the classroom, and knowledge of culturally responsive curriculum.

Teacher training for cultural and linguistic bias and awareness. In a study on EL teacher training, Ramos (2017) found that training that focused on minority language use and linguistic equity had positive impacts on teachers' preparedness to work with ELs. In the study, a group of monolingual English-speaking teachers (N= 18) participated in a 15-week teacher training wherein they experienced immersive training to build empathy for language minority students. Activities in the mixed-methods study also included explicit instruction on language bias in the English-only classroom and addressed teacher mindsets about EL students' abilities (Ramos, 2017). The study's findings suggest that addressing linguistic bias and language status in teacher training can better prepare teachers to serve linguistically diverse students in a culturally responsive manner even in monolingual environments similar to the context of the present dissertation study. The Ramos (2017) study showed increased teacher confidence in readiness for teaching EL students on all 12 items of a teacher survey.

In another study on teacher training, McAllister and Irvine (2000) found that training which offers teachers exposure to diverse cultural and linguistic experiences helps in-service teachers reflect on their bias and increase their competency with culturally responsive instruction. In their review of research literature on multicultural education frameworks, McAllister and Irvine (2000) found that teachers struggle with tackling issues of bias when working with diverse learners. Based on the findings within the review, the authors suggest that effective teacher training should include opportunities to engage with aspects of diverse cultures, examine and reflect upon their own cultural awareness, and increase teachers' knowledge and skills regarding culturally responsive instruction strategies. Results from McAllister and Irvine (2000) suggest that

incorporating opportunities to explore linguistic and cultural differences between Spanish and English into teacher training may increase teachers' ability to offer culturally responsive instruction to Spanish-speaking EL students.

Effective teacher training as described in studies like Ramos (2017) and McAllister and Irvine (2000) can further draw upon Pennycook's (2001) CALx theory. Within CALx is a framework for addressing language status and use in English learning environments. The theoretical basis for a teacher training for ELs could therefore draw upon Pennycook's (2001) CALx and address issues of equity and language for ELs through the CALx framework. Incorporating the critical position of CALx theory into training on cultural bias, awareness, and culturally responsive teaching strategies could help to address the disconnect between research in the field and schools' approaches to meeting EL student needs by addressing teacher mindset and bias (López et al., 2015; Mei Lin, 2015; Ramos, 2017). Specifically, the incorporation of culturally responsive teaching mastery experiences and materials into teacher training opportunities can shift teacher mindsets surrounding the instructional needs of EL students, and combat stereotype threat among ELs in the classroom (Keengwe, 2010; Ramos, 2017). Training teachers not only provides them with the knowledge and skills to better serve EL students consistent with research-informed best practices (Ramos, 2017), but can also address issues of bias and stereotyping in the education system that perpetuate lagging achievement among ELs (Blanchard & Muller, 2015; Cavendish et al., 2016; Keengwe, 2010; McAllister & Irvine, 2000).

Teacher training and self-efficacy. Social cognitive theory (Bandura, 1986), addresses the role of self-efficacy in shaping individuals' behaviors and interactions with

their environment. Social cognitivism posits that beliefs about efficacy shape behaviors which in turn shape an individual's environment and reinforce the beliefs of the individual. Tschannen-Moran and Hoy (2007) applied Bandura's (1986) social cognitive theory to teachers' beliefs and their learning experiences. In a study that measured self-efficacy beliefs among a sample of 255 experienced and novice teachers, Tschannen-Moran and Hoy (2007) explored sources of increased self-efficacy in teachers. Results from the study found that teachers viewed mastery experiences as having the greatest impact on improving efficacy beliefs. Findings also suggested that vicarious experiences (teacher learning experiences wherein strategies are modeled explicitly) also influenced teachers' efficacy beliefs, especially among novice teachers (n=74) who may have limited mastery experiences. Drawing upon Bandura's (1986) social cognitive theory, the findings from Tschannen-Moran and Hoy (2007) suggest that teachers who are offered learning experiences that encourage mastery practice and use vicarious learning experiences could increase teachers' self-efficacy and, in turn, shape teacher behaviors in the classroom.

Studies specific to culturally and linguistically responsive instruction have found that teacher training may increase teachers' efficacy in providing responsive instruction to EL students (McAllister & Irvine, 2000; Ramos, 2017). Teacher training should address topics ranging from the use of bilingual supports in the classroom, language acquisition, early literacy, and culturally and linguistically responsive teaching (McAllister & Irvine, 2000; Ramos, 2017; Siwatu et al., 2017). Offering teachers mastery and vicarious learning through training sessions may increase their self-efficacy (Tschannen-Moran & Hoy, 2007) and increase their use of culturally and linguistically

responsive instruction strategies (Henson, 2001; Ramos, 2017; Siwatu et al., 2017). Further, providing such training within a CALx framework encourages teachers to think critically about language use and equity in the classroom and adjust language instruction practices to combat implicit bias in English language instruction (Pennycook, 2001).

Brief Summary of the Selected Intervention

Needs assessment study results suggested that research in the school system consider ways to intervene on gaps in early literacy achievement among EL students in a way that equips teachers with effective instructional methods and skills to support ELs in early literacy development through research-based assessment and instruction (Hopewell & Escamilla, 2014; Ramos, 2017). The logistical limitations of creating a bilingual program in the target school system limited the researcher's ability to implement such an intervention in the timeframe available for study. However, there was potential to creatively use bilingual supports and teacher training for teachers to better instruct young EL students in ways that are responsive to their native language abilities and that could serve as a model for other school systems facing similar limitations.

The term bricolage refers to using existing resources in new and innovative ways towards achieving a goal (Baker & Nelson, 2015). Although implementing a full bilingual program lacked viability, some existing resources for incorporating bilingual supports in early literacy classrooms in the target school system were adapted and repurposed for use in its monolingual environments. Using bricolage to capitalize on the skills of existing bilingual staff and bilingual assessment tools already available within in the school system and adapting existing aspects of bilingual programs into monolingual environments sought to address the needs of ELs without implementing a costly and risky

bilingual model. Helping teachers understand students' native language literacy skills while equipping them with the tools to use such information to guide instruction sought to harness some benefits of bilingual instruction despite a lack of formal bilingual programming in the county. Therefore, it was determined that an effective intervention to the problem of practice was to implement a teacher training program for EL teachers working in early childhood grades. The training program would require teachers to use bilingual data, guided by Cummins' (1991) theory of linguistic interdependence, to identify students' native language skills and capitalize on those skills to facilitate language transfer and address language learning. Doing so would also require teachers to approach assessment and instruction through a linguistic equity lens, framed within CALx theory (Pennycook, 2001), and necessitated additional training on culturally and linguistically responsive instruction in concert with the implementation of bilingual assessments.

To address teachers' self-efficacy for providing culturally responsive instruction, the teacher training program ultimately selected for use in the intervention incorporated vicarious and mastery learning experiences (Tschannen-Moran & Hoy, 2007) structured within the CALx framework (Pennycook, 2001). The program plan began with the use of mock student results from measures within the school system's chosen reading benchmark system (the Fountas and Pinnell Benchmark Assessment System) and paired Fountas and Pinnell *Sistema de evaluación de lectura* to provide vicarious learning through the use of mock data. These teacher training experiences allowed teachers to learn about assessment use and response in instruction through a vicarious learning experience and then transition to mastery learning opportunities as teachers use training

sessions to respond to their own bilingual student data. Per the intervention plan, assessment and response to student data occurred through the teacher training program focused on teachers in schools where the needs assessment showed low levels of teacher self-efficacy for providing culturally and linguistically responsive instruction. The activities in the planned teacher training program allowed teachers to facilitate language transfer in the early childhood classroom and leverage students' linguistic knowledge for literacy learning.

The teacher training sought to target a group of EL teachers working with students in early childhood grades in schools with the highest needs based on the needs assessment results. The intervention plan included teacher training accompanied by bilingual assessment administration early in the academic year, a timeline for which is presented in Figure 3.3 below. Bilingual assessment results were used to situate the teacher training in real classroom practice and illustrate how to use culturally familiar tasks and language transfer to improve reading performance (Banks, 2015; Hopewell & Escamilla, 2014; Mei Lin, 2015; Ramos, 2017; Siwatu, 2007). In addition to equipping teachers with the assessments and tools for using language transfer to support ELs, the training program sought to increase teachers' self-efficacy for providing culturally responsive instruction (Banks, 2016; López, 2016; Siwatu, 2007; Tschannen-Moran & Hoy, 2007), a need illustrated by low CRTSE scores in the needs assessment study.

	Quarter 1 SY 2019-2020			Quarter 2 SY 2019-2020			Quarter 3 SY 2019-2020			Quarter 4 SY 2019-2020		
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Administration of bilingual literacy assessments		██████████										
Teacher training series		████████████████████										
Teachers apply training in the classroom		████████████████████										
Focus group & posttest survey administration					██████████							
Data analysis & evaluation of the intervention						██						

Figure 3. 3. Timeline for implementation of the intervention.

The selected intervention had a dual nature and required teachers to work closely with researchers to administer and interpret bilingual assessments and apply that knowledge to classroom practice with the support of a teacher training series. Due to the limited linguistic diversity of available staff and student demographics in the school system, the intervention targeted support for only native Spanish-speaking students, which comprise the largest portion of ELs in the county (U.S. Census Bureau, 2017). The bilingual assessment portion of the intervention included only Spanish and English assessments, though some of the teaching practices highlighted in the teacher training offered teachers strategies to respond to the needs of linguistically diverse learners from a variety of language backgrounds.

The intervention, using bilingual assessment and teacher training, equipped teachers with student data on early literacy to better support skill transfer from Spanish to English among EL students whose first language is Spanish, as identified by student records and teacher recommendations (Cummins, 1979; Hopewell & Escamilla, 2014).

The selected intervention using a bilingual assessment and teacher training program aimed to address the teacher efficacy and EL programming needs that emerged from the empirical needs assessment study.

Conclusion

English learners face a number of barriers to academic success, which can have lasting impacts on students' learning trajectories long-term (August & Shanahan, 2008; Samson & Lesaux, 2015). Using research-based approaches to bilingual assessment and teacher training prepares EL teachers to leverage culturally and linguistically responsive practices to increase literacy achievement among ELs in early childhood. The potential impact of the present research study is far-reaching. Linguistic diversity in public schools continues to grow (National Center for Education Statistics, 2017b), and schools may seek out interventions like the one discussed here to meet the needs of EL students despite limitations on bilingual staffing and programming options. Offering schools research support for using bilingual supports even within largely monolingual environments may help schools meet the needs of changing linguistic populations.

The review of research literature in this chapter illuminated the potential efficacy of a teacher training program that utilized bilingual assessments and culturally responsive teaching mastery experiences to improve instructional practice in the target school system. By assessing students bilingually and empowering teachers with the knowledge and skills to use the results, researchers sought to leverage aspects of linguistic interdependence (Cummins, 1991) and CALx (Pennycook, 2001) theory to change EL teachers' mindsets and behaviors the early childhood setting. The selected intervention held the potential to not only benefit students by offering them high quality bilingual

supports to improve outcomes in early literacy but also to increase the use of research-based culturally and linguistically responsive instruction within the target school system's EL programs at the early childhood level.

CHAPTER 4

Intervention Procedure and Program Evaluation Methodology

English learners are a rapidly growing student group in American public schools (National Center for Education Statistics, 2017b). The EL student population growth in one central Maryland school district has left schools in the system ill-equipped to meet the needs of their changing student population. A needs assessment in the school system illuminated three areas of need: low early literacy achievement among ELs in kindergarten, low teacher self-efficacy for culturally responsive instruction, and misalignment between current research and EL instructional practices throughout the school system.

A review of research literature on possible interventions on the problem highlighted several options for addressing achievement among EL students and their teachers' training needs. Options included implementing bilingual programs for students in city schools, using bilingual assessments in early literacy classrooms, and offering teacher training opportunities. Ultimately, a blended bilingual assessment and teacher training program was deemed most feasible in the study context. The study in this chapter, therefore, details a teacher training program aimed at meeting the needs of EL teachers and their students. The teacher training program, detailed in the logic model presented as figure 4.1 below, engaged EL teachers in eight in-person training sessions using bilingual early literacy assessment data from kindergarten EL students. The intervention incorporated bilingual assessments into training experiences to instruct teachers on the use of culturally and linguistically responsive teaching strategies in the early literacy classroom and apply their learning to work with their EL students.

The research study described in this chapter is situated within research literature on models of EL instruction and teacher self-efficacy for providing students with culturally responsive instruction. The study used a teacher training model for EL teachers to facilitate the use of language transfer in early literacy instruction of Spanish-speaking EL students in kindergarten. The training sessions equipped teachers with training on language use and language transfer in the classroom to increase their self-efficacy for providing students with culturally responsive instruction. Cummins (1991) and Hopewell and Escamilla (2014) suggest that EL instruction that incorporates native language supports can increase student achievement in reading. However, many teachers are not equipped with the knowledge or skills to effectively deliver such culturally and linguistically responsive instruction (Samson & Lesaux, 2015). The intervention described in this chapter drew upon the research of Ramos (2017) and Siwatu (2007) to create an immersive and research-supported series of training sessions that sought to increase teachers' self-efficacy for culturally responsive teaching through a training program for EL teachers.

Following the 2006 Report of the National Literacy Panel on Language-Minority Children and Youth, researchers from across the United States published recommendations for addressing lagging achievement among ELs (August, Shanahan, & Escamilla, 2009). The report noted that the widespread use of English-only instruction was ineffective, biased, and failed to adequately address the needs of EL students (August et al, 2009). Studies on ELs' academic achievement suggest that the use of bilingual assessments for early literacy skills like concepts of print, phonological awareness, and phonics can improve EL student outcomes by allowing for language

transfer (August et al., 2009) and allow teachers to respond to individual student needs in a culturally and linguistically responsive manner (Hopewell & Escamilla, 2014). Specifically, immersive and culturally-focused teacher training on responsive instruction improves self-efficacy for culturally and linguistically responsive instruction and ultimately teachers' use of responsive teaching strategies (López, 2016; Ramos, 2017; Siwatu, 2007). Providing teachers with bilingual assessment data and training on its use in the classroom can offer schools options for using bilingual supports to meet the needs of ELs and increase teacher knowledge of culturally responsive teaching practices, thereby yielding outcomes of increased culturally responsive instruction and improved EL student performance on measures of early literacy (Hopewell & Escamilla, 2014; López, 2016; Thomas & Collier, 2002). The bilingual assessments that teachers used in the teacher training program gave teachers information on students' foundational literacy skills in Spanish and English, including phonological awareness, phonics, and comprehension skills.

Achieving the desired outcome of improved EL student achievement through the teacher training program required a variety of inputs and activities. The logic model for the intervention, included below in figure 4.1 and in Appendix C, specified the human and material resources needed to implement the teacher training program. The intended proximal outcomes of the intervention were twofold; to increase teacher self-efficacy for providing culturally responsive instruction (Ramos, 2017; Siwatu, 2007) and to align EL instructional practice more closely with literature supporting the use of bilingual literacy instruction (August et al., 2009; Cummins, 1991; Hopewell & Escamilla, 2014; Thomas & Collier, 2002).

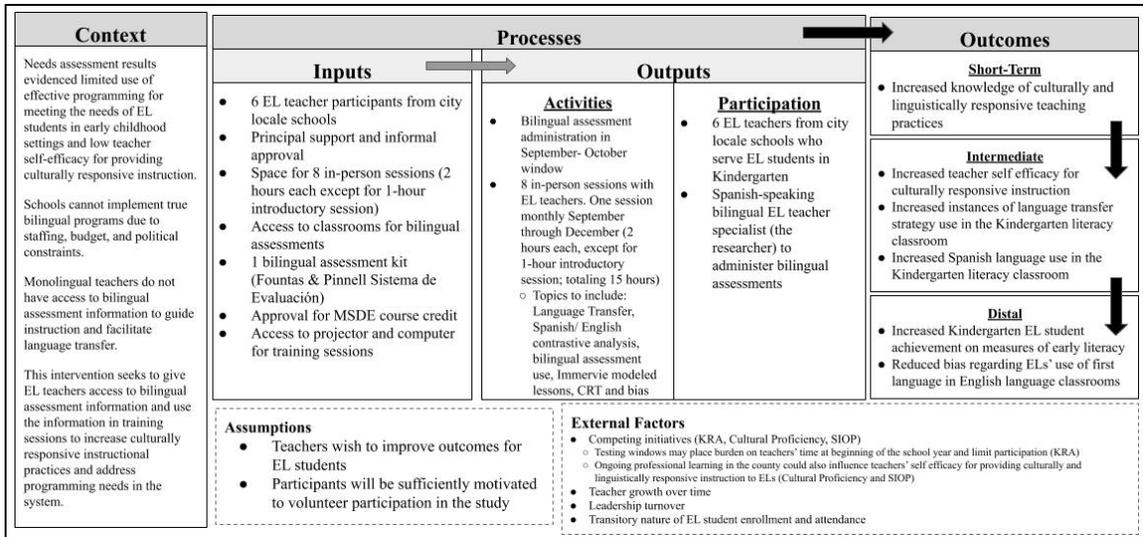


Figure 4. 1. Logic model for the teacher training program.

The bilingual assessment aspect of the intervention equipped EL teachers with the information needed to facilitate language transfer in the classroom. The six kindergarten EL teachers who participated in the study worked with a bilingual assessor to collect data using the Fountas and Pinnell *Sistema de Evaluación de la Lectura*. Teachers used bilingual assessment data on foundational literacy skills in English and Spanish in teacher training sessions to apply their learning on topics ranging from the interpretation and use of those bilingual assessments (Hopewell & Escamilla, 2014), facilitating language transfer in the classroom (August et al., 2009; Beeman & Urow, 2013; Cummins, 1991), and the use of culturally responsive teaching practices (Ramos, 2017; Siwatu, 2007). Sessions also included a contrastive linguistic analysis between English and Spanish, which illustrated the differences in early literacy skills between the languages as well as highlighted areas for language transfer (Beeman & Urow, 2013; Hopewell & Escamilla, 2014). Facilitating training sessions required access to space at a school, a computer with projector, and active participation of teachers.

This chapter describes the intervention and program evaluation procedures. The chapter begins with a discussion of the literature supporting the study, the research questions, and procedures for participant recruitment. The chapter also outlines key components of the study, including study procedures, instrumentation, data collection, and plans for analysis.

Purpose of the Study

The purpose of the intervention study was to investigate the extent to which participation in a teacher training program changes EL teachers' efficacy for providing culturally and linguistically responsive instruction to EL students. The study also investigated the extent to which participation in the program influenced use of students' native language in the early literacy classroom.

Research Questions

The research study explored five research questions. The research questions address both process and outcome evaluations of the program, and are as follows:

6. To what extent was the study implemented in adherence to the established procedures?
 - a. To what extent did the program adhere to the established timeline and number of sessions?
 - b. To what extent were the stated goals for each teacher training session met?
7. To what extent does participation in a teacher training program change EL teachers' self-efficacy for providing culturally responsive instruction?
8. To what extent does participation in a teacher training program influence the use of language transfer strategies in the classroom among kindergarten EL teachers?

9. To what extent does participation in a teacher training program influence instances of Spanish language use in the classroom among kindergarten EL teachers?
10. What are kindergarten EL teachers' experiences in the teacher training intervention?
 - a. What were teachers' perceptions of the relevancy of the materials to their instructional practice?
 - b. What are teachers' lived experiences with successes and barriers to implementing the strategies learned in training sessions in the classroom post-intervention?

Research Design

It can be difficult to identify causal relationships in nonexperimental research and program evaluation (Leviton & Lipsey, 2007). To aid in interpreting the study's procedures and results, the theory of treatment for this study, found in Appendix D, uses a causal diagram to illustrate the relationship between variables in the intervention and treatment specifics with intended outcomes. Leviton and Lipsey (2007) recommend that a sound theory of treatment define the problem exactly, define the effective ingredients of the treatment, describe the mechanism of change, and define the intended outcomes of the intervention. To aid in inferring causal relationships, the intended outcomes for the study were measured using a quasi-experimental convergent parallel mixed method design (Creswell & Plano-Clark, 2018; Shadish, Cook, & Campbell, 2002), which captured quantitative and qualitative data on the beliefs and experiences of kindergarten EL teachers. The causal diagram in Appendix D addresses each of Leviton and Lipsey's

(2007) four recommendations for a sound theory of treatment and provides the underlying theory of change for the mixed methods study.

Process Evaluation

Protecting the fidelity of a research study allows researchers to draw more accurate conclusions based on study findings and can protect the validity of results (Dusenbury, Brannigan, Falco, & Hansen, 2003). Engaging in process evaluation allows researchers to monitor programs throughout implementation and can help protect the fidelity of a research study (Rossi, Lipsey, & Freeman, 2004; Saunders, Evans, & Joshi, 2005). Developing a detailed process evaluation plan can aid researchers in understanding the relationship between an intervention and its outcomes (Rossi et al., 2004). The research questions for this study address two process evaluation components, project implementation (Stufflebeam, 2003; Zhang, et al., 2011) and fidelity of implementation, participant responsiveness (Dusenbury et al., 2003).

Project implementation. Project implementation is the extent to which an intervention is carried out in adherence with an established plan (Stufflebeam, 2003; Zhang et al., 2011). The four-component context, input, process, and product (CIPP) model offers researchers a framework for assessing a program's implementation and outputs (Zhang et al., 2011). In particular, the *process evaluation* component of the CIPP model provides a framework for evaluating project implementation and explore the extent to which the program is implemented as planned. Researchers can use process evaluation to monitor programs in real-time and make adjustments to ensure proper implementation and protect the fidelity of the program (Stufflebeam, 2003; Zhang et al., 2011). Within this study, project implementation is operationalized as adherence to the

study plan as presented within the logic model. Specifically, the present evaluation investigated the delivery of language transfer and culturally responsive teaching strategies to participants in planned training sessions.

To measure fidelity of project implementation in the current study, the process evaluation required analysis of the content delivered in training sessions as measured by session feedback surveys. Analysis of progress toward the training program session goals illuminated whether implementation occurred using the key inputs and activities of the study per the logic model and allowed for making real-time adjustments to sessions as the study progressed to ensure that participants met the established content learning goals for each session.

Fidelity of implementation: Participant responsiveness. In a review of research literature on the fidelity of implementation, Dusenbury et al. (2003) defined participant responsiveness as “the extent to which participants are engaged by and involved in the activities and content of the program” (Dusenbury et al., 2003, p. 244). Measuring participant responsiveness in process evaluation offers researchers information on participants’ lived experiences in the program and offers opportunities to adjust project implementation to engage with and meet the needs of the intended audience. Within this process evaluation, participant responsiveness is operationalized as teachers’ feelings of engagement in the sessions. Participant responsiveness in this study was measured throughout the program using session feedback surveys and in a culminating focus group discussion. The participant engagement indicator included quantitative measures from session feedback surveys and qualitative data gathered in a culminating focus group. In the study, the indicator for Baranowski and Stables’ (2000) context component of process

evaluation was participants' perceptions of the relevance of the content delivered at training sessions to their work as EL teachers. Gathering information on the perceived relevance of training sessions helped guide subsequent sessions during the program and measure participant responsiveness.

