2020

Factors that Affect Language and Literacy Development in International School Contexts

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Walden University
2020

Abstract

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MA, Smith College, 2003

BS, University of New Hampshire, 2001

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

February 2020

Abstract

Kindergarten students attending English-immersion, international school programs in Spanish-speaking countries may be at risk for learning difficulties. The purpose of this quantitative study was to determine the relationship and comparisons between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency (dependent variable) of dual language learners attending an international school where the instruction was primarily in English and the dominant language of the country was Spanish. Vygotsky's sociocultural theory and Dworin's theory of bidirectionality in bilingual language development formed the theoretical foundation for this study. Research questions addressed the relationship and differences between the variables for 204 international school kindergarten students living in Chile who spoke languages other than English at home. Archival data were analyzed using correlational and causal comparative analyses. Results from the study showed a significant relationship between English language proficiency scores and time enrolled in the program, and a significant difference in proficiency scores for students whose parents spoke some English at home. Gender differences were found in relation to the time enrolled in the program. Recommendations derived from this study include earlier enrollment, intentional instructional groupings based on language background, and a system for monitoring and assessing oral language skills of preschool students. Teacher professional development on intentional and innovative English language instructional practices can promote positive social change for preschoolers in their English language mastery as they mature to become proficient in multiple languages in Latin America.

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Dedication

This dissertation is dedicated to my husband, Casey Overton, who supported me through every step of my doctoral journey. On many occasions, you have taken the role as a primary parent by whisking the kids away on a camping trip or offering to do the grocery shopping when I needed the time to research and write. You have set a strong example for our children of what it means to be a supportive partner. Thank you for your unyielding love and encouragement.

Acknowledgments

I owe a great deal of gratitude to those who offered their support throughout my doctoral journey. First, I would like to express my sincere gratitude to my first committee chair, Dr. Patricia Anderson, for challenging me and growing my potential. Her encouragement and constructive feedback were greatly appreciated, as well as her guidance each step of the way. She held high expectations and never gave up on me.

I would like to express my appreciation for my committee members, Dr. Beryl Watnick and Dr. Shereeza Mohammed, for the hours spent reviewing my work and providing me with feedback and suggestions. Without their expertise, I would not have learned how to refine my work.

I am thankful for my children, Noah and Maya, for their patience and understanding. They have been incredibly generous with their love and support. I would also like to thank my parents, Steven and Vivian Cardoza, for teaching me that anything is possible when hard work is involved.

To all of the strong women I am surrounded by, including Kristen MacConnell, Renea Pope, Jennifer Haugh, Kate Harvey, Michelle Crosbie, Amber Trujillo, and my mom Vivian, who have been a constant reminder of what it means to be a strong, caring, and successful career woman. I am grateful for their kindness and friendship over the years.

Lastly, I would like to express my gratitude to the late Dr. Darragh Callahan with whom I began my journey. Although she could not see everything unfold, I know she would have been proud of the outcome. I am deeply appreciative for having crossed paths.

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Chapter 1: Introduction to the Study

International American schools in South America are comprised of culturally diverse student populations that come from countries around the world (Bailey, 2015). According to the website of the school that was the location of this study, in Santiago, Chile, students attending international schools can come from over 50 different nationalities and speak many languages. Families tend to send their children to international schools because the curriculum is delivered in English and differs from the educational systems in the host country (Rydenvald, 2015). Parents may send their children to such schools because they value a bilingual education and view bilingualism as a potential advantage for their children when they become adults (Banfi, 2017). There is a gap in the research regarding factors that relate to academic success, specifically in language and literacy, during the early childhood years within international school contexts (Hammer et al., 2014). Because of the diverse population of students attending international schools, understanding how these factors affect learning at a young age can help educators and school administrators make decisions regarding curriculum, assessment, and programming. This study may produce positive social change by shedding light on which factors support opportunities for language and literacy learning in various cultural contexts. Included in this chapter is a discussion of the background, problem statement, and purpose of the study. The research questions and theoretical framework are explained followed by the nature of the study, definitions, and assumptions, scope and delimitations. Finally, the significance and summary are provided to close the chapter.

Background

The present study took place in a private, international school in Santiago, Chile where families pay private tuition fees for school enrollment. Parents are well educated and have a high socioeconomic status (SES) in the country. The preschool program provides what Hickey and de Mejía (2014) described as a monolingual English immersion program with an additive approach to bilingualism. The cultural context of the local setting is such that English is the primary language of instruction and Spanish is the country's dominant language. More than half of the student body at the school that was the focus of this study comes from Spanish-speaking countries (58%) while approximately 18% of the students are from countries that speak a language other than English or Spanish, and 24% are from English-speaking countries. Evidence from previous research suggests that the amount of exposure to a particular language affects the growth and development of that language (Hindman & Wasik, 2015; Paradis & Kirova, 2014). Students in kindergarten learn language and early literacy in English while the social language among students and the dominant language of the country is Spanish. This means that they are learning and communicating in more than one language from an early age, which could affect their social and language development. At the end of the year, language and literacy screenings are conducted for all kindergarten students. At the target school, entering first-grade students who do not meet the end of year kindergarten expectations in English language proficiency, Spanish literacy, or English literacy are provided with one type of intervention but may be eligible for all three. Every student in an international school who has been enrolled in the target school since the early

childhood program is in some way a dual language learner. Dual language learners, or DLLs, refer to children who learn their home language and an additional language, simultaneously or sequentially (Nemeth, 2015).

In the local setting, academic performance may be affected by various factors, including the amount of time spent in the preschool program, home language, and gender (Gámez, 2015; Paradis & Kirova, 2014; Voyer & Voyer, 2017). According to Castro (2014), the language and literacy development of DLLs in cultural contexts outside of the United States needs further investigation in order to provide the most effective interventions to students early on as a way to prevent difficulties in academic performance in the later years. To stakeholders in the local setting, this deeper understanding may help to provide more effective programming and services, ensuring high-quality learning experiences for children and families attending private international schools.

Problem Statement

The lack of understanding of how various factors affect English language learning among early childhood students enrolled in an international school in a Spanish-speaking country was the problem that formed the focus of this study. There was a high percentage of students in the local setting who were eligible to receive intervention in language, affecting the rate at which they learn to read and write. Lack of understanding of factors that affect English language learning may obscure some children's eligibility for intervention and may affect their ability to master English. International schools are described as independent institutions in host countries around the world that offer

instruction primarily in English (Rydenvald, 2015). The desire for families living abroad to provide their children with a high quality, bilingual school experience as early as preschool has become increasingly important in recent years (de Mejía, 2016). Although many research studies have examined factors that affect the development of young DLLs (Winsler, et al., 2014), international schools are continually challenged with providing language instruction that meets the needs of the diverse preschool populations (Schwartz, Koh, Chen, Sinke, & Geva, 2016). More specifically, teachers and administrators in the local setting are challenged with identifying and providing appropriate intervention services when students are eligible for receiving more than one type of intervention (e.g., Spanish reading and ESL) upon entering first grade. In the local setting, approximately 41% of the students leaving kindergarten are identified as needing support services in English language proficiency, Spanish reading, English reading, or a combination of these. According to the student support services coordinator at the target school, of those students who qualify to receive language support services, 44% have attended the program since pre-kindergarten (Personal Communication, June 12, 2018) This means that a high percentage of students who completed prekindergarten at the school require additional language support in first grade, and suggests that unexplored factors may hinder English language proficiency and literacy. The sociocultural theories of Vygotsky (1978) and Dworin (2003) suggest that language learning and, specifically, bilingual language facility develop in social contexts of the home and school. The lack of understanding of how various factors affect English language learning among early

childhood students enrolled in an international school in a Spanish-speaking country is the problem that formed the focus of this study.

Purpose of the Study

The purpose of this study was to determine the relationship between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency (dependent variable) of DLLs attending an international school where the instruction primarily in English and the dominant language of the country was Spanish. This study was based on the sociocultural theories of language learning and bilingualism proposed by Vygotsky (1978) and Dworin (2003). Results from this quantitative study may help educators, administrators, and policymakers to identify and provide effective and appropriate intervention services, identify staffing needs, and analyze programming for continued improvement for young DLLs in international school settings as early as possible.

Research Questions and Hypotheses

Three questions guided this study, to explore sociocultural factors as suggested by Vygotsky (1978) and Dworin (2003) that may affect children's language proficiency.

RQ1: What is the relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home?

$H_0$1 - There is no statistically significant relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home.

H_A1 - There is a statistically significant relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home.

RQ2: Is there a statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home?

$H_0$2 - There is no statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home.

H_A2 - There is a statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home.

RQ3: Is there a statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home?

$H_0$3 - There is no statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home.

H_A3 - There is a statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home.

Theoretical Framework for this Study

The theoretical foundation to support the present study came from Vygotsky's (1978, 1980) sociocultural theory and the idea that language and literacy learning happens within social and cultural contexts of a child's environment. Vygotsky proposed that children's learning takes place as a result of the interactions between a child and the adults and peers in the child's environment (Vygotsky, 1978).

In relation to Vygotsky's sociocultural theory is the theory of bidirectionality (Dworin, 2003). From this perspective, achieving biliteracy is a bidirectional process where the first language facilitates learning in the second language and the second language mediates learning in the first language (Dworin, 2003). Some bilingual learners may use their second language while writing prior to mastering oral proficiency in that language while other bilingual learners will rely on their oral language to support their

written language. These patterns suggest that bilingual learners do not all learn in the same way and that there are multiple paths to becoming biliterate (Dworin, 2003).

Another theoretical perspective to consider is the hypotheses of Cummins (1979). Cummins proposed that language learning is affected by the background, child input and educational treatment factors where success in a second language is dependent on proficiency in a first language. This theory extends to learning literacy in one language, which supports literacy learning in a second language (Cummins, 1980). The research questions posed in this study focused on whether or not relationships exist between oral language development and three social and environmental factors (i.e., time in the program, home language, and child gender).

The ideas of Vygotsky, Dworin, and Cummins provided guidance in identifying the variables I examined in this study. Vygotsky's sociocultural theory addressed the influence that a child's interpersonal environment had on learning and development, which was one of the key distinctions of the study. I examined variables of home language, gender, and the amount of time spent in the program to determine their relationship to oral language development for DLLs in international school contexts. Home language and the amount of time spent in the program varied between participants, which may have had an effect on their ability to acquire a second language. If a statistically significant relationship existed between the variables, the results of this study would support Vygotsky's theory.

