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This dissertation, TEACHER PERCEPTIONS AND BELIEFS ABOUT THE CHARACTERISTICS AND ACADEMIC IMPACT OF A DUAL LANGUAGE IMMERSION PROGRAM, was prepared under the direction of the candidate's Dissertation Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree of Doctor of Education in Leadership in the School of Education, Concordia Univer tyIrvine.

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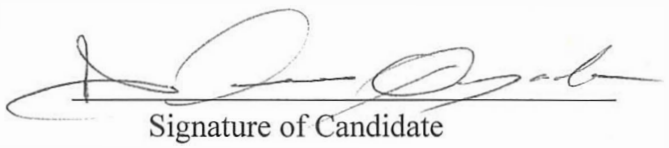

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TEACHER PERCEPTIONS AND BELIEFS ABOUT THE CHARACTERISTICS AND ACADEMIC IMPACT OF A DUAL LANGUAGE IMMERSION PROGRAM

by

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ABSTRACT

Many children of immigrants replace the minority language with English (Anderson, 2012). This results in loss of opportunity to become bilingual impacting educational access and employment negatively (Tran, 2010). Attending a dual language program is one way of maintaining their home language, but is there an impact on their academic achievement when learning two languages simultaneously? A mixed-methods phenomenology study was used to explore this question.

A survey and a 30-minute interview with six K-2 dual-language teachers and one administrator were used to learn about their professional characteristics and beliefs of school personnel in a Dual Language program. Comparing achievement scores (MAP reading) between two Southern California schools; one implementing a dual-language Spanish-English program and one with an English-only program across five data points during 2018-2020 we learned about the academic achievement between the two programs. Classroom observations and teacher and administrator interviews were used to learn how their perceptions contribute to the dual-language program implementation.

Findings demonstrated that teachers in the dual language program are bilingual, biliterate, and value bilingualism. They believe that teacher preparation and effectiveness, resources and professional development, positive beliefs about dual language programs, parental support, and teacher and parent collaboration contribute to the effectiveness of the program. Students in dual language scored statistically higher on 2 out of 15 data points in grades 3 and 4. Previous research does not find evidence of academic advantage until the fifth grade or beyond. Evidence of teachers practicing the strategies that promote language maintenance and academic instruction was found through the walkthroughs.

Key terms: dual language immersion, bilingual education, academic achievement in bilingual students, components of dual language program.

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CHAPTER 1: INTRODUCTION

The United States was and has been populated by immigrants from many different countries for the past 400 years. These immigrants bring with them rich cultures, traditions, and languages. Unfortunately, many children of these immigrants have lost their native languages. According to Fillmore (1991), countless American immigrants, native children, and adults have lost their ethnic languages in the process of becoming linguistically assimilated into the English-speaking world of school and society. Bilingualism and biliteracy promoted through the implementation of more dual-language programs in United States schools will benefit individuals with greater career, education, and employment opportunities, and in a more globalized society, individuals who speak English and another language tend to have greater economic and political opportunities.

This chapter begins with the background of the study, providing a review of some of the research-based benefits of bilingualism/biliteracy. It is followed by the problem statement, the purpose of the study, the significance of the study, the theoretical framework, and the research questions. Lastly, definitions of terms, limitations, delimitations, assumptions, and the organization of the study are discussed.

Background of the Study

There are many benefits to bilingualism. Educational researchers have found that bilinguals have stronger multitasking skills, show more creativity, have better working memory (short-term memory), and have higher academic achievement than monolinguals (Waterfont, 2019). These cognitive skills are highly valuable in our diverse society today because bilingual and bi-literate individuals are likely to have better educational and employment opportunities. According to a report published by the New American Economy, the demand for multilingual

workers more than doubled from 2010 to 2015. Specifically, the demand for bilingual employees who speak Spanish, Chinese, and Arabic has increased, particularly in the finance, healthcare, legal services, and customer service sectors (Colon, 2019). Dual-language programs have demonstrated that they can help students succeed in becoming bilingual and evidence from longitudinal and comparative studies have demonstrated that students in dual-language programs perform at or above grade level in academics (Colon, 2019). Rodriguez (2009) has found that bilingualism gives students metacognitive skills that lead to better economic opportunities for both the nation and the individual.

Dual language programs are increasing in the United States. Cobb et al. (2006) found that prior to 1995 there were less than 100 two-way bilingual programs in the United States and by 2006 there were over 260 programs. According to Santiago Wood (as cited in Lam et al., 2020) executive director of the National Association for Bilingual Education, nationwide, there were about 3,000 dual-language programs as of 2015.

The researcher was motivated by personal and professional experience to investigate the characteristics and beliefs of school personnel who support the dual language program model, and their academic performance using similar samples. Students who have been in a dual-language program from kindergarten to fifth grade will be compared to a similar sample of students who have attended regular English classes during the same period. These two groups of students will be compared using their standardized reading scores. The researcher is a bilingual and bi-literate California educator who has experienced the powerful impact that speaking two languages has on his own academic achievement, socio-emotional well-being, and his overall resiliency. This equipped him to succeed academically in high school, college, and later in life.

Problem Statement

Many children of immigrants lose their opportunity to become bilingual in the U.S. as children of second-generation immigrants replace the minority language with the dominant language of this country (Anderson, 2012). According to Stone (2017), there are three reasons why we need more dual-language programs: 1) cultural responsiveness, which allows children to interact more effectively with diverse communities and bilingual education provides language tools and teaches tolerance and respect by expanding their worldview; 2) bilingualism and the knowledge of two languages benefit individuals in terms of employment, salary, and even health opportunities; 3) academic advantage, which allows students to have better academic performance than their monolingual peers. According to Tran (2010), assimilation to a new culture often involves the loss of the mother tongue, education access, and diminished opportunities for employment.

Additionally, it is important for first-generation immigrants to maintain and transmit their mother tongue and culture to their children. In this generational loss of language Tran (2010) states that immigrants learn some English but prefer the use of their mother tongue; the second generation develops a preference for English but continues to use the majority language at home, and the third generation speaks only English. This loss points to the urgent need for public schools in the United States to offer more dual-language immersion programs. According to Kids Count Data Center, (2018), in 2016, 22% of children in the United States, slightly more than 12 million children, spoke a language other than English at home. This rate has risen to 2%, or 1.2 million kids, in the last decade. At the state level, the percentage of children who do not speak English at home varies by state, from a high of 44% in California to a low of 2% in West Virginia. According to the U.S. Census (2011), more than 20% of U.S. residents speak a

language other than English at home. A language data survey shows that Spanish was by far the largest non-English language in 2016, spoken at home by 40.5 million people, or 13.3 percent of the population aged 5 and older, followed by Chinese with nearly 3.4 million speakers at home, and Tagalog with 1.7 million speakers at home. Despite the large numbers of families who speak a language other than English very little support for bilingualism is offered in the United States compared to Europe.

In comparing the support of language variation in the European country of Luxembourg and the United States, in Luxembourg, there are three mandatory languages for students in schools: Luxembourgish, German, and French. Students first learn Luxembourgish in primary schools and German as their second language. In secondary education, they learn French or English as an option. Majewski, (2017) states that in Luxembourg students learn more languages than other students around the world. On the other hand, students in United States schools are taught primarily in English. Since the United States has fallen behind in teaching in other languages besides English, placing a priority on second language learning will keep the United States competitive in the global economy. As cited in Mitchell, (2017), an American Academy of Arts & Sciences report concluded that the United States, with its mostly monolingual residents, could face social and economic disadvantages in an increasingly multilingual, global society.

The United States has a long way to go in supporting an educational policy that focuses on preserving bilingual education programs. Given the many academic and personal benefits of bilingualism, policymakers should consider supporting the implementation of effective dual language programs founded on research in public schools. As a nation, we must support the implementation of more dual-language programs in public schools.

In the United States, the arguments against bilingual education have focused on the belief

that not learning English quickly will delay the academic learning of the students. Other arguments against bilingual education have focused on the notion that bilingual education programs do not effectively prepare students for college and careers. The present study will look at a dual-language program at a school in Southern California. The academic growth of these bilingual students will be compared to students who receive regular English instruction. This study compares the academic achievement of both groups. In addition, the study will look at the perceptions of teachers and administrators regarding what contributes to dual-language program implementation.

Significance of the Study

The purpose of this sequential explanatory mixed-methods study is to investigate the characteristics and beliefs of school personnel who support the dual-language program model in a Southern California public school. The study will investigate the benefits for students enrolled in a dual-language immersion program, as evidenced by standard assessment scores and teachers' and administrators' perceptions. To make policy decisions we need to accrue scientific evidence that dual-language programs are supporting students' learning equally or better than traditional immersion programs and that students in dual languages achieve proficiency in both languages. This study used a matched sample comparing students who attend two different schools within the same school district in two conditions (dual-immersion and traditional English programs). According to the Glossary of Education Reform, dual-language instruction will be generally defined as programs that are taught in two languages

Research Purpose

The purpose of this study is to investigate the characteristics and beliefs of school personnel who support the dual-language program model as well as how the perceptions of

school administrators and teachers contribute to dual-language program implementation. The significance of the study is critical as it contributes valuable insight into the successful implementation of dual-language programs not only in Southern California but also across the United States.

According to the Glossary of Education Reform, dual language has existed in the United States for roughly two centuries, and it reached its height of popularity in the 1970s. The use of dual-language education in public schools has declined significantly in recent decades due to legislative actions that have sought to limit its use, conflicting research findings on its benefits, pedagogical and ideological disagreements, and diminished funding and resources supporting the approach have contributed to this decrease. There is an urgency, now more than ever, to conduct studies that can demonstrate with scientific evidence that dual-language programs provide academic benefits for all students.

The results of this study are unique in that they will compare the academic and linguistic skills of a matched sample. Previous studies have only looked at the quantitative outcomes of students in dual-language programs and students in English-only programs. However, they failed to include both qualitative and quantitative data. In this study, we will be addressing that gap by looking at qualitative data to describe the characteristics and beliefs of school personnel that support the dual-language model. In addition, we will be looking at quantitative data in the form of an English assessment between students that have been in a dual-language program and students that have been in an English-only program. If this study finds evidence that the students attending dual-language programs have similar or better performance in academia and linguistic measure, this evidence could be utilized to recommend bilingual education policy. Multiple studies have demonstrated the effectiveness of dual-language immersion programs. For example,

Steel et al. (2017) found that students who participate in dual-language programs acquired improved reading in English, increased English proficiency for English learners, and proficiency in two languages. The present study will look at strategies that teachers and students are using in the classroom as they learn both languages, English and Spanish. In addition, the study will interview teachers and an administrator to understand their perceptions related to the characteristics of the dual language model.

Studies show that second language literacy acquisition is greatly enhanced if learners are literate in their first language (August & Shanahan, 2006). The present study will explain the characteristics and beliefs of school personnel who support the 90-10 dual-language program model. The present study is unique in nature compared to previous research because the sample is a matched sample that includes most students that are English Learners and/or Reclassified Fluent English Proficient (RFEP) students and have participated in a dual-language program since they were in kindergarten. On the other hand, most studies on dual-language immersion include about half of the students who are native speakers of English and half are native speakers of the "partner" (non-English) language (Steele et al., 2017). The present study will include assessment data from two schools with about one-third of English Only (EO) students and about half of English Learners (EL). See the tables below.

Table 1. 1

2018-2019 Jets and Moon Elementary Language Fluency Comparison

Language Designation	Jets Elementary	Moon Elementary
English Only (EO)	31.8%	24.3%
English Learner (EL)	45.7%	45.3%
Reclassified Fluent English Proficient (RFEP)	18.8%	26%
Initially Fluent English Proficient (IFEP)	3.7%	4.3%

Table 2. 1

2019-2020 Jets and Moon Elementary Language Fluency Comparison

Language Designation	Jets Elementary	Moon Elementary
English Only (EO)	35%	25%
English Learner (EL)	48.8%	52.9%
Reclassified Fluent English Proficient (RFEP)	11.4%	18%
Initially Fluent English Proficient (IFEP)	4.8%	4%

Researchers have studied the social context of dual-language programs and found factors that contribute to their success. Alanis and Rodriguez (2008) described some of the factors that contribute to dual-language program success in a study of a school in Texas and identified (1) administrative and home support, (2) school environment, (3) high-quality instruction, (4) professional development, and (5) instructional design and features as important components. Chestnut (2016) conducted a study and found that students who participate in dual-language programs in elementary school have higher achievement by middle school and high school. Collier and Thomas (2004) also found that two-way bilingual classes taught by sensitive teachers can lead to a context where students from each language group learn to respect their fellow students as valued partners in the learning process with much knowledge to teach each other. Other factors mentioned by Collier and Thomas (2004) that contribute to program effectiveness include the length of time in the program (six years of dual-language instruction), high-quality language arts instruction, collaborative and interactive teaching strategies, qualified teachers and an active and committed principal, staff development and planning time and ongoing program evaluation. The results of Collier and Thomas (2004) indicate that teachers and a principal felt that they had a vision and they all worked together to make dual language success happen. They all felt that they were part of something special, the school was perceived positively by the whole school community, teachers expressed excitement, loved teaching now and would never leave their jobs, had lots of support, and planning time was given for innovation. Administrators also expressed loving their jobs and were fully committed to making dual language work. The study under investigation will look at the common perceptions that contribute to dual language program implementation.

In this unique study, the researcher investigates how the perceptions of teachers and administrators regarding dual-language participation contribute to dual-language program implementation in a Southern California public school. Cobb et al. (2006) conducted a study in Colorado and found that students that participated in elementary school dual-language programs received high levels of academic competence and motivation and developed ambitions to go to college. The present study will look at a Southern California public school. Soderman (2010) states that effective dual-immersion programs need administrators, teachers, parents, and students who consider bilingualism a positive attribute rather than a linguistic, cognitive, and academic liability. The author also stresses the importance of teachers collaborating, ongoing support, planning, using consistent ongoing assessments, and parent involvement. Chestnut (2016) conducted a study at the University of Texas where 20 administrators participated to determine the overall perceptions of a dual-language program. The results showed that 19 out of 20 administrators strongly agree that dual-language instruction provides a clear advantage to achieving high academic levels of achievement. They saw their role as key to the successful implementation of the program. The present study will include a matched sample at a Southern California public school. Students in the study under investigation are predominantly Latino.

Research Questions

The following research questions guide the research study:

1. What are the characteristics and beliefs of school personnel who support the Dual Language program model?
2. What effect does dual-language immersion have on academic achievement compared to similar students in English immersion instruction?
3. How do the perceptions of school administrators and teachers contribute to dual-

language program implementation?

Expected Outcomes Based on Previous Findings

Based on previous findings the researcher hypothesizes that the results of the study will demonstrate that the characteristics and beliefs of school personnel who support the dual-language program model are similar to other findings. Additionally, the comparative hypothesis about achievement in reading between dual-language immersion students and structured English immersion students will be that students receiving dual-language instruction will outperform students not receiving dual-language instruction as demonstrated by the Measures of Academic Progress assessment at around 5th grade as others have previously found.

Theoretical Framework

The study under investigation will be analyzed through the lens of the first and Second Language Acquisition Theory. According to Chomsky (1965), Under the Innatist Cognitive Approach, the Language Acquisition Device (LAD) is a postulated organ of the brain built into humans that is supposed to function as a congenital device for learning the first language (Brown 1973). Chomsky (1965) also argued that the first language is acquired with no direct instruction, no practice, no drills, and with no apparent difficulty. In contrast (As cited in Schutz, 2019), Stephen Krashen proposed that children only need comprehensible input to activate the LAD and utilize this device to begin learning a second language. Krashen argued that input becomes comprehensible when teachers use strategies such as showing pictures or visuals to accompany new vocabulary words and commutative concepts, incorporating gestures, drama, and music into lessons, designing lessons with hands-on activities and manipulatives, repeating new vocabulary, and using translation. Chen's (2014) research supports Krashen's theory by suggesting that knowledge is socially constructed through interaction and negotiation of the ideas of others.