Outcome Evaluation

Using a mixed methods approach to study complex problems and programs offers researchers opportunities for rich data collection on both the lived experiences within an intervention and its empirical data (Johnson & Onwuegbuzie, 2004). The mixed methods paradigm is especially useful in evaluating programs in education (Teddlie & Tashakkori, 2003). The following sections provide a rationale for the study design and research methods for the intervention study.

Quasi-experimental pretest-posttest method. The intervention required manipulation of an independent variable (participation in the training program). To measure the change in teacher self-efficacy and strategy use (dependent variables), the study used a pretest posttest design. Because the study manipulated a variable but had no control group, it was categorized as a one-group pretest-posttest design (Shadish et al., 2002) that used a convergent parallel structure for mixed methods data collection and analysis (Creswell & Plano-Clark, 2018).

The study began with a pretest survey administration in the first month of the 2019-2020 academic year. Teacher participants in the intervention group attended an introductory session at which time they received an overview of the program and completed the pretest survey. The teacher training sessions offered teachers immersive and engaging learning experiences on topics like language transfer and culturally

responsive instruction, linguistic contrastive analysis between Spanish and English, interpreting and responding to bilingual literacy assessments, identifying bias in assessment, and translanguaging in the kindergarten classroom.

Based on research literature on effective training for EL teachers, the training sessions included modeled and immersive learning for teachers (Ramos, 2017) and incorporated opportunities for mastery and vicarious learning experiences (Tschannen-Moran & Hoy, 2007). Formative process evaluation measures were collected at the end of each session, while outcome evaluation posttest data collection and the culminating focus group occurred once in December of 2019 during the last in-person training session. To pair pretest and posttest results in an effort to measure change over the course of the intervention, participants were assigned a unique participant identification (ID) code to use when taking surveys. Participant ID codes were also used to identify individuals during the focus group for triangulation purposes. Participants' names and ID codes were kept in a disaggregated database separate from other study materials to maintain participants' anonymity on surveys and in focus group data.

Convergent parallel design. The study utilized a quasi-experimental one group pretest-posttest design (Shadish et al., 2002). Further, the study used a convergent parallel mixed method approach for analyzing both quantitative survey and qualitative focus group data, and took a nested approach to sampling, in which collection of data occurred within one group of purposively sampled participants (Pettus-Davis et al., 2011; Small, 2011). Working within the mixed methods paradigm allowed researchers to offset the limitations of a single methodological approach (Creswell & Plano-Clark, 2018; Johnson & Onwuegbuzie, 2004), and offered insight into the empirical outcomes of the teacher

training program as well as teacher experiences within the intervention. Figure 4.2 illustrates the purpose, timing, and data collection plan for this convergent parallel mixed methods approach:

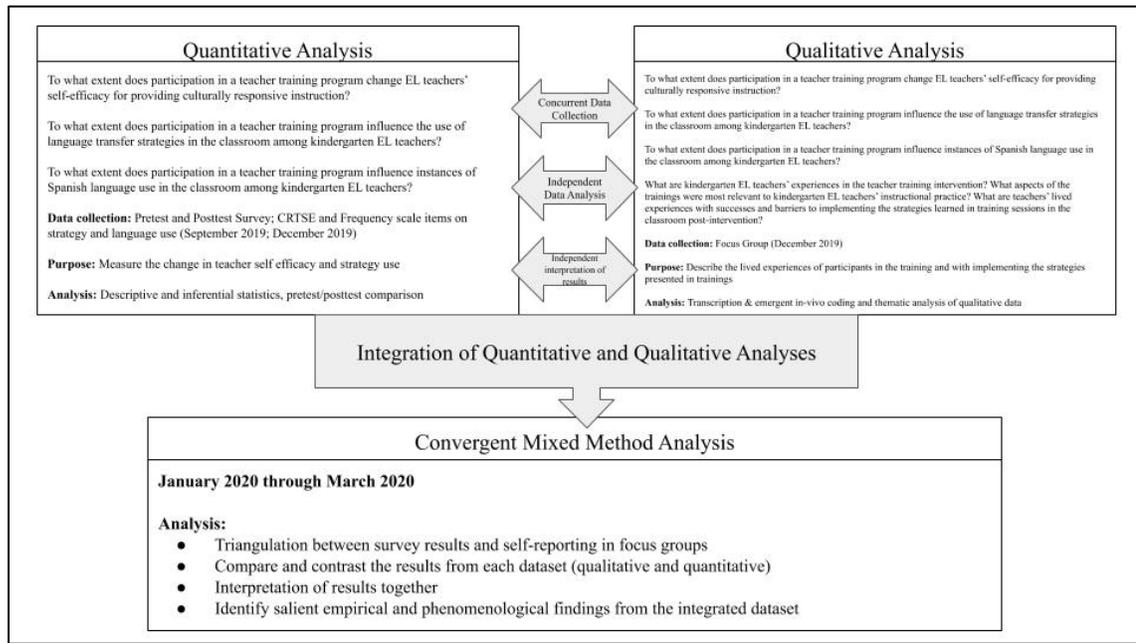


Figure 4. 2. Illustration of the convergent parallel mixed methods research design.

The mixed methods study measured teacher self-efficacy for culturally responsive teaching and the use of language transfer strategies and instances of Spanish language use. Data collection occurred during the first semester of the 2019-2020 academic year and concluded prior to the assessment window for federally mandated English language proficiency testing in January. Within the quasi-experimental one-group design, all participants received the treatment that was participation in the teacher training program. To protect the trustworthiness of the data, quantitative comparison group data was also collected from two comparison groups of teachers at the beginning and end of the study. The evaluation began with a pretest survey administration in the first session of the series and prior to participation in the intervention. Quantitative survey data collected during

the pre-test included use of the existing, valid CRTSE scale and frequency scales for strategy and language use. The pretest survey also collected some limited demographic data from participants. Based on research literature on effective training for EL teachers, the subsequent sessions included modeled and immersive learning for teachers (Ramos, 2017) and incorporated opportunities for mastery and vicarious learning experiences (Tschannen-Moran & Hoy, 2007). Final posttest data collection and the culminating focus group occurred once in December of 2019 during the last in-person training session. The posttest collected quantitative data using the same survey as the pretest, and allowed the researcher to meet the objectives of the study and measure the extent to which participation in the study increased EL teacher self-efficacy for culturally responsive instruction and their use of language and transfer strategies. Pretest and posttest surveys for the comparison groups included only the demographic items and the CRTSE scale.

Culturally and linguistically responsive instruction for ELs is a complex issue. EL student achievement is fraught with contributing factors relating to instructional practices and teacher mindset (Battey et al., 2013; Cavendish et al., 2016; Echevarría, Short, & Powers, 2006). The mixed methods evaluation approach used in this study offered a context-rich view of the problem and intervention. The convergent parallel nature of the design allowed the researcher to analyze quantitative and qualitative datasets separately and then together to identify patterns across the data and describe both the empirical outcomes of the study and the phenomenological outcomes of the intervention in a balance of quantitative and qualitative analysis (Creswell & Plano-Clark, 2018; Johnson & Onwuegbuzie, 2004), providing a balanced view of the complex problem of practice.

Methods

The context of this study was a large school system in central Maryland. The school system serves roughly 44,000 students in pre-kindergarten through grade 12. At the time of the study, English learners represented about 13% of the total school district's population and 10% of kindergarten students in the county. Every elementary school in the county staffs at least one EL teacher, though this study focused specifically on EL teachers in city locale elementary schools. Additionally, the study collected data from two comparison groups to include EL teachers working with first graders in city locale schools and kindergarten EL teachers working in non-city locales.

Participants

This study used a purposive approach to sampling, and targeted a specific population of EL teachers in the target school system (Pettus-Davis et al., 2011). This nonprobability approach aimed to target a specific group of participants based on results from the needs assessment study, as the needs assessment showed that EL teachers in city locale schools had the lowest average composite CRTSE score. Additionally, gaps in early literacy achievement were most profound in the area of kindergarten reading. Therefore, the purposive sample for this study targeted only city-locale kindergarten EL teachers who work with Spanish-speaking students.

This study aimed to purposively sample six to 10 EL teachers working with Spanish-speaking kindergarten EL students in city locale schools within the target school system. Further, in an attempt to mitigate threats to validity during the study, quantitative data was also collected from a comparison group. Teachers in the comparison group included roughly eight first-grade EL teachers from city locale schools and 18

kindergarten teachers from non-city locale schools. Survey data from the comparison group aided the researcher in accounting for threats to validity, which are discussed in detail in chapter five.

Measures and Instrumentation

This study investigated the extent to which between participation in a teacher training program changed teachers' self-efficacy for providing culturally responsive instruction and teachers' Spanish language use and language transfer strategy use in the classroom. Data collection instruments in the study included the pretest-posttest teacher survey (Appendix F), session feedback surveys (Appendix E), and a focus group (Appendix G). The pretest-posttest survey included four subsections, including demographic items used to identify covariates for data analysis. The purpose of the survey was to measure the dependent variables to the study, including teachers' self-efficacy for culturally responsive instruction, frequency of Spanish language use in the classroom and the use of language transfer strategies in the classroom. Section I of the pretest-posttest survey contained demographic items wherein teachers identified information like their years of EL teaching experience and educational backgrounds. Demographic items were adapted from the Council of Chief State School Officers surveys of enacted curriculum series (2016). Each of the scales within the pretest-posttest survey are discussed in the following sections.

Culturally responsive teaching self-efficacy. Culturally responsive teaching self-efficacy was measured on the 41-item Culturally Responsive Teaching Self Efficacy (CRTSE) scale (Siwatu, 2007). The CRTSE was included in section II of the survey with permission from the author. In the instrument validation study (Siwatu, 2007), the

Cronbach's Alpha for the CRTSE showed an internal reliability measure of .96, well above the .70 threshold for acceptable reliability in social science research (Santos, 1999). Additional correlational analyses indicated high validity for the scale. The CRTSE scale is reproduced in its entirety in Section II of the pretest-posttest survey, which appears in Appendix F. In the intervention study, the scale included 41 Likert-type items, asking respondents to rate their confidence in their ability to use each of the culturally responsive teaching practices on a scale from 0 to 100 using any number in that range. The survey offered descriptors for the levels of comfort, with zero representing 'entirely uncertain' and 100 representing 'completely certain. Sample items on the CRTSE included "identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture" and "identify ways that standardized tests may be biased towards linguistically diverse students."

Frequency of strategy and language use. Use of language transfer strategies and Spanish language use in the classroom was measured on two separate frequency scales that contained 20 and 13 items, respectively. Sections III and IV of the survey included the frequency scales for language strategy use and Spanish language use in the classroom. These scales were adapted from a study on the validity and reliability of a teacher strategy self-report scale Classroom Strategies Scales-Teacher Form (CSS-T) and a scale for measuring teachers' self-reported classroom strategy use (Reddy, Dudek, Fabiano, & Peters, 2015) and were created using guidelines from current research on best practices in language transfer instruction (Beeman & Urow, 2013; García et al., 2016). The full pretest-posttest survey is available in Appendix F. The frequency scales used a zero to seven Likert on which teachers rated how often they use a strategy or the Spanish

language during various classroom activities. On the scales, zero indicated that the strategy or language was never used, and seven indicated that it was always used.

Frequency of language transfer strategy use. The 20-item language transfer strategy use scale asked teachers to identify how often they use a particular language transfer strategy in the classroom. Items on the seven-point Likert scale included strategies like: “Allow time for peer discussion in students’ language of choice”, and “Pre-plan opportunities to facilitate bridging (language transfer) between English and Spanish.” The strategies within the scale addressed culturally relevant pedagogy, translanguaging strategies, and bridging strategies—topics which were addressed in teacher training sessions.

Frequency of Spanish language use. Teachers’ use of Spanish language in the classroom was measured on the frequency of Spanish language use scale. Like the language transfer strategy use scale, the Spanish language use scale used a seven-point Likert scale to measure how often teachers used Spanish in certain classroom and instructional activities. Sample items on the language use scale included: “...teach cognates to make connections between vocabulary in English and Spanish,” “Students are prompted to share Spanish vocabulary with their peers,” and “Students select Spanish language texts for independent reading.”

Training session feedback. Fidelity of implementation was measured using formative session feedback surveys. The purpose of the session feedback survey was to collect formative data on process evaluation constructs like participant responsiveness and adherence to the study plan. To measure the delivery of content per the research plan, informal feedback surveys were administered to teacher participants in the last five

minutes of each training session for the duration of the program. Surveys, a sample of which can be found in Appendix E, included content delivery items like “Did we meet the stated goals for this session?” Each session had a set of goals relevant to the content to be covered within the session. Goals changed for each training session and each set of goals was included in the session’s respective feedback survey (see Appendix E for an example of session goals presented within the survey). One item on the feedback survey asked teachers to indicate whether the session met its intended goals. Feedback on this item of the survey allowed researchers to monitor their delivery of training content and adjust instruction as needed when goals were not met during a session. Session feedback survey data was collected at each training session, and provided the researcher with formative data on participant engagement using items like: “On a scale from 0 to 5 (0 meaning completely disengaged [e.g. uninterested in content of the lesson, doing other tasks not related to the content, bored or distracted] and 5 meaning completely engaged [e.g. interested in the content, listening to the presenter, participating in session activities]), how engaged were you in today’s training session?”

Qualitative measures. A final focus group provided qualitative data on participant responsiveness, self-efficacy for culturally responsive instruction, and strategy and Spanish language use. Qualitative data collection from a focus group interview with all study participants occurred in December of 2019. The semi-structured focus group provided summative data for the evaluation and offered insights into the processes and outcomes of the evaluation. Sample focus group items for the participant engagement indicator include: “What were some engaging aspects of the training sessions? Why were they engaging?” and “What aspects of the training were less engaging? Why?”

Additional focus group items asked about participant experiences with implementing culturally and linguistically responsive strategies, like “ How has participation in this program, if at all, influenced your ability to meet the early literacy needs of ELs in kindergarten?” and “Give some examples of what went well for you in implementing the strategies you’ve learned. Give some examples of challenges.” Qualitative data from the focus group was transcribed and analyzed using emergent, in-vivo coding. The focus group protocol, including guiding questions, appears in Appendix G.

Study Procedure

The intervention described in this chapter spanned the first semester of the 2019-2020 academic year. During that time, participants attended eight in-person sessions that ran bi-weekly on Tuesday evenings from 4:30 PM- 6:30 PM at a centrally located city school. A sample session presentation appears in Appendix H. Participants who attended all training sessions earned one Maryland State Department of Education (MSDE) continuing education credit. If participants were unable to attend a session, they attended a make-up session to ensure that all participants met the learning goals for each session. In addition to the in-person training aspect of the intervention, teachers were provided with bilingual assessment data for their students to use during training sessions. Bilingual assessment data included measures of foundational reading skills in English and Spanish using the Fountas and Pinnell *Benchmark Assessment System* and *Sistema de evaluación de lectura* benchmark assessment kit. Table 4.1 shows an overview of the intervention timeline including topics and the data collection for each session.

Table 4. 1

Overview and Timeline of the Training Sessions

Session & Date	Strategy/ Information Delivered	Data Collection
Session 1: September 10, 2019	n/a	Pretest Administration
Session 2: September 24, 2019	Bilingual Assessment (Beeman & Urow, 2013; Hopewell & Escamilla, 2014)	Session Feedback Survey
September- October 2019	Bilingual Assessment Window	n/a
Session 3: October 7, 2019	Contrastive Analysis between Spanish and English (Beeman & Urow, 2013; Freeman & Freeman, 2004)	Session Feedback Survey
Session 4: October 22, 2019	Culturally relevant pedagogy (Echevarria et al., 20006; García et al., 2016; Ladson-Billings, 2015)	Session Feedback Survey
Session 5: November 5, 2019	Cultural funds of knowledge approach (Beeman & Urow, 2013; García et al., 2016)	Session Feedback Survey
Session 6: November 19, 2019	Translanguaging (García et al., 2016)	Session Feedback Survey
Session 7: December 3, 2019	Bridging (Beeman & Urow, 2013)	Session Feedback Survey
Session 8: December 10, 2019	n/a	Focus Group & Posttest Administration

Recruitment

Teacher recruitment for the study began in the summer of 2019, and the intervention began once teachers returned to work in the first weeks of the 2019-2020 academic year. Teachers were recruited directly via email from the researcher.

Recruitment emails included a flyer (Appendix I) informing teachers of the study and participation requirements. Early recruitment also took place at an in-person meeting for all EL teachers during teachers' first week back to work after the 2019 summer break. At

the meeting, the researcher held a brief discussion with nine kindergarten EL teachers eligible for participation in the intervention group to answer prospective participants' questions about the training program. The researcher also made an announcement to all EL teachers at the meeting to explain the eligibility criteria for participating in the online survey as part of the comparison group. Subsequent recruitment used direct emails to the intervention group. Of the nine kindergarten teachers eligible to participate in the intervention group for the study, six opted to participate in the intervention. All six participants remained in the intervention for the duration of the study and chose to participate in the pretest and posttest survey administration as well as the focus group.

To protect the validity of the study, a comparison group was also established. The comparison group included a sample of eight first-grade EL teachers from city locale schools and 18 kindergarten teachers from non-city locale schools, who were sent an anonymous survey link for data collection directly via email. Comparison group surveys followed the same data collection schedule as the intervention group, receiving one link on the pretest session date in September of 2019 and another on the last session date in December 2019.

Bi-weekly sessions began in September of 2019. The in-person training sessions offered participants explicit training on the use of language transfer strategies and culturally responsive instruction and drew upon current research in the field of EL best practice and culturally responsive instruction (Banks, 2015; Ramos, 2017; Siwatu, 2007). Sessions offered a balance of direct instruction to participants, collaborative opportunities, and mastery and vicarious learning experiences that aimed to increase

teachers' self-efficacy for culturally responsive instruction (Tschannen-Moran & Hoy, 2007).

Training Sessions

The six participants in the intervention group attended eight in-person evening training sessions between September 10, 2019 and December 10, 2019. Attendance logs from the training sessions indicated high participation, with 100% attendance at all but one session, with only one participant needing to attend an alternate make-up session for an unexpected session absence. The make-up session for that individual took place in the week following the missed session and covered the same content and session goals established in the in-person training with the rest of the intervention group. In the first training session, all participants in the intervention group were assigned a participant ID code used to pair pretest and posttest survey responses and later triangulate quantitative survey data with qualitative focus group data.

Bilingual Assessments

The in-person training sessions included a variety of vicarious learning and mastery experiences (Bandura, 1986; Tschannen-Moran & Hoy, 2007). To facilitate mastery learning experiences, teachers in the intervention group were provided with Spanish assessment data that included three indicators for early literacy skills in Spanish: concepts about print, phonological awareness, and early reading behaviors. These data, routinely collected and provided to teachers through the district's central office, were provided to teachers to use in study sessions. In the first week of October of 2019, the researcher provided each intervention group participant with Spanish language assessment data for some of their kindergarten students. Participants in the study

generated a list of priority students for testing that included Spanish-dominant kindergarten ELs in their classrooms. In total, participants had access to early literacy assessment data for 17 students, which included each of the three early literacy skill assessments as mentioned above. Participants were provided with data at their school sites during the October testing window, and brought the student assessments to training sessions for interpretation and real-time application of strategies to respond to the individual linguistic needs of EL students in early literacy.

Data Collection

Data collection for this study began with the administration of the pretest survey in September of the 2019-2020 academic year. A detailed matrix including each research question, constructs, instruments, and data analysis procedures appears in Appendix J. The summary matrix offers an overview of data collection for each research question for the study.

At the beginning and end of the training program, all participants in the intervention group took the teacher survey, containing demographic items and three additional scales. Pretest and posttest results were matched using unique participant ID codes. Of the 26 teachers sampled in the comparison group, 20 individuals participated in the pretest and 18 participated in the posttest survey administrations. Participants in the comparison group were prompted to create their own anonymous ID code for use in the comparison group's pretest and posttest survey administrations, following a simple, replicable formula (favorite color + number of siblings + favorite fruit). Participant ID codes and demographic items indicated paired pretest and posttest results, and resulted in a total of 11 matched pairs to be included in participant-level analysis of study results. All

survey data were collected using the online Qualtrics platform, and participants received a direct anonymous link to complete the survey via email.

Pretest-posttest survey. The pretest-posttest survey was administered once in the first session of the training program and again at the last session. The survey appears in its entirety in Appendix F, and was used to measure teacher self-efficacy for culturally responsive education, language transfer strategy use, and Spanish language use. The survey took approximately 30 minutes to complete on the computer, and administration occurred through the Qualtrics online survey platform that teachers accessed during the first in-person training session and again at the end of the intervention. Pretest and posttest administrations used the same format and structure, and participants received a unique link for each administration. Participants accessed the link to the Qualtrics survey via a direct email to all participants, sent immediately prior to survey administration. The comparison group also accessed their abbreviated version of the pretest and posttest survey via an anonymous link sent to the group directly via email.

Session feedback surveys. During the last five minutes of each in-person training session, participants completed a session feedback survey. The survey, administered via Google forms, provided valuable formative process evaluation data that helped to adjust sessions throughout the intervention. A sample session feedback survey appears in Appendix E. Participants accessed the survey via a link presented within the session presentation. Participants were able to complete the survey on a computer, tablet, or smart phone.

Focus group. The culminating focus group interview occurred once in December of 2019, and took approximately one and a half hours to complete. The protocol for the

semi-structured focus group appears in Appendix G, and includes a script for the introduction and conclusion of the focus group as well as focus group questions. The focus group was audio recorded, and the researcher took detailed notes during and immediately after the focus group to supplement the audio recorded data from the interview. The focus group session took place in the same physical location as the teacher training sessions.

Data analysis

Data analysis for outcome measures in this study occurred post-intervention, with comparison of means between quantitative pretest and posttest survey data and emergent coding and thematic analysis of teachers' self-reported qualitative focus group data. Analysis of formative process evaluation data occurred throughout the study, informally after each training session to support the continuous improvement of the intervention and ensure fidelity of implementation. The following section offers a detailed discussion on the data analysis procedures for each data source.

Pretest-posttest survey. Following the final training session and survey administration, pretest and posttest survey data was cleaned and input into the data analysis program Statistical Package for Social Sciences (SPSS). This data included pretest and posttest data from the intervention and comparison groups. Basic descriptive statistics and inferential statistical analyses were used to analyze results, and are presented in detail in the final chapter of this dissertation. Due to the nature of the small sample size within this study, quantitative analysis of survey data is mostly descriptive in nature. Following a reliability analysis for each survey scale, the researcher compared

composite mean scores on the pretest and posttest surveys for each of the survey scales: CRTSE, language transfer strategy use, and Spanish language use.

Mean scores for the CRTSE were analyzed using a dependent t-test, and only included comparison group data with established pretest and posttest paired cases. Analyses compared participants' composite mean scores for each group pre- and post-test. To determine the appropriate statistical test to compare CRTSE means in the sample, the researcher first checked the assumptions for the parametric tests available (Foster, 2011; Lochmiller & Lester, 2017; Shadish et al., 2002). The level of measurement for the CRTSE variable and homogeneity of cases met the foundational assumptions for the test for the dependent and independent variables. Further, a Shapiro-Wilk test for normality indicated that the data were normally distributed ($p= 0.09$) and the data had no significant outliers. Based on these tests for assumptions, the dependent t-test was used to compare means on the CRTSE scale.