In Dworin's (2003) theory of bidirectionality, bilingual learners use both languages that they are acquiring to support development across languages, which may

account for differences within language groups or cohorts. In contrast, when considering Cummins theory, a level of proficiency in a first language is required in order to be successful in the second language, which would indicate that students entering the program at the beginning of kindergarten would likely have higher proficiency in English by the end of the year given that they entered the program at an age when they had already mastered their first language. When analyzing the data, I used these theories to help me understand the strength of the relationship between these factors and children's oral language development at the end of kindergarten. A deeper investigation into the theories regarding bilingualism and biliteracy, along with the social construction of language, including the possible effects of duration and depth of language exposure, and gender of the learner, are discussed in Chapter 2.

Nature of the Study

This study followed an explanatory correlational design. Explanatory correlational research studies seek to correlate two or more variables and collect data at one point in time (Creswell, 2012). A correlational relationship study was the most appropriate because two or more variables were examined, all data were collected at one point in time, each participant had an individual score for each variable measured, and the data came from one group of participants (Lodico, Spaulding, & Voegtle, 2010). In the local setting, the dependent variable of English language proficiency in kindergarten was measured using the WIDA ACCESS Placement Test (W-APT) and was administered at the end of the school year in kindergarten. Using archival W-APT data from the last two years of data collection and the demographic data provided in the school's database, the

independent variables examined included the amount of time enrolled in the program and child gender, as indicated for each child in the school's database, and the child's home language, as indicated by parents in the child's enrollment form. The dependent variable was children's overall English language proficiency, as measured on the W-APT assessment. Convenience sampling was used and participants included all students in kindergarten that spoke Spanish or languages other than English at home. It was anticipated that data would include information from approximately 200 students over the past two school years. I examined whether or not a relationship existed between the variables and the degree to which they were associated.

Definitions

Amount of time of enrollment: for the purpose of this study, this term corresponds to the number of semesters a child is enrolled in the target school, where the first semester of the school year is between July-December, and the second semester is between February-June.

Bilingual first language acquisition (BFLA): children who learn two languages from birth (De Houwer, Bornstein, & Putnik, 2014).

Cultural continuity/discontinuity: the degree to which an individual experiences congruence between their own culture's ways of doing things and what is typically done in another culture; a disconnect between expectations in an early childhood program and the expectations for the child at home is an example of cultural discontinuity (Derman-Sparks & Edwards, 2010, p. xi).

Dual language learners (DLLs): Children in the process of learning two languages simultaneously or who develop a primary language at the same time as they learn a second language (Nemeth, 2014).

Early childhood program: in the local setting, this term includes children between ages 3-6, comprising Prekindergarten (3-4 years old), Kinder 1 classes (4-5 years old), and kindergarten (5-6 years old). (International School Nido de Aguilas, 2017)

Early second language acquisition: children who begin to learn a second language before the age of six (De Houwer, 2011).

Home language: for the purpose of this study home language is the language spoken at home by parents and caregivers, and indicated by parents on the child's enrollment form.

Immersion education program: programs that are monolingual or bilingual and provide services to maintain or enrich second language learning (Hickey & de Mejia, 2014)

International schools: independent institutions charging tuition fees or offering scholarships and catering specifically for students of many nationalities, some of whom will be transient; the educational program is usually different from that of the host country and English is the main language of instruction in most institutions (Rydenvald, 2015).

Language dominance: the language that bilingual children are exposed to the most (Grosjean, 2010).

Language proficiency: the extent to which an individual's skill in one or both of their languages meet the expectations for skill in a similarly-aged native speaker (Bedore et al., 2012).

Monolingual immersion model: program model where experiences are offered in a single language and the goal is to promote additive bilingualism; learning is sometimes supported by the mother tongue to facilitate the second language acquisition (Hickey & de Mejía, 2014).

Phonemic awareness: the ability to hear, to identify, and to manipulate the individual sounds (phonemes) in spoken words (Strickland & Riley-Ayers, 2007)

Phonological awareness: the ability to identify and make oral rhymes, to identify and work with syllables in spoken words, and to hear, identify, and manipulate the individual sounds- phonemes-in spoken words (Strickland & Riley-Ayers, 2007).

WIDA-ACCESS Placement Test (W-APT)- a screening tool for kindergarteners used in the target school to measure baseline English language proficiency and identify students who may be eligible to receive intervention services (https://www.wida.us).

Assumptions

I assumed that the demographic data collected by the school was accurate with regard to factors relevant to this study. For example, I assumed that the home language identified by parents in the enrollment form was the actual language spoken at home. I assumed also that the W-APT provided an accurate depiction of student abilities. The validity of these assumptions was essential to this study, and I remained alert to any

discrepancies in the data that might arise, at which point I sought clarification of the data from the school's administrator and school counselor who worked with the families.

Scope and Delimitations

The focus of this study was to examine if there was a relationship between the outcome variable of oral language proficiency and other variables, which included gender, home language, and amount of time spent in the program. The data used in this study comprise archived oral language proficiency scores from approximately 200 kindergarten students who attended an international school located in a major metropolitan area of a South American country and who lived in a home in which at least one parent spoke primarily Spanish or another language than English. Data were collected and archived by the target school over a period of two school years between 2017 and 2018, and therefore, represented a pre-existing data set.

Limitations

One limitation to the study was that some families in which English was not the first language indicated falsely that their child had some level of proficiency in English for fear that the truth of no proficiency would negatively affect their child's ability to be admitted to the school. If I relied solely on parents' truthfulness in indicating the language spoken at home, the validity of the study would have been compromised. To validate parent language reporting, I confirmed this information with school counselors who had worked with the families. Parents of 10 children had indicated that English was the child's second language spoken at home, when, in fact, neither parents nor caregivers spoke English, per the school counselors. As a result, data from these 10 participants

were modified to accurately represent information on the child's language exposure. Data from an additional four participants were omitted because language exposure at home could not be determined from the parent report nor verified by the school counselors.

The families who send their children to the school pay private tuition costs. Among the students included in the study, only a few were receiving financial aid or scholarships. Also, because the parent community was comprised of business owners, diplomats, embassy employees, and others whose careers require a sound educational background, data used in this study came from children and families with parents who are well educated. These demographic factors describe a privileged subset of the DLL population, and so affect the generalizability of my findings to DLL students in general.

Finally, because the study took place in an international school in South America and the data were specific to one school, the potential for generalizability only extended to the local population. However, the results may be useful for other international schools in South America with a similar curriculum and demographics.

Significance

Students attending international schools around the world are a unique population because of the context in which they are learning. Given that these students came from families where bilingualism and education apparently were valued, where parents were well educated, and families had a high SES, it was unclear what factors might have negatively affected children's success in language and literacy within this setting. There remains a gap in the literature in regards to language and literacy development for DLLs, specific to high SES and cultural contexts (Hammer et al., 2014). Many studies

conducted in the United States used samples of children from low-income and poverty-level households. Removing SES background as a factor, which has been shown to negatively affect the language and literacy development of young children, may provide a deeper understanding of how other factors affect development. This deeper understanding will advance knowledge of the effects that certain factors have on early language development in high socioeconomic populations in a country where English is a minority language.

In the local setting, findings from the study shed light on the learning profiles of students who spend most of their educational career in one school setting, which also informs decisions of targeted supports that could be provided. At a more general level, understanding how the unique demographics of international schools affect language and literacy development could help identify predictors and/or risk factors for later school success (Hoff, 2013). This deepened understanding could assist administrators and other instructional leaders in the curriculum planning and implementation of intentional language instruction practices for dual language preschoolers in Latin America.

Summary

Understanding the factors that affect language development for young DLLs is important when planning curriculum, assessment, and program design. There is limited research on the nature of language development of bilingual learners in early childhood programs in cultural contexts outside of the United States.

From a sociocultural perspective, children learn a language within the social context of their environment and community. Two important factors that affect language

development and are evident in research include home language input and the age of exposure to each language. In the present study, I determined if a relationship existed between time spent in the program, home language, and gender and oral language proficiency scores at the end of kindergarten. The results of this study showed how these factors affect the successful development of language and literacy in English.

The literature review in the next section includes an in-depth look at the components of this study. Evidence from past research studies regarding factors and predictors of bilingual language development is discussed. In Chapter 3, the research design and methods used to conduct this study are described in detail.

Chapter 2: Literature Review

Students attending international schools for the majority of their educational career may be at risk for learning difficulties. In the local setting, a large percentage of students leaving kindergarten qualify to receive language and learning support services at a young age. The purpose of this study was to determine the relationship between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency (dependent variable) of DLLs attending an international school where the instruction is primarily in English and the dominant language of the country is Spanish. The literature review provides an in-depth look at the components of the present study. The term 'dual language learner,' or DLL, is defined as it pertains to the population. Evidence from past research studies regarding factors and predictors of academic success for bilingual language and literacy development are discussed. Lastly, the cultural context of international schools is addressed, as it is what makes this study unique.

Literature Search Strategy

A variety of search strategies were used to locate articles related to the focus of the present study. First, specific search terms were used in the Walden library, which included such terms as *bilingual, bilingual development, bilingual programs, cultural context, dual language learners, early language development, factors in bilingual language learning, home language exposure, immersion education, international schools, language development predictors*, *preschool and kindergarten, second language learners,* and *SES*.

Second, I utilized Google Scholar to search the terms and set a date range within the last five years for published peer-reviewed articles. I changed the settings in my browser to link directly to the Walden University library where I had full access to the entire content and where I could download and save articles. I also used the "cited by" and "related articles" links for more possible resources related to the study. Third, I referred to the reference list that was included in each article that was most pertinent to the content of my literature review to find other articles that were related to or supported the specific content I researched. Lastly, if I had a doubt about the credibility of a source, I utilized UlrichsWeb.com to ensure that the article came from a scholarly, peer-reviewed journal.

Theoretical Foundation

The theoretical framework to support the present study came from Vygotsky's (1987) sociocultural theory that language and literacy learning happens within social and cultural contexts of a child's environment. This theory proposes that children's learning takes place as a result of the interactions between a child and the adults and peers in the environment. That is, the adults and more knowledgeable peers, or more knowledgeable others in a community share their beliefs, values and intellectual adaptations from their culture with a child (Vygotsky, 1980). Variations between different cultures determine the way in which a child approaches learning. For example, in some cultures, storytelling is used as a way to pass history down from one generation to the next while in other cultures, history is passed down through songs or in writing. The influence of culture and community play a significant role in cognitive development as it influences the ways in

which a child interacts within their environment and that culture and social interactions most significantly affect cognitive development (Vygotsky, 1978).

