THE EFFECT OF LANGUAGE USED IN THE HOME ON ACADEMIC ACHIEVEMENT IN ENGLISH LANGUAGE LEARNERS WITH SPECIAL NEEDS

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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ABSTRACT

The number of students classified as English language learners enrolled in schools in the United States continues to multiply yearly. An increasing number of these students also qualify for special education services. Students in either group have underperformed compared with their general education peers for years, and the basic academic proficiency levels of these students are concerning when either language proficiency or disability is considered separately. However, when a lack of language of proficiency is compounded with a disability, academic proficiency levels become even more concerning. While student language proficiency and disability are well-researched in terms of academic performance, the language students are exposed to at home has not been given adequate consideration. The purpose of this causal comparative study was to examine the relationship between parents' preferred language of communication and the Georgia Milestones End-of-Grade (GMAS EOG) English language arts and mathematics proficiency levels of students served in both English language learner and special education programs. The study employed archived data from the 2018–2019 school year from a convenience sample of 110 third- through eighth-grade students dually served in English language learner and special education programs (55 whose parents preferred communication in English and 55 whose parents preferred communication in a language other than English). Two independent samples *t* tests were used to determine if there was a difference in the GMAS EOG scores for the two groups. There was not a difference in the English language arts scores between the two groups and there was not a difference in the mathematics scores between the two groups.

Keywords: Georgia Milestones, English Language Learners, home language, special education

Dedication

This dissertation is dedicated to my family, who, above all else, encouraged, supported, and loved me throughout this process. No matter what, you told me to keep pushing. You never complained about the time this took away from you. To Jason, my mama, Marla, Marlena, and Christy, thank you from the bottom of my heart.

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List of Abbreviations

Assessing Comprehension and Communication in English State to State (ACCESS)

Developmentally Appropriate Practices (DAP)

Education for All Handicapped Children Act (EAHCA)

Elementary and Secondary Education Act (ESEA)

End-of-Course (EOC)

End-of-Grade (EOG)

English Language Learner (ELL)

English for Speakers of Other Languages (ESOL)

Every Student Succeeds Act (ESSA)

Georgia Milestones Assessment System (GMAS)

Governor's Office of Student Achievement (GOSA)

Individuals with Disabilities Education Act (IDEA)

Least Restrictive Environment (LRE)

National Assessment of Educational Progress (NAEP)

National Center for Education Statistics (NCES)

No Child Left Behind (NCLB)

Office of English Language Acquisition (OELA)

Response to Intervention (RTI)

Socioeconomic Status (SES)

Specific Learning Disability (SLD)

Students with Disabilities (SWD)

World-Class Instructional Design and Assessment (WIDA)

CHAPTER ONE: INTRODUCTION

Overview

Chapter One examines the prevalence and the impact of dually served students in classrooms in the United States. Students who are dually served in both programs for English language learners (ELLs) and for students with disabilities (special education) are not making sufficient academic gains, particularly in the areas of literacy and mathematics. Dually served students originate from both monolingual and bilingual backgrounds, but educators have done little to ascertain whether the language these students and their parents speak at home impacts their academic development and, subsequently, their overall academic achievement. Dually served students often spend years in both ELL and special education programs, but still fail to meet minimum proficiency standards in literacy and mathematics.

Background

Within the last 10 years, the number of students classified as ELLs in the United States has increased by over 50% (Counts et al., 2018). While these students diversify the underlying population of schools, they are a rather homogenous group, with 76% citing Spanish as their native language (Office of English Language Acquisition [OELA], 2020a; Rodríguez & Rodríguez, 2017).

During the 2017–2018 school year, approximately 12% of all students enrolled in public schools (kindergarten through 12th grade) received services as students with disabilities (SWD) and 10% received services as ELLs. Of the total students classified as SWD, 11.2% were dually-classified as ELL (OELA, 2020b). Criteria for receiving ELL and special education services are governed by the Every Student Succeeds Act (ESSA, 2015) and the Individuals with Disabilities Education Act (IDEA, 2004) respectively. IDEA (2004) recognizes 13 categories of disability.

Dually served students, those that qualify for both ELL and special education services, are most often categorized as students with a specific learning disability (SLD), speech or language impairment, or other health impairment (OHI), with SLD being the most prevalent disability within the population (OELA, 2020b; Rodríguez & Rodríguez, 2017).

While dually served students can be concurrently categorized, eligibility requirements for inclusion in each group vary individually. Students who qualify for ELL services are typically identified using a home language survey completed by a student's parents or family member upon enrollment in public education. These surveys are developed by individual states, leaving room for inconsistencies in identification rates from state to state (Counts et al., 2018). Likewise, special education identification practices vary from state to state. However, specific categories of eligibility and their corresponding definitions are defined by IDEA (2004).

Students who receive ELL services have substandard English proficiency that impedes their ability to comprehend both written and spoken English. This lack of proficiency hinders student progress within the general curriculum where English is most likely the primary language of instruction (Rodríguez & Rodríguez, 2017). By contrast, students who qualify for special education services, particularly in the eligibility category of SLD, also exhibit difficulties with written language, spoken language, or both (IDEA, 2004). While identifying students that qualify for either group can prove challenging, appropriately identifying and serving those students who qualify for inclusion in both groups is even more so. This is particularly true when the special education category of eligibility is SLD (Barrio, 2017).

According to the National Center for Education Statistics (NCES, 2019b), in 2019, approximately 39% of fourth-grade general education students in the United States scored in the proficient range in reading. Only 10% of fourth-grade students who received ELL services

scored in the proficient range. Students with disabilities performed slightly better, with 12% being considered proficient in reading (NCES, 2019b). Scores for eighth-grade students were lower in all categories. Thirty-seven percent of eighth-grade students in the United States were considered proficient in reading. ELLs and SWD scored at 4% and 9%, respectively (NCES, 2019b).

The most recent national assessment data related for writing showed that, in 2002, 28% of fourth-grade general education students scored at the proficient level (NCES, 2002). Disaggregated data for the specific subgroups were no longer available. The most recent data for eighth grade were from 2011. In 2011, only 27% of eighth-grade general education students scored at the proficient level for writing. By contrast, only 1% of ELL and 5% of SWD scored at the same level (NCES, 2011).

In general, mathematics requires students to be fluent in both symbols and words. In 2019, 41% of fourth-grade general education students scored at the minimum proficiency level in the area of mathematics. Only 16% of fourth-grade ELLs were proficient in mathematics during that same year, while SWD were proficient at a rate of 17% (NCES, 2019a). Mathematics proficiency levels decreased significantly for eighth-grade general education students, with 34% scoring at the proficient level. ELLs and SWD proficiency rates also declined. Only 5% of ELLs and 9% off SWD were proficient in mathematics during that same year (NCES, 2019a).

Concerns for the academic progress of these students continue to plague educators. Students in both categories are not progressing sufficiently to satisfy minimum academic proficiency standards. Typically, students in either group have generally scored lower than their peers who receive general education services. However, when a lack of language proficiency is compounded with a disability, the outcomes suffer even greater (Haager & Osipova, 2017).

Historical Context

Historically, special education identification has relied upon methods developed specifically for monolingual students who speak English only (Ferlis & Xu, 2016; Francis et al., 2019). This, in turn, contributes to both an over- and underrepresentation of ELLs in special education (Barrio, 2017; Becker & Deris, 2019; Golloher et al., 2018). Underrepresentation of ELLs in special education often stems from the misconception that students whose home language is anything other than English cannot be adequately assessed for special education (Francis et al., 2019). Educators may delay the referral process, believing that academic difficulties stem from a lack of English proficiency (Counts et al., 2018; Golloher et al., 2018). Conversely, educators also have a history of referring students for special education prematurely, believing that academic difficulties exist because of an insufficient amount of time allotted for language acquisition (Golloher et al., 2018). Thus, students who are served in both programs have a history of receiving inappropriate services and interventions that fail to adequately address both language and disability in concert.

Kangas and Cook (2020) identified an exaggerated focus on the deficits these students present as one reason for a lack of appropriate services. Emphasis placed on high-stakes testing contributes to this. The presumed urgent need to uphold IDEA (2004) requirements for SWD placement in the least restrictive environment, most often inclusion, also factors into decisions regarding educational programming (Kangas, 2018; Kangas & Cook, 2020).

Many of the strategies that are effective for teaching students with disabilities or academic deficiencies are many of the same strategies that have been shown to be effective for ELLs. However, the magnitude of planning and implementing programs that benefit both populations (and those who fall into both) can be overwhelming (Ortiz & Robertson, 2018).

Kangas (2018) found that schools and systems lean toward prioritization of either special education or English language services, falsely believing that services cannot occur simultaneously; the reasoning behind such decisions was most often the misconception that special education services are legally mandated and English language services are little more than policy recommendations. Kangas' study showed that educators feel that there are no "enforceable laws" (p. 893) associated with English language services like those associated with special education. The result was that educators felt that English language services were optional and special education services were legally mandated.

To address this, Ortiz and Robertson (2018) suggested that collaboration between professionals and families is key. Those responsible for planning and providing services should solicit feedback from parents about desired goals and outcomes. Also, school professionals should collaborate and "accept joint responsibility" (Ortiz & Robertson, 2018, p. 182) for designing, implementing, and monitoring programs that serve these students.

The most effective academic setting for dually served students is often a point of contention, and these students are often placed in separate classroom settings apart from their peers who receive general education services (Cheatham & Hart Barnett, 2017; Spies & Cheatham, 2018). This trend is contrary to what happens when either disability or language proficiency is considered separately. For SWD, however, current trends have made inclusion the most frequent service model used (Spies & Cheatham, 2018). For ELLs, the push-in model is the most frequently used service model (Kangas, 2017). Push-in services heavily resemble inclusion provided for SWD but place more emphasis on vocabulary and language acquisition rather than addressing issues stemming from a disability. However, Jozwik and Douglas (2017) found that

instruction heavily rooted in vocabulary, particularly academic vocabulary, is also highly beneficial for native English-speaking students with academic difficulties.

Social Context

Aside from difficulties with identification, dually served students are a growing population that will continue to present challenges to educators if their needs are not adequately addressed (Counts et al., 2018). While students who qualify for either ELL or special education services (not both) are regressing or stagnant when compared to their peers receiving only general education services, dually served students' academic progress is regressing further. When a lack of English proficiency is coupled with a disability, the effects are even more detrimental, with academic scores even lower than those students served in either program alone (Haager & Osipova, 2017).

Despite the best efforts of educators to understand and meet student needs, these students' academic progress continues to fail minimum academic proficiency standards. Decreasing literacy proficiency produces effects on academic self-concept, leading to the possibility of dropout behavior and decreased enrollment in postsecondary programs. In addition, failing literacy proficiency rates have been shown to negatively affect employment rates when compared to peers from dissimilar, more homogenous backgrounds (Wang & Woolf, 2015).

Theoretical Context

Academic instruction for most ELLs, SWD, and dually served students has always been provided in English (Rodríguez & Rodríguez, 2017). Students who speak only one language at home find themselves immersed in another as they acquire and learn to apply basic skills. This is disconcerting and troubling as students need to be literate in the language of instruction to make adequate progress.

Home language is an important factor to consider when examining student academic progress. There has been much debate about whether language (including basic reading and writing skills) is learned or if it is naturally acquired (Farnsworth, 2018). Lev Vygotsky (1935/1978, 1935/2011) believed that language develops naturally, and he was one of the first theorists to link the concepts of language and literacy. His sociocultural theory suggested that learning is a socially-bound construct within which social interactions are critical for appropriate language acquisition and thought development (John-Steiner & Souberman, 1978).

Jerome Bruner's (1983) social interaction theory grew from Vygotsky's (1935/1978, 1935/2011) work. Language develops from the combination of a child's natural abilities and interaction with and within his or her environment (Bruner, 1983). Both Vygotsky (1935/1978, 1935/2011) and Bruner (1983) linked social interactions with language development and, in turn, their theories aid in understanding how language influences academic development and achievement. Thus, the language spoken at home likely affects how a student develops basic reading, writing, and mathematics skills once they enter school. As a result, an ample amount of attention should be given to this trend.

Problem Statement

Students who qualify for both ELL and special education services are an increasing and diversifying population whose needs educators are struggling to meet. During the 2017–2018 school year, schools in the United States enrolled over 5 million students who qualified for ELL services with approximately 76% of those citing Spanish as their native language (OELA, 2020a, 2021). Within this group, more than 10% of these students also qualified for special education services (OELA, 2020c).

Unfortunately, many school programs begin eliminating the amount of English language services that ELLs receive by the middle grades, assuming that language should be well-developed by that time (Counts et al., 2018). Many dually served students are not identified for special education services until the upper elementary grades when intensive reading and writing interventions have also begun to wane (Counts et al., 2018). This places students in an educational vacuum where educators are unsure of how to address their expanding academic needs. Despite legislation designed to ensure that both ELLs and SWD are provided with an appropriate education designed to meet individualized needs, by the time students reach upper-elementary and middle grades, schools often choose either ELL or special education services at the expense of the other (Kangas, 2018).

Much of the available research focuses on the academic achievement of either ELLs or SWD separately. Research that addresses the needs of dually served students tends to focus either upon the lack of standardized identification criteria or upon the over- and underrepresentation of ELLs in special education (Barrio, 2017; Becker & Deris, 2019; Ferlis & Xu, 2016; Francis, et al., 2019; Golloher et al., 2018).

Current research also neglects to examine how home language impacts academic development and achievement. If social interactions in the home are essential to literacy and academic development, more research is needed to determine if there is a relationship between the language a student's parents speak and their subsequent academic achievement. Research that addresses both upper elementary and middle grades students is needed because, by these levels, students have extended beyond what most educators believe to be an acceptable amount of time to acquire English as a second language. Students who qualify for ELL services come from homes with varied language backgrounds and enter school where English is typically the

language of instruction. However, despite lack of progress, educators are unsure of whether the problems these students face is due to language or disability (Farnsworth, 2018).

The problem is that students who are dually served in ELL and special education programs continue to underperform compared to the peers who receive only general education services, particularly in the areas of literacy and mathematics. It is unclear whether there is a connection between a student's home language and the level of academic proficiency they attain.

Purpose Statement

The purpose of this causal comparative study was to examine the relationship between the independent variable, preferred language of communication, and the dependent variables of English language arts and mathematics proficiency levels of students in Grades 3–8 who are dually served in both special education and ELL programs, as measured by the Georgia Milestones End-of-Grade assessment. The independent variable, preferred language of communication, was a self-reported measure collected from parents who indicated whether they preferred communication from the school in English or Spanish. For the purposes of this study, the preferred language was finite and varying degrees of parental language proficiency were not addressed.

Mancilla-Martinez et al. (2020a) used a self-report language survey to determine the home language status of students and defined their language use variable in terms of Likert-type data ranging from 1 (only Spanish) to 5 (only English). Language status was primarily defined as the amount of English language exposure students experienced at home. Similarly, home language use was used as an independent variable when examining the impact of language on literacy development of students from Chinese-speaking households (Chen & Ren, 2019). Both studies (Chen & Ren, 2019; Mancilla-Martinez et al., 2020a) utilized a self-report measure to

gauge the primary language spoken in students' homes. While self-report measures inherently present concerns with reporting accuracy, measures to provide an absolute determination of whether a home is monolingual, or bilingual, are few.

The Georgia Milestones End-of-Grade assessment is a standardized assessment given yearly to students in Grades 3–8. Students in Grades 3, 5, and 8 are assessed in the areas of English language arts, mathematics, science, and social studies. Students in Grades 4, 6, and 7 are assessed in the areas of English language arts and mathematics only (Georgia Department of Education, 2020d). The Georgia Department of Education (2020k) establishes minimum proficiency standards in all academic areas. Scores obtained by students in this study were judged as proficient or not, based upon the predetermined cut scores for the English language arts and mathematics assessments.

Participants in the study were students in Grades 3–8 who were classified as both ELL and SWD. The participants were selected from elementary and middle school programs in a Georgia school district and were students required to participate in the Georgia Milestones End-of-Grade assessment. Students who participated in an alternative curriculum or assessment were excluded.

Significance of the Study

The Georgia Milestones End-of-Grade assessment measures student achievement against state-adopted academic standards (Georgia Department of Education, 2020d). Students who are classified as ELL and as SWD have rights afforded to them by the U.S. Office of Civil Rights meant to ensure equitable access to educational opportunities (Civil Rights Act, 1964). However, these students are often marginalized with services that do not adequately address their unique needs (Cheatham & Hart Barnett, 2017). Despite research that argues that language matters,

schools continue to instruct and assess students classified as ELL, SWD, or both without regard to home language (Francis et al., 2019).

Still, once identified, students participate in services yearly, making little to no improvement, further widening the achievement gap between ELLs, SWD, and their general education peers. This is a troublesome trend because gaps and deficiencies in basic academic skills can lead to a myriad of problems in high school and beyond. Outcomes for these students can become limited, leading to lower employment rates and fewer enrollments in postsecondary educational institutions (Wang & Woolf, 2015). More immediately, however, literacy deficiencies can lead to increased academic problems in areas that rely heavily upon reading and writing, leading to inadequate self-image and increased dropout tendencies among the students (Haager & Osipova, 2017). Deficiencies in basic academic skills contribute to poor academic and postsecondary outcomes for ELLs, SWD, and dually served students.

This study aids in understanding the effects that parental language has on students identified as ELLs and SWD. In addition, this study provides insight into the influence of receiving both ELL and special education services on literacy and mathematics outcomes for dually served students. Understanding these elements will aid in instructional programming that will increase the academic achievement for students classified as ELL, SWD, and dually served.

Based upon the theories of Lev Vygotsky (1935/2011, 1934/1986), language is a social construct that is inherently linked to academic development. Jerome Bruner (1983) later provided evidence supporting Vygotsky's ideas about the importance of language for both social and academic development. Both Vygotsky's and Bruner's theories are beneficial for understanding how students, including those who receive English language services, acquire and develop language and, thus, learn. Bruner (1983) also theorized that adults influence language

development, serving as models who help to scaffold language learning. The implications of these theories extend into the classroom as teachers strive to meet the needs of all students, including those who are dually served.