Analysis of the two frequency scales administered to the intervention group also included a comparison of means. Because the language transfer strategy scale and Spanish language use scale were only administered to the intervention group ($n= 6$), the data did not meet the sample size requirement for use of a parametric test. The data met the assumptions for the equivalent, nonparametric Wilcoxon Signed Rank test based on the level of measurement for the dependent variable and homogeneity of cases. Furthermore, the distribution of differences between each group were symmetrical and the Shapiro-Wilk test indicated a normal distribution for both the strategy use scale ($p= 0.56$) and the Spanish language use scale ($p= 0.43$). Therefore, analysis of pretest and

posttest data used the non-parametric Wilcoxon Signed Rank test to compare means for the related sample.

Session feedback surveys. Session feedback surveys, a process evaluation measure, were reviewed after each session to monitor progress towards session goals and adjust future training sessions as needed. Participant feedback on selected response items regarding engagement and progress on session goals were analyzed using basic descriptive statistics. The open-ended item on the survey: *“How can I improve upcoming sessions to support your learning?”* was also reviewed informally during each session, and allowed the researcher to make iterative changes in response to individual participant needs.

Focus group. Qualitative focus group data was audio recorded and transcribed. During the focus group, participants in the study described their experiences in the training program and also their use of language and language transfer strategies in the classroom post-intervention. The researcher recorded notes throughout the discussion to help provide thick descriptions of qualitative data and the focus group process (Braun & Clarke, 2006). During transcription, participant ID codes were noted with focus group responses to pair focus group responses with results on survey items for use during triangulation. After transcription of the data, the researcher began round one of coding. Because the focus group discussion addressed a variety of topics regarding the program itself, implementation of strategies in the classroom, and teachers’ attitudes and beliefs, round one began with holistic coding to describe the overall contents of the data (Miles, Huberman, & Saldaña, 2014). Round two analysis identified in vivo and descriptive

codes using exact words or phrases from the data. Finally, analysis included a third round of coding for thematic analysis (Miles et al., 2014).

Triangulation of quantitative and qualitative data. The data analysis for this convergent parallel study included triangulation between quantitative survey data and qualitative data from the focus group. Triangulation between quantitative and qualitative data aided the researcher in identifying areas of consistency or divergence between the datasets and to protect the validity of results (Creswell & Miller, 2000; Johnson & Onwuegbuzie, 2004). During analysis, focus group responses on questions pertaining to culturally responsive instruction, language use and language transfer strategy use in the classroom were compared to teachers' responses on the CRTSE and language and strategy use frequency scales from the posttest survey administration to corroborate findings and lend contextual evidence and participant voice to quantitative results. The researcher used triangulation between the datasets to protect the validity of the quantitative results despite the small sample size and aid in answering the mixed methods research questions by identifying patterns across the empirical and experiential results.

CHAPTER 5

Findings and Discussion

The purpose of this chapter is to present the findings and conclusions from the intervention study. Results from the study's process and outcome evaluations comprise this chapter. The study, grounded in linguistic interdependence and critical applied linguistics theory, aimed to investigate the extent to which participation in a teacher training program changed EL teachers' self-efficacy for providing culturally and linguistically responsive instruction to EL students among kindergarten EL teachers working with students in city schools.

Measuring project implementation allows researchers to evaluate adherence to a study plan and can help protect validity of a study and interpretation of its data (Stufflebeam, 2003; Zhang, et al., 2011). The intervention conducted over the course of the dissertation study was designed to increase teacher self-efficacy for culturally responsive teaching and their use of effective strategies for early literacy instruction for ELs. To achieve these intended proximal outcomes, the study relied on a mediating variable as outlined in the theory of treatment (Appendix D). Mediating variables, as defined by Rossi, et al. (2004), are short-term outcomes of a study that, in turn, influence a longer-term outcome or result. By equipping teachers with knowledge and skills for culturally and linguistically responsive early literacy instruction in the intervention, the study employed a mediating variable of increased teacher knowledge and skills to change teachers' self-efficacy and classroom practice, as presented in the study's logic model and theory of treatment (Appendix C and D, respectively). Cummins' (1979) theory of linguistic interdependence and Pennycook's (2001) critical applied linguistics theory

undergirded the teacher training program. The study's expected short-term outcomes were increased self-efficacy for culturally responsive teaching and increased use of language transfer and native language supports in the early literacy classroom.

Research on effective professional development for improving self-efficacy establishes that mastery and vicarious learning experiences can improve self-efficacy beliefs (Bandura, 1986; Tschannen-Moran & Hoy, 2007). Further, studies pertaining to improving culturally and linguistically responsive teaching practices suggest that the use of empathy-building experiences and explicit training on the subject can increase teachers' ability to use culturally and linguistically responsive strategies with students (Siwatu, 2007; Ramos, 2017). These tenets of effective teacher training guided the implementation of a series of eight in-person training sessions that spanned the first semester of the 2019-2020 academic year.

Process of Implementation

The intervention program took place between September 10, 2019 and December 10, 2019. Teachers in the intervention group attended in-person bi-weekly trainings that incorporated self-efficacy building activities focused on culturally and linguistically responsive instruction. The sessions totaled 15 hours of in-person training for teachers in the intervention group distributed over eight total sessions. Activities in the intervention included an introductory session during which time teachers were introduced to the study and took the pretest survey. During the same week that the intervention began, teachers in the comparison group were invited to take the online pretest survey. The six intervention group sessions thereafter included a variety of interactive training episodes that used real student data and simulated learning experiences to connect theory to practice and model

effective strategy use for teachers in the intervention. The final training session consisted of the posttest survey administration and focus group discussion. Following the final training session, teachers in the intervention group were invited to complete the online posttest survey. A clear description of the process of implementation, as established in the research plan, can help to align the activities in the study with the expected proximal outcomes discussed in the findings below (Dusenbury, et al., 2003; Stufflebeam, 2003). The intervention activities offered EL teachers in the intervention group mastery and vicarious learning experiences wherein they could apply new learning from training sessions to their work with EL students. These activities aimed to increase teachers' knowledge of culturally and linguistically responsive instruction and thereby increase their use of responsive instructional practices and self-efficacy.

The forthcoming sections of this chapter include analysis of the study's process and its proximal outcomes. These analyses begin with a discussion on the basic descriptive data and analysis for quantitative, qualitative, and mixed methods results. The discussion on the study's implementation and key findings aims to align study implementation with the anticipated outcomes of the intervention (Rossi et al, 2004).

Descriptive Statistics

To understand the context of the study, this section presents basic descriptive statistics regarding participant demographics and initial within-group differences. These basic data provide useful background information that offers context within which to consider the study's findings. Further, understanding the participant demographics is especially relevant considering the use of a purposive nonrandom sample for the study. The intervention group for the study included only teachers from the school locale that

had the lowest average culturally responsive teaching self-efficacy per the needs assessment. As the needs assessment study established city locale teachers as having low culturally responsive teaching self-efficacy, it is important to note how that initial difference is reflected in the pretest survey results and how it may inform interpretation of the findings.

The pretest survey showed diversity within the study sample. Teachers in the study ranged in years of EL teaching experience from new teachers to veterans with up to 15 years of prior EL teaching experience. Approximately 48% of the sample were teachers with 12-15 years of EL teaching experience, and roughly one third of the group had three to five years of prior EL teaching experience. Further, the majority of EL teachers in the sample (62%) earned their EL teaching certification by passing a common licensure exam to add the endorsement to an existing teaching license. Overall, participants in the study represented a variety of years of EL teaching experience and EL certification pathways. Nearly all participants were female, with the exception of one male participant in the intervention group. This gender makeup is unsurprising, as the system's elementary EL teacher population in the 2019-2020 school year was majority female, with 62 female teachers and only 4 male teachers.

Participants in the intervention group were majority monolingual, with only one participant in the group identifying as bilingual English and Spanish speaking. Participants in the comparison groups represented more linguistic diversity, with half of kindergarten EL teachers from non-city schools identifying as multilingual in English and a variety of languages, including French, German, and Spanish and one third of city locale first grade EL teachers identifying as multilingual as speakers of Italian and

Russian. Overall, the majority of teachers in the study were monolingual English speaking (59%). All but one teacher in the intervention group were monolingual English speaking. Table 5.1 includes demographic for teachers in the study sample.

Table 5. 1

Years of Experience Teaching English Learners among Study Participants

	How many years have you taught English Learners prior to this year?					
	Less than 1 year	1-2 years	3-5 years	6-8 years	9-11 years	12-15 years
Intervention Group	1	1	2	0	1	1
Comparison Non-City Kindergarten	0	1	5	1	0	8
Comparison Group City 1st Grade	0	0	1	1	0	4
Total	1	2	8	2	1	13

	How did you earn your EL teaching certification?		
	Completion of an undergraduate program	Completion of a master's program	Passing a PRAXIS exam
Intervention Group	0	2	4
Comparison Non-City Kindergarten	3	3	8
Comparison Group City 1st Grade	0	2	4
Total	3	7	16

	Are you multilingual?		
	Yes	Languages other than English among multilingual EL teachers in the study ^a	No
Intervention Group	1	Spanish	5
Comparison Non-City Kindergarten	8	French, German, Spanish	7
Comparison Group City 1st Grade	2	Italian, Russian	4
Total	11		16

Note. Demographics for study participants identified using pretest

^a survey item defined multilingualism as the ability to speak, write, and read the language fluently to communicate accurately and clearly with native speakers of the language across professional and social contexts

Pre-Intervention Study Group Differences

Pretest survey results showed some early differences between the intervention and comparison groups. Prior to the intervention, each group took a survey which included demographic items and the existing CRTSE scale. The intervention group survey

included two additional frequency scales in addition to the CRTSE scale. Results from the first survey administration showed early differences in teachers' self-efficacy for culturally responsive teaching and appear in figure 5.1 below. Teachers in the intervention group scored lowest on the scale during the pretest, with an average CRTSE score of 69.76, compared to the comparison group overall average of 83.78. This discrepancy in pretest CRTSE scores likely reflects the purposive sampling for the intervention group, as needs assessment results guided sampling to target the population of teachers with lowest CRTSE scores in the system.

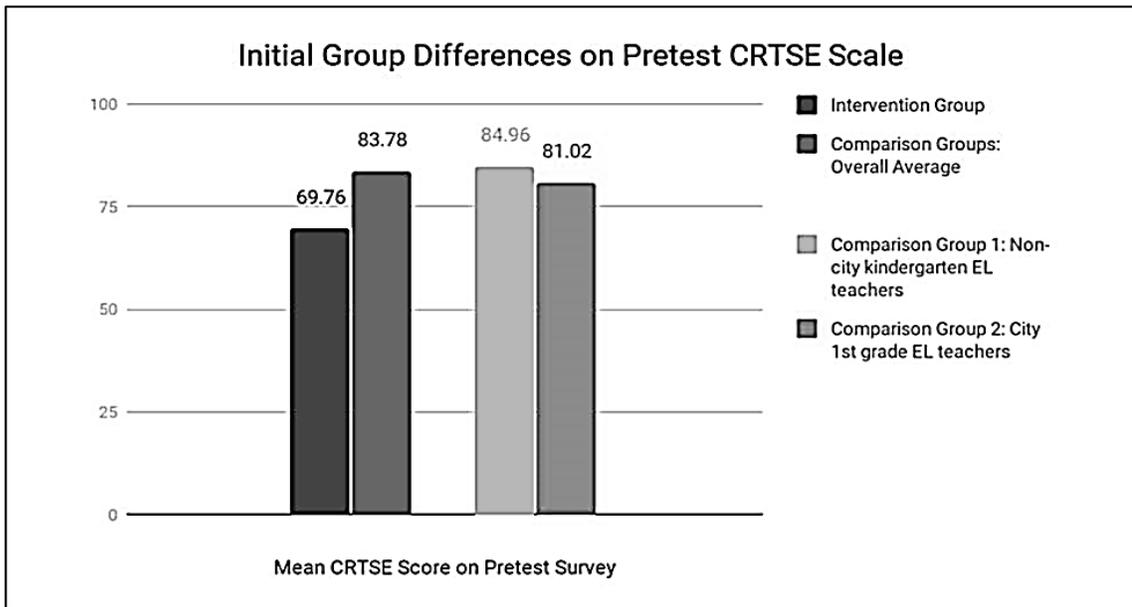


Figure 5. 1. Initial between-group differences on the CRTSE scale

Overall, quantitative data from pretest and posttest administrations varied by group. These differences are unsurprising based on the needs assessment findings. As established by the needs assessment, teachers in city schools had lower CRTSE scores overall, as compared to non-city schools. Further, teachers in the intervention group had initial low scores on their use of language transfer strategies and Spanish language use.

These basic descriptive statistics support the initial findings from the needs assessment study, which showed that EL teachers relied mostly on English-only instruction and did not consistently employ effective strategies for teaching early literacy for ELs. Table 5.2 presents a summary of the descriptive pretest and posttest results for the entire sample, including the intervention group and both comparison groups.

Table 5. 2

Descriptive Statistics for Each Survey Scale for the Entire Sample

		Minimum	Maximum	<i>M</i>	<i>SD</i>
Pretest	Culturally Responsive teaching Self-Efficacy Scale (CRTSE) (<i>n</i> = 26) ^b	54.98	96.83	78.60	12.66608
	Language Transfer Strategy Use Scale ^a	2.56	5.06	4.06	1.04905
	Spanish Language Use Scale ^a	2.08	6.58	3.94	1.50247
Posttest	Culturally Responsive teaching Self-Efficacy Scale (CRTSE) (<i>n</i> = 24) ^b	72.73	99.71	85.39	7.71040
	Language Transfer Strategy Use Scale ^a	4.72	6.72	5.62	.69426
	Spanish Language Use Scale ^a	4.83	6.83	5.90	.81380

Note. These descriptive statistics present average composite scores for each scale among paired pretest and posttest cases

^a Language Transfer Strategy Scale and Spanish Language Use Scale only administered to the intervention group (*n*= 6)

^b Includes all cases for pretest and posttest administration, including unmatched cases; difference in *n* due to variance in pretest and posttest response rates

Reliability of Survey Scales

The pretest-posttest teacher survey used for the intervention group included three survey scales and a bank of demographic items. Analysis of the Cronbach's alpha for the CRTSE scale for the pretest administration indicated adequate reliability for the study

($\alpha = 0.969$). The pretest Spanish language use survey scale was also found to be reliable ($\alpha = 0.918$). The strategy use scale did not yield similarly strong reliability during the pretest administration, with a Cronbach's alpha of 0.795. Correlation tables for the scale were used to omit unreliable items and improve the reliability of the instrument for use in the analysis of findings. Ultimately, three items were removed from the survey based on an item analysis. Removing scale item 3: *Select authentic texts for instruction that were written by linguistically diverse authors* yielded an improved, though still low, reliability ($\alpha = 0.848$). Next, based on subsequent correlation table results, the researcher removed item 2: *Display classroom materials that reflect the linguistic diversity of students (posters, toys, books)*, further improving reliability for the scale ($\alpha = 0.882$). Ultimately, after further a third round of item analysis for reliability, item 20 was removed, yielding an acceptable Cronbach's Alpha of .906, which was favored for analysis of posttest results. Correlation tables including item-total statistics for each survey scale appear in Appendix L.

Initial Qualitative Analysis

Emergent coding and thematic analysis of qualitative data illuminated several central themes in the data. The five themes that emerged from qualitative data analysis appear in figure 5.2, which includes a description of each theme with supporting codes and serves as an audit trail for the coding process. The researcher relied on in vivo coding for thematic analysis for its usefulness in allowing themes to emerge from participant voice (Miles et al., 2014). A code book for the qualitative data is presented in Appendix K. The following section presents a brief discussion on each of the themes that emerged from the focus group data.

Empowerment

The empowerment theme encompassed holistic codes pertaining to experiences in training sessions, implementation of strategies, and self-efficacy beliefs. Empowerment in this study is twofold and describes not only empowerment of teachers but also of EL students. The theme of empowerment represents feelings of heightened engagement and voice for both teachers who participated in the study and their students, and emergent codes relating to empowerment help illustrate those facets of the theme. Teachers reported feeling more engaged with their colleagues and with language teaching through the application of knowledge they gained in sessions. These feelings are closely related to self-efficacy beliefs among the teachers in the sample, and led participants in the intervention to gain a sense of empowerment through their increased knowledge and skills, supporting established self-efficacy research used to guide the program's design (Bandura, 1986, Tschannen-Moran and Hoy, 2007).

The empowerment theme also pertains to students who, through the increased use of culturally and linguistically responsive strategies on the part of teachers, experienced higher engagement and agency in the classroom. Teachers reported increased instances of teachers calling on EL students to participate in class and increased understanding of EL students' assets in the classroom, thus empowering them as learners and speakers of a language other than English (Echevarría et al., 2006).

Language as an Asset

Holistic codes relating to Spanish language use and culturally responsive teaching elucidated the theme of language as an asset in the classroom. The theme refers to the notion that a student's home language is an asset that can be leveraged for learning and

can enrich the classroom environment (Banks, 2015; Gee, 2008; Ramos, 2017). During the focus group, teachers discussed how their views on language use shifted as a result of the study and reported increased use of students' home language in the classroom.

Role

Focus group data also illuminated a central theme around the role of the EL teacher. Focus group results indicated a shift in teachers' thinking about their role. This is an important theme in the study, as there is a dearth of research on culturally and linguistically responsive instruction among EL teachers. Qualitative data on the role of the EL teacher offers valuable insight into language instruction. During the focus group, codes like "language teacher", and "not just intervention" illustrated teachers' thinking about their role as a language teacher. This theme on what language instruction is at its core informed how teachers reflected on their use of language transfer strategies and responded to other educators. The role theme encompasses codes that illuminate how language teaching is perceived by those who provide EL services to students.

Resource Gaps

The theme of resource gaps refers to a scarcity of human and material resources that posed barriers to implementation of strategies learned in the intervention. Codes within in this theme included both teachers' and students' low levels of Spanish proficiency, lacking awareness of the assets that students bring to the classroom, and the lack of adequate early literacy assessments in students' home language(s). The resource gaps theme describes participants' perceptions of those skills and materials that they need to implement effective culturally and linguistically responsive instruction and respond to individual student needs.

Bifurcation

The fifth and final theme that emerged from qualitative data analysis was bifurcation. This theme refers to participants' feelings of conflict between their role as a language instructor and advocate for EL students and as a public school employee accountable for student achievement. The bifurcation theme is illustrated by codes like assessments, that teachers used to discuss assessment targets and instruments that have a singular focus on students' achievement on grade level standards and that often neglect to value growth and social-emotional skills. The bifurcation theme describes the internal conflict that participants voiced between wanting to educate the whole child using culturally and linguistically responsive practices and the pressure they feel to demonstrate student growth and achievement consistent with established accountability measures.

Through multiple rounds of emergent coding and thematic analysis, the five themes described above illuminated participants' experiences in the training sessions themselves as well as their successes and challenges with implementing culturally and linguistically responsive practices in the early literacy classroom. Figure 5.2 offers a visual representation of the themes that emerged from the qualitative analysis.

Additionally, the forthcoming sections of this chapter offer illustrative quotes and codes that support the analysis of each research question.

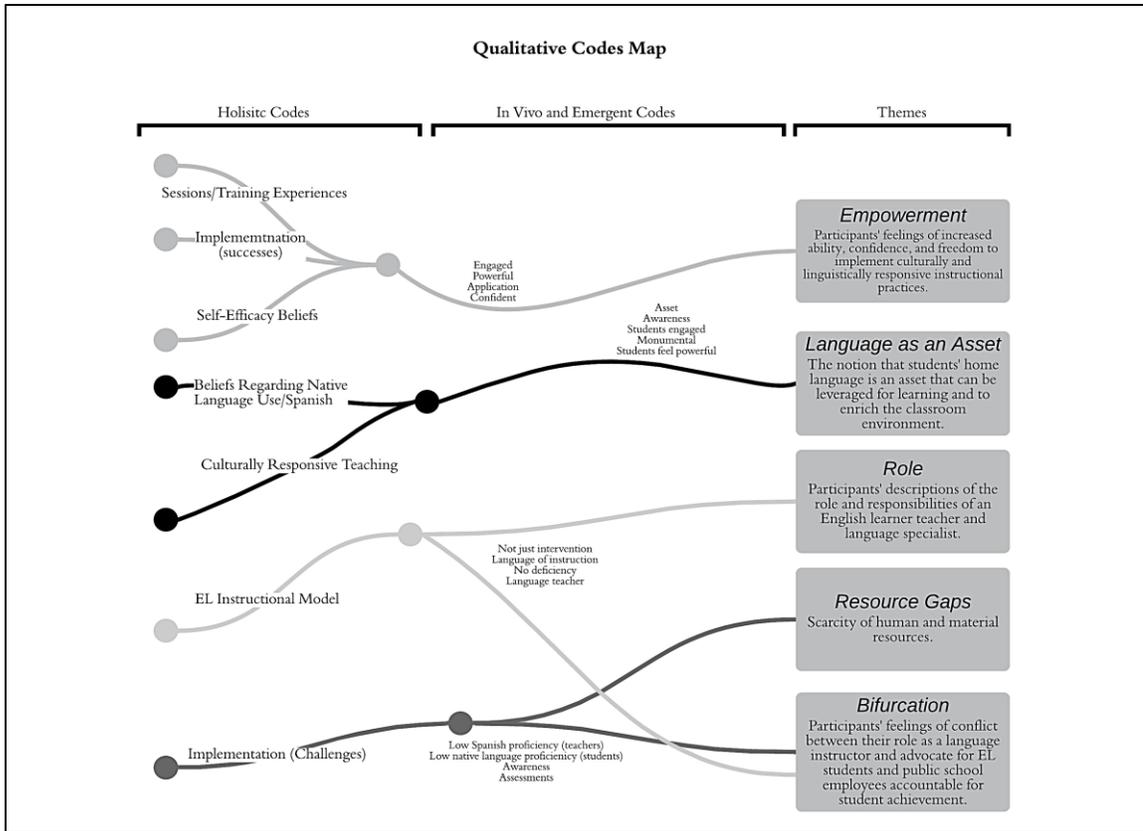


Figure 5. 2. Themes from Qualitative Focus Group Data

The results for the study, presented in the forthcoming section, include an analysis of each research question. Data include the results from session feedback surveys the three survey scales discussed above, and qualitative focus group data. Consistent with the convergent parallel design of the study, the findings include quantitative, qualitative, and mixed methods analysis for the mixed methods research questions.

Findings

Findings for each of the research questions listed below appear in the forthcoming sections of this chapter. The research questions (RQs) guide the presentation of the study's findings and discussion. Questions to the study were as follows:

1. To what extent was the study implemented in adherence to the established procedures?
 - a. To what extent did the program adhere to the established timeline and number of sessions?
 - b. To what extent were the stated goals for each teacher training session met?
2. To what extent does participation in a teacher training program change EL teachers' self-efficacy for providing culturally responsive instruction?
3. To what extent does participation in a teacher training program influence the use of language transfer strategies in the classroom among kindergarten EL teachers?
4. To what extent does participation in a teacher training program influence instances of Spanish language use in the classroom among kindergarten EL teachers?
5. What are kindergarten EL teachers' experiences in the teacher training intervention?
 - a. What were teachers' perceptions of the relevancy of the materials to their instructional practice?
 - b. What are teachers' lived experiences with successes and barriers to implementing the strategies learned in training sessions in the classroom post-intervention?