Vygotsky (1987) believed that language acquisition within the social context of a child's environment was key to cognitive development. Three types of language are developed in a child beginning at an early age. First, social speech is developed as a way for a young child to communicate with others. Then, private speech is developed, which aides in a child's ability to self-regulate and allows for planning and organizing thoughts. At this time in a child's development, thoughts and language merge to create verbal thinking. By the age of seven, children develop inner speech, which is when language becomes internalized and leads to further cognitive development (Vygotsky, 1987). Although Vygotsky did not refer specifically to second language acquisition in his work, his theory of how language is developed within a sociocultural context provides a foundational knowledge of how culture and social contributions affect cognitive development.

Researchers have posed many theories regarding the development of bilingualism and biliteracy. For example, Cummins (1979) suggested two hypotheses. First is the developmental interdependence hypothesis, which states that competence in a child's second language acquisition is dependent on the proficiency of their first language (Cummins, 1979). The second hypothesis is referred to as the threshold hypothesis, which states that when a bilingual child is acquiring the first and second language, they must reach a certain threshold in those languages in order to benefit from the advantages that come along with bilingualism (Cummins, 1979). Cummins' hypotheses work

together with consideration of the interaction between background, child input, and educational treatment factors (Cummins, 1979). Cummins' hypotheses support studies that examine the development of bilingual learners who have already mastered their first language. That is, by the time monolingual children reach the age of five, they are proficient in the language that they have been exposed to since birth (De Houwer, 2009; Tabors, 2008). Cummins' hypotheses extend to learning literacy in much the same way, stating that learning literacy in one language will support literacy learning in a second language (Cummins, 1980).

In contrast to Cummins' perspective is the theory of bidirectionality (Dworin, 2003). From this perspective, learning literacy is a bidirectional process where the first language facilitates learning in the second language and the second language mediates learning in the first language (Dworin, 2003). Some bilingual learners may use their second language while writing prior to mastering oral proficiency in that language while other bilingual learners will rely on their oral language to support their written language. These patterns suggest that bilingual learners do not all learn in the same way and that there are multiple paths to becoming biliterate (Dworin, 2003). Both Cummins' hypotheses and Dworin's theory of bidirectionality provide perspectives on bilingualism and literacy that pertain to students in international schools. Further research is needed to determine which theories support the manner in which the local population acquires language and literacy.

In the following sections, I present literature on factors that affect overall language acquisition as influenced by the cultural and linguistic context of international

schools, which is what makes the population in this study unique to other studies. A discussion of the research on DLLs, the role of cultural context, oral language and literacy development, factors that affect development, and predictors of academic success for young DLLs is included in the remainder of this chapter.

Cultural Contexts

Cultural context plays a significant role in a child's development. Culture, as defined by Derman-Sparks and Edwards (2010), refers to the way that a group of people lives, what they believe in, how they celebrate customs and traditions, and how they relate to others. Cultural identity begins at birth and changes over time (Hanson, Lynch, & Poulsen, 2013). As early as 3 years old, children begin to develop a sense of self and an awareness of how other people within a community value and view their culture. A child will experience continuity when the values, practices, and/or beliefs of the child's family are similar to the dominant culture within the community (Bronkhorst & Akkerman, 2016). When children experience discontinuity there is a disparity between their own culture and the culture of the school or community (Bronkhorst & Akkerman, 2016). In the present study, children who spoke Spanish or English at home were more likely to have cultural continuity in the school because the social language on the playground was Spanish and the language of instruction was English. Studies have shown that the cultural context that a child lives in can have an effect on overall learning and development (Senzaki, Wiebe, Masuda, & Shimizu, 2018; Tran, Arrendondo, & Yoshida, 2016; Wiedl, Mata, Waldorf, & Calero, 2018).

Some research studies outside of the United States have considered the role of cultural context on child performance. Wiedl et al. (2018) conducted a study of children from Germany and Spain with migratory and non-migratory backgrounds through the use of dynamic testing. The purpose of the study was to examine the validity of using dynamic testing as a non-bias screening of cognitive abilities for preschoolers. Participants were placed in groups according to the migratory status of their parents. The results of the study did not find a significant difference in the learning potential between groups according to migrant status; however, differences were most attributed to children's linguistic background (Weidl et al., 2018). The interaction between language and culture plays an important role in development (Imai, Kanero, & Masuda, 2016).

A key finding in many studies is that there is an interaction between language and culture that has effects on bilingualism and cognition (Senzaki et al., 2018; Tran et al., 2016). In a study that examined the effects of language and culture on attention, researchers looked for differences in the areas of attention (i.e., alerting, orienting, and executive control) of monolingual and bilingual 3- to 5-year-olds from the United States, Vietnam, and Argentina. Using the Attention Network Test, bilinguals outperformed monolinguals in all areas of attention. Some differences were seen in Eastern cultures than Western cultures at various points in time between 3- and 5-years-old but were comparable over time (Tran et al., 2018). The evidence suggests that cultural background plays a role in the development and that learning more than one language has a positive effect on development.

Senzaki et al. (2018) found similar evidence in a study that looked at the social context in relation to attention and executive function. The groups of participants consisted of East Asian (Japanese) and Western (Canadian) children, ages 4 to 5 and 6 to 7 years old. Children were shown a variety of social and non-social stimuli. Results showed that the Japanese children responded more accurately to the social stimuli than the Canadian children and both responded similarly to non-social stimuli. That is, Japanese children were more successful at completing tasks involving executive function and less successful in regulating their attention as compared to Canadian children in the study. Thus, providing further evidence that cultural background and social context plays a role on development (Senzaki et al., 2018). If development is affected by the interaction between language and culture, then a child's home language and the cultural context in which they live may affect their oral language proficiency, which is one of the primary variables that was examined for DLLs in the present study.

Dual Language Learners

DLLs are defined as children who grow up with more than one language at the same time, or who learn a second language after acquiring a first language (Nemeth, 2014). Researchers have used various terms to describe DLLs such as *bilingual, emergent bilingual*, and *second language learner*. Each variation in terms has to do with the nature of circumstances that a child is exposed to in their environment. For example, the term *emergent bilingual* refers to children who speak a home language and are exposed to a second language in the school setting (García, Kleifgen, & Falchi, 2008). In comparison,

Kohnert (2010) described *bilingual* children as having received input in two or more languages between birth and adolescence.

Bilingual children are exposed to two languages during childhood. The two most commonly referred types of bilingual learners are simultaneous and sequential, or successive learners (Nemeth, 2015). Simultaneous learners are exposed to two languages since birth (Nemeth, 2012). Sequential, or successive learners, are children who have been exposed to one language first and then to a second language (Nemeth, 2012). To date, researchers have not agreed upon the extent to which simultaneous versus sequential bilingualism affects language learning in the early years (Kim, Park, & Lust, 2018), however, there is significant evidence from research which suggests that the exposure and input in a child's environment does affect bilingual language development (De Houwer, 2017). DLLs will be the term used for the present study, because it emphasizes the importance of learning both languages (Nemeth, 2015). All participants in the current study, regardless of home language, have been learning at least two languages, English and Spanish, from a very young age.

In the local setting, the preschool and kindergarten population consisted of a variation in DLL backgrounds and exposure to language. Most commonly found were the families from the host country, Chile, where parents and children were Chilean and the child spoke primarily Spanish at home and English at school. There was also a multilingual subgroup of children whose parents were expatriate and spoke a language other than English or Spanish at home. Another subgroup of DLLs in this setting, one that was excluded in this study because they were native English speakers, consisted of

children who were born in Chile from parents who were expatriates and spoke English at home. These children also may have spoken Spanish at home with a caregiver and were exposed to English and Spanish at school. One of the primary factors explored in the current study had to do with oral language proficiency of DLL children whose first language was not English, which included two of the three subgroups of students enrolled in the target school.

Early Language and Literacy Development

Extensive research has been conducted regarding the ways in which DLLs acquire language. DLLs have two language systems that may affect or influence the development of each language (Hammer et al., 2014). This interaction between languages is also referred to as a cross-linguistic effect (Kupisch, 2014). Although it may take longer to acquire more than one language for young children, bilingualism is seen as an asset to language development (Hammer, et. al, 2014).

Oral language proficiency and literacy development are closely linked. Oral language refers to listening and speaking, which includes listening comprehension, verbal expression, and vocabulary development (Foorman, Koon, Petscher, Mitchell, & Truckenmiller, 2015a). Literacy refers to reading and writing, which includes concepts of print, alphabetic principle, phonological awareness, comprehending and responding to books, and written language (Murray, 2016). Evidence from research has shown that oral language development not only promotes literacy development but it is a key factor to later academic achievement (Hammer, et. al, 2014).

Several studies have examined the effect of early literacy skills on later reading outcomes. Foorman, Herrera, Petscher, Mitchell, and Truckenmiller (2015b) conducted a study of the role of oral language and reading comprehension outcomes in Title 1 schools in the United States of students in kindergarten, first- and second-grade. Results showed that reading comprehension outcomes were predicted by oral language (listening comprehension, syntax, and vocabulary) in kindergarten only. Oral language and decoding fluency predicted reading comprehension in first- and second grade (Foorman et al., 2015b).

Further evidence to support this finding was related to bilingual learners. Babayiğit (2015) studied the role of oral language on later reading outcomes of children ages 9 to 10 years old who spoke English as a first (L1) and second language (L2) in England. While results showed the L2 learners were generally at a disadvantage in terms of oral language and reading comprehension when compared to L1 learners, oral language was found to be the most predictive of reading comprehension for both groups. Students with lower English language skills performed lower in reading. Researchers in both studies, Babayiğit (2015) and Foorman et al. (2015b) highlighted the importance of supporting oral language development in the early years for all students.

Researchers have identified other factors that predict later academic success specific to language-based skills. Mancilla-Martinez and Lesaux (2017) used longitudinal data to analyze reading comprehension of immigrant Spanish-speaking children in the US at various grade levels in order to find which language-based skills best predicted later academic success. Results of the study showed that word-based skills in early grades

predicted academic outcomes by the end of fifth grade and language-based skills predicted outcomes in eighth grade (Mancilla-Martinez & Lesaux, 2017). Researchers in the study highlighted the importance of considering the development of language learners over time and screening children in the primary years (kindergarten through grade 2) on language-based skills.