Cummins (1979) argues that a cognitively and academically beneficial form of bilingualism can be achieved only when an adequately developed first language (L1). He further explains that the "development interdependence" hypothesis proposes that the development of competence in a second language (L2) is partially a function of the type of competence already developed in L1 at the time when intensive exposure to L2 begins. Another hypothesis he proposes is the "threshold" hypothesis which proposes that there may be threshold levels of linguistic competence that a bilingual child must attain both to avoid cognitive disadvantages and allow the potentially beneficial aspects of bilingualism to influence his cognitive and academic functioning. Additionally, he states that there are two registers that developed separately in the language in the acquisition process: Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). BICS is the first type of language a student acquires and is often referred to as "playground vocabulary" or survival vocabulary. This is the language that a person needs to function in society or to socialize with family and friends. It usually takes a student 2-5 years to acquire high proficiency in BICS. Students with advanced BICS skills can converse about many different topics and are familiar with the target language slang and idiomatic expressions. The same students may struggle with academic areas such as science, math, and history that require a different type of vocabulary (i.e., CALP). This is difficult for students because they rarely discuss these subjects using academic vocabulary with family or friends. This is difficult for second-language learners because they lack vocabulary and exposure. Therefore, it is critical that teachers working with second-language learners use comprehensible input strategies in the academic vocabulary and language patterns to experience success in learning CALP, which is more closely related to learning academics than BICS. Escamilla and Grassi (2000) argue that the nativist theory provides an answer to the question of

how people acquire a second language, but it falls short in addressing the importance of the environmental factors encountered by the second-language learner. Additionally, Escamilla and Grassi (2000) also argue that the environmentalist theory better addresses the social and psychological factors as well as the linguistic factors in second language acquisition. During the classroom walkthroughs the researcher will look for evidence of BICS and CALP. He expects to see students cognitively engaged in oral discussions, vocabulary practice, and writing with their partners and table groups. Comprehensible input strategies will also be observed. The interview responses will serve as confirmation of what the administrator and teachers believe are the characteristics of a dual language program. MAP reading data will be used to determine if students in dual language programs are maintaining high levels of academic competence.

Definition of Terms

Two-Way Bilingual Immersion (Also called Dual Language Immersion 90-10): A dual language immersion program that promotes bilingualism and biliteracy (English plus target language) and positive cross-cultural attitude and behavior. It begins with 10-90% of instruction in the target language with increasing English until academic work and literacy are 50:50 (California Department of Education, 2020).

Dual-language immersion program: A program that provides both native English speakers and English learners with general academic instruction in two languages from kindergarten onward (Steele et al., 2017).

Comprehensible Input: The language input that can be understood by listeners despite them not understanding all the words and structures in it. It is described as one level above that of the learners if it can only just be understood. According to Krashen's theory of language acquisition, giving learners this kind of input helps them acquire language naturally, rather

than learn it consciously (Schutz, 2019).

Bilingualism: According to the Merriam-Webster Online Dictionary, bilingualism is defined as the ability to speak two languages; the frequent use (as by a community) of two languages; the political or institutional recognition of two languages.

Bi-literacy: According to the Merriam-Webster Online Dictionary, bi-literacy is defined as being able to read and write two different languages.

Language policy: Definitions.net defines language policy as what a government does either officially through legislation, court decisions, or policy to determine how languages are used, cultivate language skills needed to meet national priorities, or establish the rights of individuals or groups to use and maintain languages.

Hispanic: Wikipedia defines the term Hispanic as people, cultures, or countries related to Spain, the Spanish language, or Hispanidad. It commonly applies to countries with a cultural and historical link to Spain and viceroyalties formerly part of the Spanish Empire following the Spanish colonization of the Americas, parts of the Asia-Pacific region and Africa.

Limitations

The following limitations are exhibited within this study:

1. Results may not be generalizable to all dual-language programs across the country, as the researcher conducted the study in only two Southern California elementary schools.
2. Unavailability of qualitative data (surveys, interviews, and classroom walkthroughs) from one of the schools compared here.
3. Another limitation in this study is the unavailability of standardized assessment data for the year 2020 due to the COVID-19 pandemic.

Delimitations

The delimitations used by the researcher were devised to better understand the components of effective dual language programs in only two elementary schools. This leaves out dual-language programs in private and/or charter schools. Another delimitation of the study was the setting and participants of the study. This population is unique in that most of the community are Spanish speakers at home, but they are embedded in a major Urban District with high exposure to the English language. A final delimitation within this study was the researcher's decision to use standardized assessment data from the 2018-2019, and 2019-2020 school years to compare the academic progress of dual language and non-dual language students, although this limits the number of years available, it excludes the impact of long-distance learning in the program.

Ethical Considerations

The ethical considerations included in this study include voluntary participation, confidentiality, informed consent, the potential for harm, and compensation for participation. Voluntary participation will be ensured by asking participants orally if they would like to participate in the present study. Once they orally accept, the researcher will provide them with a consent form for them to sign and return. The consent form specifies that their participation is totally voluntary, and they have the right to quit participation at any time without negative consequences. Participants will also be informed that confidentiality will be ensured by saving the data in a password-protected laptop and removing all possible identifiers (name, location, etc.) from the data. The participants will be informed that there are no physical, psychological, social, or legal risks associated with the study other than the normal consumption of time and

effort in answering the survey and questionnaire. Participants will be informed that they will receive a gift card as a token of appreciation upon completion of the project.

Organization of the Study

This research study is presented in five chapters. Chapter 1 includes the background of the study, problem statement, purpose of the study, significance of the study, theoretical framework, research questions, definitions of terms, limitations, delimitations, and assumptions of the study. Chapter 2 is a review of the literature which is broken down into the history of bilingualism in the United States, defining bilingualism and bi-literacy programs, theories by bilingual language development, goals of dual language programs, benefits of dual language programs and bilingualism, components of an effective dual language program, studies on dual language immersion programs, goals of dual language programs, components of an effective dual language program, effective dual language teaching strategies, and dangers of subtractive immersion. Chapter 3 describes the methodology chosen for this study, including the selection of participants, instrumentation, the data collection process, and the steps taken to curate and analyze the data. Chapter 4 presents the findings of the study with further insight of the participants in relation to the research questions. Chapter 5 provides a summary of the overall study, further discussing findings, implications of the study, conclusions drawn, and suggestions for further research.

CHAPTER 2: REVIEW OF LITERATURE

This review of literature focuses on providing a brief overview of the history of bilingualism in the United States, defining bilingualism, and the educational approaches used to maintain and promote it. A discussion of the research field on bilingual education and some best practices and other evidence-based findings is presented.

This review provides the theoretical and empirical evidence to support the implementation of Spanish/English dual language education. Learning about the impact of bilingual education on at-promise students and its relation to academic growth will prepare us to better serve one-fifth of the population that comes from a family that speaks a language other than English. Reaching their bilingual potential will contribute not only to their own success but will enrich our nation's social and economic capital.

History of Bilingualism in the United States

Bilingualism has existed in the U. S. since the beginning of this nation. It is one of the pillars of our multi-ethnic and multi-cultural roots. However, bilingualism is often defined differently in the different political and educational fields. Support for bilingual education has fluctuated throughout our political history. Currently, we have a great potential to foster bilingualism in our nation for students who are at high risk for academic failure and through it help them maintain their cultural capital. A delicate balance between not compromising their academic achievement, while fostering the acquisition of two languages and literacies, must be maintained. Recognizing the benefits of bilingualism at several levels (i.e., cognitive, and academic) access to dual-language programs might serve to bridge the academic gaps for a large proportion of the student population.

Gandara and Escamilla (2017) state that ironically, the United States, a self-proclaimed "nation of immigrants" has historically had an uncomfortable relationship with its immigrants and their languages. However, according to Kloss (1977/1998), as stated in Gandara & Escamilla (2017), there have been some exceptions to the uncomfortable relationship for bilingualism at different times in the nation's history. For instance, during the eighteenth century, many of the new settlers spoke French, Dutch, and German. Kloss (1977/1998) states that German was widely spoken in the colonies. By 1800, German bilingual schools flourished, particularly in the Midwest. In 1839, Ohio became the first state to adopt a bilingual education law, authorizing German-English instruction at parents' request. Louisiana adopted an identical provision for French and English in 1847, and the New Mexico territory did so for Spanish and English in 1850. German language education in the United States ended with World War I. The post-World War I period ushered in an era of repression and foreign languages and new efforts to "Americanize" immigrants. By 1923, 34 states had laws requiring English-only instruction in all private and public primary schools (Kloss, 1977/1998).

The Great Depression of the 1930s and the increased immigration to the United States helped to promote the idea of "Americanizing" the newcomers. The goal was for these newcomers to learn English (Schmid, 2001 as cited in Gandara & Escamilla, 2017). The primary response, according to Schmid (2001), was to segregate them into "Mexican schools" or "Mexican rooms" where they were taught in English and "Americanized." However, they were not given a high-quality bilingual education because the teachers were not fully bilingual, the schools did not have adequate resources, and the programs failed to incorporate culturally relevant curricula.

On the other hand, the Cuban Revolution of 1959, caused an exodus of many Cubans to South Florida. Unlike Mexicans of the Southwest, bilingual schools were established for Cubans where their children could learn two languages while they waited to return to the Spanish-speaking island as soon as Castro was deposed. The Coral Way School, the first established to meet the needs of Cuban children, became a model of bilingual education for the nation (Gandara and Escamilla, 2017). The 1968 Bilingual Education Act (Title VII of the historic Elementary and Secondary Education Act of 1965) acknowledged the needs of "Limited English Proficient" (LEP) students and provided $7.5 million for some pilot bilingual programs. Crawford (2004) states that the goal of these programs was not defined in the law, and it was unclear – and highly controversial – whether their purpose was to teach children in two languages so that they might be literate in both or simply to transition them into English at the first moment possible. Most states with significant "LEP" populations passed legislation to provide a variety of bilingual programs. Massachusetts was the first to pass a bilingual education law in 1971 (Gandara and Escamilla, 2017)

In 1974, the Supreme Court ruling *Lau v Nichols* in which 1,856 Chinese-speaking children in San Francisco argued that they were denied an equal education because they could not understand the classroom instruction and no accommodations were made for their language differences. The Supreme Court ruled that the school district had to take affirmative steps to provide access to the same curriculum that English-speaking students received. After this, most Boards of Education assumed some form of bilingual education. By 1977, 11 states had laws supporting some form of bilingual education. However, a backlash to this progress began about twenty years later in 1998, when California became the first state to overrun its bilingual law and establish English as the official and only language of instruction.

Days after *Lau v Nichols,* in 1974, Congress passed the Equal Educational Opportunities Act (EEOA) 1974, requiring school districts to "take appropriate action to overcome language barriers that impede equal participation by its students in its instructional programs." "Appropriate action" was clarified by the 5th Circuit in the (1981) *Castañeda v Pickard* decision, setting the "three-prong standard that included: (1) a program based on recognized theory; (2) faithfully implemented according to theory, including adequate resources for implementation; and (3) that demonstrate effectiveness over time.

Gandara and Escamilla (2017) state that the federal Bilingual Education Act (BEA) has also been the object of political whim and ideological campaigns. An example of a proposition against bilingual education was Proposition 227, which required all public-school instruction to be conducted in English. Except for 1994, each time the Bilingual Education Act has been reauthorized, the regulations regarding bilingual education have been weakened in favor of greater support for English-only instruction methods. With the realization of the Elementary and Secondary Education Act in 2001 (renamed the No Child Left Behind Act), the BEA (Title VII) disappeared entirely and was replaced with the "English Language Acquisition, Language Enhancement, and Academic Achievement Act." The authors conclude that the history of bilingual education in the United States has shifted between tolerance and repression depending on politics, the economy, and the size of the immigrant population. Languages other than English have been (and continue to be) primarily seen as a problem to be remediated by the schools (Ruiz, 1984 as cited in Gandara & Escamilla, 2017). Language rights have been framed largely as the right to not be discriminated against by denying access to the English curriculum, and bilingual educators have routinely been on the defensive about helping students to maintain their native language. Yet, many people believe that the goal of bilingual education is to teach English

when in reality the goal is to educate children in two languages (Gandara & Contreras, 2009). The National Center for Education Statistics (NCES) shows that the student enrollment in U.S. public schools has grown since 1995. However, it has not grown across all racial/ethnic groups. A major shift has been in the number of Hispanic students enrolled. Enrollment of Hispanic students has grown from 6.0 million in 1995 to 13.6 million in fall 2017. During that time, Hispanic students went from making up 13.5 percent of public-school enrollment to 26.8 percent of public-school enrollment. NCES projects that Hispanic enrollment will continue to grow, reaching 14 million and 27.5 percent of public-school enrollment by fall 2029. These bilingual or multilingual students have an advantage in the job market because bilingual skills are essential 21st-century skills (Corradini et al., 2016) and are more apt to close the academic gap after 5-6 years of schooling in two languages (Collier & Thomas, 2017). According to the U.S. Census (2015), the data collected from 2009 to 2013 demonstrated that there were over 350 languages spoken at home other than English. For instance, 54 % of the metro area population in Los Angeles age 5 and over spoke a language other than English at home. The New York Metro area had at least 185 languages spoken at home and the Los Angeles metro area had at least 153 languages spoken at home. Additionally, 29 % of the Chicago metro area population age 5 and over speak a language other than English at home. This data demonstrates the potential for the implementation of more bilingual education programs that would allow children to learn more languages while maintaining their home language. Savage and Hughes (2014) state that for the United States to remain competitive in the global marketplace, it needs its citizens to recognize the importance of developing more than one language and various cultural skills.

Each of these historical trends has influenced our understanding of the impact of bilingualism. New knowledge on the brain and on socio-emotional research has also contributed

to our understanding of the very complex and multi-leveled structure of bilingualism. In this study, the researcher uses the conventional definition of bilingualism and in the next section, this definition, and its association with biliteracy are presented in the context of different bilingual education to provide some background on alternative programs.

Defining Bilingualism and Bi-literacy Programs

The online Merriam-Webster dictionary (n.d.) defines bilingualism as 1) the ability to speak two languages: 2) the frequent use (by a community) of two languages, and 3) the political or institutional recognition of two languages. Bilingualism has to do with 'speaking' two languages. On the other hand, the online Cambridge Dictionary defines biliteracy as being able to read and write in two languages. Additionally, the Glossary of Education Reform defines dual-language education, formerly called *bilingual education*, as academic programs that are taught in two languages. When used, dual-language education is generally seen to ensure that non-English-speaking students, or students who are not yet proficient in English, are given equitable opportunities to succeed in and complete their education.

The goals of the programs are to develop English fluency, content knowledge, and academic language - the knowledge, skills, and cultural proficiencies needed to succeed in an academic program. The Glossary of Education Reform (2013) lists three main forms of dual-language education:

Transition programs provide students with some level of instruction in their primary or native language for a certain period - generally one to three years - before students transition into English-only instructional programs. They are known as "one-way" programs because they only serve one group - non-native English speakers.

Maintenance programs provide students with concurrent instruction in English and their primary language throughout their elementary-school years - typically pre-kindergarten through sixth grade - with the goal of developing English fluency and academic literacy in both languages.

Two-way enrichment programs teach both native and non-native English speakers in two languages with the goal of developing bilingual fluency. In some cases, monolingual English-speaking students may be immersed in second-language instruction alongside native speakers of the language with limited English ability.

Dual-language programs use the partner language for at least half of the instructional day in the elementary years. These programs generally start in kindergarten or first grade and extend for at least five years, and many continue into middle school and high school. Dual language programs foster bilingualism, biliteracy, enhanced awareness of linguistic and cultural diversity, and high levels of academic achievement through instruction in two languages.

Different programs may work differently for different bilingual communities. Education is often informed by theories of language development and the needs for learning a second language are different. The context in which the language is learned is also very important.

Theories of Language Acquisition

It is important to understand the history of how humans acquired language. According to Steedman (2017), the crucial evolutionary event leading to human language was a shift to a way of life requiring the generalization of the pre-human ability for composing consequences of elementary actions into plans for the ability to do so involves multiple agents. This ability constituted a language of mind capable of supporting human language. Furthermore, the author

contends that in some unknown way, but in development with known parallels in other evolutionarily unrelated images, our non-human primate ancestors developed the capacity for deliberative planning of sequential action, requiring a search through hypothetical state spaces, using sequential operators or merger such as application and composition of actions/functions representing state-change, sometimes made available by tools that the current situation includes, of a kind we see in other animals, including their non-human descendants, applying today, representing structured symbolic plans.

In addition, Steedman (2017) explains that somewhere between 2 and 3 million years ago, the human line became distinguished by access to a new cooperative action concept, requiring planning with variables representing non-present agents and resources, constituting a good part of our moral and intellectual nature. It is important to note that the language of mind that was implicit in such plans logically preceded but immediately supported connection to the sensory-motor system to form communicative language, a task which can be solved in many ways and at different times and was initially heavily represented by gestures. Finally, the author also states that development in planning also led to the manufacturing of tools. After a long period during which the only strictly evolutionary development consisted in the continuous adaptation of the vocal tract to the advantageous medium of vocal speech, the human lineage got lucky enough long enough to apply the planning abilities that were already supporting language and tool manufacture for the development of more sedentary ways of life, supported by larger groups and resources like leisure, trade, and agriculture, eventually allowing the emergence of less evanescent symbolic practices related to language, including painting and music. Since communicative language contributed to the development of the first language, learning a second language also develops in the same manner. Krashen and Terrell (1983) state that students

learning a second language move through five states: Production, early production, speech emergence, intermediate fluency, and advanced fluency.