Research Questions

RQ1: Is there a difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

RQ2: Is there a difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

Definitions

1. *Assessing Comprehension and Communication in English State to State for English Language Learners (ACCESS)* – The ACCESS is an exam designed to measure the English proficiency level of ELLs. It consists of subtests in the areas of listening, speaking, reading, and writing (World-Class Instructional Design and Assessment, 2021a).
2. *Dually Served Students* – Dually served or dually identified students are students with special needs receiving services as both an ELL and a SWD (Georgia Department of Education, 2020c).
3. *Elementary and Secondary Education Act (ESEA)* – The Elementary and Secondary Education Act is federal legislation signed into law in 1965 by President Lyndon Baines Johnson. The ESEA addressed inequality in schools and offered federal grants for

improving educational opportunities for low-income students. ESEA was reauthorized as the Every Student Succeeds Act in 2015 (U.S. Department of Education, 2019).

4. *Every Student Succeeds Act (ESSA)* – The Every Student Succeeds Act is an act signed into law by President Barack Obama. The act addresses the academic achievement of students in K–12 schools. The act addresses accountability, testing, interventions, and teacher evaluations (U.S. Department of Education, 2019).
5. *Georgia Milestones Assessment System* – The Georgia Milestones Assessment System is an end-of-grade, summative assessment administered to measure the academic performance against the Georgia state academic standards (Georgia Department of Education, 2020d).
6. *Individuals with Disabilities Education Act (IDEA)* – The Individuals with Disabilities Education Act is an act that ensures that students with disabilities receive an education that is comparable to that of their non-disabled peers (U.S. Department of Education, n.d.-a)
7. *No Child Left Behind (NCLB)* – The No Child Left Behind Act of 2001 was the reauthorization of the Elementary and Secondary Education Act of 1965. NCLB established accountability measures for school personnel and student achievement. It established programs and set academic standards for special education and English language programs (U.S. Department of Education, n.d.-b).
8. *Other Health Impairment (OHI)* – Other Health Impairment is a special education category of eligibility caused by a medical condition that results in limited alertness within the educational environment. This may include “asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition,

hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome" (IDEA, 2004).

9. *Specific Learning Disability (SLD)* – A specific learning disability is a disorder that affects at least one of the basic psychological processes that adversely impacts using spoken or written language (IDEA, 2004).
10. *Speech or Language Impairment* – A speech or language impairment is a communication impairment that negatively impacts a student's educational performance (IDEA, 2004). A communication impairment can include "stuttering, impaired articulation, language impairment, or voice impairment" (NCES, 2020, p. 307).

CHAPTER TWO: LITERATURE REVIEW

Overview

Through a systematic review of the literature, the problem of low academic achievement for dually served students who qualify for both English language and special education services was explored. This chapter examines current literature relevant to academic instruction for both students with disabilities (SWD) and English language learners (ELLs). The first section explores theories that pertain to developmentally appropriate strategies for instruction. A review of current literature related to the current legislation, identification, eligibility, and instructional strategies for both groups follows. Through an examination of approaches currently used for both groups, a gap in the existing literature for dually served students is identified, highlighting a need for the current study.

Theoretical Framework

The purpose of a theoretical framework is to guide and provide perspective when gathering empirical data. In quantitative research, specifically, the theoretical framework is the lens through which data are collected and interpreted (Check & Schutt, 2012). The complexity or lack of complexity in the language to which children are exposed is highly predictive of what that child will learn during the first few years of life. Scores on language-based exams given during the first years of schooling are predictive of academic achievement in upper elementary grades (Golinkoff et al., 2019). Lurie et al. (2021) found a positive association between a child's cognitive stimulation (including exposure to complex language structures) with overall language development and, ultimately, academic achievement.

Critical interactions at home help to support a positive learning environment that facilitates language development and encourages the development of neural networks that

support later academic development (Ursache & Noble, 2016). Language is the basis for learning to read and the quality of the communication that occurs at home is more beneficial than the quantity of words that are spoken on a regular basis (Golinkoff et al., 2019). Thus, student academic achievement is closely connected to language development. The interconnectivity of Lev Vygotsky's sociocultural theory served as the primary theoretical lens through which this study was framed. Similar concepts from Jerome Bruner's social interaction theory provided additional support for Vygotsky's primary ideology.

Sociocultural Theory

Learning is adaptive, and because each child is unique, children all learn differently (Vygotsky, 1935/1978). Child development is a product of learning, but it does not follow it proportionally. There is no formula or predetermined schema for learning because every child's experiences are fundamentally different (John-Steiner & Souberman, 1978).

According to Vygotsky (1935/2011, 1934/1986), language development relies primarily upon environment and culture. Though traditionally considered to be a constructivist, Vygotsky separated himself from other contemporary constructivists like Jean Piaget because he believed that learning could not be separated from the social realm. Vygotsky's ideas about language situate themselves between constructivism and cognitivism because of the importance that he placed upon thought (Jeung & Kellogg, 2019). Vygotsky (1934/1986) compared thought and language to water. Water can be separated into the elements of hydrogen and oxygen. While each element of water serves a purpose individually, they come together as water to serve an entirely different purpose.

Though related, Vygotsky (1934/1986) believed that thought and language have separate origins. Even though they develop separately, thought and language development intersects

periodically, and the two exert influence upon one another (Burkholder & Peláez, 2000; Vygotsky, 1934/1986). Vygotsky (1934/1986) believed thought develops in four distinct stages. First, babies make rudimentary gestures and mothers intervene. Babies soon learn that there is a meaning behind actions, forming the foundations for primitive communication and pre-intellectual thought (Burkholder & Peláez, 2000; Vygotsky, 1934/1986). Secondly, as children become more aware of their environment, they begin to understand the use of tools, marking the first signs of "practical intelligence" (Vygotsky, 1934/1986, p. 87). Here, children begin to understand the use of grammar and the logistics of beginning communication. In the third stage, children begin to understand how to use external symbols to solve internal problems. They may begin to count on their fingers, use manipulatives, or use mnemonics. The fourth stage is characterized by the use of "logical memory" (Vygotsky, 1934/1986, p. 87) and inward thought processes.

Vygotsky also described three stages of speech development: external, egocentric (private), and inner speech (Vygotsky, 1934/1986). As children progress through each of the stages, communication becomes more complex. Babies can communicate well before their mouths are able to form words. In the beginning, interactions from the environment gradually shape external speech. Children produce external speech to communicate with others (Ehrich, 2006). These interactions provide feedback and help babies to learn how to communicate to obtain what they want and need.

As external speech transitions toward egocentric speech, children talk to themselves through play or other activities. Egocentric or private speech continues to contribute to the language and cognitive development of the child by broadening their problem-solving skills (Burnell, 1979). As children progress through egocentric or private speech, they begin to assume

more responsibility regarding their actions and behaviors. Ultimately, inner speech is the most developed form of communication and language development. It represents the ability of a child to engage in higher-order thinking and problem solving (Ehrich, 2006).

Vygotsky (1935/2011, 1934/1986) postulated that social speech is a key component of language development. He argued that children do not create speech themselves; rather, they gradually acquire the speech of the adults around them. This is important as it highlights the impact home language has upon early speech development. Furthermore, more complex mental functions develop from a student's social interactions with peers and others within the environment (Schunk, 2020, p. 332). This may pose a problem for ELLs as their primary language proficiency is muddled with instruction provided in English, particularly younger students in early grades.

Natural language development is spontaneous and social in nature. Learning a second language, however, is not spontaneous, so social immersion is crucial (Vygotsky, 1934/1986). When a child begins to acquire a second or subsequent language, the native language serves a solid foundation upon which the second language can be built. The intricacies and nuances of language do not have to be relearned. This may lend credence to the idea that students who are bilingual potentially hold an academic advantage. Vygotsky (1934/1986) proposed that the relationship between a child's native and second language is similar to the relationship between basic arithmetic and algebra. Just as the study of algebra does not require children to re-learn basic arithmetic, children who learn a second language do not have to re-learn fundamental concepts of speech and language. Instead, they build upon the basic tenets already learned in the native language.

Literacy development is intricately interconnected with language acquisition, making social interactions a critical part of learning to read and write. Students who are learning English as a second language need to be engaged in speaking with others to further their English language development. These interactions are also crucial for students who receive special education services because they help to support academic development. Reading (particularly when it involves higher cognitive processes or comprehension) is a by-product of successful language development, relying heavily upon a child's ability to participate in inner speech (Ehrich, 2006).

Zone of Proximal Development

The Zone of Proximal Development (ZPD) refers to the difference between what a child can do independently and what a child can do with assistance (Vygotsky, 1935/1978, 1935/2011). Vygotsky thoroughly defined the concept of ZPD within his work on sociocultural theory. Essentially, the skills that a child can perform with assistance help to bridge the gap between what a child can perform independently and the topics with which they have no experience. Instruction within the ZPD moves beyond instruction that is rooted in concrete concepts. Instead, it is interactive and takes into consideration the developmental readiness of the child (Vygotsky, 1935/1978). By providing instruction within the ZPD, educators help to facilitate the learning process.

Vygotsky (1935/2011) clarified that the ZPD provides educators with an understanding of not only what a child has already mastered, but also what skills the child is capable of mastering with support. By this definition, the ZPD allows educators to predict a student's readiness to attain certain skills. Therefore, the ZPD of a child should be considered when

designing instruction for and meeting the needs of all students, including those who are dually served (Vygotsky, 1935/2011).

Social Interaction Theory

Jerome Bruner (1983) also stressed the influence that social experiences have on student learning. Bruner's theory heavily supports Vygotsky's postulations regarding both intellectual and language development. Language acquisition requires a series of systematic actions that include meaningful social interactions with others. Communication is a basic ability, and children can communicate long before they can utter intelligible words. As children acquire language, they are also learning the functional intent of language and "how to get things done with words" (Bruner, 1983, p. 18). As a result, language acquisition involves negotiations between the child and their environment that continue until an effective means of communication is established. Bruner (1983) argued that language acquisition does not occur accidentally. Instead, language develops out of necessity and is shaped by the social realm until it is effectively mastered.

Learning to communicate consists of both acquiring linguistic knowledge and learning to apply it (Taylor, 1984). Bruner (1981) contended, "Language acquisition occurs in the social context of discourse" (p. 175). To become a native speaker of a language, children must learn a language's "syntax, semantics, and pragmatics" (Bruner, 1983, p. 18). While children possess some innate abilities for communication, language is also a learned process that develops because of social interactions. Children require a language acquisition support system that provides structured interactions from which they can learn (Bruner, 1981; Taylor, 1984). While language will develop naturally to some extent, having social interactions within the language support system will help to further facilitate language acquisition (Bruner, 1983; Taylor).

First language acquisition is often the result of play activities or language games in which parents or other caregivers engage children and provide support as they learn the constructs of the language (Bruner, 1983). This symbolic play helps children attach meaning to symbols through social interactions with adults. Quinn and Kidd (2018) found that children engaged in symbolic play exhibited greater joint attention measures and non-verbal gesturing than when engaged in non-symbolic or functional play. Joint attention helps to ensure an exchange of meaning, especially with children who are first to communicate. The results of the study indicate that symbolic play, as Bruner (1981, 1983) suggested, is socially-bound, and supports early language development in children (Quinn & Kidd, 2018).

Scaffolding

Bruner (1983) stressed the importance of adult guidance when learning new skills. As children learn and grow, adults gradually withdraw the supports students no longer need and maintain those they do. Instruction that incorporates the use of scaffolding is a particularly effective strategy for dually served learners (Murphy & Haller, 2015). The use of scaffolding is consistent with Bruner's (1983) social interaction theory. Language, Bruner contended, develops under careful guidance of the environment. Language development in children is the result of interactions with adults that are purposefully scaffolded, providing support when needed (Bruner, 1983; Jeung & Kellogg, 2019).

The work of Wood et al. (1976) first mentioned scaffolding and defined it as "a hierarchical program in which component skills are combined into higher skills" (p. 89). Scaffolding serves the purpose of breaking down more complex tasks into smaller steps to gain and maintain learner attention (Poehner & Infante, 2017). Tasks are broken into manageable parts and responsibility is ultimately given to the learner.

Bruner (1983) briefly described scaffolding as ensuring that a child's "ineptitudes" can be "rescued or rectified" (p. 60) when needed by the adult and then completely removed when the child can perform the task independently. Bruner's (1983) ideas on scaffolding and Vygotsky's (1935/2011) concept of ZPD are interrelated in this manner. The two concepts are not entirely separate; instead, they are complementary. Scaffolding instruction can serve as a means for monitoring a student's mastery and readiness to acquire new skills. Careful monitoring of what scaffolds a student needs is essentially a means of evaluating what skills lie within the ZPD.

Related Literature

ELLs are among the most significantly increasing segments of the student population. The number of these students has increased in number by more than 50% within the last 10 years, and this trend is expected to continue (Counts et al., 2018). The majority of ELLs in public schools serving kindergarten through Grade 12 are comprised of native Spanish speakers (Rodríguez & Rodríguez, 2017). A 2017 report by the U.S. Office of English Language Acquisition (OELA) reported that 10% of students who qualified for English language services also qualified for services as an SWD. Among these students, the most frequently utilized special education category for dually served students was that of specific learning disability (Rodríguez & Rodríguez, 2017).

Bilingualism

The number of people who speak more than one language continues to grow. The ability to speak two languages is generally regarded as a positive attribute. Those who speak two or more languages typically outperform monolinguals in non-verbal tasks (D'Souza et al., 2020). However, in households where English is not the primary language of communication, enrolling students in schools where English is the primary language of instruction is challenging. Home

language is causally linked to the developmental skills children learn early in life and is "the basis of reading and school successes" (Golinkoff et al., 2019, p. 989). It is not uncommon for parental support of the school to be influenced by concerns that education in the non-native language might negatively impact a student's ability to maintain his or her native language (Wesely, 2018).

Native Language Learning

Acquiring language requires a set of complex interactions through which children learn to construct meaning (Kapengut & Noble, 2020). Constructivists and social constructivists such as Vygotsky believe that new knowledge is socially bound and is constructed and integrated with existing knowledge. Instead of an inborn ability to learn language, children derive the ability to use and understand language from their social environment (Behrens, 2021).

Second Language Learning

Second language learning is separated into two types: simultaneous and sequential. Simultaneous language learning occurs when a child is exposed to two languages at home, before school age. Sequential language learning occurs when a child is exposed to a second language after acquiring the first (Limlingan et al., 2020). Children who learn two languages simultaneously tend to follow developmental patterns that mimic those of monolingual children (Limlingan et al., 2020; Sopata et al., 2021). Most of the ELLs in American public schools are sequential language learners (Limlingan et al., 2020). This contributes to the importance of the role of quality, language-rich interactions in academic environments.

Second language learning must embed opportunities for children to continue communicating in their native language (Goodrich et al., 2021; López & Foster, 2021). Learning a second language positively affects a child's cognitive development and bilingual children

typically perform better on tasks that require executive control (Barker & Bialystok, 2019; Cockcroft et al., 2019; Marini et al., 2019). Children who speak more than one language also display better control of inhibitory processes. This may be because of the cognitive flexibility required to maintain multiple languages (Barker & Bialystok, 2019).

Impact on Education

Early parent–child interactions do more than help foster a child's ability to speak. Children also acquire skills that help support both listening and reading comprehension skills that are essential for school readiness and subsequent academic success (Dickinson et al., 2012; Kapengut & Noble, 2020). However, language proficiency is a continuum. ELLs enter school with varying amounts of native language proficiency (López & Foster, 2021; Mancilla-Martinez et al., 2020b). However, during the preschool years, the quality of interactions between ELLs and their teachers and peers are important to developing appropriate language skills that prepare them to enter kindergarten (Rojas et al., 2021).

Quality parent–child interactions may be a better predictor of academic outcomes than literacy activities conducted in the same household (Kapengut & Noble, 2020). Exposure to a language-rich environment in the home also supports vocabulary development and an understanding of sentence structure that helps students comprehend more complex texts as they progress through school (Golinkoff et al., 2019).

However, Rojas et al. (2021) found that once ELLs enter school, their receptive and expressive vocabularies tend to decline when compared to their monolingual peers. This may be because vocabulary development is spread across two languages, weakening the depth of vocabulary knowledge (Mancilla-Martinez et al., 2020b; Rojas et al., 2021). One way to mitigate

this problem is to provide bilingual learning opportunities (Rojas et al., 2021). However, this is not always feasible or realistic for monolingual educators.

Words are powerful indicators of a child's overall development. Children exposed to a second language experience cognitive gains in the areas of verbal short-term memory and verbal working memory (Marini et al., 2019). These children are better able to shift attention between tasks and transferring information into working memory (Chamorro & Janke, 2020; D'Souza et al., 2020; Quinn & Kidd, 2018). This is likely because the unpredictability of the home language environment causes them to frequently adapt to what they are hearing because, in a sense, both languages are always active within their mind (Chamorro & Janke, 2020). Thus, children from bilingual home environments are often adept at seeking out information that helps them to understand what they are hearing and seeing (D'Souza et al., 2020). It is also likely that children that come from bilingual homes have a greater ability to see things from another person's point of view, making them more empathetic and more receptive to learning certain topics (Isaacs, 2021).

Exposure to two languages is not always viewed positively, however (Bialystok, 2018; Chamorro & Janke, 2020). This is particularly true when a child's native language is spoken primarily at home and instruction is provided in the second language. Students for whom instruction is provided in a second and, perhaps, weaker language may perform poorly in subjects that rely on literacy in the second language and fair slightly better in a subject like mathematics where symbols are used (Bialystok, 2018).

In addition, many bilingual children in the United States come from immigrant backgrounds that are typically within a low socioeconomic status (SES) level. Historically, children from low SES households enter school with deficient vocabularies and language skills

that are inadequate (Golinkoff et al., 2019; Lurie et al., 2021). SES affects both language and overall cognitive development (Marini et al., 2019). However, Golinkoff et al. (2019) found that SES mattered little if the conversations between parents and children were meaningful and consistent.