Adherence to the Established Study Procedures (RQ1)

The first research question to the study was: "To what extent was the study implemented in adherence to the established procedures?" The question included two sub-questions to investigate the extent to which the program adhered to the established

timeline and number of sessions and the extent to which the stated goals for each teacher training session were met. To measure whether the study adhered to the established procedure, all participants in the intervention group completed a survey at the close of each training session. Table 5.3 displays each session's established goals and indicates which goals were not met during the session, as identified by session survey results. Session feedback survey data indicate that, in all but three sessions, participants met each of the established goals for the session. For an example of a session feedback survey, see Appendix E.

To ensure that participants received all planned content from training sessions, the researcher adjusted subsequent sessions each time a goal was not met in a session. The established plan for the study sessions included a series of eight in-person trainings totaling 15 hours of training. Overall, session feedback surveys indicate that all but one of the established goals of the training program were met prior to the last training session. All sessions occurred on the planned days and within the established time for each session, resulting in 15 hours of total in-person training time for participants in the intervention group from September 10 through December 10 during the 2019-2020 academic year.

Table 5. 3

Training Session Goals

Session Goals	
Session 1	Sign informed consent forms Take the pretest teacher survey Set group norms for the training program Review upcoming topics and session dates
Session 2	Discuss Cummins' theory of language transfer and Pennycook's theory of critical applied linguistics Experience an immersive early literacy task from the perspective of an English learner Practice interpreting assessment data Learn about the bilingual assessments available to your EL students Make a plan for school visits and administering Spanish language foundational skill assessments
Session 3	Complete a contrastive linguistic analysis between English and Spanish Review student assessment data and identify areas of strength and needs for support Discuss how teachers can use an understanding of Spanish and English linguistics to respond to student needs
Session 4	Conduct a brief review of materials and content from previous training sessions Discuss EL student data using a holistic bilingualism approach Experience culturally relevant instruction from the student perspective Discuss what culturally relevant pedagogy is and why it is important
Session 5	<i>Discuss EL student data using a holistic bilingualism approach</i> Conduct a brief review of materials and content from previous training sessions Learn about cultural funds of knowledge Engage in a cultural funds of knowledge activity Apply learning from previous sessions to respond to student needs
Session 6	Conduct a brief review of materials and content from previous training sessions <i>Apply learning from previous sessions to respond to student needs</i> Learn about translanguaging Create a translanguaging progression for a student
Session 7	Conduct a brief review of materials and content from previous training sessions Discuss translanguaging as a pedagogical approach. Experience a bridging lesson Discuss the aspects of effective planning for bridging lessons Plan a bridging lesson for Kindergarten EL students ^a
Session 8	Complete MSDE credit forms Participate in a focus group discussion Take the posttest teacher survey

Note. Goals that were not met during the planned session are in boldface. Goals from previous sessions that were met in a subsequent meeting are italicized.

^a This goal was not met during the planned training sessions

Establishing fidelity of implementation helps protect the validity of a study (Rossi et al, 2004). The findings from research question one indicate that the study was implemented consistent with the established research plan. Session feedback surveys and study materials showed that teachers in the intervention group received the intended intervention. Findings for research question one establish that implementation included the requisite inputs and activities outlined in the study's logic model, thus allowing the researcher to align implementation with the expected outcomes of the study. The following sections of this chapter address those outcome measures and present the key findings from the outcome evaluation.

Teacher Self-Efficacy for Culturally Responsive Instruction (RQ2)

Quantitative findings for RQ2. The second research question to this study was: "To what extent does participation in a teacher training program change EL teachers' self-efficacy for providing culturally responsive instruction?" Self-efficacy scores were measured using Siwatu's (2007) Culturally Responsive Teaching Self-Efficacy Scale (CRTSE), which includes 41 items pertaining to teachers' confidence with using culturally responsive instruction strategies. Table 5.4 provides a summary of the mean composite scores on the CRTSE scale from the pretest and posttest survey administrations for each participant in the study.

Table 5. 4

Average CRTSE score by participant for pretest and posttest administration

Participant ID	Average Composite Score on the CRTSE Scale ^a		
	Pretest	Posttest	Increase?
<u>Intervention Group (n=6)</u>			
01	77.32	84.88	yes
02	55.22	85.59	yes
03	91.10	90.68	no
04	74.73	87.71	yes
05	65.24	83.41	yes
06	54.98	74.59	yes
<u>Comparison Group 1: Non-City Kindergarten (n=6^b)</u>			
07	87.73	89.76	yes
08	78.20	82.99	yes
09	82.65	85.15	yes
10	63.83	94.46	yes
11	80.63	74.34	no
12	96.83	99.71	yes
<u>Comparison Group 2: City 1st Grade (n=5^b)</u>			
13	90.24	88.59	no
14	86.22	96.63	yes
15	80.00	80.49	yes
16	88.90	84.49	no
17	68.12	72.73	yes

Note. CRTSE= Culturally Responsive Teaching Self-Efficacy Scale.

^aComposite average score on 100-point CRTSE scale

^b Includes only pretest and posttest matched pairs

By group, 83% of participants in the intervention (n=6) had an increase to their overall CRTSE average score, compared to 72% of participants in the comparison groups (n=11). To investigate change in teachers' self-efficacy over the study, a dependent t-test was used to compare mean scores on the CRTSE scale pre-intervention and post-intervention among each group. Teachers in the intervention group experienced significant growth in their average CRTSE scores between the pretest (n= 6, M= 69.76, SD= 14.05) and posttest administration (n=6, M= 84.47, SD= 5.46, p= .019). The

comparison group, however, did not show significant CRTSE growth when comparing matched pretest and posttest cases. Within these matched cases, pretest scores ($n=11$, $M=82.12$, $SD=9.64$) and posttest scores ($n=11$, $M=85.94$, $SD=9.03$, $p=.215$) on the CRTSE did not significantly change. Overall, the full comparison group (including unmatched pretest and posttest cases) had fairly consistent pretest ($n=20$, $M=83.77$, $SD=10.90$) and posttest ($n=18$, $M=84.90$, $SD=10.58$) results on the CRTSE. Table 5.5 includes a summary of these results.

Table 5. 5

Average CRTSE scores for intervention and comparison group

	Average Composite Score on the CRTSE Scale ^a			
	Minimum	Maximum	<i>M</i>	<i>SD</i>
<u>Intervention Group ($n=6$)</u>				
Pretest	54.98	91.10	69.76	14.05
Posttest	74.59	90.68	84.47*	5.46
<u>Comparison Groups ($n=11$) ^b</u>				
Pretest	63.83	96.83	82.12	9.64
Posttest	72.72	99.71	85.94	9.03

Note. CRTSE= Culturally Responsive Teaching Self-Efficacy Scale.

^a Composite average score on 100-point CRTSE scale

^b Only includes cases with matched pretest and posttest pairs

* $p<.05$

Quantitative findings for research question two indicate that participants in the intervention group experienced statistically significant improvement ($p<.01$) in their self-efficacy for culturally responsive instruction, whereas participants in comparison groups did not. Figure 5.3 illustrates growth on the CRTSE scale between teachers in the intervention group and comparison groups.

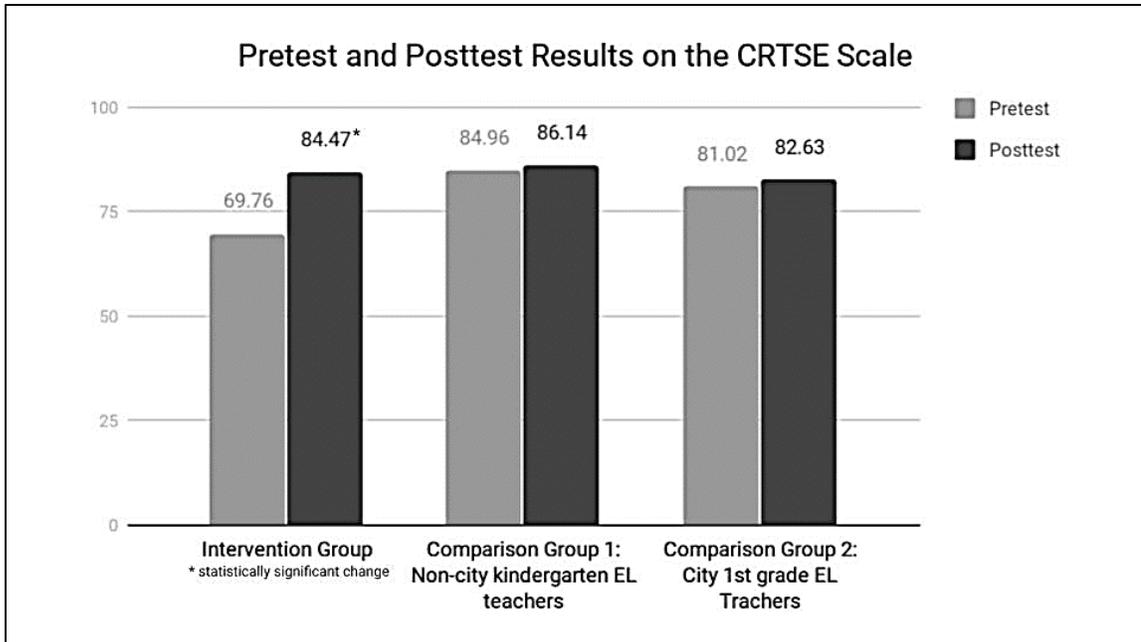


Figure 5. 3. Pretest and posttest CRTSE results by study group

The intervention group had lower CRTSE scores pre-intervention, and increased significantly post-intervention while the comparison groups did not show a significant increase. This finding, considered alongside the significant increase to the intervention group's CRTSE scores, suggests that the intervention program yielded accelerated growth in teachers' self-efficacy for culturally responsive instruction over the course of the study, essentially closing the gap between groups on initial CRTSE scores.

However, teacher scores on the CRTSE offer only a single perspective on participants' self-efficacy beliefs. Bandura (1986) describes self-efficacy as a combination of several factors, including thought patterns and behaviors. As such, qualitative data on participants' self-efficacy beliefs and behaviors offer valuable insight into teachers' thought patterns and practices during the intervention, offering increased understanding of teachers' self-efficacy beliefs in this outcome evaluation.

Qualitative findings for RQ2. Focus group data, collected only from the intervention group during the final training session, illustrated several key findings relating to teachers’ self-efficacy for culturally responsive instruction. For the purposes of this study, culturally responsive instruction is the use of students’ cultural backgrounds, prior experiences, individual learning preferences, and aspects of diversity to engage students in a learning environment which facilitates multiple means of expression, encourages respectful interaction (Banks, 2015; Siwatu, 2007) and that provides “students with the knowledge and skills needed to function in mainstream culture while simultaneously helping students maintain their cultural identity, native language, and connection to their culture” (Siwatu, 2007, p. 1087). Three themes from the qualitative dataset included pertinent findings to teachers’ feelings of self-efficacy for culturally responsive instruction: empowerment, bifurcation, and resource gaps. Table 5.6 Presents a summary of relevant findings, including in-vivo codes and relevant quotes from the focus group discussion.

Table 5. 6

Responses by Theme for Data Pertaining to Self-Efficacy for Culturally Responsive Teaching

Theme	Codes	Relevant Quotes
Empowerment	“Empowered” “Validating” “feel more confident” “teach the whole child” “establish funds of knowledge”	“really has helped me with professional conversations with colleagues and specialists and getting them to understand all of the funds of knowledge that our students are bringing to the table, and how to help them incorporate that into their sessions, even though they're not EL teachers they're working with those EL students in interventions or small groups, and that has helped me a lot and help them feel more confident and appreciate the students.” (Participant 04) “I feel like I have a little bit more freedom to teach the whole child, rather than just the standards.” (Participant 02)

		<p>“And I just don't think for some it's not time for them yet and I think this class has given us that that muscle so to speak to kind of go in and say no- this is what I've learned and this is what I know, and therefore, let's, you know, revisit it at another time and let's get them where they're comfortable right now to move forward and take in more” (Participant 03)</p>
Bifurcation	<p>“Needing to see quarterly growth” Caseload and supporting too many teachers “Hard to measure their language”</p>	<p>“I think the difficulty lays in needing to see quarterly growth and assessments that don't necessarily measure language.” (Participant 04)</p> <p>“people are like, Oh, why do you get to do this, this and this, like ‘What, I have to follow all these standards?’. Well, I'm still following standards I'm just doing it in a language that’s different.” (Participant 03)</p>
Resource Gaps	<p>Teachers’ low Spanish proficiency</p> <p>Lack of knowledge about other cultures</p>	<p>“I feel like I can prepare for what I'm going to say, but I can't prepare myself for what they're going to say to me, so I might be going one way with a topic, or whatever, I, the way I think it's going to go so I've prepared in a certain way but then the students take it a completely different route. And I haven't prepared myself for that in Spanish, like I have my words or however I want to help support, but that's not the way the lesson goes. So then I'm kind of stuck” (Participant 02)</p> <p>“I know I, I want to learn more to about. I remember one of the questions on the early survey was like about the scientists and I answered like whatever the lowest was because I really don't know and that's kind of shaped like what we were talking about the lens that we've learned in. And I, so that's one thing I do want to learn more about in all the cultures, and not just the Spanish community but you know to bring in people from each culture and posters and tell them teach them and have them learn too about their own people” (Participant 01)</p> <p>“it's really nice to be able to bring in all of these you know it's a great benefit, you know, but then as my school's population changes or, if I professionally change or something like that, you know, it's like that other challenge of how do I bring that in with like Malagese, you know, or something like that, you know, with languages I've had to look up on Google and be like where is that?!” (Participant 02)</p>

Overall, two major findings regarding teachers' self-efficacy for culturally responsive instruction emerged from the qualitative data. First, teachers reported feelings of empowerment and confidence in using culturally responsive teaching strategies after participating in the program. This finding is illustrated by the following quote from Participant 04, in reference to the use of bilingual assessments in the program: "having that knowledge gave us the power to explain to the teachers that the students have these assets, and that they were able to [participate in the classroom]." Qualitative data suggest that teachers gained a sense of empowerment through using culturally responsive strategies and bilingual assessments over the course of the training and experienced increased confidence for doing so.

Qualitative data also offered insight into participants' challenges to implementing culturally responsive practices in the classroom. One major finding pertains to the theme of bifurcation, or participants' feelings of conflict between their role as a language instructor and advocate for EL students and public school employees accountable for student achievement. Qualitative data suggest that, although participants felt more efficacious in applying culturally responsive strategies, they were unsure about the feasibility in doing so in the classroom. Participants cited expectations for demonstrating regular growth on accountability measures for student as being in opposition to implementing culturally responsive strategies like allowing students to demonstrate understanding in their home language or deviating from the established curriculum to include more culturally relevant materials and activities.

Mixed methods analysis for RQ2. Quantitative results on the CRTSE indicate that participants in the intervention group experienced significant growth in their self-

efficacy for culturally responsive teaching. Qualitative data support that finding, as participants indicated increased confidence and empowerment in using culturally responsive strategies as a result of their participation in the study. Additionally, triangulating focus group data with qualitative results for each participant allowed the researcher to analyze disconfirming patterns. Such was the case with Participant 03. Between the pretest and posttest administration, Participant 03 experienced a slight decrease in their average CRTSE score, from 91.10 to 90.68. This result initially appears to disconfirm the participant's focus group responses about increased confidence for using culturally responsive teaching strategies. Focus group data does, however, offer additional insight into the decrease in CRTSE score, as illustrated by the following quote from Participant 03, when asked how their EL instruction had changed after participating in the program:

[It's] more purposeful. Still making things accessible, but really focusing on what they need and more teaching the whole child. That's how I felt. That this is giving me the opportunity to go towards more teaching because you say it, but where we really doing it before? Like before having done this, it's given me a little more power to focus on the child. (Participant 03, 2019)

This quote lends insight into the slight decrease in the participant's CRTSE score, as it may suggest that the participant, after engaging in the intervention, became more aware of whether they were truly implementing culturally responsive teaching before the program. Tschannen-Moran and Hoy (2007) suggest that, after engaging in mastery experiences, as participants did in the present study, individuals may see an initial decrease in self-efficacy as they become more aware of gaps in their knowledge or

experience. This phenomenon may be an explanation for the discrepancy in the data for Participant 03.

Overall, participants' reports during the focus group discussion supported the findings from quantitative survey data. Triangulation helped identify patterns across the datasets and in explaining disconfirming results. In general, both sets of data suggest increases to teachers' self-efficacy for culturally responsive instruction after their participation in the intervention. These findings establish that participants' self-efficacy increased over the course of the study. Research on self-efficacy beliefs suggests that changes to self-efficacy often effect changes in behavior (Bandura, 1986; Siwatu, 2007; Tschannen-Moran & Hoy, 2007). Research questions three and four, analyzed in the following subsections, provide evidence of this change in behavior and present the analysis for outcomes associated with changes in instructional practice and language use.

Use of Language Transfer Strategies in the Classroom (RQ3)

Quantitative findings for RQ3. Research question three asked: "To what extent does participation in a teacher training program influence the use of language transfer strategies in the classroom among kindergarten EL teachers?" The language transfer strategy use scale items included a seven-point Likert scale that asked participants to rate how often they use a variety of language transfer strategies with their EL students. The scale items ranged from zero (never used) to seven (always used). Results from the language transfer strategy scale, administered only to the intervention group pre- and post- intervention, showed an increase in participants' average for the scale, which included 17 items after adjusting for reliability (Cronbach's $\alpha = .906$). Overall,

participants in the intervention group increased from an average composite score of 4.06 on the pretest scale to 5.62 post-intervention, as illustrated in figure 5.4.

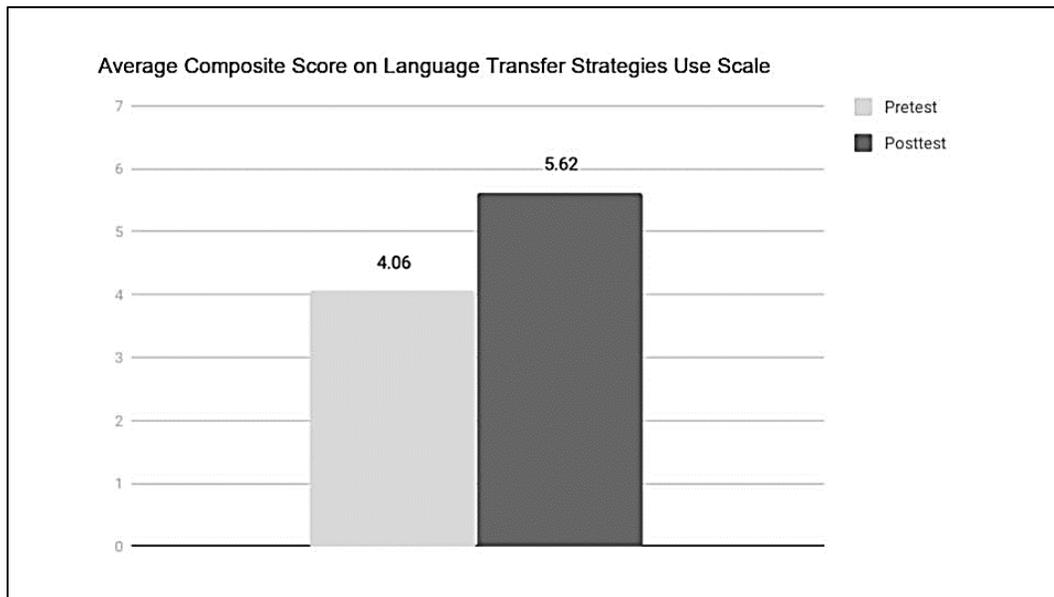


Figure 5. 4. Pretest and posttest results on the Language Transfer Strategy Use Scale

All participants in the intervention increased on their average composite score for the strategies use scale. Table 5.7 shows individual participant’s growth on the strategy use scale pre- and post- intervention.

Table 5. 7

Average Language Transfer Strategy Use by Participant

Participant ID	Average Composite Score on the Language Transfer Strategy Use Scale ^a		
	Pretest	Posttest	Increase?
01	4.17	6.06	yes
02	2.56	5.28	yes
03	4.83	6.72	yes
04	4.78	6.58	yes
05	5.05	5.33	yes
06	3.00	4.72	yes

Note. n=6

^a Administered only to the intervention group

A comparison of means from the language transfer strategy use scale showed that participants experienced significant growth in their average language transfer strategy scale scores between the pretest ($n= 6, M=4.06, SD= 1.04$) and posttest administration ($n=6, M= 5.62, SD= 0.69, Z = -2.207, p=.027$). Table 5.8 Includes presents a summary of results on the language transfer strategy scale pre- and post-intervention.

Table 5. 8

Average Language Transfer Strategy Use

	Average Score on the Language Transfer Strategy Use Scale ^a			
	Minimum	Maximum	<i>M</i>	<i>SD</i>
Pretest	2.56	5.06	4.06	1.04905
Posttest	4.72	6.72	5.62*	.69426

Note. n= 6

^a Administered only to the intervention group

* $p < .05$

Qualitative findings for RQ3. Focus group data illuminated participants’ experiences with implementing language transfer strategies in the classroom. Three themes from the data were found to be relevant to language transfer strategy use: empowerment, role, and resource gaps. Overall, participants indicated that the use of language transfer strategies resulted in empowerment among teachers and their students. Through the focus group, teachers indicated that bridging strategies and contrastive linguistic analysis were useful language transfer strategies that they applied throughout the intervention. Participants noted how understanding language use through the lens of transfer and holistic bilingualism allowed them to better serve their EL students. As an example, one participant noted that gaining a deeper understanding of language transfer through training experiences with contrastive linguistic analysis helped them offer students a deeper understanding of language learning:

I think for me the [things that went well] are still the contrastive analysis to break it down. Show them. This is how English works. This is how, you know, Spanish works. You know, so then being able to look for similarities but then also to analyze those differences here. Because I like what you said about that raises the rigor of language, it's not just: regurgitate [what the teacher says]. Now I can understand why it does that... It's a deeper understanding. (Participant 05, 2019)

Throughout the focus group, participants pointed to strategies like bridging as being helpful with their students, indicating that they had used the strategy over the course of the training. As one participant stated: “one teacher, when I was doing the bridging activity, she was like ‘I really liked what you're doing back there and I really like what I'm hearing and the kids were all engaged and participating” (Participant 03, 2019).

Reflections like this suggest that participants applied language transfer strategies with their students and found them to be helpful. Teachers also indicated that they struggled at times when they attempted to use a strategy and student characteristics complicated their planned lessons. Several teachers noted that students’ lack of native language (L1) proficiency limited their ability to transfer skills into English. Table 5.9 Includes a summary of focus group data by theme as it pertains to language transfer strategy use.