Theories of Second Language Acquisition

Schmid and Kopke, (2017) explain that one approach to second language acquisition is the Usage-Based approach. The authors state that this approach is governed by domain-general learning mechanisms. The development processes rely on the same principles such as frequency and perceptual saliency. However, these are shaped and determined by the contexts surrounding the acquisition and previously acquired knowledge. Any context of language processing and development – L1 and L2 acquisition, simultaneous bilingualism, code-switching, aphasia – should be capable of being modeled within an overarching theory, and this theory should allow identifying the contribution that other, user-specific or extralinguistic factors will make in each context. The authors contend that one attempt to provide such a theory is MacWhinney's Unified Competition Model (Schmid & Kopte, 2017). According to this model, language development is determined by the availability (frequency) and reliability of cues in the input, with reliability playing an increasingly strong role in more proficient speakers to the extent that it remains the only factor.

Under the Innatist Cognitive Approach, Chomsky (1965) believed that the Language Acquisition Device (LAD) is a postulated organ of the brain built into humans that is supposed to function as a congenital device for learning symbolic language (Brown 1973). Chomsky argued that the first language is acquired with no direct instruction, no practice, no drills, and with no apparent difficulty. Later, Stephen Krashen proposed that children only need comprehensible input to activate the LAD and begin learning a second language. Krashen argued that input becomes comprehensible when the teachers use strategies such as showing pictures or visuals to

accompany new vocabulary words and commutative concepts, incorporating gestures, drama, and music into lessons, designing lessons with hands-on activities and manipulatives, repeating new vocabulary, and use translation. In the present study, the researcher will observe the implementation of these strategies during the classroom walkthroughs.

Chen's (2014) research supports Krashen's theory by arguing that knowledge is socially constructed by interacting with others. Cummins (1979) states that bilingualism benefits cognitive and academic abilities when the first language is adequately developed. He argues the "development interdependence" hypothesis proposes the development of competence in a second language is partially a function of the type of competence already developed in the first language at the time when intensive exposure to the second language begins. He also proposed the "threshold" hypothesis which proposes that there may be threshold levels of linguistic competence that a bilingual child must attain both to avoid cognitive disadvantages and allow the beneficial aspects of bilingualism to influence his or her cognitive and academic functioning. In the language acquisition process, two registrars develop separately: Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). BICS is the first language that a person acquires to function in society or to socialize with family and friends. It takes about 2-5 years to acquire high proficiency in BICS. CALP, on the other hand, is the academic vocabulary needed for different school subjects. A student with poor CALP may struggle academically.

The nativist theory explains how people acquire a second language; however, this theory ignores the environmental factors encountered by second-language learners. Escamilla (2000) argues that the environmentalist theory better addresses the social and psychological factors as well as the linguistic factors in second language acquisition. The author states this theory

suggests that a learner's social and psychological distance from the target language group influences the individual's ability to develop proficiency in the target language. Social distance refers to the proximity of two cultures that meet one another. For example, the social distance between Americans and Canadians is minor because their culture is similar. However, the social distance between American and Mexican cultures is quite great because these two cultures are very different. The author claims that teachers are faced with linguistically capable students whose feelings of alienation, fear, or frustration toward the target culture prevent them from acquiring high proficiency in the second language. The following table contains a description of the positive social factors and the negative social factors.

Table 3. 1

Environmental/ Outside Influences in Second Language Acquisition

Positive Social Factors	Negative Social Factors
Social Dominance: The second language learner's cultural group feels dominant or of equal status to the target language group.	Social Dominance: The second language learner's group feels subordinate to the target language group.
Integration Pattern: The second language learner desires assimilation or acculturation into the target language group.	Integration Pattern: The second language learner desires preservation of his/her own cultural identity.
Cohesiveness: The second language learner's cultural group encounters ample contact with the target language group.	Cohesiveness: The second language learner's group is cohesive and tends to discourage contact with the target language

	group.
Enclosure: The second language learner's group requires contact with the target language group to go about daily life.	Enclosure: The second language learner's group has its own churches, newspapers, and leaders and is not dependent on the target culture for daily living.
Size: The second language learner's group is small and encourages inter-group relations.	Size: The second language learner's group is large and tends to facilitate only intra-group relations.
Cultural Congruence: The target language group and the second language group are culturally congruent (similar).	Cultural Congruence: The target language group and the second language group are incongruent (dissimilar).
Attitude: The attitude of the two groups toward one another is positive.	Attitude: The attitude of the two groups toward one another is negative.
Length of Residence: The second language learner intended to reside within the target culture for an extended period of time.	Length of Residence: The second language learner only intended to reside within the target culture for a limited period of time.

The author states that the greater the number of negative social factors affecting a second language learner's relationship with the target language group, the more difficult it will be for the second language learner to acquire the target language. On the other hand, if the learner experiences more positive social factors, he/she will have greater ease in acquiring the language.

Additionally, the author states that in addition to social distance, there is a psychological distance which consists of three factors: 1) culture shock, 2) language shock, and 3) motivation. Culture shock is the period in which second language learners temporarily reject the target language and culture. However, with assistance and support, he/she acquires proficiency in the target language. Language shock occurs when the second language learner rejects the target language because it is very different from his/her own language. Motivation is psychologically essential to acquiring a second language. Escamilla (2000) states that if a learner is involuntarily in the target culture and is not motivated to learn the target language, proficiency is unlikely.

Benefits of Dual Language Programs and Bilingualism

Magruder et al. (2013) state that there are many benefits to bilingualism. Becoming proficient in two languages is both possible and beneficial to young children; bilingual preschoolers have shown increased cognitive, linguistic, and social-emotional advantages. Bialystok (2011) performed studies with bilingual and monolingual younger and older adults. The studies showed that bilingual individuals consistently outperformed their monolingual counterparts on tasks involving executive control. The studies involved classifying visual or auditory stimuli in either the single task or dual-task modes. The author argued that the constant use of two languages by bilinguals led to changes in the configuration of the executive control network and resulted in more efficient performance on executive control tasks (i. e., paying attention, organizing, planning, etc.), even those that are completely nonverbal. In another study it was determined symptoms of dementia were delayed in bilinguals: onset for monolinguals was on average 71.4 years old and for bilinguals, it was 75.5 years old. A difference of 4.1 years. Another Alzheimer's disease study demonstrated that monolingual patients were 72.6 years old, and the bilinguals were 77.7 years old when their families first noticed cognitive problems, this

time there was a difference of 5.1 years. These findings are attributed to the advantages documented for executive control across the life span that contribute to cognitive reserve, allowing bilinguals to better cope with Alzheimer's disease and postpone the appearance of its devastating symptoms. As a final note, the author states that the executive control circuit needed to manage attention to the two languages becomes integrated with the linguistic circuits used for language processing, creating a more diffuse, more bilateral, and more efficient network that supports high levels of performance (Bialystok, 2011). In another study conducted by Friesen et al. (2015), where the results of visual tasks of 53 monolinguals and 56 bilingual young adults were analyzed, the results showed some benefits for bilinguals. Although monolinguals and bilinguals performed equivalently on the feature searches, bilinguals were significantly faster than monolinguals in identifying the target in the more difficult conjunction search. This provided evidence for better control of visual attention in bilinguals.

Lindholm-Leary (2012) asserts that according to longitudinal and comparative studies, students in dual language programs perform at or above grade level in reading and math as measured in their partner language. This is true for other languages such as Korean and Chinese. Additionally, the results of the research also show that secondary school students also outperform their English-only peers and are more likely to be enrolled in higher math courses. Lindholm-Leary (2012) states that native Spanish speakers in dual language programs at the secondary level may need 1-2 years to catch up to their native English peers on achievement tests in English. The authors state that by the end of elementary or middle school, dual language achievement is higher than in the comparison groups. As cited in Rodriguez and Ramos (2009), Stephen Krashen, one of the world's foremost authorities in the fields of language acquisition

and language education, affirms that bilingualism better equips individuals with academic and cognitive skills to solve problems.

Dangers of Subtractive Immersion

According to Cha and Goldenberg (2015), subtractive bilingualism describes the situation in which competence in one language does not persist and is gradually replaced by the other language. That is, in subtractive bilingualism, competence in two languages is in a zero-sum relationship – language input that increases competence in one language decreases competence in the other. The authors conducted a study of over 1,400 Spanish-dominant kindergartners in California and Texas. The purpose of the study was to examine how emergent bilingual children's English and Spanish proficiencies moderated the relationship between English and Spanish at home (Bilingual Home Language Input (BHLI)) and children's oral language skills in each language. The conclusions of the study demonstrated: a) children's proficiency in a language (English or Spanish) moderates the relationship between BHLI and proficiency in the other language and b) BHLI moderates the relationship between children's Spanish and English oral proficiencies. When a child gains proficiency in English very early, the communication needs of the home tend to accommodate to the child's needs. This often accelerates the use of English at home increasing the potential for subtractive bilingualism. On the other hand, when the child maintains Spanish use longer through Dual Language Immersion (DLI), it increases the maintenance of Spanish at home providing better quality of language input at home. Given that the acquisition of vocabulary in a second language is seven times faster when that word is known in the first language than when it is a completely new concept; this results in faster acquisition of the second language, or additive bilingualism. The results suggest that among this population of children, bilingual home language environments that maintain high levels of Spanish use are

associated with additive bilingualism whereas bilingual home language environments with high levels of English use are associated with subtractive bilingualism.

Magruder et al. (2013) stated that losing the home language leads to a disconnect from the family which may lead to emotional and self-esteem concerns as dual language learners approach adolescence. Simon-Cereijido (2018) suggests that every person has the human right to communicate in the language or languages he or she wants, likes, prefers, and uses. According to Fillmore (1991), as stated in Latham and Stoessel (2017), the consequences of losing a primary language are far-reaching, and it does affect the social, emotional, cognitive, and educational development of language-minority children, as well as the integrity of their families and the society they live in. For instance, Kouritzin (1991) found that the most common consequence of home language loss was the inability of children to communicate with extended family, and sometimes, even with parents. At the individual level, those who lose their home language may experience low self-esteem and view the attrition as their fault or, in extreme cases, develop an attitude of individualized racism. Schools have the power to encourage bilingualism or eradicate it altogether. For example, Fillmore's (1991) data indicated that early education programs that did not use the home language for at least a portion of instruction resulted in a shift from the home language to English in the home in 50.6% of families. On the other hand, research on adolescents suggests that parental use of the home language in the home is strongly correlated with maintenance of the language and has a greater influence than the attitudes toward the home language.

Castro et al. (2011) argue that regarding dual language learning, various studies have shown that a strong basis in the first language promotes school achievement in the second language and is important to ensure that children do not become alienated from their families and

communities. In addition, it is argued that phonological awareness skills transfer from the first to the second language. The authors argue that oral and written language experiences for Dual Language Learners (DLLs) should be regarded as an additive process, to ensure that children are able to maintain and develop their first language while learning to speak and read English. According to Lopez et al. (2018), Spanish dominance is on the decline among second-generation and third-generation Hispanics. While 61% of Hispanic immigrants in the United States are Spanish-dominant (and another 32% are bilingual), the share who are Spanish-dominant drops to 6% among second-generation Hispanics and to less than 1% among third-or higher-generation Hispanics.

Studies Of Dual Immersion Programs

Lindholm-Leary (2016) conducted a study that included 788 fifth-through eighth-grade students who participated in a Spanish-English (n=645) or Mandarin-English (n =143) dual-language program. The goal of the study was to survey students' language proficiencies, ratings of bilingualism, and social and cognitive functioning. The results of the study demonstrated that overall, Dual Language (DL) students had developed language proficiency skills in both languages, rated themselves as somewhat or very bilingual, enjoyed participating in the program, had positive attitudes toward the languages and speakers of the target language, and perceived some cognitive and other benefits from being bilingual.

Cobb et al. (2006) reported on how students that participated in a dual language in elementary school perform in high school. The findings show that (1) high school students who participated in the two-way program achieved high levels of academic competence and motivation, developed ambitions to go to college and knowledge about how to pursue Spanish after they finished the program, and were satisfied with the education they received in the two-

way program, (2) the results point to the development of a sense of "resiliency" (high self-esteem, motivation to study hard, and a belief in one's academic performance, positive school perception, value of education in family, peer group that values education and does not use drugs) among the Hispanic, particularly ELL and low-income students. In this study, standardized scores on reading, writing, and math were analyzed to investigate the relationship between these and their participation in a dual language program in elementary. The study took place in Colorado in schools with a 50-50 to 60-40 ratio between Spanish and English-speaking students since opening in 1993. The dual-language program followed the 90-10 model. This model means that students in kindergarten were taught 90% of the time in their primary language and 10% in English, in first grade 80% in their primary language and 20% in English, by second grade 70% in their primary language and 30% in English, and so on. By grades five and six, students were taught 50% of the time in English and 50% of the time in Spanish. Data were collected through school district records on Non-English Speakers (NES) and Non-Spanish Speakers (NSS) students from the two-way bilingual elementary school (experimental group, n = 83) and their matched pairs (control group = 83). The two groups were enrolled in the years: 1996-97, 1997-98, 1998-99, or 1999-2000). After analyzing the data, the authors found evidence that: (1) dual language schooling, when implemented properly by schools, must be considered at least equally as effective in core academic achievement areas as traditional elementary schooling, and is probably more effective in the long term, (2) dual language instructional programs, in general, work well for both Non-English Speakers (NES) (except mathematics) and Non-Spanish Speakers (NSS) students. Therefore, providing substantial instruction in Spanish-speaking students' primary language does not impede long-term achievement in any of the core academic areas.

Thomas and Collier (1997, 2001) as discussed in Cobb, Vega, and Kronauge (2006), conducted two longitudinal studies with over 700,000 language minority students in five large urban and suburban districts across the country and found that: (1) quality, long-term, enrichment bilingual programs that are well-implemented, give language minority students the best chance to succeed academically in English into the high school years, and (2) many transitional and maintenance programs do not result in cognitively and academically preparing language minority students. Some transitional programs are no more successful than English-only programs in the long term. Thomas and Collier (2001) conducted the study again and found that enrichment bilingual programs, a form of dual language program, (composed of non-native speakers of English and native English speakers) produce the highest achievement levels compared to other bilingual education programs.

The authors also found when students are taught in their primary language earlier in life, these students tend to perform better academically in the second language. It was also found that students with no primary language schooling are not able to reach grade-level performance in the second language. Short-term remedial programs do not close the achievement gap between language minority (LM) students and native-English speakers. Additionally, students who receive at least 5 to 6 years of dual language instruction achieve parity in L2 by grade 5 or 6 and maintain that level of performance.

Feinauer and Howard (2014) conducted a study where the student participants were from eleven different schools, including six elementary, three middle, and two K-8 schools. Spanish dual language program models included 90-10 and 50:50. About 521 students (81%) participated in the 90-10 program and 124 (19%) in a 50:50 program. By the time the students participated in this study, they were spending 40%-50% of their instructional day in the target language.

Elementary students (grades 4-5) were receiving half a day in English and half a day in the target language. Students completed a questionnaire with questions concerning attitudes toward bilingualism and the dual-language program. The questionnaire was made using a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree). On another class day, students were asked to write an essay or an advertisement cartoon for becoming bilingual or participating in a Spanish-English or Mandarin-English dual-language program. Also, there were FLOSEM (Stanford Foreign Language Oral Skills Evaluation Matrix) scores for each student in the Spanish-English DL programs that were collected as part of an ongoing evaluation at each of the schools. These scores were used to measure. Based on the outcomes, 85% of the participants reached bilingual proficiency in the target language and in English for their grade level and 92% for English only. The results also showed that students perceive positive influences in cognition in that they feel that they can think about information across languages, they can translate from one language to another, they can think in different or more creative ways because they are bilingual, and their bilingualism gives them more confidence to do well in school.

Palmer et al. (2016) discussed an ethnographic study on third grade teachers implementing the Gomez and Gomez, a form of dual language in which 50% of the instruction is in English and the other 50% in the target language in two pilot schools. The research question of this ethnography of language policy was: How do two teams of third-grade bilingual teachers negotiate the intersection of two-way dual language program implementation and high-stakes standardized testing? The participants were two third-grade teaching teams at Riverrun Elementary and Woodward Elementary. Classroom observations occurred two times per week from August to May mostly during language arts. In addition, interviews were conducted. Teachers worked out their plans for each week of teaching. Once data was collected and collated,

a completed thematic analysis of the data from each school was performed and data were thematically analyzed by more than one researcher to increase the validity and reliability of the finding. The authors warned that dual language programs require long-term planning and investment, a strong and context-appropriate model for language and content instruction, effective leadership, and shared goals among all stakeholders. Researchers documented the way the teachers worked together and negotiated the intersection of this dual language program and high-stakes testing. Over the course of the 2012-2013 school year, this dual language program was dismantled in both schools because teachers did not implement the dual language program with fidelity. The goal of the implementation of the Gomez and Gomez method was to increase student achievement, particularly for EL students. Although the adoption of the program was motivated as a solution to low test scores, high-stakes accountability pressures complicated its implementation.