As these children enter school, instruction provided at school is likely to differ from the language spoken at home, further contributing to vocabulary disparities. As in the home, the quality of interactions in both expressive and receptive language at school have been shown to positively impact academic achievement (Golinkoff et al., 2019; Kapengut & Noble, 2020; Lurie et al., 2021). Golinkoff et al. (2019) stressed that quality interactions are key, not quantity.

The Achievement Gap

A problem plaguing schools that enroll dually served students is the widening achievement gap. Students from diverse backgrounds are underperforming when compared to their peers in many academic areas, but this is particularly true in literacy (Golloher et al., 2018). O'Connor et al. (2019) cited statistics that indicated only 5% of ELLs in the eighth grade were proficient in reading. Students with disabilities did not perform much better, with only 10% scoring proficient on reading assessments. While students who qualify as ELLs typically score lower on reading assessments than their monolingual peers, when a lack of English proficiency is compounded by a disability, reading proficiency scores decrease more than those students served as an ELL or an SWD alone (Haager & Osipova, 2017).

This trend is troubling because a lack of basic reading proficiency can lead to problems in other academic areas that rely heavily on reading (Haager & Osipova, 2017). Academic problems that persist can ultimately lead to increased dropout behavior and barriers to entering

postsecondary education. Also, these students experience lower employment rates than their peers from less diverse backgrounds (Wang & Woolf, 2015).

If the academic difficulties experienced by ELLs who also qualify for special education are not adequately addressed, the achievement gap between these students and their peers who receive only general education instruction will continue to widen. For the purposes of examining National Assessment of Educational Progress (NAEP) data, students who are only served under a 504 plan or did not receive special education services were not considered to be in the SWD subgroup. Data for these students were not examined and were excluded from the following data and data tables.

Reading

On average, in 2009, SWD scored an average of 39 points below their non-SWD peers on the NAEP reading assessment. In 2019, the average difference increased to 42.7 points. However, in all grades the difference between SWD and non-SWD scores was significant (National Center for Education Statistics [NCES], n.d.-a). For ELLs, the average score difference was 43 points in both 2009 and 2019 (NCES, n.d.-a). As with SWD, differences in both years and in all grades were deemed significant by the NCES (n.d.-a). Table 1 shows the reading achievement gap for SWD in the fourth, eighth, and 12th grades in 2009 and 2019. Table 2 shows the same reading data for ELLs in those same years (NCES, n.d.-a).

Table 1

Average Scores on the 2009 and 2019 NAEP Reading Assessments for SWD and non-SWD

	2009			2019		
Grade	SWD	Non-SWD	Difference	SWD	Non-SWD	Difference
4	187	223	-36	180	225	-41
8	226	266	-40	224	267	-43
12	248	290	-42	244	288	-44

Note. Adapted from "Achievement Gaps Dashboard" by National Center for Education Statistics (n.d.-a), https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx#. In the public domain.

Table 2

Average Scores on the 2009 and 2019 NAEP Reading Assessments for ELLs and non-ELLs

	2009			2019		
Grade	ELL	Non-ELL	Difference	ELL	Non-ELL	Difference
4	188	223	-35	191	224	-33
8	219	265	-46	221	265	-44
12	240	288	-48	235	286	-51

Note. Adapted from "Achievement Gaps Dashboard" by National Center for Education Statistics (n.d.-a), https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx#. In the public domain.

Reading data available for students dually served in ELL and special education programs for the 2009 and 2019 NAEP assessments further illustrate the difficulties experienced when a lack of language proficiency is compounded by a disability. The average difference on the 2009

reading assessment between dually served students and those identified as neither ELL nor SWD was 79 points. In 2019, the average difference fell almost 10 points to 69.7 points (NCES, n.d.-a). The scores for dually served students fell significantly, and the performance gap widened when both language proficiency and disability were taken into consideration. The results for the 2009 and 2019 NAEP reading assessments are shown in Table 3 (NCES, n.d.-a).

Table 3

Average Scores on the 2009 and 2019 NAEP Reading Assessments for ELLs with Disabilities

	2009			2019		
Grade	Both ELL and SWD	Neither	Difference	Both ELL and SWD	Neither	Difference
4	153	226	-73	161	230	-69
8	192	268	-76	202	270	-68
12	202	291	-88	219	291	-72

Note. Adapted from "Achievement Gaps Dashboard" by National Center for Education Statistics (n.d.-a), https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx#. In the public domain.

Mathematics

On the 2009 NAEP mathematics assessment, SWD scored an average of 33.7 points below students classified as non-SWD. By 2019, the average difference had increased to 39 points. For ELLs, the 2009 mathematics assessment show an average score difference of 34 points. In 2019, this average difference increased to 35.7 points. For the mathematics assessment, score average differences for all grades and year were determined to be significant for both SWD and ELLs (NCES, n.d.-a). Tables 3 and 4 display the math achievement gap according to the 2009 and 2019 NAEP mathematics assessments for SWD and ELLs, respectively.

Table 4

Average Scores on the 2009 and 2019 NAEP Mathematics Assessments for SWD and non-SWD

	2009			2019		
Grade	SWD	Non-SWD	Difference	SWD	Non-SWD	Difference
4	219	241	-22	211	244	-33
8	246	285	-39	242	286	-44
12	115	155	-40	113	153	-40

Note. Adapted from "Achievement Gaps Dashboard" by National Center for Education Statistics (n.d.-a), https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx#. In the public domain.

Table 5

Average Scores on the 2009 and 2019 NAEP Mathematics Assessments for ELLs and Non-ELLs

	2009			2019		
Grade	ELL	Non-ELL	Difference	ELL	Non-ELL	Difference
4	218	242	-24	219	243	-24
8	243	284	-41	243	284	-41
12	116	153	-37	109	151	-42

Note. Adapted from "Achievement Gaps Dashboard" by National Center for Education Statistics (n.d.-a), https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx#. In the public domain.

For dually served students, the 2009 and 2019 NAEP mathematics assessment scores fared slightly better than the reading scores. On the 2009 assessment, the average score difference between dually served students and those served in neither category was 56 points. In

2019, the average difference increased to 58.7 points (NCES, n.d.-a). Table 6 shows NAEP assessment data for dually served students in 2009 and 2019 (NCES, n.d.-a.).

Table 6

Average Scores on the 2009 and 2019 NAEP Mathematics Assessments for ELLs with Disabilities

	2009			2019		
Grade	Both ELL and SWD	Neither	Difference	Both ELL and SWD	Neither	Difference
4	199	244	-45	198	247	-49
8	220	288	-68	226	289	-63
12	101	156	-55	91	155	-64

Note. Adapted from "Achievement Gaps Dashboard" by That National Center for Education Statistics (n.d.-a), https://www.nationsreportcard.gov/dashboards/achievement_gaps.aspx#. In the public domain.

Specific results from the NCES (2019b) indicated only 12% of SWD and 10% of fourth-grade ELLs scored at a minimum proficiency level on the NAEP in reading in 2019. By contrast 39% of non-SWD and 39% of non-ELL students scored at or above the proficient level (NCES, 2019b). By the eighth grade, general education scores remained relatively stable with 37% of non-SWD and 36% of non-ELL scoring at or above the proficiency level. However, the percentage for SWD and ELLs fell to 9% and 4% respectively. By the 12th grade, the percentage of SWD scoring at or above minimum proficiency grew to 13%, but ELLs still lost ground, falling to 3% (NCES, n.d.-c).

In 2019, 45% of non-SWD and 44% of non-ELL students scored at or above proficiency levels in fourth-grade mathematics. Only 17% of SWD and 16% of ELLs met the same standard.

In the eighth grade, mathematics proficiency fell to 38% for non-SWD and 36% for non-ELLs, while SWD decreased to 9% and ELLs decreased to 9% (NCES, 2019a). Twelfth-grade mathematics scores from the same year showed SWD proficiency at 7% and ELL proficiency at 3% (NCES, n.d.-b).

Legislation

Students who receive both special education and ELL services must qualify for each program separately. Guidelines for providing services to both ELLS and SWD were set forth by the Every Student Succeeds Act (ESSA, 2015). However, federal guidelines outlined within the Individuals with Disabilities Education Act (IDEA, 2004) specifically provide guidance for qualifying and providing services to students with disabilities. Though legislation seems to consider the two groups separately, it is interconnected and often addresses the needs of both groups as separate entities. Neither piece of legislation addresses ELLS with disabilities as a combined group.

English Language Learners

The Elementary and Secondary Education Act (ESEA) of 1965 was enacted by President Lyndon B. Johnson and was the first piece of legislation designed to address the quality and inequities in education. Before this, the U.S. government had essentially ignored the educational system, leaving state and local governments to bear most of the responsibility (Casalaspi, 2017). The ESEA was groundbreaking legislation because, for the first time, it provided funding for disadvantaged schools. However, in its initial format, ESEA failed to address either bilingual education or students with disabilities (Nelson, 2016).

President George W. Bush reauthorized ESEA in 2002, renaming it No Child Left Behind (NCLB, 2011). NCLB increased accountability for public schools, particularly regarding

SWD and ELLs (Acosta et al., 2020). In 2015, under the direction of President Barack Obama, NCLB was changed to the Every Student Succeeds Act (ESSA) and was amended to address the how students qualify for English language services. It also provided a timeline within which students were supposed to meet minimum proficiency standards and exit English language services altogether (Mitchell, 2017).

Students with Disabilities

In 1975, the Education for All Handicapped Children Act (EAHCA) or Public Law 94-142 helped to ensure that SWD were provided a free, appropriate public education. At the time, this law was written for two main groups of children: those students with disabilities who had no access to education at all and those students with limited yet inappropriate access to the educational system (U.S. Department of Education, 2010). EAHCA (1975) was also aimed at protecting the rights of both SWD and their parents. This piece of legislation was the first step to ensuring that SWD had access to the same educational resources as their non-disabled peers (U.S. Department of Education, 2010).

In 1990, Congress amended the original EAHCA, renaming it the Individuals with Disabilities Education Act (IDEA). The 1990 amendment was a reauthorization of the original EAHCA and was specifically designed to emphasize recognizing individuals rather than focusing on their disability (U.S. Department of Education, 2010).

The final reauthorization of IDEA occurred in 2004. This reauthorization aligned with the No Child Left Behind Act of 2001 to help increase learning standards for all students. With this, increased accountability measures for schools became a reality (U.S. Department of Education, n.d.-b). A subsequent amendment to the law occurred in 2015 through the Every Student Succeeds Act (ESSA), or Public Law 114-95 (IDEA, n.d.). ESSA was enacted by President

Barrack Obama and catalyzed efforts to improve the quality of education provided to students with disabilities, stating that presenting a disability does not mean that an individual forfeits his or her rights to become productive members of society (IDEA, n.d.; U.S. Department of Education, 2019). ESSA also included educator accountability measures and, for the first time in history, required that all students receive an education based in high academic standards aimed toward college preparation and other postsecondary schooling (U.S. Department of Education, 2019).

> According to the 2004 version of IDEA, SWD are those:
>
> (i) with mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance (hereinafter referred to as emotional disturbance), orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; and (ii) who, by reason thereof, needs special education and related services. (p. 854)

This definition is general in nature and recognized 13 categories of disability, further defined as intellectual disability, speech or language impairment, visual impairment, emotional disturbance, orthopedic impairment, autism, traumatic brain injury, other health impairment, deaf, deaf-blindness, hearing impairment, specific learning disability, and multiple disabilities (IDEA, 2004). Specific qualifying criteria for each category is outlined within the IDEA (2004) statute. However, the criteria are still quite broad and are interpreted differently from state to state.

Eligibility for Services

Students classified as dually served students qualify for both English language and special education services. Federal legislation outlines specific eligibility criteria for both English language and special education services. English language services are more unilateral

while special education services encompass a myriad of characteristics, as well as the 13 categories of disabilities outlined in IDEA (2004). Students who qualify as dually served are most often special education eligible in the areas of specific learning disability (SLD), speech or language impairment, or other health impairment (OHI), with SLD being the most prevalent disability within the population (OELA, 2020b; Rodríguez & Rodríguez, 2017).

English Language Learners

While the ESSA (2015) addressed ELLs and their eligibility for services, it did little more than provide generalized guidelines and promised financial support. The method by which students qualify for English language services is largely relegated to the states. In Georgia, when first registering their children for school, parents are asked to identify their home language using a Home Language Survey (HLS). According to the Georgia Department of Education (2021b), the HLS consists of three major questions:

1. Which language does your child best understand and speak?
2. Which language does your child most frequently speak at home?
3. Which language do adults in your home most frequently use when speaking with your child?

A fourth question is also included on the HLS but is not one of the three require questions. Instead, it is used for data collection purposes and is intended to solicit the preferred language of communication that should be used between home and school (Georgia Department of Education, 2021b).

Students who are entering public schools for the first time are administered an English language proficiency (ELP) screener in the home language identified by their parents (Georgia Department of Education, 2020a; World-Class Instructional Design and Assessment [WIDA],

2020). Students who are transferring from another school within Georgia or another state in the United States are provided with English language services if their school records indicate that such services have previously been in place (WIDA, 2020). The screener provides scores in the four domains of listening, speaking, reading, and writing. It also scores student performance in three composite areas (oral language, literacy, and overall; WIDA, 2021b).

Continued eligibility for English language services is determined using the Assessing Comprehension and Communication in English State to State for English Language Learners (ACCESS for ELLs; Georgia Department of Education, 2020a). The ACCESS test is developed by the WIDA consortium. The ACCESS tests measures English proficiency using subtests in the areas of listening, speaking, reading, and writing. Each subtest receives a scale score that is reported as an interpretive proficiency level score. These scores are as follows: Level 1 *Entering*, Level 2 *Emerging*, Level 3 *Developing*, Level 4 *Expanding*, Level 5 *Bridging*, and Level 6 *Reaching* (WIDA, 2021a). Students who score a composite score of 5.0 or better are automatically exited from English language services (WIDA, 2020). Students who score below 5.0 continue to receive services in most instances. It is possible, however, that students are exited through a school district's English language team when their overall composite score falls between 4.3 and 4.9 (WIDA, 2020).

Specific Learning Disability

To meet SLD eligibility criteria, students who qualify must exhibit deficits that manifest as difficulties with spoken language, written language, or both (IDEA, 2004). The category of SLD is one that directly affects how students learn. While other categories may also cause or present as academic difficulties, students who qualify for SLD services, by definition, have average or above-average intelligence concurrent with academic performance deficits, or an IQ–

achievement discrepancy (IDEA, 2004; Santi et al., 2019). While interpretation of the criteria for interpreting the SLD definition sometimes varies, Compton et al. (2012) described students with learning disabilities as each having unique strengths and weaknesses.

IDEA (2004) defined the category of specific learning disability as a demonstrated difficulty in basic psychological processes. Characteristics that qualify a student for services as a student with an SLD are language-based. Students with a SLD in reading typically present gaps in basic phonological processing skills (Compton et al., 2012). Approximately 33% of all SWD are eligible for special education services as a student with an SLD (National Center for Education Statistics, 2020).

Prior to current practices that are more research-based, the most frequently employed means for identifying students with an SLD was the identification of an IQ–achievement discrepancy. Compton et al. (2012) described this as the "waiting to fail" (p. 79) method of identification. One problem with this method was that students who exhibited gaps between aptitude and achievement were often left to struggle for several years before they were referred for special education. In the meantime, schools typically implemented a variety of strategies that may or may not have had any real academic benefit.

One very specific problem with this method was that the identification of a learning disability was often coupled with an expectancy of failure (Compton et al., 2012). The flawed identification process often required students to experience academic failure for years before the gap between perceived ability and performance was great enough to warrant a special education referral (Compton et al., 2012; Zumeta et al., 2014). Still today, legal guidance aimed toward identification of students with an SLD is likely vague because of little agreement regarding the specific characteristics exhibited by these students (Beaujean et al., 2018). Identification

measures set forth by the achievement-discrepancy model allowed states to interpret the parameters for what constituted a learning discrepancy, and, thus, who qualified for special education services with an SLD eligibility.

To alleviate the need for a student to experience years of failure before receiving a special education referral, Response to Intervention (RTI) programs were implemented. RTI programs are designed to provide evidence-based interventions and to monitor a student's progress, or response, to those interventions (Fuchs & Fuchs, 2006). Targeted specifically at students who are at-risk for academic failure, RTI programs attempt to mitigate problems with special education identification (Fuchs & Fuchs, 2006; Siegel, 2020). RTI programs are typically comprised of a three-tier system of evidence-based interventions that begin in the classroom and progress to small group and, eventually, individualized interventions if the student fails to make adequate progress (Siegel, 2020).

Fuchs and Fuchs (2006) argued that RTI programs were developed, at least in part, to help alleviate the stress and rising costs associated with providing special education services to students with learning disabilities. The achievement discrepancy model typically used to identify students with learning disabilities inarguably created situations where students from lower SES backgrounds were inappropriately placed in special education (Izumi et al., 2019; Santi et al., 2019). However, despite problems with this mode of identification, Izumi et al. (2019) found that it is still the primary method used by approximately 63% of school psychologists surveyed. By contrast, Silva et al. (2020) found that, despite evidence that RTI programs provide a more structured, consistent identification process backed by empirical data, they are still implemented inconsistently.

Speech or Language Impairments

IDEA (2004) defined a speech or language impairment as a communication impairment that negatively affects a student's educational performance. A communication impairment can include "stuttering, impaired articulation, language impairment, or voice impairment" (NCES, 2020, p. 307). According to the NCES (2020), speech or language impairments were the second most prevalent category of eligibility during the 2018–2019 school year with 19% of all SWD qualifying in this category. Pinpointing the actual prevalence of speech or language impairments can be difficult, and the actual number of students who receive speech or language services is likely higher. This is because many speech or language eligibilities are secondary to another primary area of eligibility such as SLD, OHI, intellectual abilities, or autism. Speech and language services are frequently provided as a related service provided to students whose communication skills are adversely affected by their primary area of eligibility (Hall-Mills, 2019).