In comparison, Dennaoui et al. (2016) studied the relationship between oral language proficiency and later literacy outcomes for bilingual students in Australia. Findings of the study provided further evidence that students in preschool (ages 4-5) who were proficient in English early on were more successful in language and literacy by the end of elementary school (Dennaoui et al., 2016). Similar findings came from a longitudinal study conducted by Grimm, Solari, and Gerber (2018). They examined the growth in literacy development for Spanish-speaking students in third through eighth grade. Latent growth curve models were used to determine which reading-related skills best predicted literacy development at various grade levels. English vocabulary scores in kindergarten were significantly related to literacy outcomes for students in third through eighth grade (Grimm et al., 2018). Many studies (Hoff & Core, 2015; Paradis & Kirova, 2014) have examined receptive and expressive vocabulary as an oral language measure and have found significant associations with later academic outcomes.

Vocabulary and DLL Students

Vocabulary knowledge is one of the key language-based predictors of academic success for DLLs (Hoff & Core, 2015). Two ways to think of vocabulary for DLLs are *total vocabulary* and *total conceptual vocabulary*. Total vocabulary refers to the number

of words a child knows in both languages whereas total conceptual vocabulary refers to the concepts a child knows in both languages (Hoff & Core, 2015). Researchers have examined and compared vocabulary development across languages and at different ages (De Houwer et al., 2014; Gross, Buac, & Kaushanskaya, 2014). De Houwer et al. (2014) compared total conceptual vocabulary in bilingual children and monolingual children at 13 months and 20 months old and did not find a significant difference between bilingual and monolingual children at 13 and 20 months old. However, findings revealed that bilingual children understood 71% more words than their age-matched, monolingual peers (De Houwer, et al., 2014). Gross et al. (2014) found similar evidence when they examined receptive and expressive conceptual vocabulary scores, comparing various groups of language learners (i.e., simultaneous, sequential, monolingual). Results showed that using conceptual scoring for DLLs yielded scores closer to those of monolingual children. Because vocabulary knowledge is distributed across both languages (Paradis & Kirova, 2014), it is important to account for knowledge children have in both languages.

Westerveld (2014), working in New Zealand, found that when receptive vocabulary development was measured across languages, the DLL group outperformed the monolingual group of children. In addition, Jackson, Schatschneider, and Leacox (2014) found that DLLs' receptive vocabulary grew significantly between preschool and Grade 2. In a study by Garcia (2018), English and Spanish vocabulary development was measured in several different classroom contexts (i.e., English-only, bilingual, mostly Spanish). Results showed that students in classrooms with mostly Spanish instruction scored lower in English vocabulary than did other students, while students in the

bilingual and English-only classrooms showed similar scores to each other (Garcia, 2018). The findings from these studies provided evidence that exposure to a language affects the growth in vocabulary for DLLs and that using both languages is beneficial for overall language development. Furthermore, measuring and monitoring vocabulary growth in the early years is important because of the predictive factor of vocabulary on later academic outcomes (Jackson et al., 2014; Mancilla-Martinez & Lesauz, 2017).

Factors that Affect Language Development in DLLs

Factors identified in research studies of young DLLs include age of exposure, parental education, home language, student gender (De Houwer, 2015; Winsler et al., 2014), family SES, early care and education classroom and school characteristics, and level of certification and experience of the teachers (Kim, Curby, & Winsler, 2014;). I will address each of these next.

Socioeconomic Status and Parental Education

SES and parental education play significant roles in development. Children coming from low-income households are at-risk for delays in development and achievement (Mancilla-Martinez, Christodoulou, & Shabaker, 2014). Mancilla-Martinez et al. (2014) studied the vocabulary development of preschool English-language learners with low SES. Results showed that low English language proficiency scores were related to low vocabulary knowledge, placing this population at risk for later failure in achievement (Mancilla-Martinez et al., 2014). Similar results were found from a study that examined literacy measures of preschool children from low SES backgrounds (Heath et al., 2014). Children who were considered to be high-risk continually scored lower on

literacy outcomes by the end of kindergarten than their low-risk peers (Heath et al., 2014).

In relation to SES, researchers have identified parental education as being one of many factors that affect a child's language development (Kim et al., 2014; Winsler et al., 2014). In a study by Winsler et al. (2014), demographic variables were examined in relation to child outcomes. Results showed that parental education had a different effect on development dependent on the languages spoken at home. For English-speaking families, parental education was positively associated with cognitive development, literacy, and family engagement, whereas families of DLLs showed a stronger association between parental education and socio-emotional outcomes (Winsler et al., 2014).

In a study conducted in Chile, Coddington, Mistry, and Bailey (2014) examined preschoolers' receptive vocabulary in relation to maternal education and SES. Coddington et al. (2014) found that maternal education and SES influenced language development. Families with higher levels of SES and maternal education were associated with higher vocabulary test scores (Coddington et al., 2014). Researchers attributed the positive associations to language development on home environment factors and the likelihood that parents who are more educated provide a language-rich environment at home (Coddington et al., 2014). The home environment is a key factor in a child's language development and will be examined in the present study. In the local setting, SES and parental education are controlled for given that it is a private international

school where parents are well-educated and have the economic means to provide support to their children.

Age of Exposure

Research studies examining the age at which a child is exposed to a second language have yielded mixed results (Kim et al., 2018; Sun, Steinkrauss, Tendeiro, & De Bot, 2015; Thordardottir, 2017). As noted previously, types of bilingualism are defined by the age of exposure to a second language, which includes simultaneous or sequential bilinguals (Nemeth, 2014). Kim et al. (2018) examined the language development of Korean-English bilinguals using a mixed-methods research approach. By looking at narrative, vocabulary, and syntax measures between two simultaneous bilinguals and two sequential bilinguals with the same language backgrounds, they found that the differences between the two groups were more likely attributed to language experience rather than the timing of exposure (Kim et al., 2018). Thordardottir (2017) concluded the same in a study that measured receptive and expressive vocabulary and word structure in French-English bilingual children in first- and third-grade. Results showed that both simultaneous and sequential bilingual children scored lower on language measures than their monolingual peers; however, there were slight differences between simultaneous and sequential learners. These differences were attributed more to the amount of exposure to the language (Thordardottir, 2017).

Sun et al. (2015) described factors that affect English acquisition as internal and external. Receptive and expressive vocabulary was measured for children from China whose ages range between 2 and 5 years old. Much like the previous studies mentioned,

Sun et al. (2015) found that while internal factors such as the age of onset predicted later language outcomes for young Chinese English language learners, the external factors (i.e., quality of language input) were better predictors for receptive and expressive language measures (Sun et al., 2015).

Therefore, although the age at which a child is exposed to a language is one factor that affects bilingual development (Hammer et al., 2014), the quality of input of a language has been found to be a more accurate predictor of overall oral language performance (Muñoz, 2014). Muñoz (2014) examined language-based skills in undergraduate students in Spain to determine if age of exposure or language input were related to oral performance. The quality of language input had more lasting effects on later language abilities (Muñoz, 2014). In relation to the quality of input, Paradis and Kirova (2014) suggested that children who are exposed to English in a preschool setting might acquire English more efficiently than exposure from home; however, home language does have an effect on overall language development.

Home Language

Home environment as it pertains to home language is a key factor in a child's language development, also referred to as language input environments (De Houwer, 2017). Language input environments include the number of languages spoken by parents, the amount of time exposed to each language, and the language(s) that parents and children use to interact (De Houwer, 2015, 2017).

Key findings in several studies provide evidence that the amount of exposure a child has to a particular language affects language growth and development (Hoff,

Rumiche, Burridge, Ribot, & Welsh, 2014a; Hoff, Welsh, Place & Ribot, 2014b; Howard et al., 2014). In a study that compared monolingual and bilingual language development, in children between 22 and 30 months of age, researchers concluded that bilingual children vary in language proficiency as an effect of their environment (Hoff et al., 2014b). That is, the more a child hears in a particular language determines how proficient they are in that language. Gibson, Peña, and Bedore (2014) also supported this finding when they examined the receptive-expressive gaps in five-year-olds with different language backgrounds (i.e., English-only, Spanish-only, and Spanish-English bilinguals). Results showed that the gaps between receptive and expressive language were related to the amount of exposure in that language. For example, participants that had more exposure to English had a smaller gap between receptive and expressive language abilities than participants who heard very little English. Similar findings were seen in Spanish gaps as well (Gibson et al. 2014). This suggests that the amount of exposure to a language affects the receptive and expressive abilities in that language.

In another study, Hoff, et al. (2014a) examined the language development trajectories of bilingual children ages 22 to 48 months. The purpose of the study was to see what the influence of languages spoken at home had on expressive vocabulary in English. The sample was divided into three groups: (1) bilingual children with two native Spanish-speaking parents (2) bilingual children with one native English and one native Spanish-speaking parent (3) monolingual children of equal SES. Results of the study showed that the home languages spoken influenced English expressive vocabulary. The group with native Spanish-speaking parents scored higher in total expressive vocabulary

(in Spanish and English) and made "steeper gains" than the other two groups. The group with at least one native English-speaking parent outperformed the native Spanish-speaking parent group, but also showed a decrease in Spanish vocabulary over time. Finally, homes where English was the only language spoken at home had the highest expressive vocabulary scores (Hoff, et al., 2014a). These studies highlight the importance of home language on academic outcomes.

Children whose parents speak English at home are more likely to score higher on oral proficiency measures at the end of kindergarten (Bachman, Elliott, Scott, & Navarro, 2018). Researchers studied Latino children's academic and behavioral trajectories from the beginning of kindergarten to the end of third grade. Participants came from Spanish-speaking and English-speaking homes and a variety of preschool experiences. Results from the study showed that students who attended private preschools performed higher on reading measures in kindergarten and maintained this performance through third grade (Bachman, et al., 2018). Home language is a significant predictor of oral language proficiency and has a lasting impact on later outcomes in reading.

Further evidence was from Howard et al. (2014) in a study that explored the factors related to later reading outcomes. Researchers in this study examined three different groups of Spanish-English bilingual students in kindergarten, third, and fifth grade. Considering the number of variables, hierarchical regression was used to determine which factors were more likely to predict reading outcomes for each of these groups. Home language and English vocabulary were found to be the most significant predictors, specific to reading comprehension (Howard et al., 2014). Home language in

the current study is determined by the first- and second- languages spoken in the home, which may have an effect on English language proficiency as it has had on literacy measures in the studies mentioned. Language exposure extends beyond the home environment and includes the language exposure in early childcare and education programs.