The results at Riverrun Elementary demonstrated that teachers were concerned about the effectiveness of the model. One of the problems at this school was that third-grade students had only participated in the program since first grade instead of kinder or pre-kinder. The greatest concern though was that even the students in the younger grades in the Gomez and Gomez program did not receive adequate instruction to succeed in third grade. In summary, the students in third grade were not where they needed to be in academics. Math was supposed to be taught in English according to the Gomez and Gomez method. However, teachers decided to modify the Gomez and Gomez method by teaching math in Spanish only to Spanish-dominant speakers.

The results demonstrated that teachers also decided to divide the students based on language levels for language arts to prepare students for state testing. In addition, teachers were

constantly frustrated by the absence of guidelines and resources and with a failure to address the demands of a mandated curriculum and standardized testing for implementing the Dual Language Bilingual Education (DLBE) program. To complicate things further, no updated pacing guides from the district that aligned the curriculum with model components were provided. The district did not provide adequate curriculum materials, especially in Spanish. The authors suggested that the focus was on standardized assessment rather than on long-term bilingual development. By January, teachers fell back on homogenous language ability groupings. For example, one class was an English-medium class with 30 minutes daily of Spanish as a foreign language while another class became a "one-way dual language."

At Woodward Elementary a similar situation occurred. This school had four dual-language teachers. It had a student population of 689 students, 85% were Hispanic, and 70% were ELLs. Their model included a class being ESL mainstream, another class was "one-way" bilingual, and the other two classes were "two-way" bilingual where teachers taught half of the day in Spanish and half in English. At this school, teachers, parents, students, and staff had a solid understanding of how the program was to work. Teachers had sufficient dual-language training, and they had appropriate curricula to teach in both languages. However, as the months progressed, planning meetings started to focus more on preparing students for state testing in math and reading. Although an evaluation of the program was supposed to happen, it did not occur. The principal focused more on other aspects of the program such as displaying student work on classroom walls. Teacher negativity about DLBE was apparent mostly due to low test scores. Many English-dominant students left because middle-class parents opted to move their children to other schools with less focus on testing. As a result, the "balance" of English model students in the classroom was weakened. The issue was that translating the model from the

district level to the school and classroom level produced conflict, tension, confusion, and frustration. Since teachers did not feel the support from the district and school administration, they started to develop their own classroom curriculum decisions to meet the "testing" needs of their students. Once again, the district curriculum was not aligned with the DLBE program. The focus was on state test practice.

At Riverrun, teachers had a great deal of agency. At Woodward, teachers did not act independently to make their own curricular choices. The lack of alignment between the school and the district created problems in the fidelity of implementation of these programs. The authors state future studies that explore educational language policy implementation should focus on the agency of stakeholders at all levels. The authors also contend that the "one-size fits all" model poses problems in different contexts. Findings suggest that alignment between the school district and program policies is crucial for DLBE implementation and top-down support is key.

Ballinger and Lyster (2011) reported findings of a research study that examined the use of the Spanish language by students and teachers at a two-way immersion school. Students and teachers from Grades 1, 3, and 8 (5–6-year-olds, 7–8-year-olds, and 12–13-year-olds, respectively) were observed and interviewed. Students completed questionnaires to determine what factors influenced their language of choice and their divergence from Spanish when it was the language of instruction. The results of this study demonstrated a lack of program success in grades 1-3. However, the program experienced success in grade 8 due to a variety of factors. According to the researchers, the factors that contributed to the lack of success in the lower grades included: low teacher expectations about Spanish use in the classroom, lack of exposure to Spanish, and the inability of the teacher to speak the target language.

The following factors contributed to eighth grades' success: the teacher required students to speak to each other in Spanish, the teacher took the students on a trip to Puerto Rico where they had the opportunity to practice the target language, the teacher prepared detailed lessons that included specific collaboration goals for his students, and the teacher reminded students to speak Spanish. This level of expectation allowed students to practice the target language. Even though at times it was difficult for them to pronounce a specific vocabulary word in Spanish, students either used self-help such as using their phonics chart or by saying the word in English.

An interesting conclusion which arose at the end of the study was that the school (administrator) promoted language and cultural support by offering students field trips with Spanish-speaking guides, encouraging parents to motivate their children to speak Spanish at home, and arranging visits to class from prominent Spanish-speaking community members.

Hikey (2001) discusses a study that looks at early immersion in Irish among children from diverse language backgrounds. This study examines the children's frequency of target language use and the effect of the group's linguistic mix on that use. A sample of 60 pre-school children from Irish-only, Irish-English, and English-only homes was included. The final distribution of children in the study was as follows: 20 children from homes where only Irish was spoken, 23 from bilingual homes, and 16 from English-only homes. Children were observed on two different days. The children did not know that a transmitter and microphone were placed on one of the children to listen to their utterances and their language of choice. The results showed low levels of target language (Irish) use even by the native speakers. The children from Irish-only homes spoke Irish in about half of their total utterances during the observation period, the children from bilingual homes in about a third of their utterances, and the children from English-only homes in about a quarter. In addition, the Irish L1 children were far less talkative in groups

where English speakers dominated. The data demonstrated that children's language in Irish-medium pre-school were skewed towards English. The author warned that the relatively low level of Irish usage, even by the L1 Irish speakers, requires serious consideration by schools that want to try this dual language model.

Quintanar-Sarrellana (2004) assessed the dual language program in Monteverde School in Northern California. Monteverde ranked 7 on a 10-point scale among all schools in the state, and 10 among schools with similar populations, more than 50% of the students were above the 50th percentile in the Math and Language SAT-9 Test, and over 80% scored above the 50th percentile in the SABE Reading Test. Monteverde successfully prepared its students for a multilingual society using a two-way bilingual immersion program. The following chart outlines the components of this dual language program.

Table 4. 1

Factors that Contributed to Success for a Two-Way Immersion School at Monte Verde

1. Duration of the instructional treatment - minimum of 4 to 6 years.
2. Optimal language input and output - ELLs receive cognitive development in their primary language while developing a second language.
3. High-quality instructional personnel - Most teachers hold a Bilingual Cross-Cultural Language and Academic Development (BCLAD) credential. This credential enables teachers to teach Spanish and English language development.
4. Separation of languages for instruction - In K-1 the teacher speaks only Spanish 90% of the time. During the 10% of English instruction, the K-1 teachers exchange classrooms, to ensure K-1 students identify each teacher as the Spanish or English- language model.
5. Ratio of English to the non-English language use - Spanish to English 90-10 model. (a) kindergarten to first grade, 90:10; (b) second grade, 80:20; (c) third grade, 70:30; (d) fourth grade, 60:40; and (e) fifth grade, 50:50.
6. High additive bilingual environment - adding a second language and culture without sacrificing their own.
7. Positive school environment - Due to the teachers' bilingual skills, the students' needs are always met. School personnel attest to the interethnic friendships that exist between the students, teachers, and parents. The program brings two

linguistic groups together for a common purpose.
8. Classroom composition - Most desirable student ratio is 50% English speakers and 50% Spanish speakers, but the program can operate successfully as long as neither language group falls below 30% of the classroom population.
9. Focus on academic curriculum - English and Spanish are taught through academic content.
10. Positive interdependence and reciprocal interactive instructional climate - Daily schedule reflects a systematic approach to ensure that all students first become literate in Spanish, while gradually adding on English literacy.
11. Home-school collaboration - Parents are encouraged to volunteer in the classroom to work with their children on language skills at home, monthly newsletters, and parent workshops.

12. Multicultural curriculum, different language varieties of Spanish - Teachers place emphasis on weaving multiculturalism into every academic area of the curriculum. More important, the faculty is diverse.
13. Partnership with a bilingual cross-cultural language development (BCLAD) credential program at a teacher education institution - Partnership with a local university BCLAD Program.

14. Two-way bilingual immersion programs as bridges to other educational and community institutions - Many school districts that have started a two-way bilingual program have visited Monteverde to profit from the faculty's mastery in the implementation of this bilingual instructional model.

15. Opportunities for participation and leadership - The Monteverde community (faculty and parents) collaborated and divided the work to recruit a highly qualified teacher. Students also have opportunities to become leaders by being taped by local news agencies that showcased their bilingualism and their support for two-way bilingual education.

16. Updating the curriculum to meet the challenges of society - Integration of technology into the curriculum is a priority. In addition, technology applications have been integrated in: attendance accounting, health records, order processing and budget management, student achievement database, parent communication, e-mail, library management, school climate, and fundraising.

17. Resiliency - The school was relocated to a more convenient location. The school faculty was very happy to have a campus of their own. The school faculty and parents lobbied to extend the elementary school to middle school. The school won a Distinguished School Award.

Bilingualism and Administrative Perceptions

Ramos, Dwyer, and Perez-Prado (1999) described a study that involved the views of two-way bilingual school principals regarding staffing. The research was conducted in six elementary schools and a middle school in the Miami area that followed the BISO (Bilingual School

Organization) model. The participants were five principals of the elementary BISO schools and a principal of the middle school with 5 to 14 years of experience and educators averaging 25 years in education that have worked as teachers, bilingual and instruction coordinators, and assistant principals.

The principals held bachelor's and master's degrees. Three were enrolled in doctoral programs. The researchers had a semi-structured interview that asked them (a) to describe the qualities of their ideal candidate, (b) to identify the weaknesses applicants needed to overcome, (c) to explain whether they had difficulties finding suitable candidates, (d) to describe their expectations regarding prospective teachers' preparation, second language proficiency, and familiarity with their programs, and (e) to offer insights on how FIU's teacher preparation program could be improved. As part of the procedure, each meeting lasted an average of 50 minutes. Two researchers were present and cross-checked their notes afterward.

The results indicated that five principals agreed that candidates wishing to work at two-way bilingual schools needed to have high levels of Spanish proficiency to teach the Spanish component of the program, especially in the 4th and 5th grades. According to the findings, the problem was finding teacher candidates that were proficient in Spanish to provide content-area instruction. The principals stated that many teachers were 2nd or 3rd generation Spanish speakers and did not possess proficient Spanish. It was also stated that since many candidates were educated in English, they lacked a cultural background in Spanish. This is important in educating children because culturally- competent teachers can design lessons that are culturally relevant for children. These lessons offer a high level of student engagement because it is relevant to them. Finally, three principals stated that credential-related issues and the perception that teaching in Spanish required more work seemed to prevent more adequate placements. They also stated that

some teachers were reluctant to teach in Spanish because they felt that students "are not motivated," since English was perceived as the more prestigious language. All principals agreed that university teacher preparation programs should concentrate on augmenting the Spanish proficiency of the candidates. The principals also agreed that universities should allow pre-service teachers to work as paraprofessionals in two-way schools. The major conclusions of the study are (1) candidates' lack proficiency in the minority language, (2) the university needs to offer content courses taught in the minority language in order to promote it, and (3) opening channels of communication between universities and schools, (4) researchers hope to start a reversal in the overwhelming trend toward subtractive bilingualism surrounding universities and colleges in the U.S, (5) encouraging students to expand their knowledge of other languages and cultures, and (6) exemplifying the benefits of additive bilingualism.

Goals of Dual Language Programs

According to Gonzalez-Carriedo, R. and Esprivalo Harrell, P. (2018) the goal of dual language programs is to create a positive cross-cultural attitude and reach an academic achievement at or above grade level for students attending dual-language programs. Both small-scale and large-scale studies have found that students in two-way Dual Language (DL) programs perform similarly or better than their peers in Structured English Immersion (SEI) programs and reach at grade or above grade level in standardized assessments such as the Stanford 9 (for English) and Aprenda (for Spanish) by 5th grade. These assessments help measure the academic achievement of K-12 Spanish-speaking students in their native language. DL programs emphasize high academic achievement in two languages, acknowledging and encouraging "the knowledge and skills that the students bring to the classroom by building on prior knowledge and experiences." (Lucido & Montage, 2008). Gonzalez-Carriedo and Esprivalo (2018) also state that

this program gives students who attain proficiency in English and at least another language by the time of their graduation from high school an honorific designation on the diploma known as the Seal of Biliteracy. As of June 2020, thirty-nine states have approved the Seal of Biliteracy initiative (Seal of Biliteracy, n.d.).

Alanis (2011) explains that another important goal of dual language programs is to learn academic concepts by working together through cognitively challenging and interactive lessons or projects so that all children become academically proficient in both languages. Castro et al. (2011) agree with Gonzalez-Carriedo and Esprivalo (2018) in that two-way immersion programs provide dual language learners and native English speakers with an education in two languages. Feinauer and Howard (2014) state that two-way immersion programs in the United States have three goals: 1) academic achievement, 2) bilingualism and biliteracy, and 3) the development of cross-cultural competence. Regarding developing cross-cultural competence, the authors assert that a strong sense of one's own cultural identity is the first important step in developing intercultural sensitivities and cross-cultural competencies. The authors also state that dual language students enjoy having classmates from different linguistic and cultural backgrounds, they tend to have more positive social and cross-cultural attitudes than non-dual language students, and these positive attitudes extend into secondary school.

Components of an Effective Dual Language Program

According to the Glossary of Education Reform, dual language, formerly called bilingual education, refers to academic programs that are taught in two languages. Lindholm-Leary (2012) points out that some of the issues with dual language programs include program design, accountability, curriculum, and instruction related to biliteracy, and bilingual language development. However, Alanis and Rodriguez (2008) mentioned the factors that allowed a dual

language program at City Elementary School in south central Texas to achieve success. The factors of success were a) administrative and home support, b) socio-culturally school environment, c) high-quality instructional personnel, d) professional development in culturally relevant teaching and e) instructional design and features. The authors used three sources of data: (a) site visits and non-participants observations, (b) taped and transcribed key personnel interviews; and (c) data from the fifth-grade English Texas Assessment of Knowledge and Skills (TAKS) in reading, mathematics, and science. Quintana-Sarellana (2004) also contend that the components of an effective dual language program consist of: a) duration of the instructional treatment, b) optimal language input and output, c) high-quality instructional personnel, d) separation of languages for instruction, e) ratio of English to the non-English language use, f) high-additive bilingual environment, g) positive school environment, h) classroom composition, i) focus on academic curriculum, j) positive interdependence and reciprocal interactive instructional time, k) home-school collaboration, l) multicultural curriculum, m) partnership with a bilingual cross-cultural language development (BCLAD) credential program at a teacher education institution, n) two-way bilingual immersion programs as bridges to other educational and community institutions, o) opportunities for participation and leadership, p) updating the curriculum to meet the challenges of society, and q) student resiliency.

Additionally, Ramos and Perez-Prado (1999) conducted a study and they found that to prepare teachers to teach in Spanish-English dual language programs, university teacher preparation programs should concentrate on augmenting the Spanish proficiency of the candidates. In addition, teachers must be socio-culturally conscious. Prospective teachers must recognize, understand, and respect the differences of all students. They must be able to understand that their differences make them unique and valuable. That must be a theme running

through teacher education programs and into schools (Escamilla & Nathelson-Mejia, 2003).

Effective Dual Language Teaching Strategies

Magruder et al. (2013) designed a Personalized Oral Language(s) Learning plan (POLL) for the Los Angeles Unified School District. The focus of this plan was to provide teachers with effective, research-based teaching strategies for teachers working with DLLs. Some of the components included, (1) families first, which includes an interview with the families in order to establish rapport, set goals, and provide support, and (2) environmental support, which includes a classroom physical environment that is child-friendly, print-rich and representative of all home languages, nurturing and engaging, (3) instructional supports, which includes intentional messages such as lesson objectives, anchor text to practice vocabulary development, vocabulary imprinting, song, chants, and center extensions.

The authors suggested a list of effective teaching strategies that work well for dual language learners. For example, allowing children to have interesting conversations helps them in practicing their language skills and vocabulary. Other strategies include reading books, singing, playing word games, and simply talking to children and adults to increase language skills and vocabulary. Gray and Fleischman (2004) also agree with Magruder et al. (2013) in that a key component of an effective educational program is to establish a strong relationship with families. The authors state that oftentimes, non-English-speaking families have no means of communicating with the school or might have different cultural expectations regarding the appropriate relationship with their children's school. Inviting families as volunteers in the classroom and translating school-related media is also helpful to encourage parent involvement in schools.