Other Health Impairment

Students with an OHI are those with health problems that cause a limited alertness in an educational environment. These health problems become a special education issue and lead to eligibility as a student with an OHI when they negatively affect the student's educational performance (IDEA, 2004). IDEA (2004) outlined specific conditions that can lead to an eligibility of OHI that included: "asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome."

The OHI category of eligibility was designed so that students whose educational performance suffered at the hands of a medical impairment would be ensured to receive special

education services, even if they did not qualify under another area of eligibility (Wodrich & Spencer, 2007). This area of eligibility has continued to expand in recent years. During the 2018–2019 school year, approximately 15% of all SWD were eligible for special education services under the OHI category (NCES, 2020).

Problems with Identification

Over- and underrepresentation of ELLs in special education is a systemic problem that occurs for a myriad of reasons. Overrepresentation is defined as instances where students from specific groups are represented within the special education population at higher rates than students from other groups. Underrepresentation occurs when a specific population or group is identified at lower rates than other students from differing groups. Race, language, ethnicity, and a lack of resources are all common causes for both.

Overidentification of ELLs in special education may result because testing often fails to consider the language of instruction (Santi et al., 2019). The lack of a systematic method for identifying ELLs who need special education placement has led to both an over- and underrepresentation of ELLs in special education programs (Becker & Deris, 2019; Golloher et al., 2018).

Students who are acquiring English as a second language may be erroneously identified as presenting with a disability. Santi et al. (2019) hypothesized that the language of instruction would affect the validity of identification measures and lead to an overrepresentation of ELLs in special education. When using assessments in English only, 46% of ELLs tested would potentially qualify for special education services.

Similarly, students who genuinely present with a disability may be overlooked for special education services because differences are attributed to a lack of language proficiency instead of

actual disability (Golloher et al., 2018). Sometimes a referral for special education placement for ELLs is a judgment call. If school personnel do not perceive that a student's English skills are sufficiently developing, special education testing may be expedited. Conversely, other professionals may be overly cautious with special education referrals, causing students who should qualify for services to never be assessed at all (Becker & Deris, 2019).

Ferlis and Xu (2016) examined the perceptions of elementary and middle school teachers on how ELLs are referred for special education. Factors that affected the referral of ELLs for special education services were identified. These included the use of specialized interventions, parental resistance to referral, and barriers based at the school level. Participants in the study agreed that research-based, individualized interventions were more effective when working to identify ELLs for special educations services. However, the participants also identified parental and school barriers to identification. Some participants felt that parents of ELLs were reluctant to visit the school because of their immigration status. Others noted that parents of ELLs often place more stigma on disability and are reluctant to participate in the process at all. School-based barriers to identification included an inadequate knowledge of ELLs and a lack of assessments in students' native languages (Ferlis & Xu, 2016).

Sometimes difficulties with identification can be attributed to assessments that are developed with monolingual students in mind (Ferlis & Xu, 2016; Francis et al., 2019). Within this, there lies a fundamental misunderstanding that students who speak a language other than English cannot be adequately assessed for special education services. Furthermore, whether translated versions of standardized tests often used for special education eligibility are an appropriate solution to this problem is a point of contention. McGill et al. (2020) found that the translated Wechsler Intelligence Scale for Children, WISC-IV (a commonly used aptitude test),

was not equitable to English versions of the test, with the exception of the general intelligence and processing speed subtests. The complexities of both the English language and the variability among ELLs contributes to difficulties with adapting or translating standardized assessments (Karem & Washington, 2021). Furthermore, many English-based assessments do not include bilingual children in the normative sample and extreme caution should be used when using directly translated assessments (Harris et al., 2020).

Tests such as the Kaufman Assessment Battery for Children (KABC) are purported to be less biased toward ELLs because they do not rely as heavily upon language. The same is true for other, non-verbal assessments. However, the use and interpretation of non-verbal assessment is complex (Harris et al., 2020). Achievement testing such as the Woodcock Johnson come with the same warnings, and Harris et al. (2020) explained that the normative samples may or may not represent the diverse populations that the tests are supposed to measure.

As a result, teachers may delay the special education referral process to ensure that academic problems do not originate from a lack of English proficiency. Intensive language support services tend to wane as students progress through school, and teachers often wait to see if academic difficulties are connected to language proficiency. When these difficulties persist, the student may not be referred for special education services until the upper elementary level (Counts et al., 2018).

Assessment of ELLs should be socio-culturally tailored to student needs, but more professional development for general and special education teachers is needed for referral and prereferral decisions to be effective (Becker & Deris, 2019; Ferlis & Xu, 2016). Specifically, school staff need to develop a greater understanding of what it means to acquire a second language (Becker & Deris, 2019). Failure to understand the basic processes of learning a

language means that ELLs are likely not receiving the language support they need in the classroom. It also means that educators may not know how to choose appropriate assessments that can measure what ELLs know and understand (Counts et al., 2018).

Identification of students who are classified as ELLs in special education is not a perfect process. This is particularly true when a student qualifies as a student with a SLD (Barrio, 2017). IDEA (2004) established the most accepted characteristics of a learning disability, but there is little guidance or how to effectively identify these students from minority populations (Francis et al., 2019). When a student is receiving instruction in and learning a second language, typical identification processes do not provide the best results and cutoff scores for disability classification are not typically normed for students whose native language is not English. Other factors such as language programs at the school level influence identification, making establishing normative scores very difficult.

While exclusionary factors often apply in special education placement decisions, these factors are difficult to apply for ELLs because of the varied language instruction and other variables that could potentially be exclusionary factors within themselves (Francis et al., 2019). Qualification for SLD services, for example, requires those making eligibility decisions to affirm that difficulties with learning are not attributed to cultural or environmental factors (Yamasaki & Luk, 2018).

Another complicating factor for identification is the debate of whether language is learned or acquired naturally (Farnsworth, 2018). Theorists such as Vygotsky (1935/2011, 1934/1986) believed that language is acquired through social interactions with both objects and people within the environment. Vygotsky (1934/1986) further believed that the language spoken at home forms the foundation for learning. The social realm of speech used at home is important

because it helps to frame what children know and understand. However, most current research attests language is both acquired and learned (Farnsworth, 2018). This thought process typically assumes that the essential elements of communication are naturally acquired, and the more complex features of language such as syntax, vocabulary, and other rules are learned. With this reasoning, it is easy to understand why locating appropriate tools that focus on clear identification criteria is burdensome.

Providing Services

Once the identification process is complete, educators must consider how to deliver special education or English language services. If a student qualifies for both services, educators must determine how to meet both the legal requirements set forth by the ESSA (2015) and IDEA (2004). Students who qualify as both ELL and SWD must be provided services by each program (Kangas, 2018). Determining appropriate services requires a delicate balance that is often difficult to achieve. While IDEA (2004) and ESSA (2015) mandate that services must be provided, they are far from clear about what is the best means of doing so.

English Language Learners

Students who receive English language services often receive services through either a sheltered or mainstream model. Shelter services typically remove ELLs from the general education environment for a specified period during which core academic instruction takes place. Mainstream models differ from shelter models in that instruction in the mainstream takes place within the general education environment with non-ELL peers. Within both the sheltered and mainstream instruction models, English is the primary language of instruction (Serafini et al., 2020).

Students with Disabilities

Placement options for SWD are determined annually at IEP meetings and are based on the continuum of placement set forth by IDEA (2004). IDEA (2004) mandates that all students with disabilities should be educated with their non-disabled peers to the fullest extent possible. This concept is known as education in the Least Restrictive Environment (LRE) and falls in line with the idea that special education is a service provided instead of the location of a classroom (Agoratus, 2020; Kauffman et al., 2020; Williamson et al., 2020). Agoratus (2020) called special education services "portable" (p. 43), meaning that they can be delivered in any environment determined that to be appropriate. The LRE requirement affords SWD opportunities to progress within the general education curriculum before more restrictive settings are considered (Williamson et al., 2020).

Dually Served Students

Many students who qualify for both services find themselves in service models that do not adequately address academic concerns (Golloher et al., 2018). Despite legislation set forth by both the ESSA (2015) and IDEA (2004) for ELLs and SWD respectively, students who are dually served in both English language instruction and special education continue to find themselves in separate class placements (Cheatham & Hart Barnett, 2017; Martínez-Álvarez, 2019; Spies & Cheatham, 2018). These more restrictive placements often fail to provide support for language development (Martínez-Álvarez, 2019). This lack of support can leave dually served students in inappropriate instructional settings that exacerbate academic difficulties because students do not make adequate progress. When considered alone, however, inclusion is the most frequently used service model for SWD (Spies & Cheatham, 2018). The same is true for ELLs. When considering only language proficiency for placement decisions, the standard model

for serving ELLs is the push-in model that bears a heavy resemblance to the special education inclusion model (Kangas, 2017).

Exactly why students who also qualify for ELL services are placed in more restrictive settings is unclear but may be the result of a fundamental misunderstanding about how best to address the needs of these students. Some errors in placement can be attributed to the culturally and linguistically diverse backgrounds from which dually served students come (Yamasaki & Luk, 2018). However, such placement is counterproductive to federal demands that require students to perform and be assessed at grade level (Desimone et al., 2019). Placement in more restrictive settings is most often coupled with instruction that is not on grade level, making the interpretation of federally- and state- mandated testing difficult (Liu et al., 2017).

ELLs with disabilities possess the potential to bring a wide variety of skills and background knowledge to the classroom (Spies & Cheatham, 2018). While their diverse learning needs indeed present challenges, capitalizing on these strengths requires educators to focus upon the assets students possess and to focus on collaboration with other educators and specialists to adequately address those challenges (Kangas, 2017; Spies & Cheatham, 2018).

Many schools also continue to emphasize the requirements established by IDEA (2004), solely providing special education services at the complete expense of those meant to improve English language proficiency (Kangas, 2018). Cheatham and Hart Barnett (2017) asserted, however, that schools must remember that these students do not forfeit their right to English language services just because they qualify for special education. Though placement is admittedly more complex, these students are still afforded the right to placement in the LRE as outlined in IDEA (2004).

Teacher Preparedness

Public schools within the United States enroll students who speak more than 400 languages in addition to English (Cárdenas-Hagan, 2018). Despite acknowledging that students who are dually served require specialized instruction tailored to address both English proficiency and disability, many teachers feel underprepared to effectively teach these students. Many teachers recognize that language acquisition and disability can be interconnected but lack confidence in their own (or their school's) ability to differentiate and adequately address the unique needs of these students (Cheatham & Hart Barnett, 2017).

Moreover, most teacher preparation programs do not focus upon preparing teachers to teach dually served students. Miranda et al. (2019) found that most special education preparation programs lacked a component that helped future special education teachers to teach SWD who also happen to be ELLs. Many programs prepare future teachers to focus upon a specialty area such as elementary, secondary, English language, or special education singularly, but lack a component that addresses instruction for students needing specialized instruction to address multiple areas of need (Ortiz & Robertson, 2018).

A literature review conducted by Wang and Woolf (2015) included the recommendation for existing teacher preparation programs to identify the specific competencies teachers for dually served students should possess. The review found that most preservice teachers do not originate from culturally diverse backgrounds, leading to a disconnect between themselves and the students they teach. While many programs have increased the ability to address the instruction of ELLs and SWD separately, many are inadequate in producing teachers who are equipped to deal with this expanding population that is dually categorized (Mills et al., 2020; Wang & Woolf, 2015). However, because of the parallel nature of special education and ELL

teacher preparation tracks, those charged with designing preparation programs may not exactly know how to provide this preparation to teacher candidates (Miranda et al., 2019; Ortiz & Robertson, 2018).

Training that focuses on cultural competence and best teaching practices is most effective for encouraging ELL development in math, literacy, and language (Ramirez et al., 2019). Special education teacher preparation programs might benefit from the inclusion of an intensive ELL component. Ramirez et al. (2019) found that proper training and professional development greatly affects student academic development more than actual teaching experience. In the study, teachers with 1 hour of professional development evoked a 0.04 increase in the vocabulary standard scores of ELLs. Conversely, the number of years' experience a teacher had with working with ELLs was not a significant predictor of outcomes in the study (Ramirez et al., 2019). One probable cause is that professional development is likely to focus upon culturally responsive teaching and best practices that can later be implemented in the classroom. Teachers who understand current theories, policies, and best practices for instructing ELLs with disabilities are better able to create learning environments that are culturally responsive to diverse student needs (Ortiz & Robertson, 2018).

Specific elements necessary for successfully preparing teachers to support dually served students include requiring teacher candidates to demonstrate an understanding of the sociocultural characteristics of the ELL population. In addition, teacher candidates should thoroughly understand the best instructional practices for teaching ELLs. Miranda et al. (2019) found that these two elements were at least partially addressed in teacher preparation programs. However, the programs examined rarely addressed how students acquire a second language or how to appropriately assess and provide accommodations for ELLs. In addition, the two

elements that were omitted from the programs were the two with which teachers felt the least prepared (Miranda et al., 2019).

Ortiz and Robertson (2018) expanded upon these four areas and outlined eight broad principles by which teacher competency can be measured: language and linguistics, cultural variability, educational contexts, literacy foundations, language and literacy assessment, instruction/intervention, collaboration, and professional and ethical practice.

Language and Linguistics. To be adequately prepared, teacher candidates must understand how a second language is acquired (Miranda et al., 2019; Ortiz & Robertson, 2018). This includes understanding the basic components of language, as well as how one language differs from another. Furthermore, teachers must know and understand the benefits and disadvantages to being bilingual (Ortiz & Robertson, 2018).

Cultural Variability. Competency in cultural variability includes understanding how culture provides the foundation for values and beliefs. It is important that teachers understand this about themselves as well as the students they serve. This includes what each culture views as appropriate interactions and behavior (Ortiz & Robertson, 2018).

Educational Contexts. Teachers who are effective at teaching dually served students understand the basic theories, best practices, and applicable laws and regulations that apply to both ELLs and students with difficulties or identified disabilities (Miranda et al., 2019; Ortiz & Robertson, 2018). This tenet works in concert with the cultural variability principle in that teachers should provide culturally responsive learning environments (Ortiz & Robertson, 2018).

Literacy Foundations. Ortiz and Robertson (2018) outlined basic teacher understanding regarding the foundations of literacy. Not only must teachers demonstrate knowledge regarding the stages of literacy development, but they must also understand the complex relationship

between listening, speaking, reading, and writing. Miranda et al. (2019) expanded this to include that teacher preparation programs should expect teachers to understand how language proficiency relates to curricular areas outside of reading and writing.

Language and Literacy Assessment. Assessments in language and literacy require an in-depth understanding of how to assess the oral language skills in English. Though markedly more complicated, assessment of a student's native language skills is ideal (Francis et al., 2019; Ortiz & Robertson, 2018). Native language assessments would facilitate special education referrals, as well as ensure that they are appropriate (Ortiz & Robertson, 2018).

Instruction/Intervention. Literacy instruction rooted in best practices for both ELLs and non-ELLs is essential. Effective instruction promotes both language and literacy development simultaneously. This includes providing opportunities for students to engage in conversation in both their native and second language (Ortiz & Robertson, 2018). Assessments help to inform instruction, interventions, and accommodations given (Miranda et al., 2019; Ortiz & Robertson, 2018).

Collaboration. Effective teachers collaborate. Effective collaboration involves developing accountability for addressing the needs of dually served students. Ortiz and Robertson (2018) stated that effective collaboration provides a means for non-English speaking parents to provide input regarding the goals and academic outcomes for their students. Other individuals involved in the education of dually served students should be involved in the decision-making processes for determining appropriate interventions, services, and accommodations (Liu et al., 2017). For this to be effective, however, future (and current) educators must understand that the instruction of these students is a jointly held responsibility (Liu et al., 2017; Mills et al., 2020).

Professional and Ethical Practice. This principle requires teachers to be reflective, continually assessing their abilities to meet the needs of students. This involves participating in professional development activities that address the other principles addressed above (Ortiz & Robertson, 2018). Unfortunately, in districts where shifts in demographics are more recent or emerging, professional development regarding ELLs is lacking (Hopkins et al., 2019).

Instruction

Students who exhibit signs of reading difficulty in early grades cannot afford to wait for reading intervention. A 2018 meta-analysis by Wanzek et al. showed that early interventions are necessary to address reading difficulties. Students in first through third grades exhibited more significant positive reading growth when instruction was delivered early and specifically tailored to meet their needs. Early reading interventions in the study had an effect size of 0.28 when interventions were provided in kindergarten through the third grade (Wanzek et al., 2018).

Students who score at or below the 20th percentile in reading in the second grade are more likely than their peers to exhibit reading difficulties in the third grade and beyond (Rojas et al., 2021). The problem begins earlier than third grade, however. ELLs with reading difficulties in second and third grades likely exhibited difficulties with early literacy skills as early as kindergarten. In these cases, difficulties with reading continues to increase in both Spanish and English.

Common Core Performance Standards

Legislation such as the ESSA (2015) and the IDEA (2004) increased accountability measures for ELLs and SWD. However, the adoption of the Common Core State Standards (National Governors Association Center for Best Practices, 2010) has further complicated teachers' abilities to determine how best to provide instruction to dually served students.

Advocacy for greater accountability and higher standards for ELLs and SWD is complicated because specialized instruction is necessary to meet their specific needs, but they are assessed and subjected to the same standard as their peers in general education only (Desimone et al., 2019). How to simultaneously uphold the high standards of the Common Core and meet the needs of ELLs and SWD who are performing below grade level is a challenge not easily met.

Services for dually served students are often provided outside of the general education environment in more restrictive special education classrooms (Cheatham & Hart Barnett, 2017; Spies & Cheatham, 2018). Instruction provided in these environments is most likely less rigorous and less likely to be aligned with grade-level standards than instruction provided in the general education setting (Liu et al., 2017). This makes it difficult to discern whether current service models are contributing to the academic growth of students placed in these settings.

Teachers charged with implementing Common Core Standards for these students indicated that they have not received sufficient support with implementation (Murphy & Haller, 2015). A literature review conducted by Erickson (2018) echoed the difficulty with implementing the Common Core Standards. Since the implementation of the NCLB in 2002, teachers have found it challenging to maintain a rigorous level of instruction that is developmentally appropriate for students.