Early Childcare and Education Programs

Early childcare and education programs also play a role in overall language exposure and development for young DLLs (Hoff, 2018). In a literature review on the effects of early care programs on DLLs, researchers concluded that DLLs benefit from attending programs where English is the primary language of instruction and Spanish is used to support second language acquisition (Buysse, Peisner-Feinberg, Paez, Hammer, & Knowles, 2014). According to Yazejian et al. (2015), the more time spent in a high-quality early care program, the better the outcomes for DLLs. When looking at data from the Educare program between 2003-2013, researchers compared the effect size of programming on receptive language for children who spoke English-only (EO) and DLLs coming from Spanish-speaking homes entering the program at different ages. The effect size for DLLs was greater than that of EO children. DLLs who entered the program at an earlier age outperformed those who entered later (Yazejian et al., 2015).

Further studies on the amount of exposure as it relates to school experience have provided similar evidence to the amount of exposure at home. Gámez (2015) examined the English language proficiency of ELLs in relation to the classroom experience. The purpose of the study was to examine the relation between English input from teachers and

peers and English language outcomes in kindergartners in a Transitional Bilingual Education (TBE) program where Spanish is used as the primary instruction for language and English is used for a short amount of time during the day. Findings from this study showed that when there was a specific time set aside for intentional instruction in English, DLLs had higher gains in oral language proficiency. The quality of English language input by teachers was positively related to DLL's English proficiency (Gámez, 2015). That is, children benefit most from high-quality exposure to language spoken by native speakers of that language.

Gender

Lastly, gender was examined in the present study to determine whether or not there was a difference in oral language proficiency between boys and girls. Past research studies have provided considerable evidence of an advantage of girls over boys in school achievement (Voyer & Voyer, 2014). Studies involving reading-related skills, school readiness, and second language acquisition have all shown that females outperform males at different stages in life.

Gender differences have been found in young bilingual learners in terms of school readiness. Guhn, Milbrath, and Hertzman (2016) examined school readiness in kindergarten children in British Colombia in comparison to the home language, cultural background, and gender. The most significant finding of this study was that bilinguals outperformed monolinguals in school readiness and monolingual boys were seen as the most vulnerable population. Regarding gender, girls rated better in social competency, pro-social skills, and literacy and may be the result of different expectations between

cultures (Guhn et al., 2016). In another study that looked at school readiness of Spanish-speaking DLLs living in Miami, evidence showed that girls became proficient in English at a faster rate than boys (Kim et al., 2014). No differences were seen in school readiness at kindergarten entry specific to gender, but it was suggested that social skills have an influence on second language development, which may look different between boys and girls (Kim et al., 2014).

In the Netherlands, Wassenburg, de Koning, de Vries, Boonstra, and van der Schoot (2017) looked for gender differences in children in grades 4-6 in regards to mental simulation during language processing, ultimately resulting in reading comprehension. The authors refer to mental simulation as the mental representations used to make meaning of something that is read, or reading comprehension (Wassenburg et al., 2017). Participants were given a reading comprehension test. There were no significant differences in overall reading comprehension scores between boys and girls; however, gender was found to influence mental simulation. Researchers interpreted these findings to say that girls rely more on mental simulation, which affects their ability to complete language-related tasks, thus highlighting the importance of considering gender in language and literacy studies (Wassenburg et al., 2017).

Other studies found there to be differences in development in gender at certain ages, which disappear over time (Peyre et al., 2019; Toivainen, Papageorgiou, Tosto, & Kovas, 2017). This was evident in one study that examined the differences in language development in twins. Verbal and nonverbal abilities between boys and girls were measured at several points in time. Results of the study showed that girls developed

language at a faster rate than boys in the beginning years of life, but eventually boys caught up to girls in adolescence (Toivainen et al., 2017). Peyre et al. (2019) examined gender differences in psychomotor development (i.e., language, fine motor, and gross motor abilities) at varying ages (2-6 years old). Researchers also considered how environmental factors may influence the development at these ages. Findings of the study showed that girls outperformed boys in language domains at the ages of 2-3 years old, however, the differences were not present at ages 5-6 years old.

Similar to these findings, researchers found developmental differences between Latino boys and girls (Cabrera, Malin, Kuhn, & West, 2017). Using the sample from the Early Childhood Longitudinal Study-Birth Cohort, researchers examined Latino children's developmental profiles from infancy to kindergarten. Results showed that in preschool, differences were present between Latino boys and girls in expressive language and social skills favoring girls, and in math favoring boys, which had disappeared by kindergarten (Cabrera et al., 2017). In the present study, it was important to compare oral language proficiency in relation to gender to determine whether or not a female advantage existed in the sample.

Summary and Conclusions

There is a need to examine the factors that affect language and literacy development for young DLLs in early childhood settings in cultural contexts outside of the United States (Hickey & de Mejía, 2014). These factors include the amount of language exposure, home language input, and early care and education programs, and gender (Winsler et al., 2014). American schools in Central and South America provide

English-immersion programs for children as young as 3 years old, at an age when language learning happens. Understanding the role these factors play on development may provide insight in providing appropriate supports, staffing, and programming that is most effective for this population. In the next chapter, I describe the method by which I examine the relationship between independent variables of children's duration in a preschool program, children's home language, and children's gender, and the dependent variable of their language and literacy development, while enrolled in an international school where the instruction is primarily in English and the dominant language of the country is Spanish.

Chapter 3: Research Method

The purpose of this study was to determine the relationship between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency (dependent variable) of DLLs attending an international school where the instruction was primarily in English and the dominant language of the country was Spanish. This section includes the setting of the study, research design, and rationale. Then, the methodology and sample selection are described. Following those sections are the procedures for recruitment, participation, and data collection. An explanation of the archival data used, the data analysis plan, and ethical issues are then discussed. Finally presented are the threats to validity and summary of the chapter.

Research Design and Rationale

I used a correlational research design to examine whether or not a relationship existed between time enrolled in the program, language spoken at home by parents and caregivers, and children's gender, and children's oral language proficiency scores at the end of kindergarten. Correlational research is used when trying to measure relationships between variables (Lodico, et al., 2010). This explanatory design was appropriate because two or more variables were examined, all data was collected at one point in time, each participant had an individual score for each variable measured, and the data came from one group of participants (Lodico et al., 2010). A quasi-experimental design that looked at finding differences in test scores was not be appropriate because there was no pretest given to ensure an equal start to participants. In addition, experimental studies

seek to find differences in outcomes as a result of treatment. In the present study, there was not any treatment given to participants, only outcome scores in oral language proficiency. Qualitative methods were also not appropriate because that would have involved the collection of data through the use of observations or interviews, which are then analyzed narratively (Lodico et al., 2010). Qualitative methods would not help to investigate the research questions posed in this study. Because the data could be summarized numerically, a quantitative approach was the most appropriate.

Through data analysis and interpretation, I examined variables to determine if a relationship existed, as described by Creswell (2012). In this non-experimental design, I used archival data from the school's database and language screening data that were collected by the school's English as an additional language (EAL) support team to determine relationships between one dependent variable and three independent variables. The dependent variable was continuous and was defined as the oral language proficiency scores for each participant as obtained by the end-of-year language W-APT screening data. These data were collected by the EAL team, who were all certified in teaching English as a Second Language to students in K-12. Based on these data I determined the total score that each student obtained in the 'Listening and Speaking' portion of the screening.

Data related to the independent variables in this study was obtained from the school's student database and included the gender, home language, and time spent in the program of each kindergarten student. Gender in the database was a dichotomous variable with two discrete values, male or female. Home language was a categorical

variable, which was defined as Spanish only, Spanish and English, or Other, as indicated by parents in the enrollment form as the language spoken at home by parents and caregivers. The variable time spent in the program was a continuous variable where each number value represented one semester of enrollment in the early childhood program. A student may have been enrolled in the program between 1 and 6 semesters. Because of the transient population of international schools, turnover occurs at the beginning and end of each semester rather than the beginning and end of each year. Measuring the number of semesters provided an accurate way to define the amount of time each child spent in the program. There were no time or resource constraints considering archival data was used.

Methodology

Population

The present study was conducted in a private international school in a Spanish-speaking country in South America that serves students in prekindergarten through 12th grade. In the first two years at the target school (3 to 5 years old), English is used in classroom instruction, environmental print, and is spoken between teachers and staff members. Children speak Spanish socially during playtimes in the classroom and at recess. Beginning in kindergarten and continuing up through high school, all students receive between 45 and 60 minutes of daily Spanish instruction with a focus on reading, writing, listening, and speaking in Spanish; however, the majority of instruction that students receive is conducted in English. Teachers working in the early childhood program are required to have specialized certification in early childhood and proficiency

in English. As students progress through the program and enter into the elementary school, much more English is spoken in class and at recess times, although the social language remains as Spanish. Students continue to speak Spanish with their peers while their academic English proficiency increases.

The target population was composed of all students from the last two kindergarten cohorts in the local setting who speak languages at home that differ from English. Of the 249 kindergarten students enrolled in the program during the 2016-2017 and 2017-2018 school years, data of about 200 children were included in the study. Students who were not screened or who were reported to speak English at home with both of their parents were not included. However, I did include in the data set information from students who were reported to speak English at home in addition to another language (e.g., father speaks English and mother speaks Spanish).

Sampling and Sampling Procedures

Convenience sampling was used for the study given the existence of available archival data. Convenience sampling refers to a population of participants that is available to the researcher and willing to participate in the study (Creswell, 2012). According to Lodico et al. (2010), in correlational research, samples that are heterogeneous and have a wide range of scores may give the most accurate information in terms of relationship between variables. In the present study, sampling issues may have arisen when examining the relationship between home language and oral language proficiency due to the fact that there is a large local population of Spanish speakers and less representation of families with more diverse language backgrounds at home. All

participants included in the study spoke Spanish, Spanish and English, or a language other than Spanish or English. Excluded from the study were students whose parents both speak English at home.

In correlational design studies, it is important to consider the size and heterogeneity of the sample in order to be able to generalize the results (Lodico et al., 2010). A sample size of about 200 children is appropriate for the present study. Using a sample size calculator from Raosoft (2016), I entered in a population of 200. The minimum suggested sample size is 132, which is enough to show significance with a confidence level of 95%. With this sample size, I was able to avoid a restriction of range and it allowed me to look for patterns in high, middle, and low oral proficiency scores.