Table 5. 9

Responses by Theme for Data Pertaining to Language Transfer Strategy Use

Theme	Codes	Relevant Quotes
Empowerment	“build on strengths” “deeper understanding” Capitalize on teachable moments	“It's building on their strengths and just grow their strengths.” (Participant 01) “Getting into having those conversations more explicitly with the kids. And just talking about-having the opportunity to talk about the language in general. I've seen a lot of pride in my kids.” (Participant 06)

Role	<p>“Not just intervention” Language teacher Leader for other teachers</p>	<p>“So I really do feel more of a language teacher this year than ever before, like since I taught language I feel like, for me, it's been that door open for me kind of like hey you can. This is how you've been doing it and it's okay to do it this way. I feel like it hasn't. I've always felt like oh, like, you know, you don't want to be that lone wolf who kind of goes off and does their own thing” (Participant 03)</p> <p>“That’s what we do, you know, just like what our job is because I think there's a very, there's a misconception, that we're just interventionists and we just walk in and provide services because they want us to. That's not what we're there to do.” (Participant 03)</p>
Resource Gaps	<p>Challenge of linguistic diversity Need more ways to analyze native language Some students have L1 deficiency</p>	<p>“So it's been a challenge, like so teaching him Spanish, and teaching them English at the same time versus transferring, while the other two or three are transferring. It's an interesting complex, thing, So I wish I had more ways to analyze their language level, in their native language.” (Participant 04)</p> <p>“the translanguaging, even though, it was interesting for me because I completely agree with the translanguaging, my Spanish proficiency, isn't that good” (Participant 05)</p>

Mixed methods analysis for RQ3. Findings from quantitative and qualitative analyses suggest that participation in the intervention yielded an increase in teachers’ use of language transfer strategies. Specifically, patterns across both datasets indicate that teachers applied learning from sessions to incorporate language transfer strategies into their instruction with EL students throughout the training. Table 5.10 includes an overview of teachers’ reported use of strategies from across both the language transfer strategy use scale and focus group data.

Table 5. 10

Language Transfer Strategy Use by Strategy Type

Strategy	Average score on Language Transfer Strategy Use by Strategy Type ^a		Number of mentions in focus group relating to application
	Pretest	Posttest	
Bridging	2.53	4.37	9
Translanguaging	3.33	4.76	13

Note. Language transfer strategy items adapted from García et al. (2017) and Beeman and Urow (2013)

^a See Appendix F for strategy item details

Spanish Language Use in the Classroom (RQ4)

Quantitative findings for RQ4. The fourth research question to the study asked: “To what extent does participation in a teacher training program influence instances of Spanish language use in the classroom among kindergarten EL teachers?” Similar to the results on the strategy use scale, the use of Spanish in the classroom also increased post-intervention among participants in the intervention. The Spanish language use survey items also included a seven-point Likert scale that asked participants to rate how often they use Spanish during instruction with their EL students. The scale items ranged from zero (never used) to seven (always used). Results from the Spanish language use scale showed an increase in participants’ average use, which included 13 items (Cronbach’s alpha= .918.). Overall, average scores increased from 3.94 pre-intervention to 5.90 post-intervention. Figure 5.5 illustrates the overall difference in average scores for the pretest and posttest survey administrations.

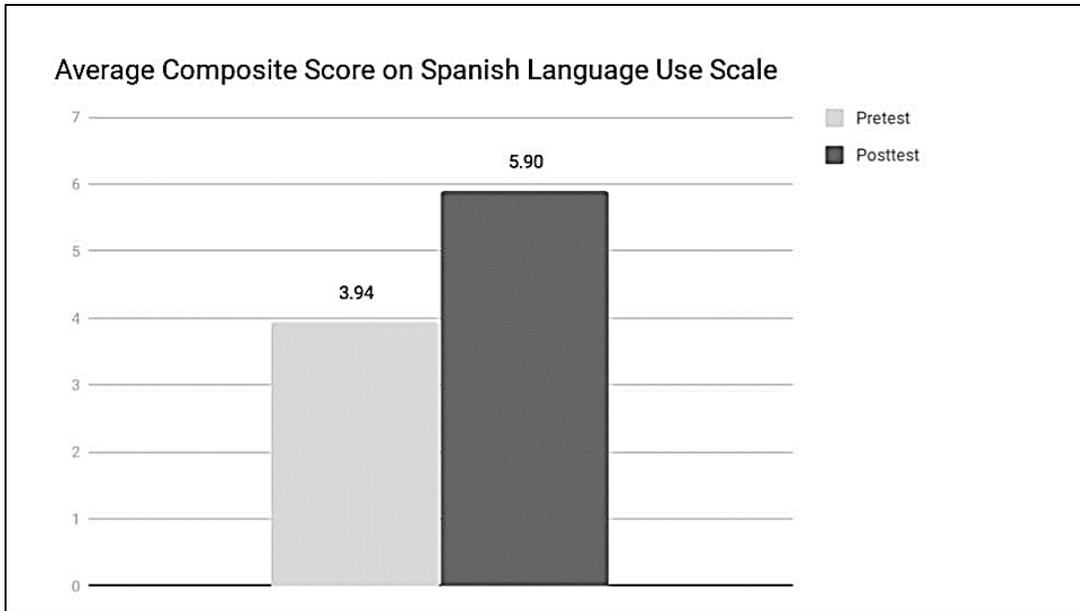


Figure 5. 5. Pretest and posttest results on the Spanish Language Use Scale

All participants in the study increased on their average composite score for the Spanish language use scale. Table 5.11 below shows individual participant's growth on the Spanish language use scale pre- and post- intervention.

Table 5. 11

Average Spanish Language Use by Participant

Participant ID	Average Composite Score on the Spanish Language Use Scale ^a		
	Pretest	Posttest	Increase?
01	3.83	6.83	yes
02	3.83	6.00	yes
03	4.25	6.50	yes
04	5.58	6.25	yes
05	3.08	5.00	yes
06	2.08	4.83	yes

Note. n=6

^a Administered only to the intervention group

A comparison of means from the Spanish language use scale showed that participants experienced significant growth in their use of Spanish in the classroom as measured by the scale between the pretest ($n= 6, M=3.94, SD= 1.50$) and posttest administration ($n=6, M= 5.90, SD= 0.81, Z = -1.199, p=.046$). Table 5.12 presents a summary of results on the Spanish language use scale pre- and post-intervention.

Table 5. 12

Average Spanish Language Use

	Average Score on the Spanish Language Use Scale ^a			
	Minimum	Maximum	<i>M</i>	<i>SD</i>
Pretest	2.08	6.58	3.94	1.50247
Posttest	4.83	6.83	5.90*	.81380

Note. n=6

^a Administered only to the intervention group

* $p<0.05$

Qualitative findings for RQ4. Overall, qualitative data suggest that participants in the study viewed Spanish language use as a powerful tool for building relationships with students and empowering EL children in the early literacy classroom. Many participants noted that they had strong beliefs about native language use in the classroom but did not feel comfortable using it in the classroom. Qualitative findings suggest that participating in the intervention empowered teachers with the knowledge and skills to use students’ native language in the classroom, equipping them with the power to defend its use. As one teacher noted, they had always used native language supports to comfort children in the classroom but felt that is was not allowed, a feeling that changed after participating in the intervention study:

I mean I kind of whispered words to them when they were upset in another [language], but it was funny how much safer they felt...it always just felt like something that people, your staff members, may or not be okay with, but I just feel like I was kind of given permission to do that no matter what I'm doing. I'm doing it and I don't have to whisper it! (Participant 06, 2019)

Of the qualitative data pertaining to Spanish language use, several key themes emerged, including empowerment and resource gaps. Participants' discussions on Spanish as a tool for empowerment focused on the use of Spanish language assessments to empower students in the classroom. As one teacher described it, providing the mainstream teacher with bilingual assessments and explaining their use was effective in changing that teacher's mindset about the student's abilities in the early literacy classroom:

It was interesting because I could talk to her [the mainstream teacher] and it was one of the many examples of how 'he [the student] just wasn't able to do anything'. And so, with the whole concept of putting what we know in both languages together, I was able to talk to her about how this guy as a newcomer, he had so many literacy skills in his L1, he can read like I've never seen a kiddo in second grade being able to read [in their first language] and I was talking about how you know all of the skills that he *did* have, and could actually show growth. (Participant 06, 2019)

Further, another participant noted, with support from others in the group, how mainstream teacher expectations shifted after they understood that a child had some foundational skills in Spanish, stating:

I oftentimes felt like the teachers had minimal to no expectations of the student (Participant 06 “Absolutely!”) and didn’t hold them accountable for their learning and once they knew they had some skill sets, they were calling on the students a little more and knowing that they could. (Participant 03, 2019)

These quotes illustrate the empowerment theme that emerged from the focus group discussion as it pertained to Spanish language use. Equipping the EL teacher with evidence of a child’s foundational literacy skills led to a change in the classroom teacher’s behavior, thus empowering the student through inclusion and giving them voice in the classroom. Establishing a child’s foundational skills and funds of knowledge increased teachers’ expectations of the EL student and may have led the teacher to call on the child for answers during instruction. This quote from Participant 03 illustrates how teachers’ increased knowledge and skills can empower EL students through increased participation and access to learning.

Empowerment stemming from Spanish language use in the classroom was illustrated by teachers’ feelings of empowerment to use the language during instruction, relationship building around students’ power as multilingual learners, and students’ increased voice in the classroom through the use of their native language. However, as table 5.13 shows, some focus group discussion on the topic highlighted gaps in resources for using Spanish in the classroom. Notably, the codes that emerged in the resource gap theme for this topic pertained to monolingual teachers’ feelings that they did not have adequate Spanish proficiency to engage deeply with students in Spanish.

Table 5. 13

Responses by Theme for Data Pertaining to Spanish Language Use

Theme	Codes	Relevant Quotes
Empowerment	<p>“makes them feel powerful”</p> <p>“relationships”</p> <p>Identity</p> <p>“Spanish is an asset”</p> <p>Student engagement</p>	<p>“I think that's what this is, it’s making those teachable moments where your kids are like, oh, you care and you heard me, and you're here listening Yeah, like, that’s been good.” (Participant 03)</p> <p>“I was never really totally against it; I just remember hearing people say Spanish? ... English only, English only. But I always love to hear it and I, I mean I'm a learner so I want to hear, and I want to learn that word I want to know that, you know, so I was never really... I think it was more heightened awareness now for using it because it's like, oh it was a green light- It's okay! You know, that's how I kind of felt this is what it did for me but I feel better using it now than I did before and I'm like you said more mindful” (Participant 05)</p> <p>“Yeah. I want them to still have the opportunity to talk, whether it's in English or Spanish and the other students are wanting to chime in and talk over them to let me know what he's saying I'm like, stop, it's not your turn to talk, let him talk.” (Participant 02)</p> <p>“Yeah, and then it’s like- would they have been on task if they were limited to English only?” (Participant 04)</p>
Language as an Asset	<p>Spanish is an asset</p> <p>“monumental in establishing a relationship”</p> <p>Language as identity</p> <p>Bilingualism as an asset</p>	<p>“I said, I know you already can already listen and speak in Spanish, but how many of you can read and write in Spanish also? And it was about half or whatever and I say, you can work on that at home with your parents and you're learning the English here, I was like, when you go for a job (Participant 06: “That’s what I told my kids!”) and you’re otherwise qualified, you're going to beat out any English only or Spanish only person any day. If you can read and speak and listen in both languages. And then they’re kind of like, hmm, well, I’m learning at home. And I’m like, ok. Keep it up!” (Participant 01)</p>
Resource Gaps	<p>Teachers’ low Spanish proficiency</p>	<p>“My lack of bilingualism is the challenge because like I will open the door with a little bit, and I’m like: Tell me in Spanish, well and then he's like [rolls tongue to indicate lots of talking]. And I’m like, You lost me at like ‘yo’.” (Participant 05)</p>

Despite some participants' characterizations of their Spanish proficiency as a resource gap, others in the group noted that even poor Spanish communication with students aided in cultivating a relationship, with one participant stating: "[Even] your bad Spanish is gonna be monumental in establishing relationship with that child and encouraging them to take risks" (Participant 04, 2019). Spanish as an asset and relationship-builder emerged as a central theme in the focus group discussion. As one monolingual participant noted:

It's really helped me to build relationships and partnerships with the kids as well, because you're really showing them that you care and that this- I'm caring enough to, to make this accessible for you, and so here are all the things that I'm putting out here and they're taking in like, you know they were really excited about it. I know when I did it with my kids and they were really excited too and it's almost like wow she gets us, you know, that was pretty much how I felt (Participant 03, 2019)

Overall, qualitative data suggest that participants in the intervention group, despite being majority monolingual English speakers, learned to use Spanish to build relationships and empower themselves and their EL students for increased access in the classroom.

Mixed methods analysis for RQ4. Qualitative data on Spanish use in the classroom lends support to quantitative results on the Spanish language use scale. Throughout the focus group discussion, teachers noted their increased use of Spanish in the classroom and described their increased comfort with using Spanish at school. Notably, focus group data suggest that this increased comfort and use pertained not only to participants' confidence in their ability to effectively use Spanish supports, but also to

feelings that they had the knowledge and skills to oppose potential resistance from other staff members while doing so. Table 5.14 includes data from the Spanish language use scale with the number of focus group mentions of Spanish language use.

Table 5. 14

Spanish Language Use

Strategy	Average score on Spanish Language Use Scale ^a		Number of mentions in focus group relating to application
	Pretest	Posttest	
Spanish language Use	3.94	5.90*	39

^a See Appendix F for strategy item details

* $p < 0.05$

Teachers did report some barriers to using Spanish in the classroom relating to students’ Spanish proficiency. When discussing barriers faced in implementing strategies, one participant reflected on a student that struggled during a bridging lesson, saying “there’s been one of my students who, who is really struggling, and I started working with her this year and realized... she really doesn’t speak her L1 and she really doesn’t understand her L1.” (Participant 06, 2019). Further, teachers noted that students who have been receiving English language instruction in school, even by kindergarten, were beginning to experience native language loss. As one teacher reflected, “they just look at you and go, Oh, I don’t know what that word is and it’s been so long since I’ve spoken it. I had one little boy tell me ‘I don’t know it because my Spanish is going away.’ And I was like, no, don’t let it go away! Keep it. We’re going to keep it.” (Participant 03, 2019). These quotes illustrate that students’ Spanish proficiency sometimes posed a barrier to using Spanish during instruction. The quotes also lend teacher and student voice to the

sense of loss that teachers and students feel when home language proficiency erodes in an English-dominant system.

Teacher Experiences in the Training Program (RQ5)

The fifth and final research question to the study investigated kindergarten EL teachers’ experiences in the intervention. The question included two parts: “What were teachers’ perceptions of the relevancy of the materials to their instructional practice” and “What are teachers’ lived experiences with successes and barriers to implementing the strategies learned in training sessions in the classroom post-intervention?” Teacher experiences in the training program were measured using informal session feedback surveys and the focus group discussion. Overall, teachers rated the training program as highly engaging. In response to the session feedback survey item: *on a scale from 0 to 5, how engaged were you in today’s session*, all participants in the intervention group indicated that they were either highly engaged or completely engaged for all study sessions, as illustrated by the chart of participant responses presented in Table 5.15.

Table 5. 15

Teacher Engagement During Training Sessions

Session	Participant Engagement Per Session Feedback Surveys					
	0- Completely Disengaged	1	2	3	4	5- Completely Engaged
Session 1	0	0	0	0	0	6
Session 2	0	0	0	0	0	6
Session 3	0	0	0	0	2	4
Session 4	0	0	0	0	1	5
Session 5	0	0	0	0	0	6
Session 6	0	0	0	0	0	6
Session 7	0	0	0	0	0	6
Session 8	0	0	0	0	0	6

Note. 0- Completely Disengaged (e.g. uninterested in content of the lesson, doing other tasks not related to the content, bored or distracted) and 5- Completely

Engaged (e.g. interested in the content, listening to the presenter, participating in session activities)

Qualitative data from the open-ended session feedback survey, which read: *how can I improve upcoming sessions to support your learning?* further illustrated teachers' engagement in the sessions, as described in comments like "It was a great class with a lot of good discussion!" and "These sessions have been interesting and valuable. Thank you!" Such comments indicate a high level of engagement in the sessions and suggest that participants enjoyed participating in the training.

Perceptions of relevance: RQ5(a). Qualitative results pertaining to teachers' perceptions of relevance of the study indicate that participants implemented some strategies from the training sessions with their students and felt that the study quickly changed their teaching practice. Participants shared that they applied learning from sessions with students immediately following trainings. As one teacher noted:

After having, you know, left the class like I would just seriously go home and just my mind was so full of just stuff, and it was good, it was all just kind of settling and sinking in. And when I went into the, you know, school, I would say, this is what I'm going to do because this is bridging, and this is this, and it just became a whole new thing with what I was already doing but really making it more meaningful and not really having to listen to everybody else's noise about the things that they think our ELs needed" (Participant 03, 2019)

Such reflections suggest that teachers were engaged deeply in sessions and reflected on ways to apply new learning to their work with students, even beyond the in-person sessions. This data indicates a perception of relevance to teachers' work with students.

Successes and Barriers to Implementing Strategies: RQ5(b). The pretest posttest increases on both the language transfer strategy scale and Spanish language use scale, as well as qualitative results from the focus group suggest that participation in the intervention changed teachers' practice over the course of the study. One teacher reported that their participation in the study immediately influenced their instructional practice, reflecting: "And so what it did is it immediately changed the way I was teaching to, you know, like it brought back is like okay the linguistics of it." (Participant 05, 2019). Teachers noted some success with implementing language transfer strategies and culturally responsive instruction during the session.

However, one theme that emerged from the focus group, bifurcation, described barriers faced by participants in implementing the strategies post-intervention. As a theme, bifurcation describes the conflicting initiatives faced by teachers in the classroom. Specifically, focus group data illuminated conflict between teachers' desire to implement culturally responsive strategies and accountability requirements for student achievement on standard assessment measures. Participants described feelings of conflict between wanting to allow students to demonstrate learning in their home language and expectations that they achieve English proficiency quickly to demonstrate mastery on grade-level assessments. Data from the bifurcation theme offer evidence of this, as teachers stated their frustration with focusing on mastery versus growth and felt pressure to meet standards over individual student needs.

Table 5.16 provides a summary of relevant qualitative findings pertaining to the relevance of training sessions to participants' work and their general experiences in the program.

Table 5. 16

Responses by Theme for Data Pertaining to Teachers' Experiences in the Program

Theme	Codes	Relevant Quotes
Empowerment	“very engaged” “put into practice” “agent of change” “empowering” “application”	“Yeah, why are you having fun, now you can articulate a little better than, it’s just good teaching” (Participant 04) “feel like that, like, has given a springboard to all of this, but really making people aware that the differences are good, and that our students are assets to our schools.” (Participant 03) “Right, right, and sharing those assessments with their classroom teacher (Participant 03 “Yes!”), I think helped build an assets-based approach implicitly with them” (Participant 04)
Role	“Not just intervention” “It’s not an intervention because there’s no deficiency” “Talking more explicitly to my kids about...holistic bilingualism”	“it's not an intervention because there's no deficiency. I thought that was very powerful.” (Participant 03) “Well, yeah, it’s applicable and then it forces us rethink what we're doing instead of starting all over. You know, sometimes you go to PL, and then you feel like ‘everything you were doing before, stop’. Start something new, do this versus... This was like, think about what you're doing, reflect, and how can you tweak it, add it, and advance.” (Participant 04)
Bifurcation	“Needing to see quarterly growth” Caseload and supporting too many teachers “Hard to measure their language”	“I'm working with kindergarten, PreK, second, third, fourth, and then yeah with 16 teachers... It's tough. It's been frustrating, because I just feel like there's a lot to be, you know, done” (Participant 06) “[The misconception] that we're able to create language mastery. Not growth.” (Participant 04)

Overall, qualitative findings suggest that teachers found session material relevant and immediately applicable to their work with students. Further, teachers reported positive experiences in the program, suggesting that they appreciated the opportunity to think deeply about their role, with one participant noting:

And the other thing I appreciated too, was it brought up issues that didn't have easy answers. You know like we would hear great questions and we would have things that will come up and they weren't easy answers, you know, and that's some of the things that as educators, I can say I don't always get... these things, they were multifaceted. (Participant 04, 2019)

One teacher mentioned interest in diving more deeply into the content, suggesting that the study be expanded into a longer series to allow more time to engage with strategies:

This could become a good university course because one of the things that was hard for me is I feel like some of it we just got kind of smattering, like if it was 16 weeks, you know, and being able to go into more ... (Participant 05, 2019)

Another participant agreed, adding:

I just know I loved, this and, and I'm very glad that I was part of it, and how much I've had yet to learn like it just opened my eyes and I very like, like you (Participant 05) said, a course, like just learning more, even more and even more, just explore all this even further (Participant 01, 2019)

Discussion of Findings

Adherence to the Established Study Procedures (RQ1)

Ensuring fidelity of implementation in a research study helps to protect the validity of its findings (Stufflebeam, 2003; Zhang et al., 2011). The intervention study followed a set of established procedures to ensure fidelity of implementation. Attendance records indicate high participation and engagement in training sessions. Adherence to the established number of sessions and session goals can aid in establishing a relationship between the intervention procedures and study outcomes.

Participants in the intervention group participated in empathy-building learning activities. As established by studies like Ramos (2017) and McAllister and Irvine (2000), training opportunities that provide teachers with explicit learning on cultural awareness and bias while building empathy for diverse student populations is effective in preparing teachers for culturally responsive instruction. The present study's findings further support extant studies on the topic, adding insights into the effectiveness of these training strategies for a population of in-service EL teachers. Implementing study sessions grounded in Pennycook's (2001) CALx framework helped to address issues of equity and language for ELs.

Further, the implementation of mastery and vicarious learning experiences aimed to improve teachers' self-efficacy for culturally responsive teaching. Session goals drew upon Bandura's (1986) social cognitive theory and the findings from Tschannen-Moran and Hoy (2007), which found mastery and vicarious learning experiences increased teachers' self-efficacy. Session goals like: *Complete a contrastive linguistic analysis between English and Spanish, Review student assessment data and identify areas of strength and needs for support, and Create a translanguaging progression for a student*, established opportunities for teachers to engage in mastery and vicarious learning throughout the training program. Tschannen-Moran and Hoy (2007) drew upon Bandura's seminal work on self-efficacy (1986) to posit that professional learning that incorporates such learning opportunities can yield strategy use in the classroom.

Incorporating the critical position of CALx theory into training sessions aimed to address teacher mindset and bias (López et al., 2015; Mei Lin, 2015; Ramos, 2017) and equip a target population of EL teachers for culturally and linguistically responsive early

literacy instruction. Further, providing participants with mastery and vicarious learning experiences in training sessions sought to improve self-efficacy for culturally responsive teaching. The established study procedures were aligned to research on effective teacher training for culturally and linguistically responsive instruction, yielding a robust model for improving outcomes for the EL teacher population targeted for study.

Teacher Self-Efficacy for Culturally Responsive Instruction (RQ2)

Sampling criteria for the study's intervention group targeted EL teacher from city schools in response to needs assessment findings that city school teachers in the target school system had the lowest average CRTSE scores. As would be expected for a study using purposive sampling to target the neediest group, teachers in the intervention group had the lowest CRTSE scores on the pretest survey administration. Findings from the CRTSE posttest administration showed that teachers who participated in the study showed significant growth on the culturally responsive teaching self-efficacy scale. Posttest results indicate that participation in the study effectively closed the gap between the target sample and comparison groups upon completion of the eight-session training series. This finding may indicate that participation in the intervention program can accelerate teachers' development in their self-efficacy for culturally responsive teaching.