Current Practice

In addition to the challenge schools face in determining the correct environment in which to provide services to dually served students, determining the instructional strategies that are most effective for these students has proven to be equally problematic (Barrio, 2017). Instructional strategies for ELLs traditionally focus upon language development. Strategies used

for SWD tend to address the effects of the disability upon overall development or classroom performance.

Developmentally Appropriate Practices. To address the challenges presented by the Common Core Standards, some teachers are adapting and integrating developmentally appropriate practices (DAP) in their literacy classrooms (Erickson, 2018). The implementation of DAP for dually served students is supported by the theoretical ideology of Vygotsky (1935/1978, 1935/2011) in terms of his ZPD. Instruction provided in the DAP sheds the notion that children develop in a uniform manner. Vygotsky (1935/1978) believed that development follows learning, but not proportionally. Instead of being linear, the developmental processes overlap, making every child's experience unique (Thompson & Stanković-Ramirez, 2021).

DAP are child-centered and focus on meeting the child's needs with considerations for culture, background, and community (Thompson & Stanković-Ramirez, 2021). Thompson and Stanković-Ramirez (2021) argued that parents are the first teachers, and children learn best when DAP challenge children to learn at a level this is just beyond their current level of mastery. This thinking coincides directly with Vygotsky's (1935/1978) ZPD. When instruction is not within the appropriate ZPD, it may lead to a lack of progress (Eun, 2017).

A 2019 study by Ward and Wilcox-Herzog showed that the college-aged students enrolled in child development classes preferred the use of DAP as opposed to didactic practices that are traditionally more teacher-centered. Beers (2019) proposed that DAP allow for greater choice, problem solving, and critical thinking for students. This type of instruction, however, is sometimes counterintuitive to those whose ideology is more traditional and leans toward a more teacher-centered approach.

Vygotsky (1935/1978) believed that children have the capability to accomplish tasks that they cannot yet comprehend. He believed that schools should move beyond what is immediately attainable toward what can be accomplished with assistance (Eun, 2017; Vygotsky, 1935/1978). This is the fundamental premise of the ZPD. DAP and the ZPD are complementary, requiring educators to be cognizant of the needs of students and address them on an individualized basis.

English Language Learners. Instruction for ELLs should include references to their native or home language. Doing so helps to support second language development and aids in supporting literacy achievement in the second language (Cárdenas-Hagan, 2018). Teachers who are effective in improving the academic achievement of ELLs tend to be those who encourage continued or increased literacy in the home language (Ramirez et al., 2019).

Instructional practices for ELLs typically include some variation of vocabulary instruction. O'Connor et al. (2019) outlined the need for daily instruction for academic vocabulary using high-leverage words that support both reading and language development. Jozwik and Douglas (2017) explored the effects of multicomponent academic vocabulary instruction on a group of students who qualified for both English language and special education services. Their study found that systematic vocabulary instruction is a critical component of reading instruction for ELLs who exhibit reading difficulty. Vocabulary instruction utilized in the study included a social component that allowed students to work cooperatively with others (Jozwik & Douglas, 2017). These results support the notion that students in English language programs benefit from engaging in conversations and other social situations with their peers.

Students with Disabilities. Strategies that help SWD to build background knowledge have been shown to be particularly effective with students who have SLDs (Hovey et al., 2019). Activities that help to build vocabulary are also effective for SWD. SWDs who struggle in

language deficiencies need vocabulary strategies in order to effectively participate in the classroom environment (Hovey et al., 2019).

Hovey et al. (2019) defined explicit instruction as teaching in small, manageable steps. Teachers release information as students become better prepared to handle it. This is much like Bruner's (1983) concept of scaffolding. Students are provided with support that is gradually withdrawn as they begin to demonstrate mastery.

Dually Served Students. Students who qualify for both special education and English language services require supports that address both disability and language acquisition (Sarisahin, 2020). According to Rodríguez and Rodríguez (2017), one of the first questions that educators should answer is which language is most appropriate for instruction for these dually served students. This includes identifying and utilizing resources in a student's native language if it is developmentally appropriate. One common misconception is that instruction for these students must be provided in English first (Cheatham & Hart Barnett, 2017). However, educators should consider the appropriateness of delivering instruction that serves to focus on both bilingualism and learning difficulties precipitated by disability (Rodríguez & Rodríguez, 2017).

Students who qualify for both English language and special education services frequently benefit from strategies that incorporate both visual and written cues. This may include graphic organizers, providing both written and oral directions, along with disaggregating material into manageable parts (Cheatham & Hart Barnett, 2017). Each of these strategies can be implemented and fully assimilated into all areas of academic instruction. The use of visual representations is a form of explicit instruction that is beneficial for both ELLs and SWD. Visual representations can serve as concept anchors for both groups of students as well as those who are dually served (Hovey et al., 2019).

A 2016 meta-analysis conducted by Hall et al. showed that teachers that used vocabulary instruction in conjunction with unstandardized reading comprehension measures were more effective than instruction that focused on vocabulary alone. A critical takeaway from this study, however, focused not on the *where*, but instead on the *how* of reading instruction. The studies analyzed by Hall et al. (2016) revealed that reading instruction delivered inside a literacy-based classroom did not yield statistically different results than reading instruction that was provided in another content area classroom. These findings imply that reading instruction could be effectively implemented across the curriculum.

Summary

Contemporary schools are becoming increasingly more diverse. Students whose native language is something other than English contribute to that diversity. A component of this expanding group includes students who qualify for both English language and special education services. Currently, schools are challenged with how to best meet the needs of this enlarging population of dually served students. However, despite increased attention to this population, these students continue to underperform compared with their general education peers in terms of academic achievement, particularly in reading (Haager & Osipova, 2017).

One contributing factor to this burgeoning problem is that schools find it challenging to differentiate between disability and language acquisition (Rodríguez & Rodríguez, 2017). As a result, students whose native language is something other than English are both over- and underrepresented in special education. This disproportionality complicates decisions regarding reading instruction for this population because schools are unsure from which perspective to address academic deficits, particularly those such as reading that are entrenched in language development. Despite qualifying for both special education and English language services,

schools often provide one service at the expense of the other, leaving these students with instruction that does not meet their specific needs (Kangas, 2018).

Research regarding strategies for increasing reading skills that best meet the needs of students who are dually categorized is lacking, yet necessary, to address this emerging problem. Social interaction for these students continues to be important. Furthermore, concepts presented in Vygotsky's (1935/1978, 1935/2011) and Bruner's (1983) theories indicate that instruction for these students should be individually tailored to meet the needs produced by both disability and lack of English proficiency. By investigating and examining strategies that are effective for both groups separately, strategies that prove effective for students who are designees of both groups will hopefully emerge.

CHAPTER THREE: METHODS

Overview

Chapter Three's purpose is to describe the research being conducted and to provide details regarding procedures that were used in the study. This study sought to determine whether there was a relationship between parental preferred language and the academic achievement scores of students dually served in programs for English language learners and special education. This chapter outlines the study's design, research questions, null hypotheses, procedures, data analysis, as well as its participants.

Design

This study used a causal comparative design to explore the relationship between parental preferred language of communication and the standardized scale scores on the English language arts and mathematics sections of the Georgia Milestones Assessment System's End-of-Grade (GMAS EOG) assessment for students dually served in English language and special education programs in Grades 3–8. Causal comparative research is a type of nonexperimental quantitative research in which the researcher compares at least two groups in terms of a single cause that has already occurred (Creswell & Creswell, 2018). In causal comparative research, the researcher seeks to determine if the independent variable (cause) affects the dependent variable (effect) (Creswell & Creswell, 2018; Gall et al., 2007). In this type of research, the independent variable is categorical and can be of nominal or ordinal scale. Comparisons are made between the means of two groups and one dependent variable (Gall et al., 2007). The dependent variable is continuous data that is interval in nature.

Causal comparative designs do not allow researchers to draw definitive cause-and-effect relationships. Still, they are beneficial when exploring associations between variables where the

independent variable cannot be changed or manipulated (Gall et al., 2007). Thus, causal comparative research is also considered ex post facto research (Creswell & Creswell, 2018; Gall et al., 2007; Salkind, 2010). A primary goal of this research design is to determine whether groups formed for the independent variable exhibit a difference when compared in relation to the dependent variable (Gall et al., 2007). This lack of control over the independent variable means that the relationship between the variables is suggested rather than definitive. Causal comparative designs are also appropriate for research that explores the effects of environmental factors on academic achievement (Smith, 2001).

In causal comparative studies, the proposed cause is the independent variable, and the effect is the dependent variable (Gall et al., 2007). This study explored if the parental preferred language of communication influenced the English language arts and mathematics GMAS EOG scores of dually served students. Therefore, the independent variable was the preferred language of communication of the participants' parents. Parental preferred language was identified by determining whether the participants' parents preferred communication with home in English or a language other than English. The dependent variables were the English language arts and mathematics scale scores on the GMAS EOG assessment for dually served students in the two identified grade level groupings.

Salkind (2010) stated that even though experimental designs are more effective at examining true cause-and-effect relationships, true experimental designs are not always feasible or appropriate. Causal comparative studies compare two or more groups and are more practical when the independent variable cannot be manipulated or when the comparison groups are naturally occurring (Gall et al., 2007; Salkind, 2010). The independent variable (parental preferred language of communication) cannot be manipulated, yet this study sought to examine

whether it affected the GMAS EOG scores of dually served students. Therefore, a causal comparative design was appropriate for this study.

Vaughn (2020) used a similar structure for a causal comparative study that examined the Preliminary Scholastic Aptitude Test (PSAT) scores of two groups of students: those who attended classical Christian schools and those who attended non-classical Christian schools. The participants in the study were naturally grouped through their preexisting school choice. This grouping allowed the researcher to determine whether there was a statistically significant difference in the PSAT scores between the two predetermined groups. Similarly, Garza-Reyna (2019) used a causal comparative design to examine the college readiness of two groups of students educated with varying degrees of instruction in their native language. This study also investigated a dichotomous independent variable's effect on the dependent variable, college readiness, as measured by student performance on the American College Test (ACT).

Research Questions

The research questions for this study were as follows:

RQ1: Is there a difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

RQ2: Is there a difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

Hypotheses

The null hypotheses for this study were as follows:

$H_0$1: There is no difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English, as measured by the Georgia Milestones End-of-Grade assessment.

$H_0$2: There is no difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English, as measured by the Georgia Milestones End-of-Grade assessment.

Participants and Setting

Using archived data, the participants in this study were drawn from a convenience sample of dually served students in Grades 3 through 9 in a northwest Georgia school district during the 2018–2019 school year. While more recent data is usually preferred, the atypicality of instruction and school operations due to COVID-19 in the 2019–2020 school year and beyond precludes its use. The most recent pre-COVID data better served this study's purpose.

The area surrounding the school district employs a vast majority of its citizens in entry-level jobs within carpet mills and factories. The area in which the school district is located comprised an estimated population of 104,628 in 2019. Of these, 36.3% were of Hispanic or Latino descent and 18.7% were foreign-born. Approximately 12.7% of the population in the area were living in poverty in 2019 (U.S. Census Bureau, n.d.).

During the 2018–2019 school year, the district enrolled 12,613 students, of which 43% identified as Hispanic and 24% were categorized as economically disadvantaged. Twenty-two percent of students within the county were eligible to receive English for Speakers of Other Languages (ESOL) services as an ELL and 14% of the total student population qualified for

special education services (Governor's Office of Student Achievement, n.d.-c).

In the spring of 2019, the school district administered the GMAS EOG English language arts assessment to 923 students classified as ELLs (671 in Grades 3–5 and 252 in Grades 6–8). The district administered the GMAS EOG English language arts assessment to 885 SWD (454 in Grades 3–5 and 431 in Grades 6–8). Of these, 80.3% of ELLs and 90.1% of SWD at the elementary level failed to meet minimum proficiency standards. At the middle school level, 96% of ELLs and 92.1% of SWD also fell below minimum standards (Governor's Office of Student Achievement, n.d.-b). In the same academic year, 52.2% of students without disabilities and 51.5% of students without limited English proficiency failed to meet minimum literacy standards at the elementary level. At the middle school level, 52.2% of students without disabilities and 54.5% of students without limited English proficiency failed to meet minimum standards on the English language arts assessment (Governor's Office of Student Achievement, n.d.-b).

In the area of mathematics, the district administered the GMAS EOG mathematics assessment to 922 students classified as ELLs (671 in Grades 3–5 and 251 in Grades 6–8). SWD comprised 881 of those assessed. At the elementary level, 72.3% of ELLs and 85.1% of SWD failed to meet minimum proficiency standards. At the middle school level, 89.3% of ELLs and 88.5% of SWD scored below minimum proficiency levels. By comparison, at the elementary level, 47.5% of students without disabilities and 47.7% of students without limited English proficiency scored below minimum standards. At the middle school level, 52.4% of students without disabilities and 54.7% of students without limited English proficiency failed to meet basic standards in mathematics (Governor's Office of Student Achievement, n.d.-b).

The percentage of ELLs at each level of proficiency on the GMAS EOG assessment is shown in Table 7. Table 8 shows the percentages of SWD at each proficiency level.

Table 7

District ELLs' Performance on the 2019 GMAS EOG Assessment

Grade and Assessment	Beginning Learner	Developing Learner	Proficient Learner	Distinguished Learner
3–5 ELA	36.2%	44.1%	18.0%	1.6%
3–5 Mathematics	22.1%	50.2%	26.1%	1.6%
6–8 ELA	61.5%	34.5%	2.8%	1.2%
6–8 Mathematics	37.5%	51.8%	9.6%	1.2%

Note. Adapted from "K–12 Public Schools Report Card" by Georgia Governor's Office of Student Achievement (n.d.-b), https://gaawards.gosa.ga.gov/analytics/K12ReportCard. In the public domain.

Table 8

District SWD's Performance on the 2019 GMAS EOG Assessment

Grade and Assessment	Beginning Learner	Developing Learner	Proficient Learner	Distinguished Learner
3–5 ELA	57.9%	32.2%	8.1%	1.8%
3–5 Mathematics	48.5%	36.6%	13.4%	1.5%
6–8 ELA	61.9%	30.2%	6.7%	1.2%
6–8 Mathematics	47.3%	41.2%	10.1%	1.4%

Note. Adapted from "K–12 Public Schools Report Card" by Georgia Governor's Office of Student Achievement (n.d.-b), https://gaawards.gosa.ga.gov/analytics/K12ReportCard. In the public domain.

By comparison, during the 2018–2019 school year, the state of Georgia tested 39,878 ELLs in English language arts and 39, 856 in mathematics at the elementary level. Of these,

84.4% of ELLs failed to meet minimum proficiency standards in English language arts, and 72% fell below in mathematics. At the elementary level, 53,373 SWD were administered the English language arts assessment, and 53,317 were administered the assessment in mathematics. For these students, 85.5% did not meet minimum proficiency standards in English language arts and 80.5% did not meet standards in mathematics (Governor's Office of Student Achievement, n.d.-b).

At the middle school level, 17,290 English language learners were administered the English language arts assessment and 17,004 were administered the assessment in mathematics. Ninety-six percent of ELLs at this level did not meet minimum English language arts standards and 90.9% failed to meet mathematics standards. In the same year, 50,321 SWD were administered the English language arts assessment and 53,317 were administered the assessment in mathematics. Approximately 89.7% of SWD middle school students failed to meet minimum English language arts standards and 89.1% failed to meet standards in mathematics (Governor's Office of Student Achievement, n.d.-b).

Table 9 shows the percentage of Georgia English language learners at each level of proficiency on the GMAS EOG assessment. Table 10 shows the percentage of Georgia SWD at the four proficiency levels on the GMAS EOG assessment.

Table 9

State ELLs' Performance on the 2019 GMAS EOG Assessment

Grade and Assessment	Beginning Learner	Developing Learner	Proficient Learner	Distinguished Learner
3–5 ELA	44.2%	40.2%	14.0%	1.6%
3–5 Mathematics	30.1%	41.9%	24.7%	3.3%
6–8 ELA	74.5%	21.5%	3.8%	0.2%
6–8 Mathematics	55.2%	35.7%	7.4%	1.7%

Note. Adapted from "K–12 Public Schools Report Card" by Georgia Governor's Office of Student Achievement (n.d.-b), https://gaawards.gosa.ga.gov/analytics/K12ReportCard. In the public domain.

Table 10

State SWD's Performance on the 2019 GMAS EOG Assessment

Grade and Assessment	Beginning Learner	Developing Learner	Proficient Learner	Distinguished Learner
3–5 ELA	56.3%	29.2%	11.2%	3.3%
3–5 Mathematics	49.2%	31.3%	15.3%	4.2%
6–8 ELA	62.5%	27.2%	9.2%	1.2%
6–8 Mathematics	56.1%	33.0%	9.0%	1.9%

Note. Adapted from "K–12 Public Schools Report Card" by Georgia Governor's Office of Student Achievement (n.d.-b), https://gaawards.gosa.ga.gov/analytics/K12ReportCard. In the public domain.

For this study, the number of participants sampled was 110. The number of dually served students whose parents prefer communication in English was 55. The number of dually served

students whose parents prefer communication in a language other than English was 55. This exceeded the number of participants required for a medium effect size. For the independent samples *t* tests, 100 participants are necessary when assuming a medium effect size with a statistical power of 0.7 and an alpha level of 0.05 (Gall et al., 2007). Groups examined for the English language arts scores were the same groups examined for the mathematics scores.

The sample originated from a pool of dually served students at each grade level grouping from 13 elementary schools and five middle schools within the county. Students that were sampled were dually served students in the ESOL and special education programs in Grades 3–8. Students whose educational programming was based on an alternate or functional curriculum or those who participate in the Georgia Alternate Assessment (GAA) were not included in the sample. Students in Grade 8 who took high school courses assessed by the end-of-course assessment were also excluded from the sample because they did not take the EOG assessment. Most of the students sampled received services in either general education inclusive or resource environments. However, students from self-contained programs may have been sampled if their designated curriculum required them to take the GMAS EOG assessment rather than an alternate curriculum assessment.