Archival Data

Archival data were used for all variables that were examined in the study. Data for the three independent variables of gender, home language, and time spent in the program were obtained from the school's database. Because the setting of the study was a private international school, all students had to go through an admissions process before being enrolled in the program. During the admissions process, all families had to provide general information about their child prior to acceptance into the school. An online parent questionnaire was filled out by all prospective families and included background information (i.e., language, ethnicity, previous schooling, etc.). These data were stored in the school's database and were available to all faculty members within the school.

The outcome variable, oral language proficiency, I generated from assessments administered to kindergarten students at the end of each school year by the EAL team.

This assessment, the W-APT, was used as a screening measure to identify students who may need English language support services for the following school year. Access to the W-APT data was provided to all kindergarten and first-grade teachers as well as the administrative team in the early childhood center. Because I was part of the administrative team at the school and work with teachers in grades pre-kindergarten through fifth, I had access to all the data related to curriculum and instruction. In order to use the data from the school's database and the W-APT for the present study, I obtained permission from the school's headmaster, who signed a data use agreement.

Instrumentation and Operationalization of Constructs

The published instrument that I used to provide data for the outcome variable of English language proficiency was the WIDA-ACCESS Placement Test, also called the W-APT for Kindergarten (Version 3). The W-APT was developed by the WIDA Consortium as a way for educators to collect baseline data on the English language proficiency of students in grades K-12 (CAL-WIDA Collaborative Projects, 2017). Version 3 of the W-APT was last updated in 2013 and the test manual was revised in 2015. In order to use the W-APT, schools must be a member of the WIDA Consortium. Members have access and permission to use all assessment materials available online and can be downloaded via a secure site. The target school in the present study was a WIDA Consortium member and was an authorized user of the materials, including all test forms and manuals. This test was appropriate for the study because it was school-based and was used to measure baseline English language proficiency (ELP) for students in kindergarten in international school settings (https://www.wida.us).

The Kindergarten W-APT was a reliable and valid instrument to use for the target population of DLLs in this study. Reliability of an instrument refers to the ability to obtain scores that are consistent and stable (Creswell, 2012; Lodico, et al., 2010). ACCESS for ELLs® was first field-tested in 2004 with 154 students from three states. Composite scores from the field test yielded a .934 (Fox & Fairbairn, 2011). The test was reviewed in 2013-2014 and administered to over 200,000 kindergarten students from more than 20 states (WIDA Consortium Annual Report, 2014). All students included in the field-testing and review came from diverse linguistic backgrounds across 25 states in the United States (WIDA Consortium Annual Report, 2014). Inter-rater reliability is addressed at the target school on a yearly basis. The EAL team has refresher training each year before screening is given. Each item is reviewed and criteria for scoring each section are discussed.

In the administration of the screener, reading and writing measures were not collected for all students as seen in the data available online. Students who scored in the exceptional range (29 or 30 out of a total of 30) on oral language proficiency were not screened in reading or writing. Language development was comprised of listening, speaking, reading, and writing, however, only students who scored a 28 or below were administered the reading and writing sections. Data on all four components of language were only provided for students who scored a total of 28 or less on the listening and speaking portion. Having this data for all participants may have provided more information in regards to literacy needs on a more holistic level. For purposes of the present study, I only looked at oral language proficiency scores. Focusing on oral

language proficiency scores at the end of kindergarten may be beneficial for identifying the most appropriate type and level of support for students entering first grade.

The independent variables included time spent in the program, home language spoken by parents and caregivers, and the gender of each kindergarten student. Gender was defined as two discrete values, male or female and coded (Male=1, Female=2). The variable of home language was separated into three categories of Spanish only, Spanish and English, or Other and coded as 1, 2, and 3 respectively. The variable time spent in the program was scored as with the numbers 1-6 to represent the number of semesters.

Data Analysis Plan

I analyzed the data using SPSS software. Prior to entering in the data into SPSS, I initially downloaded all data from the school's database onto an Excel spreadsheet. I assigned each participant a number so that they were numbered 1-200 (approx.). I entered the outcome variable, ELP, with a numerical value of 0-30 and coded the independent variables according to each category of the variable. Gender was defined as male or female, home language as Spanish only, English and Other, or Other, and the amount of time spent in the program as measured by semester a number 1-6. I cleaned and checked all data to be sure that all values entered into the spreadsheet were accurate. If there were missing values for students, I rechecked the school's database or checked with the current teacher and filled in the appropriate values. If there was missing data for a student who had since withdrawn from the program so that missing values could not be supplied by the current teacher or through the school database, I omitted that student's data from the study. Once data were cleaned, I downloaded it into SPSS for analysis.

Different statistical tests were used to analyze the data in SPSS. To examine the relationship between oral language proficiency as recorded on the W-APT and the time spent in the program as indicated in the school database by the number of semesters enrolled, I used a Pearson product-moment correlation. This statistic was used to study the relationship between two continuous variables with a sample ≥ 30. In my study, the amount of time spent in the program and oral language proficiency were both continuous variables. To interpret the results of the Pearson product-moment correlation, I used a significance level of $p < .05$.

To study the difference in groups of oral language proficiency as recorded on the W-APT and home language as indicated by parents on children's enrollment forms, I used a one-way analysis of variance, or one-way ANOVA. A one-way ANOVA is used when examining the difference in mean scores between groups (Salkind, 2016). I was looking to see if there was a statistical significance the means of language groups (Spanish only, English + Other, and Other). To interpret the results, the confidence interval was at 95% with a p-value ≤ .05.

Finally, to determine the effect of gender, I used an independent samples t test. A t test is used when examining the difference in means between two unrelated groups (Salkind, 2016). I was looking to determine if there was a statistical difference in mean W-APT scores between boys and girls. To interpret the results, the confidence interval was also at 95% with a p-value ≤ .05.

Three questions guided this study:

RQ1: What is the relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home?

$H_0$1 - There is no statistically significant relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home.

H_A1 - There is a statistically significant relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home.

RQ2: Is there a statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home?

$H_0$2 - There is no statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home.

H_A2 - There is a statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home.

RQ3: Is there a statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home?

$H_0 3$ - There is no statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home.

$H_A 3$ - There is a statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home.

Threats to Validity

Threats to validity in the present study refer to reasons why the results of the study may be incorrect or inaccurate (Creswell, 2012). An internal threat to validity may have involved the selection of participants or selection bias. In this study, I expected the group of students who spoke only Spanish at home to represent a majority of the participants, who may not have fully represented the target population intended for the study. In order to have a full representation of the population, there should have be a sufficient number of students belonging to each of the different home language groups. A randomized sample of the majority population could have been used, so that the number

of children in each category was approximately the same, but to do so would have eliminated some data and so created another threat to internal validity. Another threat to internal validity was maturation. That is, because the students at the end of kindergarten ranged in age between 5 and 7 years, there may have been some developmental factors that were not controlled for in the study. Because of the variation in language development at each age, results may have varied due to individual child development; however, the sample size of approximately 200 students minimized this effect. A confounding variable such as teacher certification may have also had an effect on the results in the study. Teachers who work in the early childhood program at the target school were all certified teachers, but there were varying degrees of experience and types of teacher training for each of the kindergarten teachers. Ensuring uniformity in the curriculum that was delivered to all students could control for this threat. While teacher certification and background vary, the lesson plans, units, and projects were planned as a team, with agreed-upon goals and objectives for all students.

External threats to validity refer to how well the results of a study may be generalized to other populations and settings (Creswell, 2012). One possible threat to external validity also had to do with the selection of participants. The local setting was an international school with approximately 50% of the population being from the home country. Results may be generalizable to other international schools in South and Central America with similar demographics.

Ethical Procedures

I took the following measures to ensure anonymity of participants. I was granted permission by the school's Headmaster to use the school's archival data for the purposes of this study. I was solely responsible for all data in the study. In the Excel datasheet, I categorized participants according to home language and then assigned a number for each one. I kept all identifying information confidential through the entire data analysis process. I was the primary person responsible for storing W-APT protocols and managing Excel documents. I applied to the Walden Institutional Review Board (IRB) for permission to conduct my study and abided by all IRB requirements (03-07-19-0354877). Finally, data were kept confidential and stored in a locked cabinet or password-protected digital file for five years following the conclusion of my study. As an administrator who works at the school, I was the sole person in possession of the original protocols used in the data collection. The data stored in Excel were shared with the EAL team and the administration only. No names of students or teachers were included in the data set, following cleaning of the data.

As an administrator at the target school, I had to guard against possible bias on my part. The use of a quantitative method precluded some of the interpretive pitfalls inherent in a qualitative design. However, I ensured the validity of my interpretation of the statistical data by sharing my preliminary results with my dissertation committee, who were charged with detecting and reducing possible bias.

Summary

I used a correlational research design to determine whether or not a relationship existed between the independent variables (i.e., gender, home language, and time spent in the program) and the dependent variable, English language proficiency in an international school in Chile. Archival data of W-APT scores for students at the end of kindergarten was used from the last two school years. SPSS software was used to run statistical tests in order to determine if there was a statistical significance in the relationship between variables. Appropriate measures were taken to protect the rights of participants with anonymity by keeping assessment protocols locked in a cabinet. Results from the study will be disseminated to all stakeholders at the conclusion of the study.

Chapter 4: Results

The purpose of this study was to determine the relationship between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency (dependent variable) of DLLs attending an international school where the instruction was primarily in English and the dominant language of the country was Spanish. Three questions guided this study, to explore sociocultural factors as suggested by Vygotsky (1978), Cummins (1979), and Dworin (2003) that may affect children's language proficiency. These research questions and their associated hypotheses included:

RQ1: What is the relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home?

$H_0$1 - There is no statistically significant relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English immersion international school setting who speak Spanish or other languages than English at home.

H_A1 - There is a statistically significant relationship between English language proficiency levels, as indicated in the W-APT scores, and the amount of time enrolled in the program, as indicated in the school's database for students in a kindergarten, English

immersion international school setting who speak Spanish or other languages than English at home.

RQ2: Is there a statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home?

$H_0$2 - There is no statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home.

H_A2 - There is a statistically significant difference on the English language proficiency W-APT scores of children who attend kindergarten in an international school setting between those who speak only Spanish, or English and another language at home, and those who speak only languages other than English and Spanish at home.

RQ3: Is there a statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home?

$H_0$3 - There is no statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home.

H_A3 - There is a statistically significant difference on the English language proficiency W-APT scores between the two genders for students who speak Spanish or other languages than English at home.

This section includes the data collection process, including discrepancies in data collection from the plan, results of the study, the statistical analyses and illustrated tables and figures, and a summary of the answers to each research question.