Alanis (2011) highlights the use of bilingual pairs as an effective teaching strategy in dual-language classrooms. The rationale behind this strategy is that children learn their native language and a second language by hearing the language in rich, meaningful contexts that help them connect what they are learning with their experiences. They also need opportunities to practice their language production in both languages. The basic idea of bilingual pairs is to have students paired by ability level. In other words, having a high Spanish speaker and a high English native speaker pair and collaborate, their social and linguistic interaction will take place, benefiting both parties because they both serve as models for each other. By using this strategy, students develop a relationship, which allows them to take risks as learners and feel safe in their academic environment. The author also contends that since children's learning is scaffolded through comprehensible input, increased verbal interaction, and active involvement of the learner, the use of bilingual pairs becomes a learning tool for teachers and students, much like manipulatives or visuals, as children practice their language skills and solidify their conceptual development.

Castro et al. (2011) further explain that, in order to promote language and literacy, the three major recommendations are: (a) using the primary language in teaching reading skills is more effective for English reading achievement than immersing children in English; (b) high- quality early childhood practices are as beneficial for DLLs as they are for non-DLLs; however, they are not sufficient to support an equal level of academic success among DLLs; therefore, (c) instructional enhancements are necessary to support DLLs' language and literacy development, especially when instruction is conducted only in English. The authors also suggested the following strategies for DLLs and all children: (1) keeping consistent routines and classroom organization so that children can follow activities, feel

comfortable, and become socially integrated; (2) creating a language- and literacy-rich environment and using supportive methods: visual aids, gestures, emphasizing important key vocabulary words; (3) using a curriculum that helps DLLs actively participate by providing concrete experiences and materials, and being responsive to cultural and linguistic differences; (4) extended talk on a single topic; (5) opportunities to converse with teachers; (6) exposure to sophisticated vocabulary; and (7) intellectually challenging group discussions.

Gonzalez-Carriedo, Bustos, and Ordonez (2016) describe a school located in north Texas that used the dual-language program known as "Gomez and Gomez" in K-5. The authors explain that in this school students collaborate and work in small groups where students can draw from each other's strengths and prior experiences. During guided reading, the teacher also worked in small groups to differentiate instruction. The teachers also formed bilingual pairs, where one student is a native speaker of English and the other a native speaker of Spanish. These pairs work together and assist each other during activities. As the teachers work with these students, they make sure to include scaffolding and differentiation of instruction to meet their varying learning needs. The article also discusses the strategy where the teacher is the facilitator of the lessons. In this teaching strategy, there is no lecturing. The teacher helps students connect concepts to lived experiences. The teacher offers students the questions, or better yet, they formulate their own questions. The idea behind this strategy is to enable students to find solutions to the problems they encounter. In addition to having students find the answers to their own questions by collaborating with their partners, the teacher also sets high expectations for students and works on creating their own academic goals. In addition, another strategy mentioned was that when students work on a writing composition, as part of the editing process, the teacher asks students

to find three peers that will check their work and rate it based on a rubric. Once again, the goal is for students to become problem solvers and to allow students to learn from one another. During this time, the teacher can target those students who need more guidance. Finally, the article discusses how Spanish, and English are used in a balanced fashion in a dual-language program. The authors also argue that teachers in a dual-language classroom are the linguistic role models of Spanish and English. One way that the teachers at this school validate the students' heritage language is by telling them that knowing and using Spanish is not only acceptable but also desirable. This allows students to feel a sense of self-confidence. The authors used a phenomenological, multiple case-study approach. The teacher's perceptions about using technology in education and the potential of technology to advance the student's bilingualism and biliteracy were analyzed.

Macrina et al. (2009) encourage teachers working with dual language learners to use developmentally appropriate practices. These teaching practices match the way children develop and learn. The authors also explain that the administrator's main responsibility is to facilitate teachers' growth through carefully planned professional development. In addition, administrators need to make sure they state a vision of the program and the goals to achieve it. Goals must be shared with staff. Administrators must also advocate for how bilingualism supports learning, increases self-esteem, and takes students one step closer to being successful in life. Administrators must do their research regarding trends in teaching and supporting second language acquisition. Principals must also organize professional development on dual language acquisition. Other important strategies mentioned by the authors include reading good literature to the child in his/her language, asking higher-level questions in the child's language, conversing, and encouraging the child to use his/her home language. The following suggestions

are given if the adult does not speak the child's language: provide books to the child in his/her home language, encourage parents to read and speak to their child in their home language, learn to correctly speak useful phrases, give the child a Survival Phrases chart, support English vocabulary by using gestures, pictures, and props, model quality English. Additionally, other strategies mentioned by the author include scaffolding, modeling language, and repetition. Finally, the authors suggest teachers plan their lessons with the mentality that children really need to feel and experience the unit of study by including more hands-on activities.

Murphy (2016) argues that in dual language programs, rather than attempting to eliminate or downplay the (minority) language, educators use primary language knowledge as a critical bridge to gain second language proficiency for students of both language groups. Additionally, both languages are used for content learning even after speakers of the minority languages have achieved second language proficiency (typically, dual language programs are offered for 6 to 8 years in the elementary setting, but some continue into secondary school).

Rodriguez and Ramos (2009) suggest some effective second language teaching methods which include providing students with comprehensible input and teaching students how language is acquired. Self-selected reading in English and in the student's second language as well as having books available has a huge role in promoting bilingualism. Finally, Free Voluntary Surfing means encouraging second language acquirers to surf the net in their second language. According to the author, those who surf more also read more and even read better. Surfing should work for the same reason free voluntary reading works. The author warns that there might be issues of appropriateness, but this is true for input from other sources as well, movies, books, and television.

Another way to support dual language students is by giving them the opportunity to switch from English to Spanish and vice versa. Ibarra-Johnson, and MuDile (2017), defined this as 'translanguaging' which is the mobilization of specific language features, within one linguistic repertoire, based on the context and need for communication. Translanguaging moves additive bilingualism to a deeper understanding of how emergent bilinguals use one "unitary meaning-making system" to produce language.

Summary

This review of literature focused on providing a brief overview of the history of bilingualism in the United States, defining bilingualism, and the educational approaches used to maintain and promote it. A discussion of the research field of bilingual education and some best practices and other evidence-based findings was presented as well. Some leading studies on effective dual language immersion programs were presented, effective dual language teaching strategies, and the dangers of subtractive bilingualism.

Bilingualism has been part of the U. S. educational system since the founding of this nation in the 1600s. It has been an important pillar of our multi-ethnic and multicultural structure. However, bilingualism has been often defined differently in different fields. Support for bilingual education has fluctuated throughout our political history. For at-promise students, students who are at risk of academic failure, there is a great potential to foster bilingualism. It is critical to foster and maintain the acquisition of two languages and literacies without compromising their academic success. Having access to a dual language program will bridge the academic gaps for a large portion of the student population. This review provided the theoretical and empirical evidence to support the implementation of Spanish/English dual language education. This study brings the unique perspective of comparing the academic and linguistic

growth of students in a dual language program controlling for contextual factors, like time in the program, and a matched control group. Learning about the impact of bilingual education on at-promise students and its relation to academic growth will prepare us to better serve one-fifth of the population that comes from families that speak a language other than English. Reaching their bilingual potential will contribute not only to their own success but will enrich our nation's capital.

CHAPTER 3: METHODOLOGY

Introduction

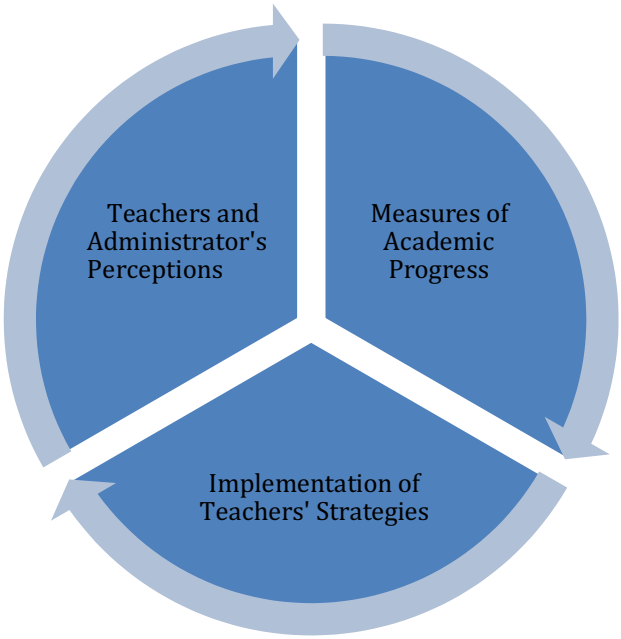
The following chapter delineates the methodology of the study and the steps the researcher followed to address the research questions. This study investigated the characteristics and beliefs of school personnel who support the dual language program model by surveying the teachers' and an administrator's perspectives. The researcher evaluated the performance of students who have participated in dual language programs since kindergarten in comparison with their peers who have attended the traditional English instruction program. The measures of academic progress (MAP) assessment were used to contrast their academic reading progress during the 2018-2019 and 2019-2020 school years. Finally, observations of six dual-language classrooms focusing on the use of teacher strategies were also analyzed to triangulate the findings. The researcher chose to conduct a triangulation mixed methods design to enrich and validate our understanding of the characteristics and beliefs of school personnel who support the dual-language model. This study used assessment data from a predominantly Hispanic population at an elementary school in Southern California, Jets elementary school. The school has been implementing the dual language program for over 10 years and the researcher was using the data from this school to compare it to Moon elementary school, an English-only school in the same community. If the data demonstrated a positive outcome of the dual-language immersion program, this could serve as further support for more dual-language immersion programs to be implemented in public schools in the United States. This chapter provides a description of the design, sampling, instruments, and procedures.

Design

In this triangulation mixed methods design, there were three different sources of data that were collected at different levels to address the research questions and validate the findings.

Figure 1. 1

Three Sources of Data



Sampling Procedures

This study was conducted in a Southern California elementary school. The study was a triangulation mixed methods design. The quantitative data was used to compare the academic achievement in English reading of students in a dual language immersion program (students that received instruction in Spanish and English at Jets Elementary) and students who were in a structured English immersion program (students who received instruction in English only at Moon Elementary). Both schools were comparable in Socio-Economic Status (SES) with over 90% of students receiving free or reduced lunch. Additionally, qualitative data was used to

define the characteristics and beliefs of school personnel who support the dual-language program model. The sites that were used to compare the academic achievement of students were Jets elementary school in Southern California which is one of the seven elementary schools in Saints Unified School District that offers a K-5 Dual-Language Immersion program and Moon elementary school in the same district. Jets Elementary utilized the 90/10 Dual-Language Immersion model.

Due to the COVID-19 pandemic teachers at Jets Elementary had too many demands and district regulations regarding social distancing and the original plan for data collection had to change. Teachers at Jets Elementary were not able to participate in the interviews or walkthroughs. The data from teachers and a principal was collected from Moon elementary school only. During the time of the study, but after 2020, Moon elementary school started offering a dual-language immersion to students in grades K-2. Given that they were implementing the dual language program, the interviews about bilingual programs were relevant and appropriate at that time. However, the data used to compare the achievement scores of the students is from the Fall of 2018 to the Spring of 2020 due to the COVID pandemic; these were the latest years for which the district administered standardized testing. During these years Moon elementary was an English–only school.

Instrumentation

Instruments used in this study varied from standardized measures of achievement to self-constructed interviews. It included instruments to collect qualitative data about teachers' and one administrator's perceptions of dual-language instruction and how it contributed to dual-language program implementation. The quantitative data helped the researcher evaluate the academic achievement of students in the dual language program compared with the English-only program.

Teacher Interview and Survey

The 10-minute survey was handed out to participating teachers in person and was analyzed to identify common themes. The teacher survey consisted of two separate sections: one was a 5-question Likert scale (1-5) varying from a 1 (completely disagree) to a 5 (completely agree). The questions were related to teacher beliefs about bilingualism/biliteracy. The second part included 8 questions related to teacher demographics. The demographic questions collected information about teacher ethnicity, gender, age, years teaching dual language, country of birth, dual language trainings attended in the last year, participation in dual language, and whether the teacher was bilingual/bi-literate or not. These survey questions were asked to understand teachers' personal and professional backgrounds as they related to dual language instruction. In addition, the teacher survey questions measured teacher perceptions and beliefs about biliteracy and the level of support from the school administrative team regarding dual language instruction. The teacher interview questions followed the survey and delved deep into the challenges of teaching in a bilingual program, teaching strategies, and support needed from the administrative team. The teacher interview consisted of 7 questions. The main constructs were challenges, perceptions of the dual language program, professional development, and teaching strategies. These questions allowed the researcher to compare the common themes of what teachers considered important and relevant in supporting dual language instruction. Information gathered from surveys and interviews guided the actual walkthrough observations which were also part of the present study and are described later.

Walkthrough Observations

The purpose of the walkthrough observations was to witness the dual language instruction and the interactions between the faculty and the students. An understanding of what

made this school unique was important to the research. By combining the interviews, surveys, and observations, the researcher was able to create a more complete picture of the school and dual-language instruction. The researcher observed each of the six dual-language classes for 30 minutes: two kindergarten classrooms, two first grade classrooms, and two second grade classrooms. With the permission of the school principal, the researcher used a walkthrough observation protocol. This protocol was a tool that allowed the researcher to take notes related to the setting, instruction, and other factors observed during the Spanish language arts block.

An understanding of the uniqueness of Moon Elementary was important to the research because it was a new dual-language school. The observer was present in each of the six classrooms during the same Spanish language arts block to create a similar context frame across all classrooms. Since the idea was to be the least obtrusive, the observer took on an observant-participant role. The observer entered the classroom. However, he did not interrupt instruction. The observer wrote notes on what was observed. The notes were about the setting (number of students in the classroom, student-to-teacher ratio, literacy activities examples such as reading activities, group work, model of instruction, and samples of student work around the classroom). The notes also included information about the language of instruction, student engagement during instruction, and teacher engagement during instruction. Other factors included (classroom environment/noise levels such as learning noise, partner work, group work, etc.), student reactions to instruction (excited, bored, sad, enthusiastic, etc.), and teacher reactions (excited, enthusiastic, etc.). The walkthrough observations allowed the researcher to see firsthand the instructional strategies and the level of student participation and excitement as they learned in both English and Spanish.

Measures of Academic Progress (MAP)

The researcher used MAP assessment data to compare the academic progress in English reading for dual-language students at Jets Elementary and non-dual language students at Moon Elementary. For the MAP assessment to be valid, it had to meet the following criteria: 1) test window dates: tests must fall within the dates designated for testing ("test window"). Test dates were when students started testing, so a student could complete a test outside the test window, and it would still count for growth. 2) multiple tests: if a student completed the same test multiple times in a term, the test with the lower standard error became the growth measure. Any duplicate test scores, even though still valid, were not considered for growth comparisons. It is important to note that if tests had the same standard error, then the test that either was most recent or had the highest RIT score became the growth measure.

MAP Growth tests produced both an overall subject score and scores for the instructional areas, also called "goals." The MAP test was administered in the Fall, Winter, and Spring without repeating the same assessment questions in a two-year period. At the time of the study, the reading (grades 2-5) had 40 to 43 questions. The MAP test was administered to students in two separate sessions to avoid test exhaustion. MAP student data was provided by the district research and evaluation team. The MAP assessment data that was collected, compared and analyzed included de-identified reading data for grades 3-5 for Fall/Winter/Spring during the 2018-2019 school year, and Fall/Winter during the 2018-2020 school year. The MAP assessment data included students who have been in a dual-language program for at least 3 years in grades 3-5. The data included achievement Rasch Interval Unit (RIT) scores. A RIT score is an estimation of a student's instructional level. It also measures students' academic progress or growth in school. Results were nationally normed. This provided information about how students

performed relative to their peers. The expected RIT score for third grade was 186.62 for Fall, 193.90 for Winter, and 197.12 for Spring. For fourth grade, it was 196.67 for Fall, 202.50 for Winter, and 204.83 for Spring. For fifth grade, it was 204.48 for Fall, 209.12 for Winter, and 210.98 for Spring. MAP assessments were used to measure growth in reading and math. The Fall assessment gathered a students' baseline, Winter assessment measured progress and the Spring administration measured the students' growth to that point. The reading goals assessed on MAP were literary text, vocabulary, and informational text. The data also included percentiles, growth and percentiles, Conditional Growth Index (CGI), Special Education students, language fluency (RFEP, EO, GATE), and Free and Reduced Lunch Program participation.