Instrumentation

This causal comparative study explored the relationship between home language and the scale English language arts and mathematics scores on the Georgia Milestones Assessment System's End-of-Grade (GMAS EOG) assessment for students dually served in ESOL and special education programs in Grades 3–8. Continued evaluation of the GMAS EOG assessments indicates that the assessments are reliable for their intended purpose and produce valid results (Georgia Department of Education, 2020b).

Parental Preferred Language of Communication

For this study, the independent variable of parental preferred language of communication was determined by a self-reported measured gathered from each family as part of the school registration process. Families indicated a preferred language at the beginning of the school year. An abbreviated registration process is completed yearly as a means for updating student demographic information. Families reported their language status in terms of preferred language of communication. This self-reporting measure was used to group the participants in terms of the dichotomous independent variable, parental preferred language of communication. Permission to include the registration form in this study was obtained from the school district. The district enrollment form completed upon registration is included in Appendix E.

Previous studies that incorporated home language as an independent variable also used self-report measures. Mancilla-Martinez et al. (2020a) used a Likert-type scale to indicate the amount of Spanish spoken within the home, with a self-report of 1 indicating only Spanish and 5 indicating only English. Scores of 2, 3, and 4 were used to indicate the decreasing use of Spanish and increasing use of English. Self-report measures have limitations, including misrepresentation, but are commonly used to determine the primary language spoken within a home (Chen & Ren, 2019; Mancilla-Martinez et al., 2020a).

GMAS EOG Assessment

In this study, the dependent variables were the academic performance of dually served students on the English language arts and mathematics portions of the GMAS EOG assessment. The GMAS EOG is a standardized norm- and criterion-referenced summative assessment given to students in Grades 3–8. Its counterpart, the Georgia Milestones Assessment System's End-of-Course (GMAS EOC) assessment is like the EOG, but it is given after the completion of

specified courses at the high school level (Georgia Department of Education, 2020d; Governor's Office of Student Achievement, n.d.-a). Both the GMAS EOG and the GMAS EOC are summative assessments that provide information about a student's achievement and readiness to perform at the next academic level (Georgia Department of Education, 2020d).

According to the Georgia Department of Education (2020k), the GMAS assigns student scores to four levels of proficiency. Descriptors for each proficiency level can be found on the Georgia Department of Education (2020k) Georgia Milestones informational website:

- Beginning Learners do not yet demonstrate proficiency in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students need substantial academic support to be prepared for the next grade level or course and to be on track for college and career readiness.
- Developing Learners demonstrate partial proficiency in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students need additional academic support to ensure success in the next grade level or course and to be on track for college and career readiness.
- Proficient Learners demonstrate proficiency in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students are prepared for the next grade level or course and are on track for college and career readiness.
- Distinguished Learners demonstrate advanced proficiency in the knowledge and skills necessary at this grade level/course of learning, as specified in Georgia's content standards. The students are well prepared for the next grade level or course and are well prepared for college and career readiness.

For the GMAS EOG English language arts assessment, students in Grades 3–8 answer a total of 51 items because of the inclusion of field-test items and TerraNova norm-referenced items (Forte et al., 2017; Georgia Department of Education, 2020b). The assessment consists of three sections. Section 1 strictly focuses on writing and Sections 2 and 3 focus on more generalized language arts knowledge (Georgia Department of Education, 2020e, 2020f, 2020g, 2020h, 2020i, 2020j).

Combined, the English language arts sections of the GMAS EOG include 37 1-point selected-response and technology-enhanced items, five 2-point technology-enhanced items, one 2-point constructed-response item, one 4-point extended constructed-response items, one 7-point extended writing-response items, and six 0-point field test items. According to the Georgia Department of Education's (2020e, 2020f, 2020g, 2020h, 2020i, 2020j) assessment guides for Grades 3–8, technology-enhanced items in the English language arts section include "evidence-based selected-response, drag-and-drop and drop-down" (p. 13).

The total raw score points available for the assessment is 60 (Forte et al., 2017; Georgia Department of Education, 2020b). Raw scores are converted to composite scale scores to assist in the consistent and accurate interpretation of student scores (Georgia Department of Education, 2020b). Scale scores for the English language arts assessment arranged by grade and achievement levels provided by the Georgia Department of Education (2020b) are provided in Table 11.

Table 11

GMAS EOG Scale Score Ranges by Level for English Language Arts

Grade	Beginning Learner	Developing Learner	Proficient Learner	Distinguished Learner
3	180 to 474	475 to 524	525 to 580	581 to 830
4	210 to 474	475 to 524	525 to 573	574 to 775
5	210 to 474	475 to 524	525 to 586	587 to 760
6	140 to 474	475 to 524	525 to 598	599 to 820
7	165 to 474	475 to 524	525 to 591	592 to 785
8	225 to 474	475 to 524	525 to 580	581 to 730

Note. Adapted from "Georgia Milestones Assessment System 2020 Operational Technical Report" by Georgia Department of Education, 2020, https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/Milestones/Technical_Documents/GA_Milestones_2020_Tech_Report.pdf. In the public domain.

Section 1 has a maximum completion time of 90 minutes and should be completed in 1 day, separate from other sections. Sections 2 and 3 have maximum completion times of 80 minutes and can either be completed in the same day or on consecutive days. Total testing time can range from 125 to 250 minutes. These times are standard across Grades 3–8, and they do not include pre- and post-administration activities (Georgia Department of Education, 2020e, 2020f, 2020g, 2020h, 2020i, 2020j). Administration time also does not include any extended time allowances given to students who receive accommodations. According to the Georgia Department of Education's (2021a) accommodation manual, students with extended time allowances typically receive time and one-half, meaning that a test with an administration time

of 90 minutes would be extended to 135 minutes. In some circumstances, students receive an extended time allowance of double time. Extended time decisions are made on a case-by-case basis (Georgia Department of Education, 2021a).

The GMAS EOG mathematics assessment consists of two sections, with a total of 55 items. The mathematics sections for Grades 3–8 include 42 1-point selected-response and technology-enhanced items, eight 2-point technology-enhanced items, and five 0-point field test items. These times are also standard across Grades 3–8, and they do not include pre- and post-administration activities (Georgia Department of Education, 2020e, 2020f, 2020g, 2020h, 2020i, 2020j). According to the Georgia Department of Education's (2020e, 2020f, 2020g, 2020h, 2020i, 2020j) assessment guides for Grades 3–8, in the mathematics section, technology-enhanced items include "multiple-part selected-response, multiple-select, drag-and-drop, drop-down, graphing, and keypad-input" (p. 72).

For this section, the total raw score available is 58 (Georgia Department of Education, 2020b). Like the scores for the English language arts section, raw scores are converted to composite scale scores to create consistency and comparability among data. Scale scores for the mathematics assessment are provided in Table 12.

Table 12

GMAS EOG Scale Score Ranges by Level for Mathematics

Grade	Beginning Learner	Developing Learner	Proficient Learner	Distinguished Learner
3	290 to 474	475 to 524	525 to 579	580 to 705
4	270 to 474	475 to 524	525 to 584	585 to 715
5	265 to 474	475 to 524	525 to 579	580 to 725
6	285 to 474	475 to 524	525 to 579	580 to 700
7	265 to 474	475 to 524	525 to 579	580 to 740
8	275 to 474	475 to 524	525 to 578	579 to 755

Note. Adapted from "Georgia Milestones Assessment System 2020 Operational Technical Report" by Georgia Department of Education, 2020, https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Assessment/Documents/Milestones/Technical_Documents/ GA_ Milestones_2020_Tech_Report.pdf. In the public domain.

Sections 1 and 2 of the mathematics assessment can both be completed in a single day or over the course of 2 consecutive days. Each section has a maximum testing time of 65 minutes, and total testing time averages between 60 and 130 minutes. Like the English language arts section, these times are standard across Grades 3–8, and they do not include pre- and post-administration activities (Georgia Department of Education, 2020e, 2020f, 2020g, 2020h, 2020i, 2020j). Standard administration times do not include any extended time allowances given to students who receive accommodations to receive time and one-half or double-time extended time allowances (Georgia Department of Education, 2021a).

Reliability and internal consistency for the GMAS assessments are evaluated using

Cronbach's alpha. The reliability coefficient for the 2017–2018 GMAS EOG English language arts assessment ranged from 0.87 to 0.91 (Georgia Department of Education, 2018). The reliability coefficient for the 2017–2018 GMAS EOG mathematics assessment had a range of 0.90 to 0.93 (Georgia Department of Education, 2018). For the 2019–2020 assessment, Cronbach's alpha ranged from 0.88 to 0.94 (Georgia Department of Education, 2020b). Values for Cronbach's alpha between the range of 0.7 and 0.9 are considered optimal in terms of reliability for most research (Creswell & Creswell, 2018; Warner, 2013, 2021). According to the Georgia Department of Education (2018), the reliability shown by the GMAS assessments indicates that student test scores are indicative of student mastery of Georgia state academic standards.

Along with Cronbach's alpha, the standard error of measurement (SEM) is used to evaluate the GMAS reliability (Georgia Department of Education, 2018, 2020b). The SEM helps researchers understand the distributions of values that would be obtained from thousands of samples (Warner, 2013, 2021). A perfectly reliable test would obtain a SEM of zero (Creswell & Creswell, 2018). The 2019–2020 assessment had SEM scores that ranged from 3.1 to 3.5, indicating that the test forms were appropriately reliable (Georgia Department of Education, 2020b).

Ensuring the validity of the GMAS allows for confidence that the assessments measure what they are intended to measure. According to the Georgia Department of Education (2020b), the GMAS is assessed for validity in the areas of "test content, response processes, internal test structure, relation to other variables, and consequences of test use" (p. 159). Test content validity is ensured using Kane's argument-based approach. This includes checking the purpose of the assessment with areas listed above (Georgia Department of Education, 2020b).

The validity of the internal structure of the assessments was measured through a Differential Item Functioning (DIF). The DIF analysis is intended to identify potential bias in test items among specific subgroups (gender and ethnicity). The Mantel-Haenszel statistic and the Delta statistic were used to analyze dichotomous items. The standardized mean difference was used to evaluate multipoint, technology-enhanced items (Georgia Department of Education, 2020b).

Constructed response items were placed into three categories: A (no DIF), B (weak DIF), and C (strong DIF). Items in category A (no DIF) had a Mantel-Haenszel chi-square statistic that was not statistically different than zero. Category B (weak DIF) had a significant Mantel-Haenszel chi square statistic where $p < 0.05$ and the SMD was greater than or equal to 0.17 and less than 0.25. Category C (strong DIF) items had a significant Mantel-Haenszel chi square statistic where $p < 0.05$ and the SMD was greater than or equal to 0.25 (Georgia Department of Education, 2020b).

Overall, two items of 127 were flagged as having a "strong DIF" in the English language arts sections, five of the 294 items were flagged in the mathematics section, one item out of 167 was flagged in science, and no items out of 167 were flagged in social studies (Georgia Department of Education, 2020b, p. 163). Therefore, overall, this instrument has good validity, though slightly weaker with respect to gender and ethnicity considerations.

Internal structures were also evaluated using dimensionality analyses (Georgia Department of Education, 2020b). For each assessment, the second-dimension analysis showed the proportion of variance to be small, indicating that there is only one dominant dimension for each test, and differences in additional dimensions are negligible (Georgia Department of Education, 2020b).

The Georgia Department of Education (2020b) received guidance regarding the reliability and the validity of the GMAS EOG from a Technical Advisory Committee (TAC). The TAC served to oversee matters pertaining to "psychometrics, validity and reliability, accuracy, and fairness" (Georgia Department of Education, 2020b, p. 2). The Georgia Department of Education met regularly with the TAC, which was comprised of "national psychometric experts" (p. 2) that were respected and published within their fields. Furthermore, Georgia teachers nominated by districts and chosen by the state provided guidance in the development of achievement descriptors, cut scores, and how to interpret both. The most recent versions of these were developed after the spring 2015 tests were administered (Georgia Department of Education, 2020b).

Procedures

This study was presented to and approved by the dissertation committee. An Internal Review Board (IRB) application was submitted, and approval/exemption was obtained. The IRB exemption letter is included in Appendix A. A permission request letter and application to conduct research was sent to the district. The original district permission request letter and approved research application can be found in Appendix B and Appendix C. The district approval letter can be found in Appendix D. Since data collected for the study originated from a district database maintained by the Director of Assessment and Accountability, contact with participants was not required.

Using archived data, data were collected from dually served students who were required to take the GMAS EOG assessment during the 2019 state-mandated testing window. Educators involved in administering the GMAS EOG were required to participate in school-level training led by school testing coordinators. Educators attended a minimum of one training session during

which they reviewed the state testing manual. The testing manual outlined specific procedures that testing coordinators must follow in preparation for testing. The manual also outlined allowable accommodations that resulted in a standard administration of the assessment, as well as conditional accommodations that resulted in a non-standard administration.

Using archived testing data from the 2019 administration, the scale scores on the GMAS EOG English language arts and mathematics assessments were collected for the selected participants. A convenience sample of 110 third- through eighth-grade dually served students was drawn. A list of potential participants was collected from the Director of Teaching and Learning. The Student Information Specialist removed any personally identifying information and assigned unique identification numbers for each participant to maintain anonymity. All data collected were stored on a secure, password-protected hard drive.

A total of 110 students (55 students per group) were sampled. In addition to being dually served in the ESOL and special education programs, students sampled were enrolled in a curriculum that requires the administration of the GMAS EOG in English language arts and mathematics for the 2018–2019 school year.

Data Analysis

Causal comparative research allows researchers to explore cause-and-effect relationships between independent and dependent variables based on naturally or previously occurring events (Creswell & Creswell, 2018; Gall et al., 2007, p. 306; Salkind, 2010). In this type of research, the independent variable is categorical and can be of nominal or ordinal scale. Comparisons are made between at least two groups and a minimum of one dependent variable that is continuous and can be of the interval or ratio scale (Gall et al., 2007). Causal comparative designs do not allow researchers to draw definitive cause-and-effect relationships. Still, they are beneficial

when exploring associations between variables where the independent variable cannot be changed or manipulated (Gall et al., 2007). Thus, causal comparative research is also considered ex post facto research (Creswell & Creswell, 2018; Gall et al., 2007; Salkind, 2010). A primary goal of this research design is to determine whether groups formed for the independent variable exhibit a difference when compared in relation to the dependent variable (Gall et al., 2007). This lack of control over the independent variable means that the relationship between the variables is suggested rather than definitive.

Data were analyzed using two independent samples *t* tests. Independent samples *t* tests work to compare the means of two independent groups. This comparison helps to determine whether there is a difference between the means of the two groups (Warner, 2021). A *t* test was appropriate because there were only two groups and membership in either group is mutually exclusive (Warner, 2013, 2021). Before *t* tests, data screening and assumption testing were done.

Data Screening and Assumption Testing

A box and whisker plot was used to identify any potential extreme outliers (Warner, 2021). There were no extreme outliers to remove before analysis. The data collected met the assumption of a normal distribution shape. This assumption was assessed using a histogram. The assumption of normality was assessed via Kolmogorov-Smirnov because the sample size was greater than 50 participants (Warner, 2013, 2021). The assumption of normality was met because $p \geq 0.05$. Each independent samples *t* test also required that the homogeneity of variance assumption be met. This assumption was tested using the Levene's test and was satisfied because the significance value of $p \geq 0.05$ (Gall et al., 2007; Warner, 2013, 2021).

Parametric Testing

Using SPSS (Version 29), the independent samples *t* tests were conducted to ascertain a potential significant difference in the mean GMAS EOG English language arts scores of two groups of dually served students in Grades 3–8, those whose parents who prefer communication in English and those who prefer communication in a language other than English. The GMAS EOG mathematics scores were also evaluated for the same group of dually served students.

Based on the results of each independent samples *t* test, the researcher failed to reject each null hypothesis. The alpha for each test was set at 0.05, indicating that there was a 5% chance of a Type I error (Warner, 2013, 2021). For an independent samples *t* test, the alpha level is typically set at this level (Warner, 2013, 2021). Effect size is the strength of the difference between groups in a study (Gall et al., 2007). The overall effect size of the results was examined using Cohen's *d* (Warner, 2013, 2021). Since neither null hypothesis was rejected, a Bonferroni correction was not necessary to guard against Type I errors. The Bonferroni correction procedure is beneficial when there are a smaller number of data points, and it is more conservative way to limit the risk of a Type I error (Warner, 2021).

CHAPTER FOUR: FINDINGS

Overview

The purpose of this causal comparative study was to examine the relationship between parents' preferred language of communication and the Georgia Milestones End-of-Grade (GMAS EOG) English language arts and mathematics scale scores of students served in both English language learner and special education programs. The study employed archived data from the 2018–2019 school year from a convenience sample of third- through eighth-grade students dually served in English language learner (ELL) and special education programs.

Data collected showed that there were 214 qualifying dually served students in Grades 3–8 (55 whose parents preferred communication in English and 159 whose parents preferred communication in a language other than English). To ensure an equal number of participants in each group, a random sample of the larger group was taken using SPSS (Version 29), allowing 55 data points within each group. Two independent samples *t* tests were used to determine if there was a difference between the GMAS EOG scale scores for the two groups. There was no difference in the English language arts scores between the two groups, nor was there a difference in the mathematics scores between the two groups.

Research Questions

RQ1: Is there a difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

RQ2: Is there a difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

Null Hypotheses

$H_0$1: There is no difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English, as measured by the Georgia Milestones End-of-Grade assessment.

$H_0$2: There is no difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English, as measured by the Georgia Milestones End-of-Grade assessment.

Descriptive Statistics

Descriptive statistics were obtained on each dependent variable, GMAS EOG scale scores for English language arts and mathematics for dually served students in Grades 3–8. The sample consisted of 110 participants, 55 dually served students whose parents preferred communication in English and 55 dually served students whose parents preferred communication in a language other than English. Possible scores for the English language arts section of the GMAS range from 140 to 830, and the scores for the mathematics section can range from 264 to 755, depending on grade level score bands. Tables 13 and 14 provide the descriptive statistics for each dependent variable.