Data Collection

Data were collected from the 2016-2017 and 2017-2018 school years. The archival data of W-APT scores at the end of kindergarten were stored in an Excel sheet and shared by all kindergarten teachers, English as an additional language specialists, and school administrators in the local setting, and so, as an administrator at the school, these data were available to me. All students were included in the initial list of participants (N= 235). Using Excel, I excluded all participants who were identified as speaking only English at home (N=35), as they did not fit the criterion for this study of being English-language learners.

While cleaning the data, I found there was some information missing in regards to the home language for 14 children. To retrieve this information, I spoke directly to each student's current teacher and the guidance counselor who was assigned to that family; in this way, I was able to assign a home language to 10 of these children. In addition, I asked the school counselor and homeroom teacher to validate the home language recorded for each student since parents may have misreported this for various reasons, and, when necessary, changed it on the data set to reflect the languages truly spoken at

home. In all cases where there was a needed change, parents had indicated that English was spoken at home as a second language; however, the counselor could attest that the parents spoke only Spanish to their child, as indicated by the counselor's meetings with each family. In four cases, I could not determine with certainty the home language of a child, so those four were omitted from the data set.

Once all data were checked and cleaned, I assigned each participant a number and removed all identifying information for that student to ensure anonymity. Before exporting the data from Excel to SPSS, I assigned a numerical code for each nominal variable. Participants were coded from 1-190. Gender was coded a 1 for males (n = 95) and a 2 for females (n = 95). Finally, home language was coded as 1 for Spanish only (n = 86), 2 for English and another language (n = 60), and 3 for Other (n = 45). Participants in the "Other" group were those students who speak languages other than Spanish or English at home (e.g., Korean, French, Mandarin, German, Dutch, Russian, Hebrew, etc.). The total population consisted of 204 kindergarten students. The sample consisted of 190 students who spoke Spanish only (45.3%), English and another language (31.6%), or a language other than Spanish or English (23.7%) at home. For the variable Gender, there were an equal number of males and females (50%) in the sample. Table 1 represents the baseline descriptive and demographic data.

Table 1

Baseline Demographics for Sample

Variable	*N*	%
Home language		
Spanish only	86	45.3
English + other	60	31.6
Other	45	23.7
Gender		
Male	95	50
Female	95	50

Note. $N = 190$.

The amount of time enrolled in the program was measured in semesters and is shown in Table 2. The mean number of semesters that students were enrolled was 4.07 ($SD = 1.71$, $N = 190$). Most students from the sample were enrolled in the program since they were 3-years-old (34%). Most children attended the program for an even number of semesters, indicating that students were more likely to stay for a full year rather than move to or from school in the middle of the year.

Table 2

Baseline Descriptive Data for the Time Enrolled in the Program

No. of semesters	*N*	%
1	14	7
2	33	17
3	17	9
4	55	29
5	6	3
6	64	34
8	1	<1

Note. $N = 190$.

In addition, English language proficiency scores were collected using the W-APT. The W-APT score for the group of students in the [Spanish only] group was $M = 25.49$, $SD = 4.97$, for the students in the [English + Other] group was $M = 27.82$, $SD = 3.65$, and for the students in the [Other] group was $M = 26.14$, $SD = 4.68$ (See Table 3).

Table 3

Descriptive Statistics for Group Raw Scores on W-APT

Measures	Group	*M*	*SD*	*N*
	Spanish only	25.49	4.97	86
W-APT score	English + other	27.82	3.65	60
	Other	26.14	4.68	44

Note. $N = 190$.

Results

Research Question 1

For the first research question, I examined if there was a relationship between W-APT scores and the amount of time enrolled in the program. A Pearson product-moment correlation was used to examine the relationship between these two continuous variables. Results from the Pearson Correlation indicated there was a statistically significant positive relationship between W-APT scores and the number of semesters a student was enrolled in the program, $r\ (188) = 0.27$, $p = 0.00$ (see Table 4).

Table 4

Relationship between W-APT Scores and Number of Semesters Enrolled

	Mean	*SD*	No. of semesters	W-APT Score
No. of semesters	4.07	1.71	1	0.273**
W-APT score	26.37	4.61	0.273**	1

Note. $N = 190$.

** Correlation is significant at the 0.01 level (2-tailed).

An additional analysis was conducted to determine the extent of the relationship between these two variables. To investigate the strength of the relationship between W-APT scores and number of semesters a simple linear regression was conducted. The predictor was number of semesters and the outcome was W-APT scores. The predictor variable was found to be statistically significant [$B = 0.74$, 95% C.I. (0.36, 1.11), $p < 0.05$], indicating that W-APT scores increased by +0.74 points for each semester of enrollment. See Table 6. The model explained approximately 7.5% of the variability [R-squared = .075], leaving 92.5% of the variance is unexplained. Many other factors not considered in this study affect language proficiency in addition to number of semesters attended.

Table 5

Regression Analysis Summary for Home Language and W-APT Scores

Variable	B	95% CI	β	t	p
(Constant)	23.37	[21.73 25.02]		27.98	0.00
No. of semesters	0.74	[0.36 1.11]	0.27	3.89	0.00

Note: R^2adjusted = 0.07. CI = confidence interval for B.

Based on these analyses, I rejected the null hypothesis, and determined that the outcome of research question 1 is there is a statistically significant and predictive relationship between the number of semesters students are enrolled and student W-PAT score.

Research Question 2

For the second research question, I examined whether there was a statistically significant difference in W-APT scores between groups of students according to the language spoken at home. Participants were grouped as [Spanish only], [English + Other], and [Other]. To test the assumption of homogeneity of variance, a Levene's statistic was run in order to determine whether all variances were equal. The test of homogeneity of variances resulted equal variance assumed [Levene Statistic = 2.928 (2,187), $p > 0.05$], which applied the null hypothesis that all variances are equal.

A one-way ANOVA was conducted to determine the difference in mean scores of each language group with W-APT scores as the dependent variable and home language as the independent variable. The analysis was used to determine if there is a difference in home language groups of [Spanish only], [English + Other], and [Other]. The analysis

resulted in a statistically significant difference between groups as determined by the one-way ANOVA [$F(2,187) = 4.759, p < 0.05$]. See Table 6.

Table 6

One-Way Analysis of Variance of W-APT Scores Between Home Language Groups

Source	*df*	*SS*	*MS*	*F*	*P*
Between groups	2	194.82	97.41	4.76	0.010
Within groups	187	3827.65	20.47		
Total	189	4022.47			

A Tukey's HSD comparison was run post-hoc to compare the means of each home language group in order to identify which groups were different. A Tukey's HSD post hoc revealed that the difference between the [Spanish only] group and the [English + other] group was statistically significant [-2.328, 95% *CI*(-4.13,-0.53); $p < .05$]. There was no statistical significance between the groups who spoke [English + Other] and [Other] at home, or between the groups that spoke [Spanish only] and [Other] at home. See Table 7.

Table 7

Tukey's HSD Post Hoc Comparison of Home Language Groups

						95% CI	
	(I)Home language	(J) Home language	*MD*	*SE*	*p*	Lower Bound	Upper Bound
Tukey HSD	Spanish only	English + other	-2.33	0.76	0.01	-4.13	-0.53
		Other	-0.65	0.84	0.72	-2.63	1.33
	English + other	Spanish only	2.33	0.76	0.01	0.53	4.13
		Other	1.68	0.90	0.15	-0.44	3.80
	Other	Spanish only	0.65	0.84	0.72	-1.33	2.63
		English + other	-1.68	0.90	0.15	-3.80	0.44

Therefore, the null hypothesis was rejected, as there was a statistically significant difference between two of the language groups.

Research Question 3

For the third research question, I examined if there was a statistically significant difference between boys' and girls' W-APT scores at the end of kindergarten. There was the same number of boys (*N*=95) as girls (*N*=95). The girls' mean scores were slightly higher than boys on the W-APT where males scored (M= 25.79, SD= 5.23, n = 95) and females scored (M= 26.96, SD= 3.84, n = 95) as shown in Table 8.

Table 8

Descriptive Statistics for Gender on W-APT Scores

Measures	Gender	*M*	*SD*	*N*
W-APT score	Male	25.79	5.23	95
	Female	26.96	3.84	95

I conducted an independent *t* test in order to determine if there was difference in means of W-APT scores between boys and girls. Results of the independent samples *t* test showed that the mean W-APT scores between males (M= 25.79, SD= 5.23, n = 95) and females (M= 26.96, SD= 3.84, n = 95) were not statistically significantly different at the 0.05 level of significance ($t(188) = -1.76$, df= 188, $p > 0.05$). On average, W-APT scores of males and females were approximately the same. The null hypothesis, which suggested there was no difference between boys' and girls' W-APT scores, is not rejected. See Table 9.

Table 9

T-test Results Comparing Males and Females W-APT Scores

		Levene's Test for Equality of Variances		*T* test for Equality of Means				
		F	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference
W-APT scores	Equal variances assumed	6.045	0.015	-1.755	188	0.81	-1.168	0.666
	Equal variances not assumed			-1.755	172.605	0.81	-1.168	0.666

Although the initial analysis for Research Question 3 showed that there was no statistical significance between boys and girls, I conducted further analysis using a multiple linear regression to evaluate the prediction of W-APT Scores from Gender and Number of Semesters. The results of the multiple linear regression revealed that Gender alone was not a statistically significant predictor in the model ($p < 0.05$). However, the results of the multiple linear regression revealed a statistically significant association between W-APT scores when Gender and Number of Semesters were both considered. Controlling for Gender, the regression coefficient [$B = 20.96$, 95% C.I. (18.32, 23.6), $p < 0.05$] associated with Number of Semesters suggested that with each additional semester enrolled in the program, the W-APT scores increased by approximately 0.79 points and that girls scored 1.475 points higher than boys. See Table 10.

Table 10

Multiple Regression Analysis Summaries for No. of Semesters, Gender, and W-APT Scores

Variable	B	95% CI	β	t	p
(Constant)	20.96	[18.322 23.598]		15.675	.000
No. of semesters	.787	[.415 1.159]	.292	4.174	.000
Gender	1.475	[.207 2.743]	.160	2.295	.023

Note: R^2adjusted = .100. CI = confidence interval for B.

The confidence interval associated with the regression analysis does not contain 0, therefore, the null hypothesis is rejected. Both Gender and Number of Semesters were significant predictors of W-APT scores where $R^2 = 0.10$, which means that 10% of the variance in English language proficiency scores was due to the variation in gender and time enrolled in the program. The remaining 90% of variance is unaccounted for, indicating that other variables than gender and duration in the program contributed to children's W-APT score results.