Validity and Reliability

The validity and reliability of the instruments as well as the rationale for adopting these measures are discussed here. According to McMillan and Schumacher (2010), validity is the extent to which inferences made based on numerical scores are appropriate, meaningful, and useful. Furthermore, these authors also state that it is a judgment of the appropriateness of a measure for specific inferences or decisions that result from the scores generated. These authors warn that to assure others that the procedures have validity in relation to the research problems, subjects, and setting of the study, it is incumbent on the investigator to describe validity in relation to the context in which data are collected.

One possible threat to the researcher's measures/surveys was construct under-representation. The author's instruments included surveys and questionnaires. The goal of these measures was to understand how the perceptions of school administrators and teachers contributed to dual-language program implementation. In addition, the instruments aimed to acquire an understanding of the level of support teachers and students needed regarding

materials, pedagogy, and the value of bilingualism and biliteracy. The researcher's goal was for the content of the instruments to represent the full scope of the content implied from the construct, in this case, student achievement in dual language programs and student achievement in non-dual language programs. As far as construct validity, inadequate pre-operational explication of the constructs could potentially become a threat. However, this was avoided by having experts in the field review the author's constructs prior to starting the study.

Another possible threat was mono-operation bias. The author's goal was to include different methods or versions of the instruments. Participants were bilingual teachers teaching in a dual language immersion program. A possible threat to the validity of the study was the selection of participants. Since the author employed convenience sampling due to the limited access to the subjects during this time of COVID, this posed a threat to validity. The small sample was not representative of the entire population of bilingual teachers in the state of California. However, this was a unique opportunity to study the teachers' perspectives in depth by working with a small sample and this was also a valuable contribution to the field of bilingual education. The external validity, which related to the generalizability of the results of the study, was assessed from the demographic characteristics of the sample gender, race, and ability. The result of the study could be generalized to some extent to other dual language teachers in the United States who have similar characteristics.

McMillan and Schumacher (2010) state that reliability is the extent to which the results are similar over different forms of the same instrument or occasions of data collection. In other words, the measures are free of errors. The author understood that instruments included errors. Whether errors occur because of the conditions of test construction and administration, or conditions associated with the person taking the test, the fact of the matter is that the results had

some form of error. Some of the threats to the reliability of the study included the sampling of the items and the attitudes of the participants. The sampling of the items posed a problem because the items had to be directly linked to the research question. However, participants may have provided responses that did not address the intended purpose and might have given the author different results. The attitudes of the participants were important because although the prediction was that they would fully support dual language immersion, they might have wanted to provide satisfactory answers to the interview questions to please the researcher who worked at Moon Elementary as a resource teacher.

Internal consistency was important to increase the reliability and validity of the results. There were three methods to increase internal consistency: split-half, Kuder- Richardson, and the Cronbach alpha method. Regarding split-half reliability, a possible threat to the author's instrument was that half of the items in the survey were not consistent with the other half. For example, in the teacher interview questions (which measured the independent variable), questions 1-3 were related to the challenges of teaching in a dual language immersion program whereas questions 4-6 are related to teaching strategies and extra support needed. However, the author's prediction was that each teacher would have about the same position in relation to the group in each half. Therefore, the correlation might have been high, and the survey was going to have high reliability. The teacher survey Likert scale might have biased the findings because the statements were rated on a scale of 1-4. In this survey, teachers had to circle only one numeric response to each statement. Although the questions were related to beliefs and attitudes related to being bilingual, some questions in this instrument had to do with the level of support teachers believe they were receiving. To avoid this threat, the author had to add more questions that basically asked the same thing repeatedly for verification. As far as inter-rater agreement, the

author's hope was that the participating teachers and the administrator in the study were going to agree on the perceptions that contributed to dual-language program implementation. If they agreed on program implementation, then there was going to be some consistency in measurement. The author's goal was to obtain a Cohen's kappa value above .75 by using the appropriate process. However, one of the requirements for this value to be above the appropriate level was to have a heterogeneous group and increase the number of questions in the instruments. This posed a challenge here because of the sample limitations and participants might have experienced boredom or exhaustion if the instrument was too long. The author was sure to discuss this limitation in the results section.

To enhance reliability and avoid biased findings, the author: 1) established standard conditions of data collection. In other words, the author gave participants the same directions, had the same time frame to answer the questions, and was in the same location, 2) the author was the only person administering the instruments, 3) the author was vigilant about any unusual circumstances during data collection because they might have affected reliability, 4) the author's instruments were appropriate in reading level and language so that participants were able and motivated to answer the questions honestly. The researcher informed them that their honest responses would contribute greatly to the success of the research investigation, 5) the author asked participants to take the surveys and questionnaires as seriously as possible and explain the importance of their participation 6) the researcher did not have participants work for more than 15 minutes to avoid boredom and exhaustion.

Student data was secondary, and it was available from the research and evaluation department at the district level from NWEA (Northwest Evaluation Association) for students in grades 3-5. The 6 teachers and one administrator were selected using convenience sampling

because they were all working in the same school, to which the researcher had access, as bilingual teachers in the same dual-language program.

Data Collection

Once the 6 participating teachers were recruited and the proper consent agreement was secured, they were asked to complete a teacher demographic survey which was handed out to them and turned in to the researcher at their convenience. Participating teachers and the school principal, Dr. L., were scheduled to participate in an interview later and at their convenience. The same conditions were followed for all interviews to increase reliability. The one-on-one interviews were conducted on the same day of the week, at the same place (in the researcher's office), and an interview protocol, which included seven open-ended questions, was used.

The researcher also conducted six classroom observations to directly observe the phenomenon of dual language instruction in action. In addition, the data were analyzed and coded. As stated by Creswell (2013) the observations were based on the research purpose and questions. Classroom observations were conducted in a respectful and courteous manner, the researcher was a good listener, and he recorded as much information in a notebook as possible. The teachers received a walkthrough observation protocol in advance of the visit. Each classroom was observed one time for 30 minutes during the ELA block between 8:30-9:15 a.m. (see Walkthrough Observation Protocol in Appendix A). The role of the researcher was as an 'outsider' initially, followed by becoming an 'insider' or participant observer by the time of the walkthroughs. These different levels of data gave the researcher a clearer picture of how the dual language program components fit together.

The confidentiality of the participants was ensured by masking the names of the participants in the data using the letter of their last names instead of names. Any physical data

was secured and locked in a cabinet and electronic data was stored in a password-protected laptop.

Data Analysis and Procedures

The author used the data qualitative analysis procedures suggested by Huberman and Miles (1994) as cited in Creswell (2013). Huberman and Miles (1994) suggest writing marginal notes, drafting summaries of field notes, and noting relationships among the categories. The first step in the data analysis was to collect the data from interviews, surveys, and observations. The researcher read the transcripts in their entirety several times writing notes or memos. The next step was to describe, classify, and interpret the data to form codes or categories. The researcher wrote a detailed description of what he saw. As suggested by Creswell (2013) the author developed a short list of tentative codes (e.g., 25-40 or so) that matched text segments. The author then narrowed down the codes to five or six themes. He then interpreted the data connecting it to what others have found. As a final step in the process, the author represented the data visually in a diagram form to answer the research questions as follows:

What are the characteristics and beliefs of school personnel who support the dual-language program model?

How do the perceptions of school administrators and teachers contribute to dual-language program implementation?

Triangulation on questions about the dual program was used to learn about how teachers and administrators perceived the implementation of the new dual-language program. Data from the survey provided a broad understanding of the perceptions of teachers about challenges, benefits, and strategies. This data was quantifiable through Likert scale questions that were coded in an excel sheet. Interview data were coded by themes that were presented

to describe the experience and perceptions of these teachers and one administrator. The interviews validated quantitative findings from the survey by elaborating on answers that were of the highest relevance (i.e., extreme values, representative values, or variance). Questions for the school administrator served to validate the teachers' experience and the support system they thought was provided. Finally, the observations served to validate the teacher's and administrators' perceptions that contributed to dual-language program implementation.

The question about the academic achievement of students in the dual language immersion programs was answered by comparing the mean RIT score in English language arts performance for 5 data points during the two school years, Fall 2018-2019, Winter 2018-2019, and Spring 2018-2019, as well as for Fall 2019-2020, and Winter 2019-2020 school year. MAP data for Spring 2019-2020 was not available due to the COVID-19 school closures. Next, the researcher ran a t-test and got a p-value contrasting all data points between the two groups of students (Dual Language vs English-only programs) to see if there was a statistical difference. If the p -value was less than 0.05, the difference in average scores reached significance. The following table illustrates the plan the researcher used to compare test scores between the two schools.

Table 5. 1

2018-2020 Jets and Moon Elementary MAP Performance Comparison

Test Administration	3rd Grade Jets/Moon	4th Grade Jets/Moon	5th Grade Jets/Moon
Fall 2018-2019	p-value = 0.29	p -value = 0.009	p -value = 0.06
Winter 2018-2019	p -value = 0.01	p -value = 0.44	p -value = 0.66
Spring 2018-2019	p -value = 0.12	p -value = 0.07	p -value = 0.68
Fall 2019-2020	p -value = 0.24	p -value = 0.58	p -value = 0.09
Winter 2019-2020	p -value = 0.09	p -value = 0.02	p -value = 0.29
Spring 2019-2020	n/a	n/a	n/a

Strategies for Validation of Findings

The researcher used data corroboration, in which the author used multiple types of data to support the interpretation (triangulation). Using qualitative forms of data such as surveys, interviews, and observations as well as quantitative forms such as secondary data (e.g., state assessments), allowed the researcher to provide a "credible" interpretation of the results. To ensure validity, the author used triangulation, which included the use of multiple data sources, methods, and theoretical schemes, construct validity (recognizing the constructs that exist rather than imposing theories/constructs on informants or the context). The researcher also used peer

review or debriefing to provide an external check of the process, to keep the researcher honest, and ask hard questions about methods, meanings, and interpretations. These were classmates and the dissertation chair. Another strategy the author used was clarifying researcher bias from the outset of the study. Since the researcher conducting the study on the characteristics and beliefs of school personnel who support the dual-language program model, and a comparison between a dual language program and a structured English immersion program is bilingual, the researcher had to comment on his past experiences and orientations about bilingualism that might shape the interpretations of the study. Finally, the researcher used reflexivity as a criterion to review the study under investigation.

Anticipated Ethical Issues

The researcher took into consideration ethical issues. The first issue was gaining local permission from the site and participants prior to conducting the study. According to Creswell, 2013, one way to alleviate this issue might be to identify and go through local approvals; finding a gatekeeper to help. This individual was a former principal of the proposed elementary school. Another ethical issue that the researcher needed to be aware of during data collection was respecting potential power imbalances and exploitation of participants (e.g., interviewing, observing). This issue was alleviated by avoiding leading questions, refraining from sharing personal impressions, and avoiding disclosure of sensitive information. Teachers may have felt like they were being evaluated and may have feared negative consequences. The researcher made sure to explain to the teachers that the classroom walkthroughs were only for the purpose of answering the research questions and that their identity was confidential. The researcher assured the participating teachers that he was not going to publish any individual's identity.

Summary

The teacher demographic survey, the teacher and administrator interviews, the classroom walkthroughs as well as a MAP reading assessment data were used to answer the research questions that guided the researcher in discovering the characteristics and beliefs of school personnel who support the dual language model, comparing the academic achievement of students receiving Spanish-English instruction and students receiving English-only instruction, and understanding how the perceptions of teachers and a school administrator contribute to dual language implementation. The teacher demographic survey provided the researcher with a better understanding of the participating teachers regarding their place of birth, years teaching in a dual-language program, whether they have participated as students in a dual-language program in their K-12 education, and the number of trainings attended in the last year. The classroom walkthroughs allowed the researcher to see dual-language instruction in action. Finally, MAP reading assessment data allowed the researcher to compare the reading achievement between Jets Elementary (dual-language school) and Moon Elementary (English-only school). The student population was unique because most of these students came from second and third-generation Hispanic households. These children started in the kindergarten dual immersion program as Spanish learners. This is a contrast from a decade or two ago when they started as English learners. Chapter 4 will evaluate the findings and results from the data collected.

CHAPTER 4: FINDINGS

This sequential explanatory mixed-methods study aimed to investigate the characteristics and beliefs of school personnel who work in the dual-language program model. The study looked at six K-2 dual-language classrooms using the 90-10 model of dual language instruction where the phenomenon of dual language instruction was observed. Measures of Academic Progress (MAP) reading assessment data were analyzed to compare academic achievement among students in grades 3-5 at two different Southern California elementary schools. This chapter is organized around three research questions that guided the study: 1) What are the characteristics and beliefs of school personnel who support the Dual Language program model? 2) What effect does dual-language immersion have on academic achievement compared to similar students in English immersion instruction? and 3) How do the perceptions of school administrators and teachers contribute to dual-language program implementation? The analysis of teacher demographics, surveys, teacher interviews, administrator interviews, and classroom walkthrough observations, in a new Dual Language program, generated the themes. These themes provided the researcher with a profound understanding of how the perceptions of school administrators and teachers contribute to dual-language program implementation. Additionally, an analysis of MAP assessment data in reading for the 2018-2019 and 2019-2020 school years was used to compare the achievement of two groups of students: those receiving dual language instruction for at least three years and students that have received English-only instruction.

Teacher Demographics and Classroom Walkthroughs Analysis

In this chapter, the results of the analysis for each question will be presented after the description of the demographic information of the participants from whom the data was derived. To answer the first question about the characteristics of the personnel in a Dual

Language Program and the strategies they consider valuable, the researcher presents the demographic information as well as a narrative and results from observation lists from the classroom walk-through to depict each of the teachers in the study before presenting the results of the interviews. The following chart summarizes dual-language teachers' demographic characteristics. It is important to note that two out of six teachers had taught in a dual language program for over six years. Four out of six participated in a dual language program as students in their K-12 education. It is expected that participation in dual-language education as children and having more years of teaching experience teaching in a dual-language classroom would have an impact on the value of bilingualism/biliteracy and the value of confidence. Two out of six attended three or more trainings in the last year. The trainings included California Association for Bilingual Education (CABE), Dr. Jose Medina, dual language advocate who works with school districts to provide support to dual-language schools, and dual-language trainings offered by the school district.

Table 6. 1

Teachers' Demographic Data

Teacher	Place of Birth	Years Teaching	Participated as a Student in DL k-12?	Number of Trainings Attended in the Last Year
Mrs. C.	U.S.	11+ Years	Yes, for 2 Years	3 or More
Ms. R.	U.S.	2 Year	No	1-2 Trainings
Ms. G.	Mexico	1 Year	Yes, for 3 Years	1-2 Trainings
Mrs. A.	U.S.	6-10 Years	No	1-2 Trainings
Ms. S.	U.S.	1 Year	Yes, for 4 Years	3 or More Trainings

Mrs. B.	U.S.	2 Years	Yes, for 2 Years	1-2 Trainings

All observations took place in April 2022, the researcher observed each classroom for about thirty minutes during language arts instruction and took notes of his observations. All teachers had students' writing, art, and reading work samples displayed around the classroom. Next, a description of the participant's background is presented as well as a summary of the observation. Mrs. C is a female, Hispanic educator who was born in the United States. She is over fifty years old. She has taught in a dual-language program for over eleven years and over twenty years in Structured English Immersion (SEI). She has attended three or more dual-language trainings in the last year. She participated in a dual-language program for two years in her K-12 education. She considers herself bilingual and bi-literate.

During the time of the walkthrough, the researcher noticed that Mrs. C. was teaching in Spanish 100% of the time. The model of instruction was direct instruction. Her twenty kindergarteners were working on a writing activity (dictado) about plant life. As most students were working on dictado, she selected a couple of students to come up to the board to read the sentences with the class in unison. As the selected student pointed to each Spanish syllable and read the words with fluency, all students repeated after him/her. Mrs. C. used repetition throughout her lesson and had students repeat syllables, words, and sentences. In addition to having students repeat after her, Mrs. C. also walked around the classroom and stood next to students that needed to participate more. At this point, the teacher's proximity encouraged the students to participate.

The researcher also noticed that Mrs. C. decorated her classroom with writing posters, Guided Language Acquisition Instruction (also known as Project GLAD) pictorial strategies, and

vocabulary charts. However, most of the wall space was covered with student samples of art, math, writing, and reading activities in Spanish. Mrs. C. also sang songs in Spanish with the students. Mrs. C. was also nominated teacher of the year prior to the walkthrough. The researcher knew about this nomination. This influenced the researcher because he expected to see some great teaching strategies in action.