Table 13

Descriptive Statistics for English Language Arts

Language		*N*	*M*	*SD*	Range
English	ELA	55	441.76	27.655	349–504
	Valid N (listwise)	55			
Language Other Than English	ELA	55	442.36	29.560	384–499
	Valid N (listwise)	55			

Table 14

Descriptive Statistics for Mathematics

Language		*N*	*M*	*SD*	Range
English	Mathematics	55	460.73	27.822	396–528
	Valid N (listwise)	55			
Language Other Than English	Mathematics	55	468.78	29.252	416–529
	Valid N (listwise)	55			

Results

$H_0 1$

An independent samples *t* test was used to determine if there was a difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English, as measured by the GMAS EOG assessment.

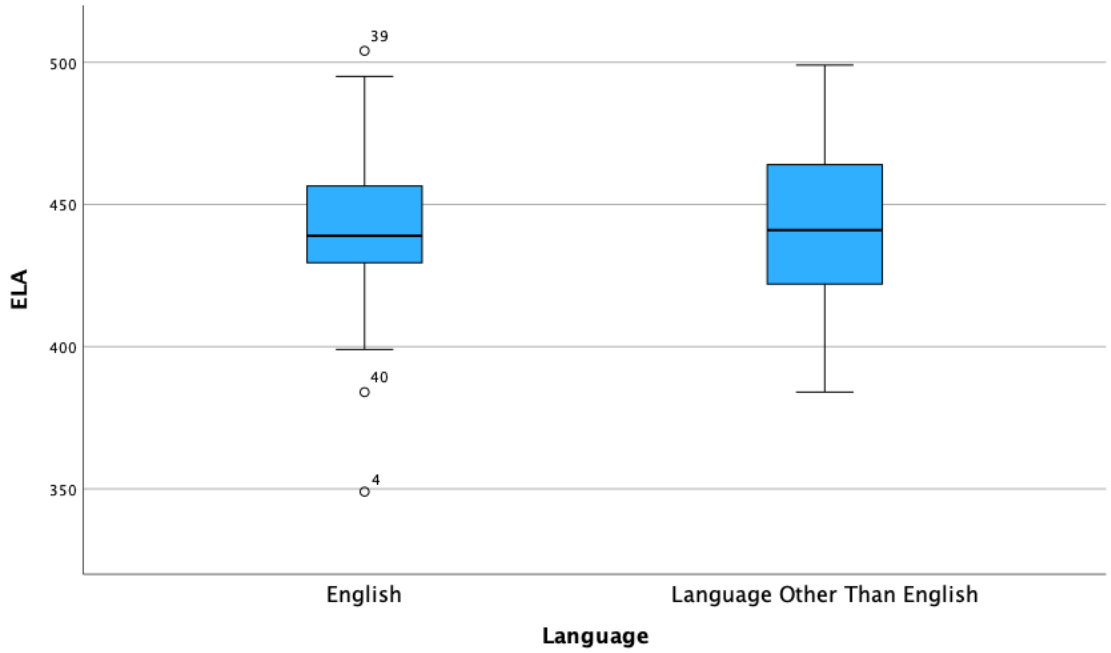
Data Screening

Data screening was conducted on each group's dependent variable. The researcher organized, sorted, and scanned each set of data for inconsistencies. No data errors or inconsistencies were identified. Using SPSS (Version 29), a random sample of the larger group

(students whose parents prefer communication in a language other than English) was taken to ensure that both groups were comprised of a similar amount of data. A box and whisker plot was used to detect extreme outliers. No extreme outliers were identified. Figure 1 displays the box and whisker plot for $H_0$1.

Figure 1

Box and Whisker Plot for English Language Arts



Assumptions

An independent samples *t* test was used to test $H_0$1. The use of a *t* test required that the assumptions of normality and homogeneity of variance are met. Normality was examined using a Kolmogorov-Smirnov test. Kolmogorov-Smirnov was used because the sample size was greater than 50. No violations of normality were found. Table 15 provides the results for Tests of Normality for $H_0$1.

Table 15

Tests of Normality for English Language Arts

		Kolmogorov-Smirnov[a]		
	Language	Statistic	*df*	*p*
ELA	English	.103	55	.200*
	Language Other Than English	.071	55	.200*

* This is a lower bound of the true significance.
[a] Lilliefors Significance Correction

The assumption of homogeneity of variance was examined using the Levene's test. No violation was found where $p = .24$ for $H_0 1$. The assumption of homogeneity of variance was met. Table 16 shows the Tests of Homogeneity of Variance for English language arts.

Table 16

Tests of Homogeneity of Variance for English Language Arts

Levene's Test of Equality of Error Variances[a,b]

		Levene's Statistic	*df*1	*df*2	*p*
ELA	Based on Mean	1.422	1	108	.236
	Based on Median	1.410	1	108	.238
	Based on Median and with Adjusted *df*	1.410	1	106.391	.238
	Based on Trimmed Mean	1.392	1	108	.241

[a] Dependent variable: ELA
[b] Design: Intercept + Language

Results for $H_0 1$

An independent samples *t* test was used to test the null hypothesis regarding differences in GMAS EOG English language arts scale scores among dually served students whose parents prefer communication in English and dually served students whose parents prefer communication in a language other than English. Equal variance was assumed. The researcher failed to reject the null hypothesis at a 95% confidence level where $t(108) = -.11$, $p = .913$,

Cohen's d = .021. The effect size was small. There was not a significant difference between the GMAS EOG English language arts scores of dually served students whose parents preferred communication in English (M = 441.76; SD = 27.66) and students whose parents preferred communication in a language other than English (M = 442.36; SD = 29.56). Tables 17 shows the t test results for the first null hypothesis.

Table 17

Independent Samples Test for English Language Arts

			English Language Arts	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	*F*		1.422	
	Sig.		.236	
t-test for Equality of Means	*t*		-.110	-.110
	df		108.000	107.524
	Significance	Two-Sided *p*	.913	.913
	Mean Difference		-.600	-.600
	Std. Error Difference		5.458	5.458
	95% CI of the Difference	Lower	-11.419	-11.420
		Upper	10.219	10.220

$H_0$2

An independent samples t test was used to determine if there was a difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English, as measured by the GMAS EOG assessment.

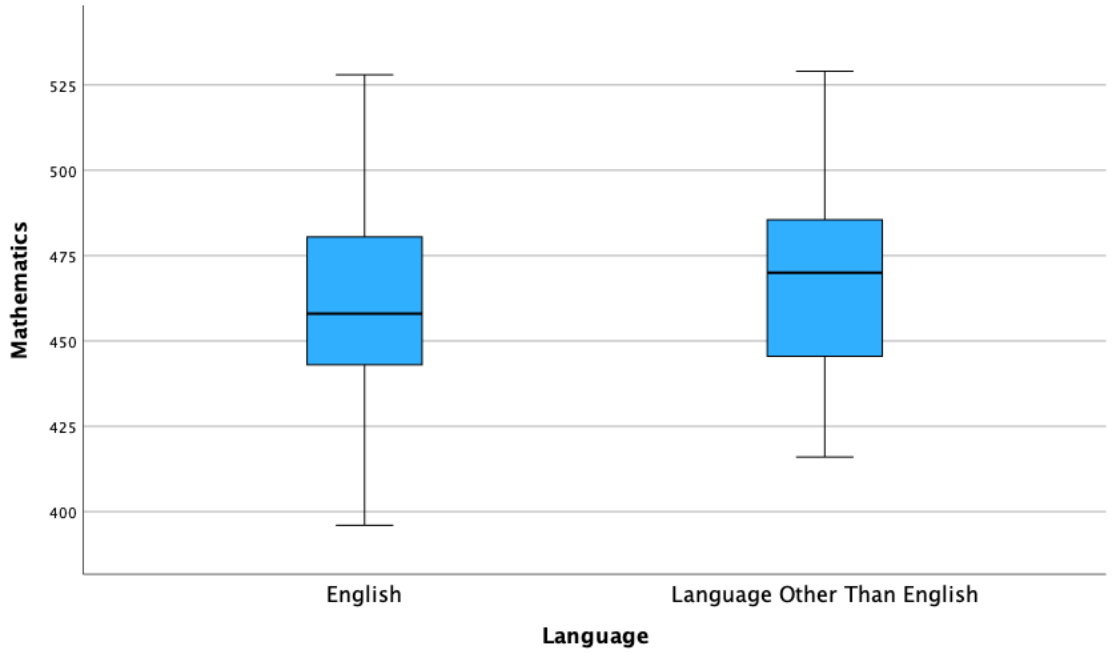
Data Screening

Data screening was conducted on each group's dependent variable. The researcher organized, sorted, and scanned each set of data for inconsistencies. No data errors or

inconsistencies were identified. The same random sample of the larger group (students whose parents prefer communication in a language other than English) that was taken using SPSS (Version 29) for $H_0$1 was used for $H_0$2. A box and whisker plot was used to detect extreme outliers. No extreme outliers were identified. Figure 2 displays the box and whisker plot for $H_0$2.

Figure 2

Box and Whisker Plot for Mathematics



Assumptions

An independent samples *t* test was used to test $H_0$2. The use of a *t* test required that the assumptions of normality and homogeneity of variance are met. Normality was examined using a Kolmogorov-Smirnov test. Kolmogorov-Smirnov was used because the sample size was greater than 50. No violations of normality were found. Table 18 provides the results for Tests of Normality for mathematics.

Table 18

Tests of Normality for Mathematics

	Language	Kolmogorov-Smirnov[a]		
		Statistic	*df*	*p*
Mathematics	English	.118	55	.054
	Language Other Than English	.099	55	.200*

* This is a lower bound of the true significance.

[a] Lilliefors Significance Correction

The assumption of homogeneity of variance was examined using the Levene's test. No violation was found where $p = .45$ for $H_0 2$. The assumption of homogeneity of variance was met. Table 19 shows the Tests of Homogeneity of Variance for mathematics.

Table 19

Tests of Homogeneity of Variance for Mathematics

Levene's Test of Equality of Error Variances[a,b]

		Levene's Statistic	*df*1	*df*2	*p*
Mathematics	Based on Mean	.573	1	108	.451
	Based on Median	.690	1	108	.408
	Based on Median and with Adjusted *df*	.690	1	107.240	.408
	Based on Trimmed Mean	.618	1	108	.434

[a] Dependent variable: Mathematics

[b] Design: Intercept + Language

Results for $H_0 2$

A second independent samples *t* test was used to test the null hypothesis regarding differences in GMAS EOG mathematics scale scores among dually served students whose parents prefer communication in English and dually served students whose parents prefer communication in a language other than English. Equal variance was assumed. The researcher

failed to reject the null hypothesis at a 95% confidence level where $t(108) = -1.48$, $p = .142$, Cohen's $d = .028$. The effect size was small. There was not a significant difference between the GMAS EOG mathematics scores of dually served students whose parents preferred communication in English ($M = 460.73$; $SD = 27.82$) and students whose parents preferred communication in a language other than English ($M = 468.78$; $SD = 29.25$). Table 20 shows the *t* test results for the second null hypothesis.

Table 20

Independent Samples Test for Mathematics

Independent Samples Test

			Mathematics	
			Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	*F*		.573	
	Sig.		.451	
t test for Equality of Means	*t*		-1.480	-1.480
	df		108.000	107.730
	Significance	Two-Sided *p*	.142	.142
	Mean Difference		-8.055	-8.055
	Std. Error Difference		5.444	5.444
	95% CI of the Difference	Lower	-18.845	-18.845
		Upper	2.735	2.736

CHAPTER FIVE: CONCLUSIONS

Overview

Through this study, the relationship between the parental preferred language of communication and the academic achievement of students dually served through English language learner and special education programs was explored. Chapter Five discusses the results of the study, its implications, limitations, and recommendations for future research.

Discussion

The purpose of this quantitative**,** causal comparative study was to examine the relationship between parents' preferred language of communication and the 2019 Georgia Milestones End-of-Grade (GMAS EOG) English language arts and mathematics scale scores of students served in both English language learner and special education programs. Because of the atypicality of instruction and school operations during the COVID-19 pandemic in the 2019–2020 school year and beyond, data from the 2018–2019 school year were used. The study employed two research questions:

RQ1: Is there a difference in the mean scale English language arts scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

RQ2: Is there a difference in the mean scale mathematics scores for dually served students in Grades 3 through 8 whose parents prefer communication in English and those whose parents prefer communication in a language other than English?

Both research questions were examined through the lens of Lev Vygotsky's (1935/2011, 1934/1986) sociocultural theory, which highlighted the idea that cognitive development and, thus, learning are deeply connected to social interactions and experiences. Recent studies have

found a positive association between the quality of language exposure in the home to the overall language and learning development of students (Golinkoff et al., 2019; Lurie et al., 2021). Furthermore, language-based examinations given to younger, school-aged children have been shown to be effective predictors of academic achievement in the upper elementary grades (Golinkoff et al., 2019). Jerome Bruner's (1983) social interaction theory echoes Vygotsky's ideas that language is closely linked to both cognitive and academic development. Bruner (1983) supported Vygotsky's postulation that language develops naturally through social discourse, adding that language development requires an understanding of the functional intent of language and "how to get things done with words" (p. 18).

As the number English language learners (ELLs) continues to grow in number, language presents itself as a potential barrier to effective communication, and in the school setting, a barrier to learning and understanding what students can do. As the number of bilingual students in U.S. schools continues to grow, educators are faced with the ever-increasing challenge of meeting the needs of students whose home language is likely a language other than English (Haager & Osipova, 2017). Although knowing more than one language is generally considered to be a positive attribute, it can become a seemingly insurmountable barrier to effective instruction and increased academic outcomes.

The ability to learn, understand, and apply language is derived from the social realm (Behrens, 2021). Learning a second language typically follows one of two courses: simultaneous language learning or sequential language learning. Simultaneous language learning occurs when students are exposed to two languages at the same time within the home. By contrast, sequential language learning occurs when exposure to a second or subsequent language occurs after the primary language has already been established (Limlingan et al., 2020). Preliminary, unsorted

data obtained for this study indicated that most students in the sample were sequential language learners (N = 159) rather than simultaneous language learners (N = 55). This means that these students learned a language other than English at home and were exposed to English as the language of instruction once they entered school.

Because language and learning are so closely connected, being a sequential language learner potentially threatens academic development if proficiency in the language of instruction is not obtained. Students may not understand material being presented and may not be able to adequately demonstrate learning on assessments. This threat can be mitigated by quality second language interactions within the school environment and home environment, if possible (Rojas et al., 2021). Vygotsky (1934/1986) proposed the idea that a child's first language serves as the foundation upon which a second language is learned. Thus, the foundational elements of language do not change and, once learned, do not have to be relearned to obtain proficiency in a second language. This ideology supports the possibility that ELLs may not necessarily be at a disadvantage when compared to students whose primary home language is English.

The first research question used an independent samples *t* test to examine the difference between the mean scale GMAS EOG assessment English language arts scale scores for dually served students in Grades 3 through 8. Out of 214 dually served students required to take the 2019 GMAS EOG assessment in English language arts, there were 159 students whose parents preferred communication in a language other than English and 55 students whose parents preferred communication in English.

A random sample of the larger group was taken to ensure that the study examined an equal number (N = 55) in each group. The independent variable was the parental preferred language of communication, and the dependent variable was the GMAS EOG English language

arts scale score. The researcher failed to reject the first null hypothesis ($H_0 1$) at the 95% confidence level where $t(108) = -.11$, $p = .913$. The effect size was measured using Cohen's *d* (*d* = 0.21). The effect size was small. There was not a significant difference between the GMAS EOG English language arts scale scores of dually served students whose parents preferred communication in English ($M = 441.76$; $SD = 27.66$) and students whose parents preferred communication in a language other than English ($M = 442.36$; $SD = 29.56$). Table 17 shows the independent samples *t* test results for English language arts.

Research indicates that ELLs demonstrate substandard academic performance when compared to native or fluent English speakers, particularly in overall literacy (Golloher et al., 2018). On the 2019 National Assessment of Educational Progress (NAEP) reading assessment, students dually served in English language and special education scored lower than students served in only general education programs by an average of 69.7 points in Grades 4, 8, and 12. On the same 2019 assessment, scores for ELLs were lower than those for non-ELLs by an average of 42.7 points. The gap for students with disabilities (SWD) was the same, as SWD scored lower than non-SWD by an average of 42.7 points (NCES, n.d.-a).

Data from the 2019 NAEP assessment in reading illustrates the gap that exists between students receiving general education instruction only and those whose instruction is supplemented through ELL services, special education services, or both. Quality social interactions between children and those around them are key to learning to read and write (Dickinson et al., 2012; Kapengut & Noble, 2020). During the early developmental years, interactions help children obtain skills that prepare them to enter school and later learn to read and write (Kapengut & Noble, 2020; Rojas et al., 2021).

Unfortunately, many ELLs come from immigrant families with lower socioeconomic backgrounds. Typically, these students are exposed to fewer words and enter school with deficient vocabularies and language skills that negatively impact literacy development (Golinkoff et al., 2019; Lurie et al., 2021; Marini et al., 2019). As these children enter school, instruction is typically provided in English and may not necessarily provide support in the student's native language, further widening vocabulary disparities (Golinkoff et al., 2019; Kapengut & Noble, 2020; Lurie et al., 2021). This supports Vygotsky's (1935/1978, 1935/2011) primary ideology that quality social interactions are crucial for child development.

The second research question also used an independent samples *t* test to determine whether there was a difference between the mean scale GMAS EOG assessment mathematics scale scores for dually served students in Grades 3 through 8. The second null hypothesis was tested using the same data points as the first research question ($N = 55$ in each group). The researcher failed to reject the null hypothesis at a 95% confidence level where $t(108) = -.148$, $p = .142$. The effect size was measured using Cohen's *d* ($d = .028$). The effect size was small. There was not a significant difference between the GMAS EOG mathematics scale scores of dually served students whose parents preferred communication in English ($M = 460.73$; $SD = 27.82$) and students whose parents preferred communication in a language other than English ($M = 468.78$; $SD = 29.25$). Table 20 shows the independent samples *t* test results for mathematics.