Summary

The purpose of this study was to determine the relationship between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency (dependent variable) of DLLs attending an international school where the instruction is primarily in English and the dominant language of the country is Spanish. The sample consisted of kindergarten students who spoke only Spanish, English and another

language, or languages other than English or Spanish at home. Archival data was used from the 2016-2017 and 2017-2018 school years with the population ($N = 204$).

The first research question asked if there was a statistically significant relationship between W-APT scores and the amount of time enrolled in the program. Results showed there was a statistically significant relationship between these variables. The predictor variable was found to be statistically significant [$B = 0.74$, 95% C.I. (0.36, 1.11), $p < 0.05$], indicating that W-APT scores increased by +0.74 points for each semester of enrollment.

The second research question examined if there was a difference in W-APT scores between home language groups. Results showed a statistically significant difference between groups as determined by the One-way ANOVA [$F(2,187) = 4.76$, $p < 0.05$]. Participants in the [Spanish only] group and the [English + Other] group were statistically significantly different in W-APT scores. The difference between the other groups was not statistically significant.

The third research question asked if there was a difference in W-APT scores in relation to gender. Results of the independent samples *t* test were not statistically significant at the 0.05 level of significance (t (188) = -1.76, $df = 188$, $p > 0.05$). However, when a multiple regression analysis was conducted, gender and time spent in the program had a statistically significant effect on W-APT scores. Participants' W-APT scores increased 0.79 points for each additional semester in the program and girls scored 1.48 points higher than boys.

In the next chapter, I interpret the findings as well as explain the limitations of the study. I provide recommendations, discuss the implications that these results have on practice and programming for young DLLs, and conclude the study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to determine the relationship between factors of duration of program enrollment, home language spoken by parents and caregivers, and children's gender (independent variables), and the English language proficiency as measured by the W-APT assessment (dependent variable), of DLLs attending an international school where the instruction was primarily in English and the dominant language of the country was Spanish. I used a correlational study to examine the relationship between these variables. Results of the study showed that there was a statistically significant relationship between English proficiency and time enrolled in the program and home language. Initial analysis of differences in W-APT scores due to gender was not found to be statistically significant. However, a multiple regression analysis revealed that, when considered together, gender and time enrolled in the program were statistically significant predictors of W-APT scores at the end of kindergarten.

Interpretation of the Findings

For the first research question, I sought to determine whether the time enrolled in the program was related to a student's English language proficiency at the end of kindergarten. Results of the data analysis showed that there was a positive correlation between the number of semesters a student attended the program and their W-APT scores. For every semester a student was enrolled in the local setting where English was the primary language of instruction, their English language proficiency scores increased. This suggests that children who enrolled in the program at a younger age may be at an advantage in acquiring English when compared to children who enrolled in later years.

This finding supports Vygotsky's (1978) theory that the influence of culture and community play a significant role in cognitive development as it influences the ways in which a child interacts within their environment and that culture and social interactions most significantly affect cognitive development (Vygotsky, 1978). Previous research studies in which the role of the environment on a child's language learning was examined, specifically regarding dual language or bilingual learners, are supported by these results as well. The exposure and input in a child's environment affect bilingual language development (De Houwer, 2017). The amount of exposure a student has to a language (Thordadottir, 2017), and the age at which they are exposed, determine how well they can perform in that language (Hammer et al., 2014).

In addition to the quantity of exposure a child has to a language is the quality of language input as it relates to the classroom experience. DLLs who begin learning English in preschool settings might acquire English more efficiently than solely from home exposure (Paradis & Kirvova, 2014). Those who attend high quality preschool programs where English is the primary language of instruction benefit from early enrollment (Buysse et al., 2014) and enter into kindergarten with an advantage over DLLs who do not attend a program (Holod, Ogut, de los Reyes, Quick, & Manship, 2018). The findings from this study support the idea that children who spend more time in a high-quality program will have higher language outcomes (Yazejian et al., 2105).

The second research question examined the home language and a student's English language proficiency as measured by a W-APT score at the end of kindergarten. I compared the mean W-APT scores of each group to determine if there was a difference in

scores in relation to the language spoken at home by parents or caregivers. Analysis of the data showed that there was a statistically significant difference in groups between students whose parents spoke Spanish and English and those who spoke only in Spanish. These findings are supported by the idea that the language input environment is a key factor to a child's language development (De Houwer, 2015, 2017). Children who come from homes where there is some English spoken at home tend to perform better on language measures in kindergarten (Bachman et al., 2018). Therefore, the more a child hears of a particular language determines how proficient they become in that language (Hoff et al., 2014a). There is a disadvantage for children who speak only Spanish at home when compared to homes where at least one parent speaks English (Garcia, 2018), which was also evident in the present study. The same was true for the "Other" group: children who spoke neither English nor Spanish at home were at the same disadvantage as those who spoke only Spanish at home.

The last research question examined whether there was a statistically significant difference in W-APT scores between boys and girls. Interestingly, no difference was found between genders when it was considered alone. Evidence from previous studies found similar findings where boys and girls performed generally the same in respect to language and literacy learning by the end of kindergarten. Although girls may learn language earlier at a faster rate, boys eventually catch up (Cabrera et al., 2017; Kim et al., 2014; Peyre et al., 2019). However, there was a difference in oral language proficiency when gender and time enrolled in the program were considered together. Girls in the sample population scored higher over time than boys. Evidence from past research has

shown that girls rate higher in social competence, pro-social skills, and literacy (Guhn et al., 2016) and have an early language advantage over boys (Adani & Cepanec, 2019). No previous studies reported a combined effect of gender and time enrolled.

Limitations of the Study

There were two main limitations to the present study. The first limitation was that the sample size was smaller than I had anticipated. All students whose parents spoke only English were excluded from the data collection process. This included students who were considered to be simultaneous DLLs whose parents spoke English but were born in Chile. The language development for this subset of students may also have been influenced by environmental factors, such as Spanish being spoken by a caregiver in the home. Another reason that resulted in a smaller sample size was the information provided by parents according to the parent questionnaire at the time of enrollment was not accurate for all participants. In most cases, I was able to correct the information so that it accurately reflected the home language for each child; however, I did have to exclude data for four participants to increase the validity of the study.

The second limitation to this study is that the results may not be generalizable beyond the target school. The students who attend the international school represent a privileged set of the DLL population. Therefore, results may only be generalized to settings that comprise DLLs who come from high socio economic backgrounds, whose families value bilingualism, and in which parents are well educated. There is a possibility results may be generalizable to other international schools in the South American region that have similar curriculum and demographics.

Recommendations

Recommendations for future studies are based on the findings of this study and current research that highlights the importance of oral language proficiency as a predictor for later academic success (Dennaoui et al., 2016). Future research studies should be conducted within the same population and over time. Because evidence from several studies shows that oral language is a predictor for academic success later in the elementary years, it will be important to examine how this is manifested in international school settings. Reading comprehension, decoding, and fluency are all predicted by oral language proficiency (Babayiğit, 2015; Foorman et al., 2015a, Foorman et al., 2015b). I recommend examining longitudinal data in language and literacy (e.g., reading comprehension, decoding, and fluency) and comparing the findings to recent research studies in other countries. Further research in this area could focus school improvement efforts by targeting specific knowledge and skills around literacy development for this demographic population.

Another consideration for future research within the same population is to include all students who attend the preschool program in language and literacy development. In the present study, children whose parents spoke English at home were excluded from the sample under the assumption that they were proficient in English. This fact does not take into account the individual experience of these students and families. The home environment has a significant effect on developmental outcomes (Cabrera et al., 2017). For example, children who were born in Chile and were learning English from their parents and Spanish from their caregivers are also considered DLLs. Future research

should examine what affect this combination of environmental and family factors has on student outcomes in language and literacy across languages.

Replicating this study in other international schools in the region could provide a larger pool of participants and increase the likelihood that results could be generalized to international schools in Central and South America. Having a network of schools that are faced with similar challenges could promote partnerships between countries in the region and provide more opportunities for professional growth and development regarding best practices for young DLLs.

Implications

Oral language is a strong predictor for later academic achievement for DLLs. In fact, language skills in kindergarten are the best predictors for school readiness, including language, mathematics, reading, and social skills (Pace, Alper, Burchinal, Golinkoff, & Hirsh-Pasek, 2019). Given the importance of a strong foundation in language, I recommend that international schools pay close attention to the curriculum and assessment practices around language learning, specifically at the kindergarten level. This includes intentional vocabulary instruction, clearly defined listening and speaking goals, and close measuring and monitoring of student progress.

Language learning is comprised of four main components: reading, writing, listening, and speaking (Abedi, 2007). In order to fully understand the effects that cultural context has language and literacy learning for DLLs in international school contexts, I recommend examining all of the components of language at the same time. Dworin (2003), in a theory of bidirectionality, suggested there are many paths to becoming

bilingual. Looking at literacy development (reading and writing) alongside oral language (listening and speaking) could give a complete picture of a child's learning potential and inform decisions around programming and models of intervention.

In addition, a closer look is needed into providing boys and girls equal opportunities over time to grow in all areas of language development. Although the initial findings of this study showed that there was not a statistically significant difference between girls' and boys' English language proficiency, girls did score higher over time. This implies that boys respond differently to the curriculum and instruction in the local setting. Given that the initial advantage of girls over boys in the area of language development is found to disappear by the end of kindergarten (Adani & Cepanec, 2019; Peyre, et al., 2019), it could be assumed that a difference wouldn't exist over time. However, a difference does exist the longer a student is enrolled in the program. It will be important explore the root causes for these differences and look for a combination of factors to ensure equal opportunities for all students.

This study can promote positive social change by informing administrators and leadership teams and providing direction for programmatic improvements. As evidenced in this study, the environment that a student experiences inside and outside of school has an effect on language outcomes. Program administrators can consider these factors when providing professional development to teachers around curriculum planning and development and parent education around dual language development.

Conclusion

The cultural context in which children learn and grow influences their outcomes and experiences (Imai et al., 2016). DLLs attending private, international schools in South America represent a unique population of students who come from high socioeconomic backgrounds and whose families value bilingualism. School experience and home language input have a significant effect on the overall development of DLLs in international school setting. Having a deeper understanding of the factors that influence language and literacy development provides a more informed view and direction for improvement. Young children benefit from exposure to an additional language early on in life, which is also supported by parents and enriched at home. This study provides evidence that such factors can predict the success of students entering into an English-immersion international school.

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