Findings from the study suggest that the training sessions allowed teachers to reflect critically on their biases and instructional practices through the lens of linguistic equity. Teachers in the intervention group applied new learning to their instructional practice and in their ongoing advocacy for the needs of EL students. These important findings illustrate the effectiveness of the study program in increasing teachers' self-efficacy for culturally responsive teaching and addressing bias among teachers. Further,

they indicate that teacher training which incorporates mastery experiences and explicit instruction on linguistic bias has a positive impact on teachers' perceived self-efficacy and beliefs about native language use with EL students.

Language Transfer Strategies in the Classroom (RQ3)

After completing the training program, teachers in the intervention group applied language transfer strategies during early literacy instruction for ELs. Participants in the intervention group significantly increased their use of language transfer strategies post-intervention. Needs assessment results indicated that teachers throughout the school system relied on ineffective EL instructional models, despite empirical support for the use of students' native language during instruction. The increase of language transfer strategies produced in this study suggest that equipping teachers with explicit training on how and why to use language transfer can yield increased use of the strategies, thus more closely aligning instructional practices for ELs with established research on effective EL instruction.

As presented in the theoretical framework in chapter three of this dissertation, Cummins' (1979) theory of language interdependence establishes the importance of language transfer for promoting second language acquisition. Findings from this study add to the existing literature on language interdependence by applying the concept to early literacy instruction. The findings suggest that teachers were able to apply the tenets of Cummins' (1979) theory of linguistic interdependence to foundational literacy skills among Spanish-dominant Kindergarten EL students. Teachers reported increased use of transfer strategies like translanguaging and bridging in the kindergarten literacy setting, suggesting that Cummins' theory of language interdependence may be applicable even

with precursor literacy skills, wherein basic language skills form the foundation for academic language.

Spanish Language Use in the Classroom (RQ4)

Extant research on effective early literacy instruction for ELs suggests that the use of students' native language promotes literacy development in English (August & Shanahan, 2008; Shanahan & Lonigan, 2010). Further, the implementation of bilingual early literacy assessments can reduce the over-identification of EL students as struggling readers in early childhood (Hopewell & Escamilla, 2014). Findings from the present study indicate that the use of Spanish in the early childhood classroom supported early literacy instruction by equipping teachers with a balanced view of students' linguistic development from a holistic bilingualism stance. Even within a majority monolingual English-speaking sample, participants in the study increased their use of Spanish language supports post-intervention.

Findings also suggest that the application of bilingual assessments and Spanish language supports in the classroom resulted in higher levels of student engagement in the classroom and increased teachers' expectations for Spanish-speaking EL students. Moreover, this evidence indicates that participation in a training program that equips teachers with bilingual assessment data and training on effective native language supports may be an effective mechanism to mitigate issues of linguistic bias in early literacy instruction and assessment. Finally, data illustrated that kindergarten EL teachers who participated in the study were better equipped to provide students with culturally and linguistically responsive instruction when they had access to a linguistically balanced bank of early literacy assessments for their students.

Teacher Experiences in the Training Program (RQ5)

Major themes from the study's findings show that teachers who participated in the program felt empowered in their efforts to provide culturally responsive instruction to their EL students. Teachers engaged with their peers in training sessions to interpret student data and plan their instructional response grounded in research on effective and equitable EL instruction. Overall, teachers' increased self-efficacy and feelings of empowerment yielded increased use of language transfer and Spanish language strategies, better aligning current practice to research on early literacy instruction for ELs (August & Shanahan, 2008; Hopewell & Escamilla, 2014; Shanahan & Lonigan, 2010).

Limitations to the Study

The study, though methodologically sound, did incur some threats to validity. To balance the limitations of the design, relying on qualitative data within the mixed methods evaluation is essential when interpreting the results and implications of the study. The sample size of the study was small, with only six participants in the intervention group. Further, the sample size for the comparison group was further limited due to inconsistent results on the pretest-posttest survey. Participant ID codes for the comparison group required teachers to create a unique code following a set formula. However, over the course of the study some comparison group participants forgot initial responses on the ID code survey item, limiting the number of pretest-posttest matched cases that could be used to match cases. The small sample size limited the use of many statistical tests to make causal inferences regarding the study's outcomes (Creswell & Plano-Clark, 2018; Shadish et al., 2002). Because of this limitation, quantitative data analysis relied on descriptive and basic inferential statistics. The small sample limits the

statistical power of the findings (Shadish et al., 2002) and, as such, readers should interpret quantitative data cautiously and in conjunction with descriptive statistics and qualitative data to support inferences and guide interpretation of the study results. Triangulation between quantitative and qualitative measures helped to protect the validity of the quantitative measures despite being unable to statistically control for confounding variables within the small-scale study (Creswell & Plano-Clark, 2018; Johnson & Onwuegbuzie, 2004; Shadish et al., 2002). Further, the addition of a comparison group, as recommended by Shadish et al. (2002) provided ancillary quantitative data to help account for history and maturation threats to the study, as discussed in detail below.

Due to the complex nature of conducting research in a school organization, the study was vulnerable to threats of history (concurrent events that may cause an observed effect) and maturation (naturally occurring changes). These threats were therefore addressed with the addition of the comparison group and some specific focus group items (Shadish et al., 2002). All teachers in the target school system engaged in professional learning on cultural proficiency at the beginning of the school year per the target school system's strategic plan and received ongoing professional learning regarding their work with EL students. This concurrent training on engaging with diverse learners may have influenced teachers' self-efficacy for providing culturally responsive teaching, thus threatening that outcome measure. To address the potential history threat to validity incurred by the ongoing professional learning, the focus group item: *Did you participate in any other professional learning or teaching experiences this year that have influenced your feelings of self-efficacy and/or your instructional practices over the course of this program?* sought to identify any other learning experiences that may have influenced the

results of the study. Responses to those items did indicate that participants had engaged in additional professional learning that could have impacted their self-efficacy, though the inclusion of comparison group data that failed to show a significant increase to self-efficacy for culturally responsive teaching indicates that the history threat did not likely impact results.

Additionally, teacher self-efficacy increases as teachers gain mastery experiences and exposure to learning opportunities (Tschannen-Moran & Hoy, 2007). The training series spanned the first semester of the 2019-2020 academic year, during which time teachers worked with their kindergarten EL students and therefore gained mastery experiences in the classroom as well as during the intervention, posing a maturation threat to validity (Shadish et al., 2002). Because of the history and maturation threats, use of qualitative data on teacher experiences during the program is paramount when interpreting intervention findings relevant to teachers' self-efficacy. Furthermore, the inclusion of a comparison group helped to mitigate this threat, as demonstrated by the discrepant CRTSE growth between the intervention and comparison groups. Teachers who did not participate in the intervention presumably engaged in the same mastery and additional professional learning experiences as those who did. However, participants in the intervention group demonstrated statistically significant growth on the CRTSE scale.

Trustworthiness and Researcher Positionality

Protecting the trustworthiness of a study's results can lend validity to its findings (Guba, 1982; Trainor & Graue, 2014). Therefore, it is important to address how the researcher protected the trustworthiness of the investigation, especially when addressing the findings of qualitative and mixed methods analyses (Miles et al., 2014). Qualitative

data reporting in this study included thick descriptions of participant responses and provided context surrounding the culminating focus group discussion (Braun & Clarke, 2006). Additionally, frequent member-checking during the focus group was used to ensure accurate representation of participants' voice in the focus group data (Krefting, 1991). Further, the convergent parallel quasi-experimental design lent itself to triangulation between both quantitative and qualitative datasets (Creswell & Miller, 2000; Johnson & Onwuegbuzie, 2004).

Addressing researcher positionality, or the researcher's role and identity within the context of the study, further helps to protect the trustworthiness of a study (Trainor & Graue, 2014). The researcher in this study is currently employed as a central office specialist in the target school system. At the time of the study, the researcher held a non-evaluative role in relation to the sample, meaning that the researcher did not complete formal teacher evaluations or observations for the study participants. However, the researcher's role establishes the them within the context of the system's EL program, and it is important to note that the researcher works directly with all participants in the study as a member of their central office leadership. To mitigate the potential power dynamic between participants and a central office researcher and help to address validity threats that this positionality may have caused, the researcher recorded detailed notes during the focus group and maintained the anonymity of survey results throughout the intervention.

Implications of the Study's Findings

The findings from this dissertation study are consistent with the research presented in chapter three, which guided the intervention plan and theory of treatment. The present study's results support extant research that found that offering mastery and

vicarious learning experiences increases self-efficacy (Tschannen-Moran & Hoy, 2007), and that teacher training that incorporates empathy-building for ELs prepares teachers to work with linguistically diverse student populations (Ramos, 2017). The mixed methods results of this dissertation study support the findings of previous published works that established that teacher training that addresses issues of bias and language acquisition can increase teachers' self efficacy for culturally and linguistically responsive teaching (McAllister & Irvine, 2000; Ramos, 2017). Further, the findings add to that body of research, which relied heavily on mainstream classroom teacher samples, by establishing similar findings in a sample of EL teachers.

Beyond the implications for teachers' self-efficacy, the study findings also offer insight into the benefits of using bilingual assessments in early literacy instruction for ELs. Existing research, as presented in chapter three, established the usefulness of bilingual student assessments in reducing the over-identification of ELs as struggling readers (August & Shanahan, 2009; Hopewell & Escamilla, 2014). The present study offers additional and novel insight into how the availability of bilingual assessments empowered EL teachers to advocate for EL students. Further, qualitative findings suggest that offering teachers bilingual assessment data may increase access in the classroom by way of raised teacher expectations, increased EL student participation, and increased confidence among EL children in the early literacy setting. Such findings suggest that schools should consider implementing bilingual assessment models for EL students in early literacy settings, even in non-bilingual instructional programs, to increase access to early literacy instruction and leverage student's home language abilities for early literacy.

Overall, the study's findings are consistent with and compliment the research presented in the intervention literature review. The results from this study suggest that the use of a bilingual assessment and teacher training program increased teachers' use of language transfer skills and Spanish in the classroom by way of increased self-efficacy for culturally and linguistically responsive teaching. These results can provide valuable insight into effective training for EL teachers and have implications for language assessment policy in schools serving EL students.

Students with a Home Language Other Than Spanish

As this study focused on strategies and language use for students with a home language of Spanish, the findings of the study may not be generalizable to other linguistic groups. However, findings that emerged from the qualitative data indicated teachers' perceived usefulness of the strategies for EL students who speak a home language other than Spanish. Although the intervention program focused on Spanish speakers, teachers indicated that aspects of the training that addressed cultural funds of knowledge and culturally responsive teaching were relevant in their work with all EL students, not just speakers of Spanish. Future research should expand upon this work and apply similar interventions for use with student populations who speak a home language other than Spanish.

Further, future research should also seek to address how multilingualism among Spanish dominant children may be leveraged for language learning in the classroom. Pérez López (2006), in a discussion on the linguistic diversity within Spanish-speaking migrant populations, noted that Spanish dominant migrant children, the population of focus for this study, often learned a Spanish dialect or indigenous language as their first

language. In this study, Spanish speaking kindergartners were identified by their teachers using school records, which do not account for variety within Spanish dialects or indigenous languages used by Spanish speakers. Therefore, future research should seek to better understand how multilingual children and their teachers can benefit from language transfer strategies and home language use in literacy learning.

Recommendations for Future Research

Despite teachers' increased feelings of self-efficacy for culturally responsive teaching, participants indicated a need for more effective tools for evaluating students' first language proficiency and gathering data regarding their cultural funds of knowledge. Researchers and entrepreneurial leaders in education should consider ways to equip the largely monolingual English-speaking teacher workforce in public schools with language assessment tools. At the core of responsive instruction is the need to respond to individual student needs. Ensuring that more teachers can gather and interpret bilingual early literacy assessment data can increase teachers' use of effective strategies as part of that response. Findings from the study indicate that teachers valued the use of bilingual assessments in empowering teachers and students. Additionally, explicit training on how to interpret and respond to results yielded increased use of effective EL instructional strategies. New assessment tools should seek to replicate those successes by providing teachers with early literacy data and related strategies for facilitating language transfer and capitalizing on cultural funds of knowledge, even among monolingual staff.

This training series contributed to the extant literature on preparing teachers for work with diverse student populations. Unlike other literature in the field, this study sampled EL teachers and focused on their work with EL students on grade-level literacy

skills. Findings from the study suggest that, although EL teachers understood the value of the strategies addressed in the training, implementation in the classroom will also require support from mainstream classroom teachers. Therefore, future studies should explore similar training and assessment strategies for mainstream teachers.

Conclusions

English learners experience gaps in academic achievement beginning in the early childhood years (López et al., 2015; Samson & Lesaux, 2015). As schools struggle to adapt to the unique needs of the growing EL student population, these students continue to fall behind their non-EL peers (Hopewell & Escamilla, 2014; Samson & Lesaux, 2015). The study presented in this dissertation sought to address the needs of EL students in early childhood by equipping EL teachers for culturally and linguistically responsive early literacy instruction.

Findings from the study show that teachers who participated in a bilingual assessment and teacher training program experienced significant increases to their self-efficacy for culturally responsive instruction, use of language transfer strategies, and Spanish language use in the classroom. The training, which included mastery and vicarious learning experiences using real bilingual student assessment data, corroborated findings from previous studies on effective teacher training, yet targeted new teacher populations. These findings are novel and notable, as they suggest that even a largely monolingual teacher population, with access to strategic training and assessment data, can apply effective bilingual strategies to literacy instruction in early childhood, more closely aligning instructional practice with research on effective EL instruction. In sum, providing students access to culturally and linguistically responsive literacy learning can

increase their opportunity to learn (Banks, 2015; Gee, 2008) and empower linguistically diverse students.

Further, findings from the study suggest that teachers gained a sense of empowerment by participating in the study and were better equipped for culturally and linguistically responsive instruction and as advocates for linguistic equity. As one participant shared in the culminating focus group discussion, engaging in the program instilled in her a sense of power and strength for meeting the needs of this vulnerable group of under-served students. In reflecting on her experiences in the program, the participant said “you know, whenever I come back from a meeting, I just throw my cape on and go: yeah, go ahead, try to touch me.” Empowering teachers as stewards of culturally and linguistically responsive instruction may begin to mitigate the profound achievement gaps faced by even our youngest EL students and provide equitable access to early literacy learning.

The present study was grounded in Cummins’ (1979) theory of linguistic interdependence and Pennycook’s (2001) critical applied linguistics. The intervention equipped teachers with the knowledge and skills to implement culturally and linguistically responsive instruction using language transfer and Spanish language strategies in the classroom. Implementing the use of bilingual assessments in the study allowed teachers to gain a more holistic picture of EL students’ reading readiness. The benefits of this multilingual approach may highly impactful as schools seek to better serve EL students in early literacy settings; Measuring early literacy skills in English only all but ensures that EL students’ linguistic and literacy skills go unidentified, resulting in persistent gaps and biases against EL students’ abilities (Reyes, 2012). Applying the two-

part theoretical framework of Cummins' (1979) theory of linguistic interdependence and Pennycook's (2001) CALx in this study allowed teachers to harness students' abilities for translanguaging and metalinguistics while also addressing implicit biases in current practices. Further, teachers used their increased knowledge and skills to empower students and advocate for children's cultural funds of knowledge and linguistic equity in the early literacy classroom. While Cummins' (1979) theory of linguistic interdependence informed the use of language transfer strategies, Pennycook's (2001) critical lens informed teachers' advocacy work and, together as a theoretical framework, ultimately may have helped enfranchise linguistic minority students by empowering them and their teachers.

This study yielded promising results for increasing teachers' self-efficacy for culturally responsive teaching and effective EL instruction in the early literacy setting. There are currently more than 4.6 million EL students in the United States and, as the EL student population is the fastest-growing in the nation, those numbers will likely continue on their steady rise (NCES, 2017b). Persistent gaps in EL student achievement show that the approach to meeting these students' needs has been largely effective. As student populations change, so must our approach to early literacy assessment and instruction. As schools adapt to meet the needs of changing student populations, the findings from this study should help to inform their efforts. Schools should consider the use of combined bilingual assessment and accompanying training programs to meet the needs of an increasingly linguistically diverse student population and increase equity and access for all students.

The growing millions of ELs in the United States are an asset to their schools and classrooms. Ensuring that they have equitable access to early literacy through culturally and linguistically responsive education will not only improve our response to the needs of this historically under-served student population, but may work to remedy long-standing gaps in their academic achievement. As the findings for this study suggest, providing equitable culturally and linguistically responsive early literacy instruction can enrich our classrooms and empower students and teachers alike.

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Appendix A

Needs Assessment Teacher Survey Instrument

Needs Assessment: EL Teacher Self-Efficacy with Culturally Responsive Instruction for ELs

Start of Block: Section 1: EL Program Information

Thank you for taking this survey! It should take you no more than 15 minutes to complete.

Please remember, by completing this survey you are consenting to be in the research study. Your participation is voluntary and you can stop at any time.

Got it, thanks! (1)

Q1

Please select the locale code for the school where you teach. See the table below for detailed instructions and school code details.

School Locale Codes for [REDACTED] Schools Adapted from the National Center for Education Statistics Common Core of Data					
Code	School Names	Code	School Names	Code	School Names
13- City, Small	REDACTED	22- Suburb, Midsize	REDACTED	41- Rural, Fringe	REDACTED
21- Suburb, Large	REDACTED	31- Town, Fringe	REDACTED		

Instructions for survey Question 1:
Please enter the code assigned to your school. For example, teachers at [REDACTED] would select code 13- City, Small. Itinerant staff should enter the code for their home school.

- 13- City, small (1)
- 21- Suburb, large (2)
- 22- Suburb, midsize (3)
- 31- Town, fringe (4)
- 41- Rural, fringe (5)

Q2 Which of the models below most closely describes how EL students are served in your school? Please select the category which reflects the model of instruction used most often.

- Category 1: Remedial Bilingual Programs - includes Transitional Bilingual Education, both Early-Exit (generally 2-3 years in length) and Late-Exit (generally 3-5 years in length). (1)
- Category 2: Remedial English-only Programs - includes EL Pullout and EL taught through content in elementary schools. (2)
- Category 3: Enrichment Bilingual Programs - includes one-way developmental bilingual education, two-way developmental bilingual education. Other names are dual-language programs, dual-immersion programs, bilingual immersion programs. Focus is on grade-level academic work across the curriculum, taught through the two languages, using interactive, discovery, hands-on learning. (3)
- Category 4: Enhanced English-only Programs - EL taught through content or Sheltered EL instruction (see Category 2 above) that also provides additional emphasis on student cognitive development; grade-level academic work across the curriculum; interactive, discovery, hands-on learning, or other instructional improvements to "basic EL." Often this is done in a self-contained classroom for 1-2 years, or occasionally an EL teacher teams with a mainstream teacher (both as equal partners in the teaching). (4)

End of Block: Section 1: EL Program Information

Start of Block: Section 2: Culturally Responsive Teaching Self-Efficacy Scale

Q3 On the scale below, please rate how confident you are in your ability to accomplish each item pertaining to work with English Learner (EL) students. Rate your confidence using a number from 0 (no confidence at all) to 100 (completely confident). You may use any number between 0 and 100. (Siwatu, Putman, Starker- Glass, & Lewis, 2017).

0 10 20 30 40 50 60 70 80 90 100

Adapt instruction to meet the needs of my EL students (1)	
Identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture (2)	
Implement strategies to minimize the effects of the mismatch between my students' home culture and school culture (3)	
Assess student learning using various types of assessments (4)	
Use a variety of teaching methods (5)	
Develop a community of learners when my class consists of students from diverse backgrounds (6)	
Use my students' cultural background to help make learning meaningful (7)	
Use my students' prior knowledge to help them make sense of new information (8)	
Identify ways how students communicate at home may differ from the school norms (9)	
Obtain information about my students' cultural background (10)	

Greet English learners with a phrase in their native language (11)	
Praise English learners for their accomplishments using a phrase in their native language (12)	
Communicate with the parents of English learners regarding their child's achievement (13)	
Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes (14)	
Model classroom tasks to enhance English learners' understanding (15)	
Identify ways that standardized tests may be biased towards culturally diverse students (16)	
Obtain information about my students' academic strengths (41)	
Use examples that are familiar to students from diverse cultural backgrounds (17)	
Explain new concepts using examples that are taken from my students' everyday lives (18)	

Obtain information regarding my students' academic interests (19)	
Design instruction that matches my students' developmental needs (20)	
Determine whether my students like to work alone or in a group (22)	
Determine whether my students feel comfortable competing with other students (24)	
Obtain information about my students' home life (25)	
Build a sense of trust in my students (26)	
Establish positive home-school relations (27)	
Teach students about their cultures' contributions to science (28)	
Design a classroom environment using displays that reflect a variety of cultures (29)	
Develop a personal relationship with my students (30)	
Obtain information about my students' academic weaknesses (31)	

Identify ways that standardized tests may be biased towards linguistically diverse students (32)	
Structure parent-teacher conferences so that the meeting is not intimidating for parents (33)	
Help students to develop positive relationships with their classmates (34)	
Revise instructional material to include a better representation of cultural groups (35)	
Design a lesson that shows how other cultural groups have made use of mathematics (36)	
Communicate with the parents of ELs regarding their child's achievement (37)	
Help students feel like important members of the classroom (38)	
Use a learning preference inventory to gather data about how my students like to learn (39)	
Implement cooperative learning activities for those students who like to work in groups (40)	
Use the interests of my students to make learning meaningful for them (21)	

Make instructional decisions informed by
research on EL best practice (59)



Q4 Describe the methods and strategies you use to instruct EL students. Respond in detail about where you serve EL students (in the mainstream classroom, pulled out to a different space, co-taught with content teacher, sheltered instruction [SIOP] etc) and how often you work with the EL students on your caseload.