Ms. R. is a female Hispanic educator born in the United States. She is over fifty years old. She has taught in a dual-language program for two years. Ms. R. has attended one or two dual-language trainings this year. She did not participate in a dual-language program during her K-12 education. However, she considers herself bilingual and bi-literate. During the time of the walkthrough, the researcher noticed that Ms. R. was teaching in Spanish about 90% of the time. This was evident when students asked Ms. R. a question in English, she replied in English. In addition, Ms. R. inadvertently used code-switching (alternating between English and Spanish). During this direct instruction writing (dictado) lesson, Ms. R. had students write five sentences in their notebooks. The sentences were pulled from the district-adopted curriculum. Subsequently, Ms. R., modeled for students how to write letters, starting from the top and moving toward the bottom line. Moments later, students watched a video that accompanies the Spanish language arts curriculum. The room environment was quiet, and students were reminded to behave appropriately. After students completed the dictado, they were instructed to take out their writing practice packet and work on writing sentences containing letters y, q, and ll. The researcher did not choose to observe during dictado. It was the time of day for this instruction. The dictado strategy was observed across k-2 grade levels. Students were sitting in table groups to promote collaboration. However, during the walkthrough, this collaboration was not observed.

Ms. G. is an American Indian or Alaskan Native female educator who was born in Mexico. She is between forty-two to forty-nine years old. Ms. G. has taught in a dual-language program for one year. Ms. G. has attended one or two dual-language trainings this year. Ms. G. participated in a dual-language program during her K-12 education. She considers herself bilingual and bi-literate. In April 2022, the researcher observed Ms. G.'s second-grade classroom for about thirty minutes. During the time of the walkthrough, the researcher noticed that Ms. G. was teaching in Spanish 100% of the time. This was evident when students asked Ms. G. a question in English, she replied in Spanish. During this direct instruction writing (dictado) lesson, Ms. G. had students write one sentence in their notebooks. Ms. G. used her View Sonic T.V. to write six words on the screen with the purpose of going over these vocabulary words. Ms. G. walked around the classroom to ensure that students were writing the words in their notebooks. She also provided corrective feedback in a calm manner noted by her tone of voice. Moments later, students watched a video that accompanies the Spanish language arts curriculum. After students completed the dictado, they were provided a printed copy and listened to a few pages about tornadoes and hurricanes. The objective of the lesson was to compare both using a Venn Diagram. The teacher had already prepared a pre-drawn Venn Diagram. She stopped at every paragraph to elicit student responses to questions she posed. Students were sitting in rows and were expected to complete their work independently.

Mrs. A. is a Hispanic female educator who was born in the United States. She is between twenty-six and thirty-three years old. Mrs. A. has taught in a dual-language program for six to ten years. Mrs. A. has attended one or two dual-language trainings this year. Mrs. A. did not participate in a dual-language program during her K-12 education. She considers herself bilingual and bi-literate. During the time of the walkthrough, the researcher noticed that Mrs. A.

was teaching in Spanish 100% of the time. However, it was noted that when students were working independently, they used English as a form of communication. During the lesson Mrs. A. had students take out their district-approved consumable Benchmark En Español booklets and read with her students about dinosaurs. Mrs. A. then used a graphic organizer, Bubble Map, where she wrote words provided by her students that describe a dinosaur. Mrs. A. then proceeded to have students use their Chromebooks to access their Google Classroom assignments. This assignment consisted of students creating a journal entry where they had to describe what it would be like to have a dinosaur as a pet. Mrs. A. showed students how to use the computer voice-typing feature in Spanish. Mrs. A. allowed her students to help one another if they had a problem with the assignment. Mrs. A. also used proximity and repetition to monitor student progress. Students were sitting in table groups and were expected to complete their work independently. However, the teacher informed her students that they could work with their table members. Mrs. A monitored the class by walking around the classroom and supporting students that raised their hands.

Ms. S. is a Hispanic female educator who was born in the United States. She is between twenty-six and thirty-three years old. Ms. S. has taught in a dual-language program for one year. Ms. S. has attended three or more dual-language trainings this year. Ms. S. participated in a dual-language program for four years during her K-12 education. She considers herself bilingual and bi-literate. During the time of the walkthrough, the researcher noticed that Ms. S. was teaching in Spanish 100% of the time. This was evident when students asked Ms. S. a question in English, she replied in Spanish. During this direct instruction writing (dictado) lesson, Ms. S. had students write one sentence in their notebooks. Ms. S. used her View Sonic T.V. to play a video about syllables. The video went over letter sounds through music and mimicry. Ms. S. had students

repeat the syllables presented in the video. She also provided corrective feedback in a calm manner as evidenced by her tone of voice. Moments later, students were instructed to go back to their seats to work on a packet where they had to cut and paste syllables that go with whole words. Ms. S. used a wide variety of strategies to keep students focused and engage in their learning. Ms. S. asked students to show thumbs up or down to check for understanding. In addition, she gave table points for being ready and for completing their work. Students sat in rows and were expected to work quietly and complete their assignments.

Mrs. B. is a Hispanic female educator who was born in the United States. She is between forty-two to forty-nine years old. Mrs. B. has taught in a dual-language program for two years. Mrs. B. has attended one or two dual-language trainings this year. Mrs. B. participated in a dual-language program for two years during her K-12 education. She considers herself bilingual and bi-literate. During the time of the walkthrough, the researcher noticed that Mrs. B. was teaching in Spanish 100% of the time. This was evident when students asked Ms. B. a question in English, she replied in Spanish. During this direct instruction writing lesson, Mrs. B. had students complete a graphic organizer with her. Once the graphic organizer activity was completed, Mrs. B. had students take out a packet that had different vowel and consonant pairs. In the beginning, students had to follow along with Mrs. B. After a few guided practice problems, students were given the time to work independently. Mrs. B. had students work on breathing exercises before transitioning to different activities. Additionally, she walked around the classroom to provide support and to ensure that students were working. Students were sitting in rows and were expected to complete their work. The researcher will present an analysis of the strategies observed below.

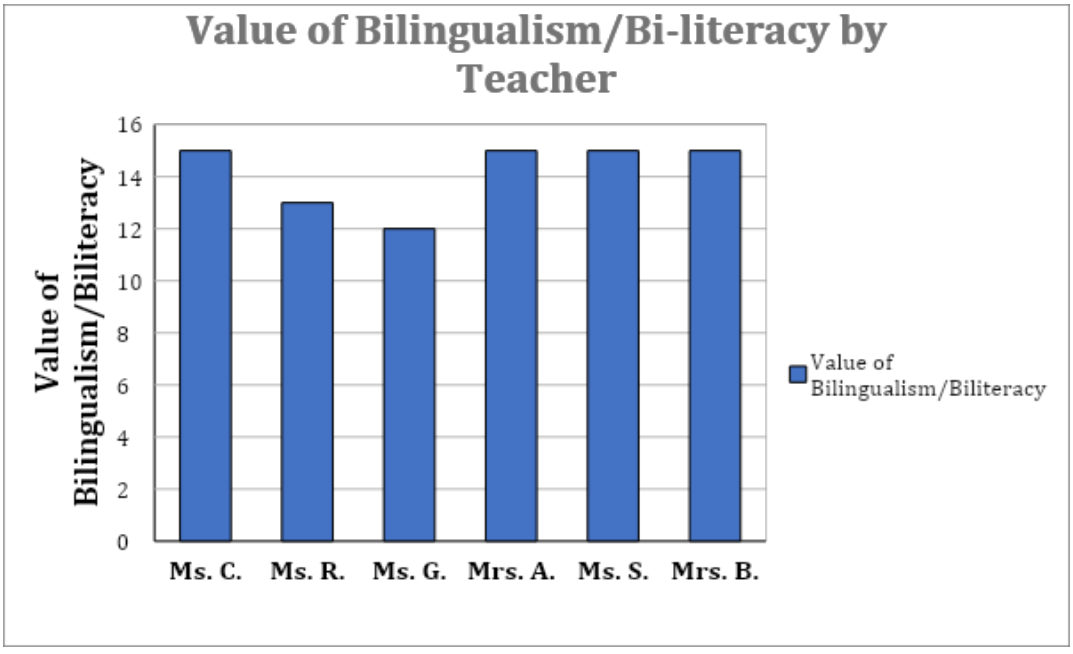
Teacher Characteristics and Survey Data Analysis

The six participating teachers were administered a seven-questions survey to understand their perceptions of bilingualism and dual-language instruction. A five-point Likert scale was used with 1= Completely Disagree to 5= Completely Agree with statements that favor dual language program.

After the survey data were analyzed, three major constructs were corroborated in measuring teacher's perception, one was the value of bilingualism and biliteracy measured with three questions (range =3 to 15), teachers' confidence measured with two questions (range =2 to 10), and perceived level of support measured with one question (range = 1 to 5). Data from two sources were combined to corroborate the validity of these themes. The researcher used similar concepts across the questions in the survey and the interview.

Figure 2. 1

Value of Bilingualism/Bi-Literacy by Teacher

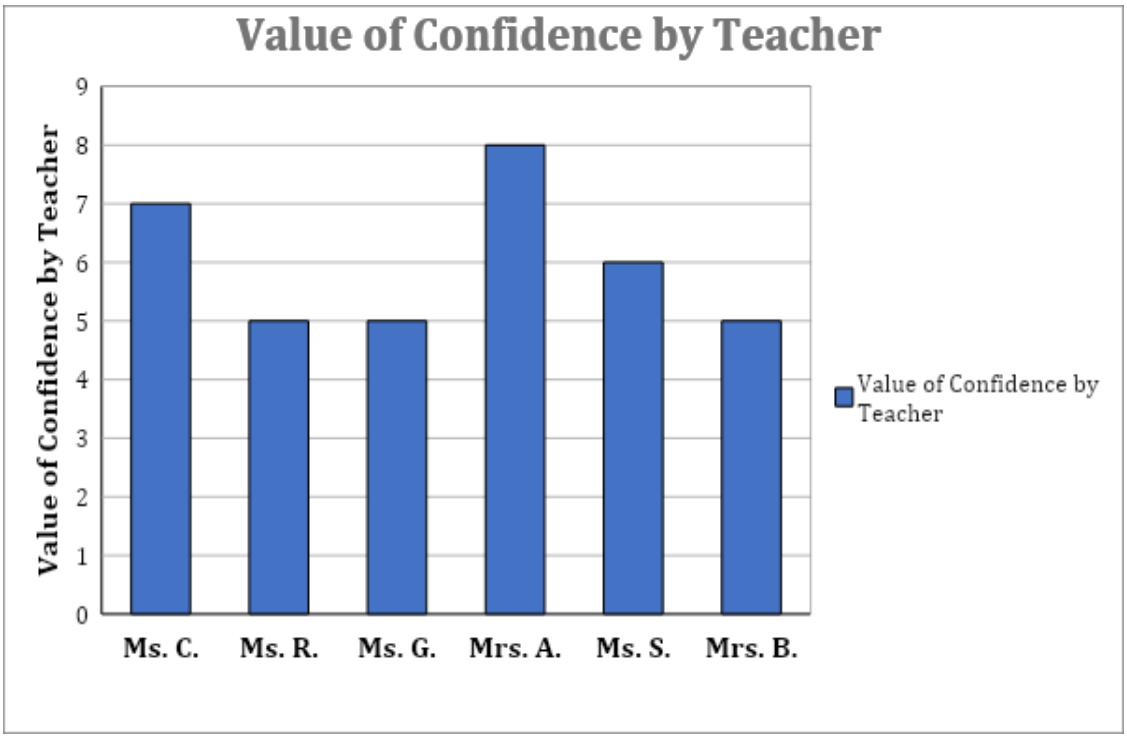


To measure the concept of 'value of bilingualism/biliteracy' the researcher combined the three statements: 1) I believe it is important that my students are bilingual, 2) I believe it is important that my students be biliterate, and 3) I believe it is important that my students be bicultural. The bar graph shows that the teachers with the highest value of bilingualism and biliteracy are Ms. C., Mrs. A., Ms. S., and Mrs. B. A similarity between all these teachers was that they provided instruction in Spanish 100% of the time during the classroom walkthroughs. According to the 90-10 model of dual language instruction, language arts must be conducted in Spanish. The reason behind this is that bilingual students need to develop a strong foundation of Spanish in grades kinder through second for the program to be effective. Another important similarity in these classrooms is that teachers used more student engagement strategies. For instance, in all four classes, students were singing, repeating after the teacher, and having students use total physical response, and breathing exercises to cement their learning.

During the teacher interviews, teachers were asked what they like most about teaching dual language students. Ms. S stated that she loves the idea of students becoming bilingual. She said, "If you look at European Latin American countries, they learn two or even three languages at school, and here in the United States, it is the opposite." Mrs. A. added that she likes the fact that students can express themselves in two languages. She said, "It is very important because it opens the world to two different cultures and to two different places – two different types of people."

Figure 3. 1

Value of Confidence by Teacher



To come to the concept of 'value of confidence by teacher,' the researcher combined the two statements: 1) I believe that I need more professional development opportunities to become a more effective bilingual teacher, and 2) I am confident in my ability to use effective teaching strategies with my students. The bar graph shows the values of confidence by teacher. Mrs. A. shows the highest confidence level, followed by Ms. C. and Ms. S. The questions aimed to understand how prepared and confident teachers feel to teach in a dual language class.

During the teacher interview, Mrs. A. was asked what extra support, materials, or professional development would be helpful to her and why. She stated that she likes to attend the yearly California Association for Bilingual Education (CABE) institute. She stated that attending this summer institute allows her to learn about the different teaching strategies for working with dual language students. She also said that she is interested in attending the GLAD En Español

training. This training is designed to support Spanish dual language immersion teachers. This model creates a learning environment that both builds knowledge on dual immersion principles and programs, while also delivering strategies and content by bilingual certificated teacher trainers in Spanish. Although Mrs. A. believes she needs more professional development opportunities to become a more effective bilingual teacher, she is confident in her ability to use effective teaching strategies with her students. Her confidence also stems from the fact that she has taught in a dual-language program for 6-10 years.

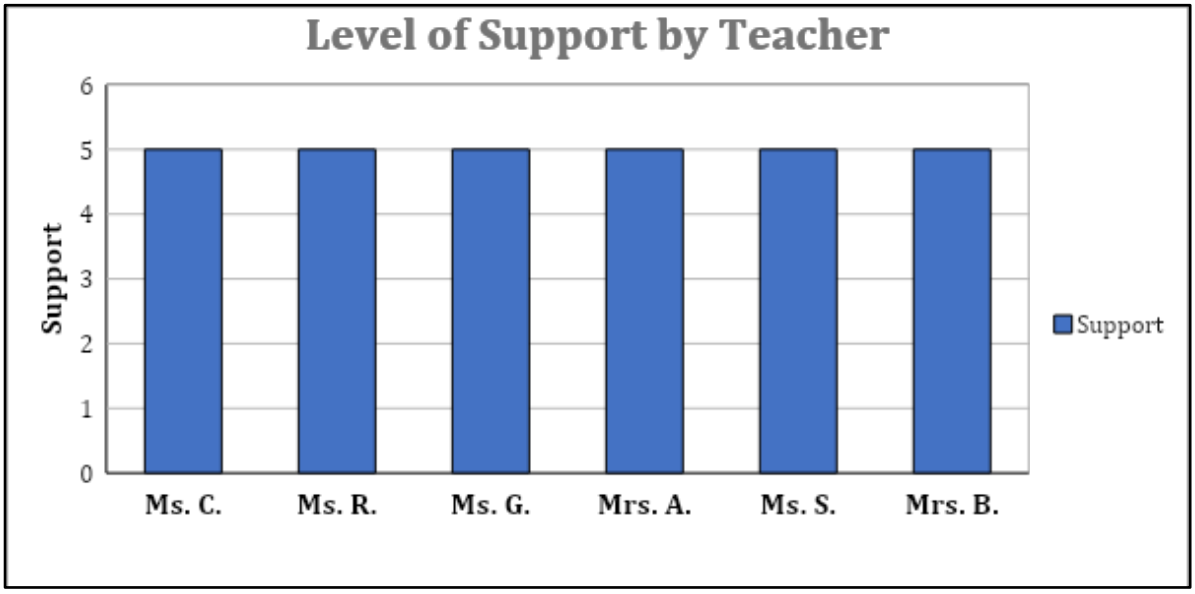
Ms. S. is a first-year teacher at Moon Elementary. When Ms. S., was asked what extra support, materials, or professional development would be helpful to her and why she stated that she would like to have an instructional assistant or an activity monitor in her class to support her in kindergarten. She also stated she would be interested in attending more district professional development opportunities. Ms. S. also added that she would like to collaborate more with dual language teachers from the other six schools in the district that offer dual language instruction. She believes that working with other teachers allows her to learn new teaching strategies. Although she is a new teacher at Moon Elementary, Ms. S. demonstrated high levels of engagement during the classroom walkthrough. She was confident in her ability to use effective teaching strategies such as repeat after me, total physical response, singing, and students working collaboratively. Both Mrs. A. and Mrs. S. demonstrate an interest in growing as professional educators and actively use effective teaching strategies.