Results for the 2019 NAEP mathematics assessment were slightly better than those for reading. However, the difference between dually served students and those served in only general education was 58.7 points. ELLs scored an average of 35.7 points lower than non-ELLs. SWD scored an average of 35.7 points lower than non-SWD (NCES, n.d.-a). In mathematics, as in reading, performance is significantly lower for students served in ELL or special education

programs when compared to students served in only general education. Results from the NAEP assessment indicate that being an ELL or a student with a disability presents difficulty with demonstrating adequate mathematics achievement. However, when a lack of English proficiency is compounded by the presence of a disability, the outcomes are even lower.

Results for this study mimicked the results of the 2019 NAEP mathematics assessment in that mathematics scores were slightly higher than those that measured reading. Students who are dually served scored an average of 22.7 points lower on the GMAS EOG English language arts assessment (M = 442.06) than on the GMAS EOG mathematics assessment (M = 464.76), regardless of the parental preferred language. These results can likely be attributed to the symbolic nature of mathematics that may rely less heavily on language proficiency than an understanding of mathematical concepts (Bialystok, 2018). While mathematics and literacy are undoubtedly connected, basic number sense is not necessarily linguistically-bound. Thus, it is likely that language is not as great of a confounding factor on assessments that measure mathematical knowledge when compared to those that measure reading and writing ability alone.

An examination of the descriptive statistics for both null hypotheses showed that, on the GMAS EOG English language arts assessment, students whose parents preferred communication in a language other than English (M = 442.36) fared better than students whose parents preferred communication in English (M = 441.76). Similarly, results from the GMAS EOG math assessment indicated that students whose parents preferred communication in a language other than English (M = 468.78) scored higher that those students whose parents preferred communication in English (M = 460.73). These results lend credence to the idea that bilingual students or students regularly exposed to more than one language may hold a slight advantage over those who are monolingual. Barker and Bialystok (2019) indicated that bilingual students

may possess greater cognitive flexibility that is necessary for maintaining two languages simultaneously and may hold a slight academic advantage when compared to monolingual peers.

Implications

The number of students classified as ELLs in the United States continues to grow. Within this population, there exists ELLs who also receive special education services in one of the 13 categories of disability outlined by the Individuals with Disabilities Education Act (IDEA, 2004). Independently, both ELLs and SWD demonstrate substandard performance on academic achievement measures. Students dually served in both ELL and special education programs suffer greater consequences than their peers receiving only general education services (Rodríguez & Rodríguez, 2017). Concerns for the academic performance for these students is a problem facing schools across the United States, and the literature that addresses these students, while expanding, is still lacking.

Despite designation in ELL, SWD, or dually served subgroup populations, most of these students are required to take and are expected to make progress on national, state, and local assessments. Even though legislation such as the Individuals with Disabilities Education Act (IDEA, 2004) and the Every Student Succeeds Act (ESSA, 2015) is aimed at providing equitable access to quality educational opportunities for all students regardless of subgroup designation, little has worked to close the widening achievement gap. With performance indicators falling below minimum proficiency standards, these students are at risk for dropping out of school and demonstrate poor academic and postsecondary outcomes (Haager & Osipova, 2017; Wang & Woolf, 2015).

Lev Vygotsky (1935/2011, 1934/1986) hypothesized that an environment rich in quality social opportunities is essential for cognitive, and, by relation, academic development. Students

served in ELL programs are exposed to a language other than English in the home. SWD often qualify for services with language-based difficulties that affect basic psychological processes that hinder progress in reading, writing, and mathematics. Dually served students, therefore, often face compounded difficulties comprised of both a lack of language proficiency and a disability that impedes learning.

To fully address the needs of dually served students, educators must understand what it means to be an ELL, as well as a student with a disability. This requires educators to have a depth of knowledge that may not be adequately addressed in teacher preparation programs. A 2018 study by Ortiz and Robertson outlined eight generalized principles through which teacher competency can be measured: language and linguistics, cultural variability, educational contexts, literacy foundations, language and literacy assessment, instruction/intervention, collaboration, and professional and ethical practice. These principles rely heavily upon a basic understanding of the interconnectivity of culture, language, and literacy.

Educators must do more than simply understand culture, language, and literacy, however. To increase favorable academic outcomes for dually served students, educators must implement early interventions that are developmentally appropriate and adequately address the effect that language has upon learning. Providing instruction that aligns with student language needs falls in line with Vygotsky's (1935/1978) ideology that instruction within the zone of proximal development facilitates learning and allows students to achieve beyond their current level of mastery. Instruction that is rich in meaningful social exchanges and explicit instruction that addresses literacy and vocabulary development will help to address academic needs presented by both a lack of language proficiency and learning difficulties resulting from disability.

Both language proficiency and disability are situated upon a fluid continuum, however. What adequately addresses the needs of one student may fail to meet the needs of another. Educator flexibility and a willingness to adapt instruction is key. This includes acknowledging instructional practices that are insufficient and possessing a willingness to expand beyond what is comfortable or familiar. While many schools have teachers who are responsible for addressing the needs of either ELLs or SWD separately, this growing population of students requires educators who are well versed in the best practices for both groups and possess the ability to meld strategies to meet the needs of dually served students.

Limitations

There were several limitations for this study. First, the independent variable (parental preferred language of communication) was obtained using a self-reporting measure on which parents indicated the language in which they preferred to receive communication from the school. Self-reporting measures are inherently flawed because parents may not understand the question being asked. Also, the self-report form may be filled out by a person other than the parent who may not answer in a similar manner that the parent would. Errors in self-reporting might cause a data point to be categorized within the wrong group.

Also, the independent variable of parental preferred language was collected as a finite measure with the only options being (a) English or (b) a language other than English. This study did not consider the variability of communication and how it affects the amount of English or other language spoken in the home. Preferred communication in English likely does not mean that English is the only language spoken in the homes of ELLs. It is probable that preferred English communication merely reflects the amount of English proficiency or comfort attained by the parents for some of the students. Another consideration is that parents will choose English as

their preferred language as a means of assimilation, projected social expectations for language spoken in the community, or the fear of drawing attention to a family member who may not be a documented immigrant. This limitation could be mitigated by using a Likert-type survey designed to allowed parents to pick from a continuum of language usage in the home. However, such measures would likely also face many of the same limitations.

This study did not consider whether students received instruction in their native language or instruction in English only. While English is the primary language of instruction for the district, recent immigrants are often provided with partial day instruction in their native language. For this study, language of instruction was assumed to be English for most of the day. Any future study could avoid this limitation by setting parameters for language of instruction.

Additionally, this study did not consider any standard allowable accommodations provided to students through either their ELL or special education programs. A variety of accommodations are available for state-mandated testing; however, this study did not explore that factor. While standard allowable accommodations are not intended to inflate test scores, it is improbable that this possibility could ever be eliminated.

Finally, the use of a causal comparative design presented several limitations. Causal comparative studies are a type of non-experimental research because participants are not randomly assigned to groups. In addition, within causal comparative designs, researchers cannot determine if extraneous or unknown variables have impacted the dependent variable within the study. While causal comparative designs are beneficial for exploring associations between variables, the lack of control with the independent variable only allows relationships explored through causal comparative designs to be suggestive, not definitively cause and effect (Gall et

al., 2007; Smith, 2001). By contrast, a true experimental design would be more effective at examining a true cause and effect relationship (Salkind, 2010).

Recommendations for Future Research

After a review of the results of this study, the following areas for future research are recommended:

1. Because language learning is fluid and connected to learning outcomes, students with higher levels of English proficiency likely have better overall proficiency in their native language. A study that examines the scores of SWD who have recently met exit requirements for ELL services would further narrow the focus on the impact of language proficiency on achievement.
2. Other researchers may replicate the basic tenets of this study but amend the research questions to focus only upon one academic test using a smaller, more focused group. For example, a study could focus solely upon English language arts, comparing only elementary grades, only middle grades, or comparing elementary grades to middle grades.
3. An additional recommended study might incorporate the scores of English proficiency examinations (e.g., ACCESS) as a variable for comparison within constructs like those set forth in this study.
4. Scores on English proficiency examinations could also replace GMAS EOG scores as the dependent variable. A study that incorporates this type of score would allow the researcher to examine the relationship between the parental preferred language and student English proficiency scores.

5. Other researchers may wish to replace parental preferred language of communication with the language most spoken by the student. A study with this variable change would examine the relationship between student language and academic performance on state-mandated testing.
6. This study could also be expanded to include other districts within the state. A study that expands beyond the current district would allow researchers to see if results are like those obtained in this study.

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APPENDIX A

IRB Exemption Letter

From: [redacted]
Subject: [External] IRB-FY21-22-1175 - Initial: Initial - Exempt
Date: June 23, 2022 at 4:07 PM
To: [redacted]

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

June 23, 2022

[redacted]

Re: IRB Exemption - IRB-FY21-22-1175 The Effect of Language Used in the Home on Academic Achievement in English Language Learners with Special Needs

Dear [redacted],

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 4. Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:
(ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
[redacted]
Administrative Chair of Institutional Research
Research Ethics Office

APPENDIX B

District Permission Request

June 26, 2022

[redacted]

Dear [redacted],

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is The Effect of Language Used in the Home on Academic Achievement in English Language Learners with Special Needs, and the purpose of my research is to examine the effect that home language has on the academic achievement of students served in both English language learner and special education programs (dually-served students).

I am writing to request your permission to access and utilize the English Language Arts and Mathematics Georgia Milestones End-of-Grade Assessment scale scores and the identified parental preferred language in Infinite Campus' parent link for dually-served students in grades three through eight in the school district.

The data will be used to compare the mean scale scores of dually-served students whose parents prefer communication from the school/district in English and those whose parents prefer communication from the school/district in a language other than English. The data will be used to compare the two groups in terms of the GMAS-EOG English Language Arts scores, as well as the Mathematics scores

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval. A permission letter template document is attached for your convenience.

Sincerely,

Rebecca Bramblett
Doctoral Student

APPENDIX C

District Research Application

[redacted]

Research Title
The Effect of Language Used in the Home on Academic Achievement in English Language Learners with Special Needs

This checklist is to assist you in submitting a complete research study application packet to the [redacted] Assessment & Accountability Office. Please submit the following materials electronically.

☒ Completed Application to Conduct Research Application
☒ Copy of institution's IRB approval letter or letter of support from graduate program. (Must be provided on official stationary).
☐ Friday, March 25, 2022 is the last day to collect data in the schools for the 2021-2022 school year (Due to state assessments and end-of-year activities)

Proposal Summary

The proposed purpose of the study will be to examine the relationship between the parental preferred home language of communication (English or language other than English) and the overall English Language Arts and Mathematics scale scores on the Georgia Milestones End-of-Grade assessment of dually-served students in grades 3-8 during the 2018-2019 school year. The proposed research will be a causal-comparative analysis to examine whether the language spoken at home has an impact on the subsequent academic achievement of these students. The focus of the study will be on students who receive both English Language Learner (ELL/ESOL) and Special Education (SWD) services and who take the Georgia Milestones EOG assessment, with or without accommodations.

List any instruments you will use in your research and attach copies via email.

The study will use archived data from the 2018-2019 school year. The instruments used in the study are district-based: 1) the parental preferred language of communication as reported on Infinite Campus' parent link, 2) Georgia Milestones EOG English language arts scale score, and 3) Georgia Milestones EOG Mathematics scale score.

Type of school research site(s) required. Please check (x) all that apply.

☒ Elementary ☒ Middle ☐ High ☐ Central Office/Other

Amount of time required of students:

none

Amount of time required of teachers/other staff:

none

List what specific school(s) or departments(s) would be involved?

[redacted]

4. Illegal, anti-social, self-incriminating and demeaning behavior;
5. Critical appraisals of other individuals with whom respondents have close family relationships;
6. Legally recognized privileged or analogous relationships, such as those of lawyers, physicians, and ministers; or
7. Income (other than that required by law to determine eligibility for participation in a program or for receiving financial assistance under such program)."

This statement and additional information about PPRA can be found at:
https://studentprivacy.ed.gov/topic/protection-pupil-rights-amendment-ppra

I have read, understand and agree to abide by the Federal requirements for protecting student confidentiality as provided for in The Family Educational Rights and Privacy Act (FERPA) and The Protection of Pupil Rights Amendment (PPRA).

[redacted]	Rebecca Bramblett	07/05/22
Signature	Printed Name	Date

Approved July 28, 2022

[redacted]

APPENDIX D

District Research Approval Letter

[redacted]

TO: Ms. Rbecca Bramblett, Liberty University

FROM: [redacted] Director of Assessment & Accountability

RE: The Effect of Language Used in the Home on Academic Achievement in English Learners with Disabilities

DATE: July 28, 2022

[redacted] is granting permission for Rebecca Bramblett, a Liberty University graduate student, to complete research based on English Language Learners. The research will be a causal-comparative analysis to examine whether the language spoken at home has an impact on academic achievement. Data will from the 2018-2019 Milestones End-of-Grade Assessment will be used.

Please remember the Family Educational Rights Privacy Act (FERPA) and the Protection of Pupil Rights Amendment (PPRA) agreements previously signed as you begin.

If I can be of any further assistance let me know. I can be reached at [redacted] or emailed at [redacted]

[redacted]

Director of Assessment and Accountability

[redacted]

APPENDIX E

District Enrollment Form

Student Enrollment Questionnaire

Date: _____

Primary Household

Home Phone: _____

Student Lives With: Both Parents ___ Mother ___ Father ___ Step Parent ___
Foster Parent ___ Legal Guardian ___

Home Address
Street: _____

City: _____ State: _____ Zip: _____

Mailing Address *(If Different from Home Address)*
Street: _____

City: _____ State: _____ Zip: _____

The following questions are intended to address the McKinney-Vento Act 42 U.S.C. 11435 and Every Student Succeeds Act. The answers to these questions help determine the services the student may be eligible to recieve.

Is the current address a temporary living arrangement? **Yes__ No__**
If Yes, please select the option that best represents the student's current housing situation.

Shared Housing __ Emergency or Transitional Shelter __ Awaiting foster care placement __

Motel, hotel, trailer park, or camp ground due to lack of alternative accommodation __

Primary nighttime residence is not ordinarily used as a regular sleeping accommodation __

Living in car, park, public space, abandoned building, substandard housing, bus or train station __

Have you lost your housing due to economic or otherhardship (eviction, fire, other emergency, domestic violence)? **Yes__ No__**

Has anyone in your household moved in order to work in another city, county, or state, in the last three (3) years? **Yes__ No__**
If yes, please check all that apply:

____ Planting/Picking vegetables (tomatoes, squash, onions, etc.) or fruits (grapes, strawberries, blueberries, etc.)

____ Planting, growing, cutting, processing trees (pulpwood), or raking pine straw

____ Processing/Packing agricultural products

____ Dairy/Poultry/Livestock

____Packing/Processing meats (beef, poultry, or seafood)

____ Commercial fishing or fish farms

____ Other

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Student Information

Please give the student's name exactly as it appears on the birth certificate. If your student has two last names, please enter both in the space marked "Legal Last Name".

Legal First Name: _____ Birth Date: _____

Legal Middle Name: _____ Gender: _____

Legal Last Name: _____ Grade: _____

Social Security Number: _____

Date First Entered US School: _____

Is this student Hispanic/Latino? **Yes__ No__**

Student Race: *Select all that apply*

___ American Indian or Alaska Native

___ Asian

___ African American

___ Native Hawaiian or Other Pacific Islander

___ White

School History

Previous School:_____

City:_____ State: _____

Is this student currently suspended or expelled from another school? **Yes__ No__**

If Yes, please explain _____

_____

_____

Has this student been adjudicated (found guilty) of a felony act? **Yes__ No__**

Has this student been enrolled in any [redacted] in the past? **Yes__ No__

If Yes, which school? _____

Student Information

Is the student currently placed in state care or custody (Foster Care)? **Yes__ No__**

If Yes, from which county? _____ Date entered care: _____

Student Services

Does the student have a current IEP? **Yes__ No__**

Does the student have a current Early Intervention Plan (EIP)? **Yes__ No__**

Does the student currently receive Response to Intervention (RTI) services? **Yes__ No__**

Does the student currently receive Speech services? **Yes__ No__**

Does the student have a current 504 plan? **Yes__ No__**

Has the student previously received gifted/talented services? **Yes__ No__**

Language Information

In order to provide your child with the best possible education, we need to determine how well he or she speaks and understands English. This survey assists school personnel in deciding whether your child may be a candidate for additional English language support. Final qualification for language support is based on the results of an English language assessment.

Which language does your child **best** understand and speak? _____

Which language does your child **most frequently** speak at home? _____

Which language do adults in your home **most frequently** use when speaking with your child? _____

Has your child ever received English as a Second Language (ESL/ELL) services? **Yes__ No__**

Health Services

Please list the student's medical or mental health conditions to the best of your knowledge

_____

_____

_____

_____

Please list all medications the student may be taking

_____

_____

_____

_____

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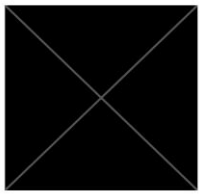

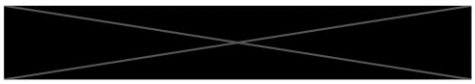

Required Documents

Proof of Residency

Proof of residency documentation is required.
Must be one of the following documents:

- Utility Bill **including** service address
- Rent or Deposit Receipt **with** parent's name, date, current address and owner's signature
- Lease Agreement
- Closing Disclosure if home was purchased recently

Legal Documents

The following legal documents are required for identification and age verification.

- Birth Certificate or other state approved documentation of age.
- Social Security Card or Signed Waiver

Any custody paperwork or other legal documents should also be submitted.

Education Documents

Please provide any of the following that you may have from the student's previous school

- Withdrawal Documentation
- School Records

Health Documents

Following health documents must be submitted within 30 days of enrollment.

- Eye, Ear, Dental certificate(form #3300)
- Immunization(form #3231) or state religious exemption (form #2208)