End of Block: Section 2: Culturally Responsive Teaching Self-Efficacy Scale

Appendix B

Table B1: CRTSE Results from the Needs Assessment Study

	Minimum	Maximum	Mean (n=15)	Std. Deviation
Adapt instruction to meet the needs of my EL students	70.00	100.00	85.8667	10.56184
Identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture	40.00	100.00	75.8667	20.55260
Implement strategies to minimize the effects of the mismatch between my students' home culture and school culture	21.00	95.00	73.0667	22.60046
Assess student learning using various types of assessments	70.00	100.00	84.9333	10.97052
Use a variety of teaching methods	71.00	100.00	89.6667	8.98941
Develop a community of learners when my class consists of students from diverse backgrounds	71.00	100.00	89.8667	8.47574
Use my students' cultural background to help make learning meaningful	60.00	100.00	87.2667	11.21521
Use my students' prior knowledge to help them make sense of new information	74.00	100.00	89.6667	8.26064

Identify ways how students communicate at home may differ from the school norms	30.00	100.00	74.4667	22.22890
Obtain information about my students' cultural background	30.00	100.00	79.7333	17.75012
Greet English Learners with a phrase in their native language	65.00	100.00	83.4667	11.69167
Praise English Learners for their accomplishments using a phrase in their native language	30.00	100.00	73.8667	21.33363
Communicate with the parents of English Learners regarding their child's achievement	25.00	100.00	73.8000	24.73055
Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes	20.00	100.00	65.0000	29.76095
Model classroom tasks to enhance English Learners' understanding	50.00	100.00	85.7333	13.60392
Identify ways that standardized tests may be biased towards culturally diverse students	20.00	100.00	62.3333	27.18631
Obtain information about my students' academic strengths	70.00	100.00	88.5333	9.85514
Use examples that are familiar to students from diverse cultural backgrounds	40.00	100.00	82.2000	14.55629

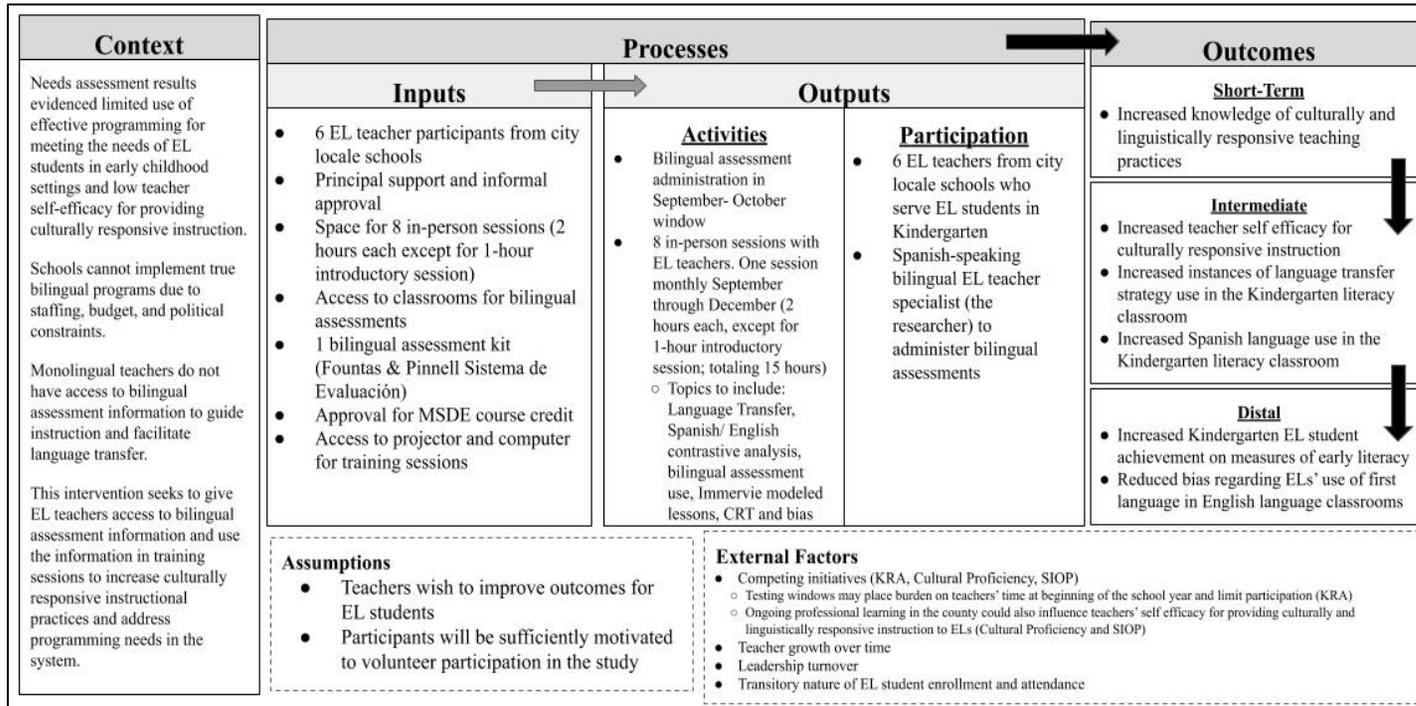
Explain new concepts using examples that are taken from my students' everyday lives	80.00	100.00	88.6000	8.29630
Obtain information regarding my students' academic interests	57.00	100.00	87.7333	13.29590
Design instruction that matches my students' developmental needs	70.00	100.00	85.8667	9.29567
Determine whether my students like to work alone or in a group	64.00	100.00	85.8667	12.09408
Determine whether my students feel comfortable competing with other students	50.00	100.00	77.4667	18.23994
Obtain information about my students' home life	50.00	100.00	76.8000	15.92931
Build a sense of trust in my students	63.00	100.00	92.5333	9.49336
Establish positive home-school relations	53.00	100.00	83.8667	14.84620
Teach students about their cultures' contributions to science	5.00	100.00	61.6000	34.17351
Design a classroom environment using displays that reflect a variety of cultures	50.00	100.00	83.6667	14.96026
Develop a personal relationship with my students	85.00	100.00	95.0667	4.74291

Obtain information about my students' academic weaknesses	74.00	100.00	87.7333	9.54289
Identify ways that standardized tests may be biased towards linguistically diverse students	20.00	100.00	70.3333	27.07309
Structure parent-teacher conferences so that the meeting is not intimidating for parents	40.00	100.00	79.2667	18.26576
Help students to develop positive relationships with their classmates	50.00	100.00	83.5333	13.30879
Revise instructional material to include a better representation of cultural groups	20.00	100.00	70.6000	25.85620
Design a lesson that shows how other cultural groups have made use of mathematics	8.00	100.00	59.4667	28.36715
Communicate with the parents of ELs regarding their child's achievement	17.00	100.00	81.7333	21.67773
Help students feel like important members of the classroom	68.00	100.00	90.8000	9.06485
Use a learning preference inventory to gather data about how my students like to learn	50.00	100.00	74.0000	19.30211
Implement cooperative learning activities for those students who like to work in groups	50.00	100.00	83.6000	13.81407

Use the interests of my students to make learning meaningful for them	59.00	100.00	87.0667	11.45467
Make instructional decisions informed by research on EL best practice	75.00	100.00	88.4667	9.59067

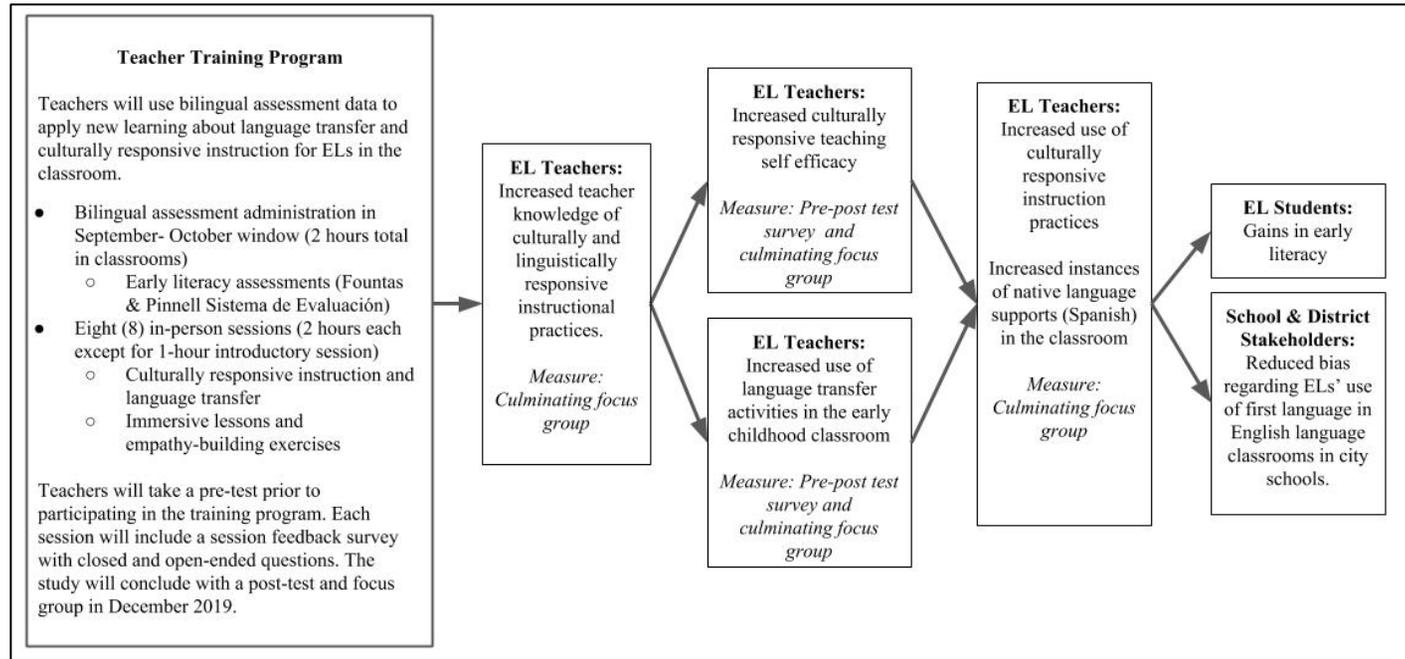
Appendix C

Logic Model



Appendix D

Theory of Treatment



Appendix E

Session Feedback Survey

Session Feedback Survey: EL Teacher Training

EL teacher training on culturally and linguistically responsive instructional practices in the early literacy environment.

* Required

Did we meet the stated goals for this session? *

Session 3 Goals: 10/8/2019

1. Learn about Dual Language Learners
2. Experience an immersive lesson about transferrable early literacy skills
3. Complete a contrastive analysis between English and Spanish
4. Interpret sample student assessment data
5. Debrief the session's activities and discuss
 - a. Bias in assessments
 - b. Approaching literacy instruction from an assets perspective



Yes

No

Other: _____

On a scale from 0 to 5 (0 meaning completely disengaged [e.g. uninterested in content of the lesson, doing other tasks not related to the content, bored or distracted] and 5 meaning completely engaged [e.g. interested in the content, listening to the presenter, participating in session activities]), how engaged were you in today's training session? *

0 1 2 3 4 5

How can I improve upcoming sessions to support your learning?

Your answer _____

SUBMIT

Never submit passwords through Google Forms.

Appendix F

Pretest-Posttest Survey

Section I

Teacher Demographics

(adapted from the Council of Chief State School Officers)

1. Enter your unique participant ID number: _____
This number will be used to pair your pretest and posttest results while maintaining your anonymity for the researcher.

2. How many years have you taught English Learners prior to this year?
 - a. Less than 1 year
 - b. 1-2 Years
 - c. 3-5 Years
 - d. 6-8 Years
 - e. 9-11 Years
 - f. 12- 15 Years

3. How long have you been assigned to this position at your school?
 - a. Less than 1 year
 - b. 1-2 Years
 - c. 3-5 Years
 - d. 6-8 Years
 - e. 9-11 Years
 - f. 12- 15 Years
 - g. More than 15 Years

4. What is the highest degree you hold?
 - a. BA or BS
 - b. MA or MS
 - c. Multiple MA/MS
 - d. Ph.D. or Ed.D.
 - e. Other (please explain) _____

5. How did you earn your EL teaching certification?
 - a. Upon completion of an undergraduate EL/ESOL/TESOL teaching certification program
 - b. Upon completion of a graduate-level (Masters) EL/ESOL/TESOL program
 - c. PRAXIS exam
 - d. Other (please explain) _____

- 6a. Are you multilingual? YES/NO

6b. If you answered yes for question 6a, list all of the languages in which you are fully proficient. *Please note that full proficiency is defined as: The ability to speak, write, and read the language fluently to communicate accurately and clearly with native speakers of the language across professional and social contexts.*

Section II
Culturally Responsive Teaching Self-Efficacy (CRTSE) Scale
 (used with permission from K. Siwatu)

Rate how confident you are in your ability to successfully accomplish each of the tasks listed below. Each task is related to teaching. Please rate your degree of confidence by selecting a number from 0 (no confidence at all) to 100 (completely confident). Remember that you may use any number between 0 and 100.

0	10	20	30	40	50	60	70	80	90	100
Entirely Uncertain	Very Uncertain	Somewhat Uncertain		Not Too Certain	Somewhat Uncertain		Very Certain	Completely Certain		

1. adapt instruction to meet the needs of my students.
2. obtain information about my students' academic strengths.
3. determine whether my students like to work alone or in a group.
4. determine whether my students feel comfortable competing with other students.
5. identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture.
6. implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture.
7. assess student learning using various types of assessments.
8. obtain information about my students' home life.
9. build a sense of trust in my students.
10. establish positive home-school relations.
11. use a variety of teaching methods.
12. develop a community of learners when my class consists of students from diverse backgrounds.
13. use my students' cultural background to help make learning meaningful.
14. use my students' prior knowledge to help them make sense of new information.
15. identify ways how students communicate at home may differ from the school norms.

16. obtain information about my students' cultural background.
17. teach students about their cultures' contributions to science.
18. greet English Language Learners with a phrase in their native language.
19. design a classroom environment using displays that reflects a variety of cultures.
20. develop a personal relationship with my students.
21. obtain information about my students' academic weaknesses.
22. praise English Language Learners for their accomplishments using a phrase in their native language.
23. identify ways that standardized tests may be biased towards linguistically diverse students.
24. communicate with parents regarding their child's educational progress.
25. structure parent-teacher conferences so that the meeting is not intimidating for parents.
26. help students to develop positive relationships with their classmates.
27. revise instructional material to include a better representation of cultural groups.
28. critically examine the curriculum to determine whether it reinforces negative cultural stereotypes.
29. design a lesson that shows how other cultural groups have made use of mathematics.
30. model classroom tasks to enhance English Language Learners' understanding.
31. communicate with the parents of English Language Learners regarding their child's achievement.
32. help students feel like important members of the classroom.
33. identify ways that standardized tests may be biased towards culturally diverse students.
34. use a learning preference inventory to gather data about how my students like to learn.
35. use examples that are familiar to students from diverse cultural backgrounds.
36. explain new concepts using examples that are taken from my students' everyday lives.
37. obtain information regarding my students' academic interests.
38. use the interests of my students to make learning meaningful for them.
39. implement cooperative learning activities for those students who like to work in groups.
40. design instruction that matches my students' developmental needs.
41. teach students about their cultures' contributions to society.

Section III

Frequency of Language Transfer Strategy Use in the Early Childhood Classroom

Rate how often you have used each of the language transfer strategies listed in the table below.

0 Never Used	1	2	3	4	5	6	7 Always Used
-----------------	---	---	---	---	---	---	------------------

	Indicate how often you use the strategy							
	0	1	2	3	4	5	6	7
Culturally Relevant Pedagogy/ Cultural Funds of Knowledge								
Select bilingual texts for use during instruction	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Display classroom materials that reflect the linguistic diversity of students (posters, toys, books)	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Select authentic texts for instruction that were written by linguistically diverse authors	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Translanguaging (adapted from García, Ibarra Johnson, & Seltzer, 2017)								
Use bilingual assessments to understand children's linguistic profiles	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Provide students with instructional materials (e.g. videos, diagrams) in English and Spanish	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Allow time for peer discussion in students' language of choice	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Think of students' languages and cultural practices as equally valuable and interrelated	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Value and include students' families and communities in their education	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙

Challenge traditional hierarchies (e.g. teacher/student, English/Spanish, EL/English fluent learner) and work toward a more just classroom and society	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Design the physical space of the classroom for collaboration and create a multilingual ecology	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Design instruction (e.g. in lesson planning, activities, instructional strategies) so that early literacy learning promotes translanguaging	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Design assessments that differentiate between general linguistic and language-specific performances	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Design assessments that evaluate whether EL students perform tasks independently, with moderate assistance, or at novice levels	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Design instruction that is responsive to students' needs, interests, and language practices	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Bridging (Adapted from Beeman & Urow, 2013)								
Label the physical classroom space in multiple languages	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
Pre-plan opportunities to facilitate bridging (language transfer)	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙

between English and Spanish								
Plan activities that allow students to do side-by-side comparisons between English and Spanish	☉	☉	☉	☉	☉	☉	☉	☉
Co-create bilingual anchor charts with students	☉	☉	☉	☉	☉	☉	☉	☉
Engage in formative bilingual assessment throughout learning	☉	☉	☉	☉	☉	☉	☉	☉
Plan activities that allow students to express what they've learned in Spanish and explicitly teach the words for those concepts in English using scaffolding and supports (e.g. TPR, visuals).	☉	☉	☉	☉	☉	☉	☉	☉

Section IV
Frequency of Spanish Language Use in the Early Literacy Classroom

Indicate how often Spanish language is used in the following contexts and circumstances.

0 Never Used	1	2	3	4	5	6	7 Always Used
-----------------	---	---	---	---	---	---	------------------

	Indicate how often Spanish language is used in the following contexts and circumstances							
	0	1	2	3	4	5	6	7
You use Spanish during direct instruction	☉	☉	☉	☉	☉	☉	☉	☉

Students respond orally to questions or prompts (given in any language) in Spanish	<input type="radio"/>							
Students interact in Spanish during instructional time	<input type="radio"/>							
Students provide written responses to questions or prompts (given in any language) in Spanish	<input type="radio"/>							
Students select Spanish language texts for independent reading	<input type="radio"/>							
You contact parents in Spanish or with the aid of an interpreter	<input type="radio"/>							
You use Spanish during social interactions with students	<input type="radio"/>							
You use Spanish vocabulary during instruction to clarify concepts taught in English	<input type="radio"/>							
You use Spanish to re-teach or clarify concepts taught in English	<input type="radio"/>							
You explicitly teach cognates to make connections between vocabulary in English and Spanish	<input type="radio"/>							
You use Spanish to redirect or chastise students	<input type="radio"/>							
Students are prompted to share Spanish vocabulary with teachers	<input type="radio"/>							
Students are prompted to share Spanish vocabulary with the class	<input type="radio"/>							

Appendix G

Focus Group Protocol

Date and Time: _____

Participants Present:

Interviewer: _____

Introduction: *Hello and thank you for participating in this focus group discussion. I appreciate your continued participation in my research study and am looking forward to hearing your reflections on the teacher training program. I will be asking you questions about your experiences in the trainings, your successes and barriers with implementing the language transfer and culturally responsive teaching strategies we've discussed in training sessions, language use in the classroom, and feelings of self-efficacy for providing EL students with culturally and linguistically responsive instruction. Please feel free to ask me any questions throughout the focus group process. Do you have any questions before we begin?*

Questions:

Teacher Experiences in the Training Sessions (Process Evaluation)

1. What were some engaging aspects of the training sessions? Why were they engaging? What aspects of the training were less engaging? Why?
2. Did you feel that the material covered in training sessions was relevant to your work as an EL teacher? If so, why? If not, why not?
3. Which aspects of the training were most relevant to your instructional practice?

Implementation of Language Transfer and Culturally Responsive Teaching Strategies

(Outcome Evaluation)

1. How would you characterize your EL instructional model?
2. What are some barriers and/or successes you've had with implementing language transfer strategies in the classroom throughout this study?
3. How often do you use native language supports in your work with ELs?
4. Describe your views on Spanish language use in the classroom.
 - a. In what ways have your views on Spanish language use in the classroom changed after participating in this training series?

Teacher Self-Efficacy for Providing Culturally Responsive Teaching to ELs (Outcome Evaluation)

1. How confident do you feel in your ability to teach EL students in a culturally responsive manner?
2. How did participation in this training program affect your knowledge of culturally and linguistically responsive teaching practices?
3. How has participation in this program, if at all, influenced your ability to meet the early literacy needs of ELs in kindergarten?
4. Give some examples of what went well for you in this program and in implementing the strategies you've learned. Give some examples of challenges.

General questions about the study and study context.

1. Did you participate in any other professional learning or teaching experiences this year that have influenced your feelings of self-efficacy and/or your instructional

practices over the course of this program? If so, please describe the nature of those experiences.

2. How did the strategies and content discussed in this program inform your work with EL students who speak a home language other than Spanish?

a. Were there strategies that you learned in the program that have been useful with non-Spanish speakers? If so, please describe those strategies. If not, please explain why you feel the strategies were not useful in serving EL students who speak a home language other than Spanish.

Appendix H

Sample Training Session Presentation

Culturally and Linguistically Responsive Early Literacy Instruction:
Training for EL Teachers

Session 3
October 8, 2019



Session 3 Goals: 10/8/2019

1. Learn about Dual Language Learners
2. Experience an immersive lesson about transferrable early literacy skills
3. Complete a contrastive analysis between English and Spanish
4. Interpret sample student assessment data
5. Debrief the session's activities and discuss
 - a. Bias in assessments
 - b. Approaching literacy instruction from an assets perspective



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2



Dual Language Learners

MSDE Definition: English learners in the early childhood years

- Simultaneous bilingual language acquisition
- Early language and literacy skills
- Language-rich environments
- Transfer!

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Debrief from Immersive Experience:

- What was a barrier?
- How did you attack the task?
- What helped?

Are you a struggling reader?

What are the implications for your instructional practice?

Early Literacy Skills and Transfer

Transferable Literacy Skills	Language-Specific Literacy Skills
Alphabetic and orthographic awareness	Print directionality
Phonemic awareness	Grammar and Orthography
Meaningfulness of print	Vocabulary
Habits and attitudes about reading	Cultural schema
Higher-order thinking and metacognitive strategies	Story structure
Content knowledge	Letter/sound correspondence

5

6



Contrastive Analysis

Engaging in contrastive linguistic analysis between English and students' native language can aid teachers in identifying:

- Opportunities for language transfer
- Areas of potential bias in assessments
- Areas of potential struggle for ELs

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8

Spanish Transparent orthography	English Opaque orthography
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What does this tell you about the skills needed to gain literacy in both languages?

9

Contrastive Analysis Between English and Spanish

English	Spanish
Letter sounds	Syllables
Non-Decodable Words & Sight Words	Letras tramosas/ Silabas tramosas
Rhyming	Ending Syllables
Print features (e.g. quotation marks)	Print features (e.g. commas vs. periods)

Special Characteristics: Gender, accents, sentence structure, verb conjugations

10



Contrastive Analysis Continued

- Register
 - Edificio/edificio
 - Culpable/ culpable
 - Encounter/ encontrar
 - Castigate/ castigar
- Dialectal differences and colloquialisms
 - Anteojos, gafas, lentes, espejuelos
 - Naranja, china.
- Approximations
 - Empuchar/empujar
 - Cachar/agarrar
- Cultural differences
 - Contextual vocabulary use, language use
 - E.g. in English the use of the word: kid vs. child

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Guided Reading Lesson Structure

English	Spanish
<ul style="list-style-type: none"> • Word work • Familiar read • Book intro • New read w/ feedback <ul style="list-style-type: none"> ◦ Learning & Language Goals ◦ Decoding and meaning-making ◦ Checks for understanding • Comprehension conversation • Writing in response to reading 	<ul style="list-style-type: none"> • Syllable work • Familiar read • Book intro • New read w/ feedback <ul style="list-style-type: none"> ◦ Learning & Language Goals ◦ Syllabication ◦ Meaning-making ◦ Checks for understanding • Comprehension conversation • Writing in response to reading

12



Application: Interpreting Sample Student Assessment Data

- Phonemic Awareness
 - Silabas iniciales
 - Initial Sounds
 - Rimas
 - Rhyming
- Concepts About Print
 - Directionality
 - Return sweep
 - Word recognition



13



Application: Interpreting Sample Student Assessment Data PART I

- Work in pairs to:
 - Interpret the results of the sample set of bilingual assessment data
 - Discuss and prepare to share:
 - What do we know about this student?
 - Where is the child struggling?
 - How might you respond to this child's needs?
 - What additional information do you need?

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Application: Interpreting Sample Student Assessment Data

- Discuss as a whole group:
 - What do we know about this student?
 - Where is the child struggling?
 - How might you respond to this child's needs?
 - What additional information do you need?

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Application: Interpreting Sample Student Assessment Data PART II

- Work in pairs to:
 - Interpret the new set of data using additional Spanish data points
 - Integrate Spanish and English assessments
 - Discuss:
 - What do you know about the student now?
 - How might you respond to the child differently?
 - How might your approach to instruction or intervention change based on this new data? Why would it change?

16

Debrief discussion

- Identifying the differences between a struggling reader and emergent biliterate student (Hopewell & Escamilla, 2013)
- Bias in assessments
 - Think back to contrastive linguistic analysis
- Taking an assets approach to language and literacy instruction



17

knowledge worth knowing



18

Feedback Survey

<https://tinyurl.com/Session3FeedbackSurvey>



19

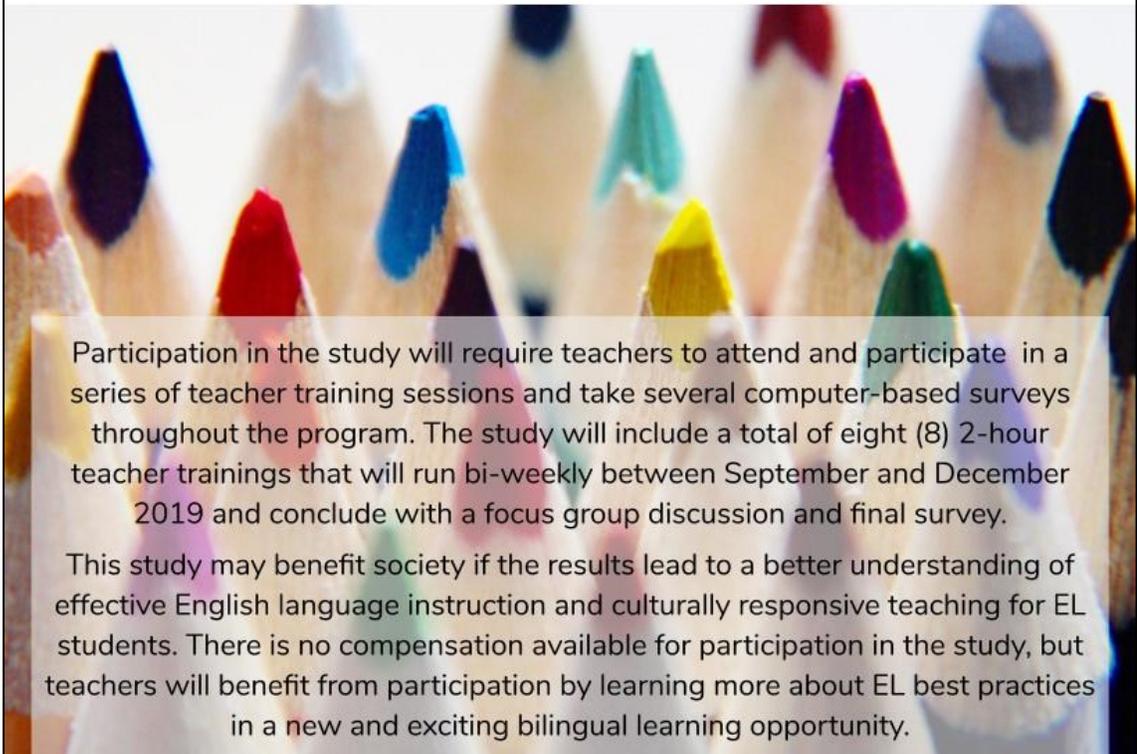
Appendix I

Recruitment Flyer

Kindergarten EL teachers:

- Do you work with Spanish-speaking Kindergarteners?
 - Are you a motivated lifelong learner?
- Are you interested in learning more about serving your EL students?

You could be eligible to participate in a research study and earn MSDE credit! I am looking for a group of 10-12 highly motivated lifelong learners to participate in a dynamic new program.



Participation in the study will require teachers to attend and participate in a series of teacher training sessions and take several computer-based surveys throughout the program. The study will include a total of eight (8) 2-hour teacher trainings that will run bi-weekly between September and December 2019 and conclude with a focus group discussion and final survey.

This study may benefit society if the results lead to a better understanding of effective English language instruction and culturally responsive teaching for EL students. There is no compensation available for participation in the study, but teachers will benefit from participation by learning more about EL best practices in a new and exciting bilingual learning opportunity.

This is a unique personal growth and teacher leadership opportunity!

Participants will earn 1 MSDE credit!

All personal information will be kept confidential and participation in the study is completely voluntary and can stop at any time.

If interested in participating (or if you want to know more) contact Kaitlin Moore at kmoore70@jhu.edu

Appendix J

Summary Matrix

Process Evaluation					
Process Evaluation Question	Evaluation Indicator	Data Source(s)	Data Collection Tool	Frequency	Data Analysis
<p style="text-align: center;">RQ 1a</p> <p>To what extent was the study implemented in adherence to the established procedures?</p> <ul style="list-style-type: none"> • To what extent did the program adhere to the established timeline and number of sessions? 	<p>Fidelity of implementation-Adherence. (Dusenbury et al., 2003)</p>	<p>Researcher</p> <p>Teacher participants</p>	<p>Teacher training session plans. Session feedback surveys.</p>	<p>Last 5 minutes of each in-person training session.</p>	<p>Descriptive statistics</p>
<p style="text-align: center;">RQ1b</p> <p>To what extent was the study implemented in adherence to the established procedures?</p> <ul style="list-style-type: none"> • To what extent were the stated goals for each teacher training session met? 	<p>Fidelity of implementation-Adherence. (Dusenbury et al., 2003)</p>	<p>Researcher</p> <p>Teacher participants</p>	<p>Session feedback survey item: “Did we meet the stated goals for this session?” (the item includes the goals for the session in the survey for participants to reference as they answer).</p>	<p>Last 5 minutes of each in-person training session.</p>	<p>Descriptive statistics</p>
Outcome Evaluation					
Outcome Evaluation Question	Construct	Data Source(s)	Data Collection Tool	Frequency	Data Analysis
<p style="text-align: center;">RQ 2</p> <p>To what extent does participation in a teacher training program change EL teachers’ self-efficacy for</p>	<p>Teacher self-efficacy for culturally responsive instruction**</p>	<p>Teacher participants</p>	<p>QUANT: Culturally Responsive Teaching Self Efficacy Scale (CRTSE) (Siwatu, 2007)</p>	<p>QUANT: Once before the intervention (pre-test in September 2019) and once</p>	<p>QUANT: Inferential statistics to compare within-group pre- and post- test responses on the CRTSE scale; possibly a dependent t-test for matched</p>

providing culturally responsive instruction?			QUAL: Teachers self-report during focus group	after the intervention (posttest in December 2019)	pairs or the nonparametric Wilcoxon signed-rank test QUAL: Transcription & emergent in-vivo coding and thematic analysis of qualitative data MM: Triangulation between survey items and focus group self-report on teacher feelings of self-efficacy
RQ 3 To what extent does participation in a teacher training program influence the use of language transfer strategies in the classroom among kindergarten EL teachers?	Use of language transfer activities	Teacher participants	QUANT: Survey items on frequency of language transfer strategies in the classroom (adapted from Beeman & Urow, 2013; García, Ibarra Johnson, & Seltzer, 2017; Reddy, Dudek, Fabiano, & Peters, 2015) QUAL: Teachers self-report during focus group	QUANT: Once before the intervention (pre-test in September 2019) and once after the intervention (posttest in December 2019) QUAL: Once after the intervention (December 2019)	QUANT: Inferential statistics to compare within-group pre- and posttest responses on the survey; possibly a dependent t-test for matched pairs or the nonparametric Wilcoxon signed-rank test QUAL: Transcription & emergent in-vivo coding and thematic analysis of qualitative data MM: Triangulation between survey items and focus group self-report on frequency of strategies and language use
RQ 4 To what extent does participation in a teacher training program influence instances of Spanish language use in the classroom among kindergarten EL teachers?	Instances of Spanish language use in the classroom.	Teacher participants	QUANT: Survey items on frequency of language transfer techniques and instances of Spanish language use in the classroom (adapted from Reddy, Dudek,	QUANT: Once before the intervention (pre-test in September 2019) and once after the intervention	QUANT: Inferential statistics to compare within-group pre- and posttest responses on the survey; possibly a dependent t-test for matched pairs or the nonparametric Wilcoxon signed-rank test

		Fabiano, & Peters, (2015)	(posttest in December 2019)	QUAL: Transcription & emergent in-vivo coding and thematic analysis of qualitative data
		QUAL: Teachers self-report during focus	QUAL: Once after the intervention (December 2019)	MM: Triangulation between survey items and focus group self-report on frequency of strategies and language use

Combined Qualitative Process and Outcome Evaluation

Research Question	Construct	Data Source(s)	Data Collection Tool	Frequency	Data Analysis
<p>RQ 5a</p> <p>What are kindergarten EL teachers' experiences in the teacher training intervention?</p> <ul style="list-style-type: none"> • What were teachers' perceptions of the relevancy of the materials to their instructional practice? 	Teacher's reported engagement and active participation in the program (Dusenbury's [2003] Fidelity of Implementation: Participant Responsiveness)	Teacher participants	Teachers' self-reporting during focus groups. Sample focus group questions include: "What were some engaging aspects of the training sessions? Why were they engaging? What aspects of the training were less engaging? Why?" "Did you feel that the material covered in training sessions was relevant to your work as an EL teacher? If so, why? If not, why not?"	Once after the intervention (December 2019)	<p>QUAL: Transcription & emergent in-vivo coding and thematic analysis of qualitative data</p> <p>MM: Triangulation between survey items and focus group self-report on frequency of strategies and language use</p>
<p>RQ5b</p> <p>What are kindergarten EL teachers' experiences in the teacher training intervention?</p>	Teachers' experiences with barriers to and		Teachers' self-reporting during focus groups. Sample focus	Once after the intervention	QUAL: Transcription & emergent in-vivo coding and

<ul style="list-style-type: none"> • What are teachers' lived experiences with successes and barriers to implementing the strategies learned in training sessions in the classroom post-intervention? 	<p>successes with implementing the strategies learned in training sessions post-intervention and how often teachers are using language transfer activities and Spanish during instruction</p>	<p>group questions include:</p> <p>“What are some barriers and/or successes you’ve had with implementing language transfer strategies in the classroom throughout this study?”</p> <p>“Give some examples of what went well for you in this program and in implementing the strategies you’ve learned. Give some examples of challenges.”</p>	<p>(December 2019)</p>	<p>thematic analysis of qualitative data</p> <p>MM: Triangulation between survey items and focus group self-report on frequency of strategies and language use</p>
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Note. **Culturally responsive instruction is defined as: the use of students’ cultural backgrounds, prior experiences, individual learning preferences, and aspects of diversity to engage students in a learning environment which facilitates multiple means of expression, encourages respectful interaction (Banks, 2015; Siwatu, 2007) and that provides “students with the knowledge and skills needed to function in mainstream culture while simultaneously helping students maintain their cultural identity, native language, and connection to their culture” (Siwatu, 2007, p. 1087).

Appendix K

Codebook for Qualitative Focus Group Data

Round 1: Holistic Coding	Round 2: In vivo and descriptive coding	Thematic Analysis
Sessions/Training Experience	<p>“Very engaged”</p> <p>“Put into practice”</p> <p>“Powerful” (x2)</p> <p>“Agent of change”</p> <p>“Empowered”</p> <p>“Gave us the power to do that”</p> <p>“Empower ourselves”</p> <p>“validating””</p> <p>I just throw my cape on and go yeah, go ahead- try to touch me”</p> <p>“Gave me the power to explain...assets”</p> <p>Strategies were “powerful”</p> <p>“Application”</p>	<p>Empowerment</p> <p><i>Participants' feelings of increased ability, confidence, and freedom to implement culturally and linguistically responsive instructional practices.</i></p>
Implementation (+)	<p>“Feel very excited” (x2)</p> <p>“They can do it”</p> <p>“Building on strengths”</p> <p>“Teach the whole child”</p> <p>“Establish the funds of knowledge”</p> <p>“It’s been that door open for me, like hey you can”</p> <p>“The skills he did have”</p> <p>Capitalize on teachable moments</p> <p>“Your kids are like, oh, you care and you heard me, and you’re here listening”</p> <p>“I can get to know my students and where they may be coming from”</p> <p>“I’ve seen a lot of pride in my kids”</p>	

	<p>“Bridging” Cognate alphabet chart Sharing those assessments with teachers helped build an assets-based approach implicitly Provides a deeper understanding Language transfer was helpful Linguistic analysis Cultural funds of knowledge- relevant with speakers of language other than English</p>	
Self-Efficacy Beliefs	<p>“Feel more confident” (x2) “Confidence increased” “Definitely the confidence” “Let’s use our powers for good”</p>	
Native Language Use/Spanish Use Beliefs	<p>Spanish as an asset “Monumental in establishing a relationship” “It makes them feel powerful” “Relationships” “Heightened awareness” “Language of who they are” “Wrong to assume that they just come (with) nothing” Students more engaged; they can participate “Would they have been on task if they were limited to English only?”</p>	<p>Language as an Asset <i>The notion that students' home language is an asset that can be leveraged for learning and to enrich the classroom environment.</i></p>
Culturally responsive teaching	<p>“Our students are an asset to our schools” “Keep it up! (bilingualism)”</p>	
EL Instructional Model	<p>“Not just intervention” Language of instruction “I was an interventionist teacher” “It’s not an intervention because there’s no deficiency”</p>	<p>Role Participants' descriptions of the role and responsibilities</p>

Implementation (-)	<p>“Talking more explicitly to my kids about...holistic bilingualism”</p> <p>“Needing to see quarterly growth”</p> <p>Caseload and supporting too many teachers</p> <p>“Hard to measure their language”</p> <p>Teachers’ low Spanish proficiency (2)</p> <p>Non-romantic languages will be different</p> <p>Some students have L1 deficiency</p> <p>“I wish I had more ways to analyze their language level in their native language”</p> <p>Don’t have background knowledge on languages other than Spanish</p> <p>Challenge of linguistic diversity</p>	<p>of an English learner teacher and language specialist.</p> <p>Bifurcation</p> <p><i>Participants' feelings of conflict between their role as a language instructor and advocate for EL students and public school employees accountable for student achievement.</i></p> <p>Resource Gaps</p> <p><i>Scarcity of human and material resources</i></p>
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Appendix L

Reliability Analysis: Item Totals for Study Survey Scales

Table L1

Reliability Analysis of the Culturally Responsive Teaching Self Efficacy Scale

	Scale Mean (sum) if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted ^a
adapt instruction to meet the needs of my students	3221.5000	.467	.969
obtain information about my students' academic strengths	3218.6250	.556	.969
determine whether my students like to work alone or in a group	3219.6667	.766	.968
determine whether my students feel comfortable competing with other students	3228.4583	.530	.969
identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture	3227.3750	.764	.968
implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture	3235.8333	.587	.969
assess student learning using various types of assessments	3222.0833	.382	.970
obtain information about my students' home life	3226.3750	.884	.968
build a sense of trust in my students	3213.6667	.485	.969
establish positive home-school relations	3218.5417	.727	.969
use a variety of teaching methods	3218.8750	.743	.969

develop a community of learners when my class consists of students from diverse backgrounds	3217.5417	.783	.968
use my students' cultural background to help make learning meaningful	3226.4167	.694	.968
use my students' prior knowledge to help them make sense of new information	3219.5000	.776	.968
identify ways how students communicate at home may differ from the school norms	3228.2500	.812	.968
obtain information about my students' cultural background	3227.6667	.660	.969
teach students about their cultures' contributions to science	3245.7917	.699	.969
greet English Learners with a phrase in their native language	3229.7500	.726	.968
design a classroom environment using displays that reflects a variety of cultures	3235.7083	.719	.969
develop a personal relationship with my students	3212.6250	.620	.969
obtain information about my students' academic weaknesses	3218.5000	.665	.969
praise English Learners for their accomplishments using a phrase in their native language	3231.1250	.591	.969
identify ways that standardized tests may be biased towards linguistically diverse students	3231.4167	.652	.969
communicate with parents regarding their child's educational progress	3226.0417	.669	.968
structure parent-teacher conferences so that the meeting is not intimidating for parents	3224.2500	.805	.968
help students to develop positive relationships with their classmates	3222.9167	.734	.968
revise instructional material to include a better representation of cultural groups	3233.1250	.794	.968

critically examine the curriculum to determine whether it reinforces negative cultural stereotypes	3235.7083	.791	.968
design a lesson that shows how other cultural groups have made use of mathematics	3250.2917	.671	.969
model classroom tasks to enhance English learners' understanding	3214.6250	.571	.969
communicate with the parents of English learners regarding their child's achievement	3222.2083	.748	.968
help students feel like important members of the classroom	3214.5000	.774	.969
identify ways that standardized tests may be biased towards culturally diverse students	3233.7917	.661	.968
use a learning preference inventory to gather data about how my students like to learn	3235.0000	.784	.968
use examples that are familiar to students from diverse cultural backgrounds	3237.4167	.786	.968
explain new concepts using examples that are taken from my students' everyday lives	3224.9583	.656	.969
obtain information regarding my students' academic interests	3221.9167	.782	.968
use the interests of my students to make learning meaningful for them	3218.5000	.716	.969
implement cooperative learning activities for those students who like to work in groups	3218.5833	.672	.969
design instruction that matches my students' developmental needs	3218.2917	.634	.969
teach students about their cultures' contributions to society	3244.2500	.695	.969

^a Initial Cronbach's alpha ($\alpha = 0.97$)

Table L2

Initial Reliability Analysis for the Language Transfer Strategies Use Scale

	Scale Mean (sum) if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted ^a
Select bilingual texts for use during instruction	77.17	.487	.779
Display classroom materials that reflect the linguistic diversity of students (posters, toys, books)	75.33	-.421	.837
Select authentic texts for instruction that were written by linguistically diverse authors	76.50	-.722	.848
Use bilingual assessments to understand children's linguistic profiles	78.17	.815	.769
Provide students with instructional materials (e.g. videos, diagrams) in English and Spanish	76.17	.698	.763
Allow time for peer discussion in students' language of choice	75.00	.828	.756
Think of students' languages and cultural practices as equally valuable and interrelated	74.33	.922	.761
Value and include students' families and communities in their education	75.00	.436	.783
Challenge traditional hierarchies (e.g. teacher/student, English/Spanish, EL/English fluent learner) and work toward a more just classroom and society	75.17	.432	.783
Design the physical space of the classroom for collaboration and create a multilingual ecology	75.50	.504	.776

Design instruction (e.g. in lesson planning, activities, instructional strategies) so that early literacy learning promotes translanguaging	76.50	.821	.760
Design assessments that differentiate between general linguistic and language-specific performances	77.50	.470	.779
Design assessments that evaluate whether EL students perform tasks independently, with moderate assistance, or at novice levels	77.00	-.050	.815
Design instruction that is responsive to students' needs, interests, and language practices	75.67	.542	.777
Label the physical classroom space in multiple languages	75.83	.189	.795
Pre-plan opportunities to facilitate bridging (language transfer) between English and Spanish	76.33	.784	.759
Plan activities that allow students to do side-by-side comparisons between English and Spanish	76.17	.970	.754
Co-create bilingual anchor charts with students	77.33	.564	.774
Engage in formative bilingual assessment throughout learning	78.33	.341	.789
Plan activities that allow students to express what they've learned in Spanish and explicitly teach the words for those concepts in English using scaffolding and supports (e.g. TPR, visuals)	77.33	-.210	.824

^a Initial Cronbach's alpha ($\alpha = 0.79$)

Table L3

Initial Reliability Analysis for the Spanish Language Use Scale

	Scale Mean (sum) if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted ^a
You use Spanish during direct instruction	48.00	317.200	.640	.912
Students respond orally to questions or prompts (given in any language) in Spanish	48.17	314.167	.936	.903
Students interact in Spanish during instructional time	47.33	341.467	.473	.918
Students provide written responses to questions or prompts (given in any language) in Spanish	48.67	361.867	.273	.922
Students select Spanish language texts for independent reading	48.83	318.967	.694	.910
You contact parents in Spanish or with the aid of an interpreter	45.00	335.600	.697	.912
You use Spanish during social interactions with students	46.50	302.300	.798	.905
You use Spanish vocabulary during instruction to clarify concepts taught in English	46.83	295.767	.784	.906
You use Spanish to re-teach or clarify concepts taught in English	48.17	294.967	.896	.901
You explicitly teach cognates to make connections between vocabulary in English and Spanish	49.00	336.800	.563	.915
You use Spanish to redirect or chastise students	50.00	324.000	.846	.907
Students are prompted to share Spanish vocabulary with teachers	47.33	325.067	.507	.918
Students are prompted to share Spanish vocabulary with the class	48.17	318.167	.510	.920

^a Initial Cronbach's alpha ($\alpha = 0.91$)

Kaitlin Moore

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Education

- Johns Hopkins University**, Baltimore MD August 2020
Doctor of Education
Specialization: Entrepreneurial Leadership in Education
Dissertation Focus: Equity, Early Literacy, and English Learners: Equipping English Learner Teachers for Culturally and Linguistically Responsive Early Literacy Instruction
- Hood College**, Frederick, MD May 2017
Master of Science in Educational Leadership
GPA: 4.0
- Bloomsburg University of Pennsylvania**, Bloomsburg, PA May 2012
Bachelor of Science in Education
GPA: 4.0, Magna cum Laude
- Bloomsburg University of Pennsylvania**, Bloomsburg, PA May 2012
Bachelor of Arts in Spanish
GPA: 3.8, Magna cum Laude

Professional Experience

- Johns Hopkins University School of Education**, Baltimore, MD 2019- Present
Teaching Assistant: Doctor of Education Program.
Research Methods and Systematic Inquiry, Evaluation of Education Policies and Programs, and Leadership in Education Organizations Courses
- ██████████ **County Public Schools**, ██████████, MD 2020- Present
English Learners Achievement Specialist (acting)
- ██████████ **County Public Schools**, ██████████, MD 2017- 2020
Teacher Specialist for English Learners
- ██████████ **County Public Schools**, ██████████, MD 2012- 2017
Teacher: Bilingual Immersion, Spanish language classroom

Selected Presentations and Awards

2015 Ready at Five: Collaboration in Action Conference: *Building a Bilingual Program for EL Students*

2016 Denver Public Schools: Foundations of Early Literacy Conference: *Multiple Leadership and Biliteracy Sessions*

2017 Hood College Outstanding Graduate Student Award: Educational Leadership Program

2018 Maryland State Department of Education Summer Symposium, *Cultivating Growth and Achievement of English Learners*

2018-2019 Scholarship Award for Graduate Studies. *Aileen & Gilbert Schiffman Fellowship.*

2019 AERA Research on Women and Education Fall Conference: *Trauma-Informed Instruction for Immigrant Children: Responding to Shifting Policy Through Practice*

Affiliations, Certifications, and Endorsements

County Commissioner, Frederick County Maryland Commission for Women 2020-Present

Member of the Student Advisory Board for the Johns Hopkins EdD Program 2018-Present

Johns Hopkins School of Education Doctoral Studies Committee: EdD Program Student Representative 2018-2019

Maryland Advanced Professional Teacher Certificate 2017

Administrator I and II Endorsement 2017

English for Speakers of Other Languages PreK-12 Endorsement 2017

Montessori Certification: Primary 2013

World Languages: Spanish PreK- 12 Endorsement 2012

Elementary Education, Grades 1-6 Endorsement 2012

Early Childhood Education, PreK- 3 Endorsement 2012