Ms. R., Ms. G., and Mrs. B. have the lowest confidence in their ability to teach dual language students. It could be that these teachers have lower confidence because they have taught in a dual-language program for one year only. Switching to teaching mostly in Spanish was a drastic change since they have taught in English for over 20 years. Additionally, since they

attended only 1-2 dual language trainings in the last year, they feel that they need more professional development opportunities to become a more effective bilingual teacher. Not being provided with sufficient dual-language professional development opportunities made Ms. R., Ms. G., and Mrs. B. feel that they are not fully prepared to teach a dual language class.

Figure 4. 1

Level of Support by Teacher



The graph shows that all six teachers believe that their principal is fully supporting them to implement the 90-10 model of dual language immersion at Moon Elementary. However, since the researcher works at Moon Elementary in the role of assisting the principal, it is possible a bias occurred as the teachers wanted to please the researcher with an affirmative response. However, the two sources of data complement to support the evidence of the three themes. This table displays the answer to just one question.

In general, it seems that all teachers regard dual language instruction very highly. The walk-throughs demonstrate that they are actively implementing the strategies that are supported by research evidence and implementing the 90/10 model with high fidelity. It seems that there is some variation on the level of confidence they have in themselves to teach this model and the variation among the teachers seem to be a function of experience and professional development level in dual language teaching. Overall, everyone expressed they feel supported by the administrator, but this response might have been biased because they were reporting on their boss to an insider.

Interview Data Analysis

This data was analyzed to learn about the characteristics and beliefs of school personnel who work at the new dual-language program. The following subheadings correspond to the themes found in the interview data. The researcher used axial coding. According to Creswell (2013), in axial coding, the database is reviewed to provide insight into specific coding categories that relate to or explain the central phenomenon. Originally, the researcher started with about 40 codes during open coding. The researcher grouped these codes into categories because they tied the codes together. For example, teachers stated in multiple ways during the interviews that professional development opportunities and support would contribute to the success of dual language programs. A few teachers believed they needed more online trainings, in-person trainings, in-services, institutes, dual language learning opportunities during the summer, support by providing instructional assistants in the classroom, having district specialist model lessons for them, having parent volunteers, etc. For this example, the theme became, “Teacher Support and Professional Development Opportunities” since most responses alluded to the idea of having support and professional learning opportunities.

Six K-2 dual language teachers were asked seven questions during a one-to-one interview. Interrater reliability was conducted with an independent coder on 20% of the data. The answers to the interview questions resulted in five themes. Each answer was coded exclusively. Out of five themes, a common understanding between the researcher and the coder was agreed upon 80% of the data coded on average. The interview questions were as follows: Question number one was about the challenges of teaching dual language students. Question number two was about what they like most about teaching dual language students. Question number three asked what they believe contributes to the success of a dual-language program. Question number four asked if they are familiar with the collaborative teaching strategy known as "Bilingual pairs." Question number five asked what teaching strategies they have found effective in developing students' Spanish and English oral skills. Question number six asked what extra support, materials, or professional development would be helpful and why. Finally, question number seven asked them to describe a typical "dual-language immersion" student.

1. What are the challenges of teaching dual language students?
2. What do you like most about teaching dual language students?
3. What do you think contributes to the success of a dual language program?
4. Are you familiar with the collaborative teaching strategy known as, "bilingual pairs?"
5. What teaching strategies have you found effective in developing students' Spanish and English oral skills?
6. What extra support, materials, or professional development would be helpful to you? Why?
7. Please describe a typical "dual language immersion" student.

The most common themes found for each of these questions will be discussed next and excerpts from some of the participants will be presented here.

Teacher's Effectiveness

Mrs. C. and Ms. S. were chosen for the purpose of representing the overall theme through their exemplary responses. Additionally, the researcher added the administrator's perspective to look at the validity of the teachers' perspectives. Mrs. C., who has been teaching for over 30 years, stated that teachers need to be prepared to teach the language and to really enjoy teaching a dual language class. She thinks that teacher preparedness is essential for success.

Ms. S. strongly believes that a teacher must have a passion and be interested in the language and the culture of his/her students. She further stated that it takes the knowledge of what you are teaching to be able to help children understand, not just the language, but the culture itself and where the language comes from. According to Dr. L., Moon Elementary's administrator, "In a dual language immersion class there needs to be a lot of collaborative activities to allow the kids to interact with each other as much as possible because a lot of learning is taking place with interactions." Additionally, he added that providing students with multiple opportunities to interact with each other will ensure that when they go out to recess or lunch, they will continue with that interaction in both Spanish and English. The quality of interaction can vary from highly academic to 'translanguaging' and it is this variation that supports language and literacy development. A further explanation of the role of translanguaging in language acquisition is presented below, as it was brought up in the principal's interview and found in observations.

According to Garcia, Ibarra-Johnson, and MuDile (2017), translanguaging is the mobilization of specific language features, within one linguistic repertoire, based on the context

and need for communication. The authors also state that translanguaging moves additive bilingualism to a deeper understanding of how emergent bilinguals use one "unitary meaning-making system" to produce language. Furthermore, when translanguaging is not valued or allowed, we are in fact, fighting against it and not in the name of equity and social justice. The key feature of translanguaging is to allow learners to choose which language to use at any time. Dr. L. also agrees that students should be allowed to 'translanguage' because they can switch back and forth without the need to be limited to one language. This allows students to feel more comfortable using Spanish and/or English in any given situation. During the walkthroughs, the researcher observed evidence of translanguaging in grades first and second. This might be because students have a stronger command of both Spanish and English in first and second compared to kindergarten.

Teacher Support and Professional Development Opportunities

Several exemplary excerpts for this theme are presented here, as they represent the needs teachers expressed, but were not described during the question about the administrator's support. Ms. G. stated, "I think that there should be more staff, like instructional assistants who provide intervention support for at least half a day to provide small group support during rotations." Furthermore, she said, "having parent volunteers would also make a huge difference in ensuring that the low-performing students can receive additional support." Ms. G. also added, "I would like to receive professional development on the curriculum and/or watch demo lessons delivered by district curriculum specialists because there's nothing like seeing the experts, the curriculum specialists go into a little deeper and demonstrate or even watch someone else teach." Ms. R. stated, "I would like to have someone come into the classroom and do small group instruction. She stated that this would be great, especially for students that are low-performing or not

meeting first grade-level standards, and for students with behavioral concerns; they need someone different than me to work with them." Ms. C. mentioned, "It would be great to have someone come into my Kindergarten classroom to provide extra support." Ms. A. stated, "I would like to continue to receive yearly CABE, California Association for Bilingual Education, training because attending CABE trainings helped me to open up the different possibilities that are out there and the different types of workshops that are offered." Ms. S. explained, "I would like to continue to attend Kinder trainings online because those trainings are opening my eyes to the fast-growing number of dual-language programs and the possibility of gaining so many new language skills." Additionally, she added, "Getting insight from other teachers who have been teaching dual language for many years will help me see how they teach it. So really seeing the people in the field and hearing their different situations because we are all learning."

Dr. L., principal at Moon Elementary, emphasized that teachers need to be well-trained by providing them with professional development throughout the year. He stated that what teachers learn in college is not sufficient, teachers must be retrained at the worksite on an ongoing basis, and it needs to include teacher collaboration. He mentioned Dr. Jose Medina, a dual-language expert, who will be providing his teachers with professional development opportunities such as unpacking the Guiding Principles for Dual Language Education. The Guiding Principles for Dual Language Education is a valuable resource for educators at all levels who seek to implement or improve dual language programs for their students. It is clear from this theme that teachers are needing support in small groups and with students who need individualized support as well as learning how to manage these two settings from experts.

Attitudes About the Dual Language Program

Ms. R. was chosen as an exemplary excerpt as she represents what her colleagues said about having a positive attitude about the dual language program. Ms. R. mentioned that the teacher must believe in the dual language program for it to work. She stated, “If the teacher is just there, and she’s not sure whether it’s going to work or not, that’s going to have an effect on whether the kids progress or not because she’s not going to go out of her way to get more supplemental materials and expose them to more programs or music in Spanish.” Ms. R. also stated that there needs to be an effective team. She used the analogy of a baseball team. She emphasized that the whole team won’t function unless you have a team and getting that team with a positive attitude is important. So, the first-grade teachers must work with the kindergarten teachers, the first-grade teachers must work with second-grade teachers, and so on. She emphasized that teachers can’t just be isolated. It is evident from this theme that teachers having the proper teaching credentials, preparation, and/or experience is not enough. Teachers need to have the right mindset regarding the reason why they are teaching in the dual language program.

Parent Support

Several exemplary excerpts are presented here, as they represent the voices of all teachers and an administrator. All six teachers and an administrator stated that parent support is very important for a dual-language program to experience success. Mrs. B stated, “Number one, I would say, the parents; buy-ing into the program and helping them be more confident and comfortable making mistakes and wanting to learn is the number one factor that contributes to the success of a dual-language program. Then, having enough resources; where as a teacher, you don’t feel like you’re taking up a lot of time looking for certain things.” Ms. C. stated, “If parents do not agree with the dual language program for their kids, teachers will not get their support.

She further explained that towards the end of the school year, some of the parents with children in her class did not know that their children were placed in a dual-language program! Dr. L. explained, “It is important to have parent meetings to clarify and emphasize the goals of the program and explain the different strategies employed by teachers, the curriculum, teacher preparation, and professional development that teachers will participate in.” It is clear from this theme that parents are a critical component of dual language program effectiveness. When parents understand the goals of the dual language program and how they can support their children at home, it is likely that their children become bilingual and biliterate.

Teamwork

The following excerpts for this theme are presented here, as they represent the ideas teachers expressed. Ms. R. stated, “You must have an effective team. I just can’t be the only one in the playing field. The whole team won’t function unless you have a team, and it’s getting that team together that’s important. Teachers can’t just be isolated.” Ms. A. also stated that motivation to learn and a good foundation where parents, students, and teachers work together. Mrs. A. explained, “Motivation to learn and a good foundation where parents, students and teachers can be together.” Dr. L. emphasized the importance of having parent meetings with the goal of providing parents with information related to the dual-language program and opening a forum where parents can clarify the goals of the dual-language program, and learn about the different strategies dual-language teachers use, the curriculum, etc. Mrs. C. stated that parent support and communication with their child’s teacher play a pivotal role in the student's academic progress. Ms. S. added that parent volunteers would make a huge difference if they were able to come to the classroom and work with small groups of students to focus on grade-level skills. It is evident from this theme that parents, teachers, and students must work together

to achieve the goals of the dual language program which are (1) to develop high levels of language proficiency and literacy in Spanish and English, (2) to demonstrate high levels of academic achievement, and (3) to develop an appreciation and understanding of diverse cultures.

Walkthrough and Classroom Instruction Strategies Observed

Stephen Krashen (As cited in Schutz, 2019) argues that a second language is learned when comprehensible input is activated with effective teaching strategies. Some of these strategies include showing pictures or visuals to accompany new vocabulary words, incorporating gestures, drama, and music into lessons, hands-on activities, using manipulatives, repeating words, and using translation. During the classroom walkthroughs, the researcher observed most of these strategies in action. Chen's (2014) research supports Krashen's theory by suggesting that knowledge is socially constructed through interaction and negotiation of ideas with others. Unfortunately, during the time of the classroom walkthroughs, the researcher did not observe students working collaboratively. The reason why teachers were not having their students do group work was because COVID-19 guidelines regarding social distancing were still in effect during the classroom walkthroughs. Only Mrs. A. was observed to allow students to work collaboratively during her lesson; however, this was only for the purpose of having students help each other as needed. The researcher also noticed that most students were wearing a face mask even though the district deemed wearing face masks as optional. Next, Table 7. 1 presents a description of strategies observed during the walkthroughs by classroom.

Table 7. 1

Walkthrough Observation Notes

Teacher	Grade	Language of Instruction	Mode of Instruction	Student Collaboration	Teaching Strategies Observed
Mrs. C.	K	Spanish	Direct Instruction	No	GLAD, modeling, repetition, proximity, Behavior Reminders
Ms. R.	1	Spanish/English	Direct Instruction	No	Modeling, Behavior Reminders
Ms. G.	2	Spanish	Direct Instruction	When students need to help each other	Visuals (Venn Diagram, video, audio recording), proximity, modeling.
Mrs. A.	2	Spanish	Direct Instruction	No	Use of student Chromebooks, Google Voice, Visuals (Bubble Map)
Ms. S.	K	Spanish	Direct Instruction	No	Repetition, TPR, Thumbs Up/Thumbs Down, Behavior Reminders, proximity

Mrs. B.	1	Spanish	Direct Instruction	No	Use of Visuals, Repetition, Proximity, Breathing Exercises

Fidelity to 90-10 Model

One common observation that stood out from the six Spanish Language Arts block walkthrough observations was that all six teachers were speaking to the students in Spanish. During the time the observer was present, dual-language teachers used the intended language about 98% of the time, and about 2% they did not. According to the 90-10 model, teachers need to provide Spanish instruction during language arts. The dual-language 90-10 model was the form of instruction that was occurring during the time of the walkthroughs. This model requires 90% of instruction to be in Spanish during the school day and 10% in English in kindergarten, in first grade it is 80% in Spanish and 20% in English. Finally, in second grade the requirement is 70% in Spanish and 30% in English. Since the walkthroughs occurred during the Language Arts block, all six teachers were using Spanish with 100% fidelity during their instruction. There were a few exceptions where teachers replied to students in English. For example, when a student asked Mrs. B. a question in English, she replied in English. However, she automatically and smoothly switched to Spanish in the middle of her response. Ms. R. also replied in English to a question a student asked in English. She switched back to Spanish after completing the student response. This type of interaction occurred a few times during the time the observer was in the classroom but not often. It was clear that the fidelity of language ratio implementation was high at these grade levels.

Focus on Writing Instruction

The observations were conducted during the language arts block, all teachers in the six K-2 dual-language classrooms were teaching students writing by having students do a "dictado" (Spanish for dictation) and instructions were developmentally differentiated. For instance, in Kindergarten, both teachers were having students write a sentence in their journals. In both Kindergarten classes, both teachers were teaching students about science concepts such as tree biology and personal hygiene and why it is important for students to brush their teeth. For example, in Mrs. C's class students wrote the sentence "Las plantas necesitan agua, aire, y luz solar para vivir." (Plants need air, water, and sunlight to live). In Ms. S's class, students wrote the sentence, "Yo me cepillo los dientes." (I brush my teeth). In both classes, students also had to create a picture that goes with the sentences. According to both teachers, this daily strategy, when combined with oral reading in a collaborative format where students read the sentences to each other, it allows them to develop oral language fluency in Spanish. Before the dictado, both teachers created GLAD pictorial charts and Thinking Maps to help students think about the concepts that they were learning. The level of complexity in writing changed from kindergarten to second grade. For instance, in one of the second-grade classrooms, students were writing five sentences related to the concepts that they were learning. The teacher dictated the sentences for students. Then, she modeled for students the correct way to write the sentences. At this point, students were able to correct the mistakes they made. Although fidelity to the 90-10 model of dual language instruction was observed as well as a focus on writing instruction and repetition, the need for more interaction in order to promote oral language skills in Spanish was not evident. This lack of emphasis on promoting more oral language development opportunities such as pair-

sharing, choral response, collaborative conversations, etc. takes away the opportunity for students to achieve oral language fluency faster.

Repetition

Another strategy that stood out during the classroom walkthroughs was the use of repetition strategies such as “repeat after me.” Having students repeat after the teacher was more common in kindergarten and first-grade classrooms. In these four classrooms, the teacher had students repeat after the teacher read the sentences out loud. In Ms. S’s class, students struggled to read the word, “dientes.” At this point, the teacher had students read one syllable at a time until all students were able to say the word correctly. In Mrs. C. 's class, the teacher had one student come up to the board. The selected student used a pointer and the rest of the class read the sentences out loud. All teachers agreed that a focus on developing oral language fluency and writing through “dictado” was a great strategy.

MAP Reading Assessment Comparison Between Jets and Moon Elementary

This analysis answered the question comparing the academic achievement of students in the dual-language immersion program compared to similar students in English immersion instruction. The Measures of Academic Progress (MAP) reading assessment data was used to compare the academic progress in English language arts for students at two different Southern California schools with similar student demographics. Students at Jets and Moon shared very similar demographics. Although the total number of students is higher for Jets than Moon elementary, the number of students reclassified, and receiving free and reduced lunch is very similar. See Table 8. 1 below.

Table 8. 1

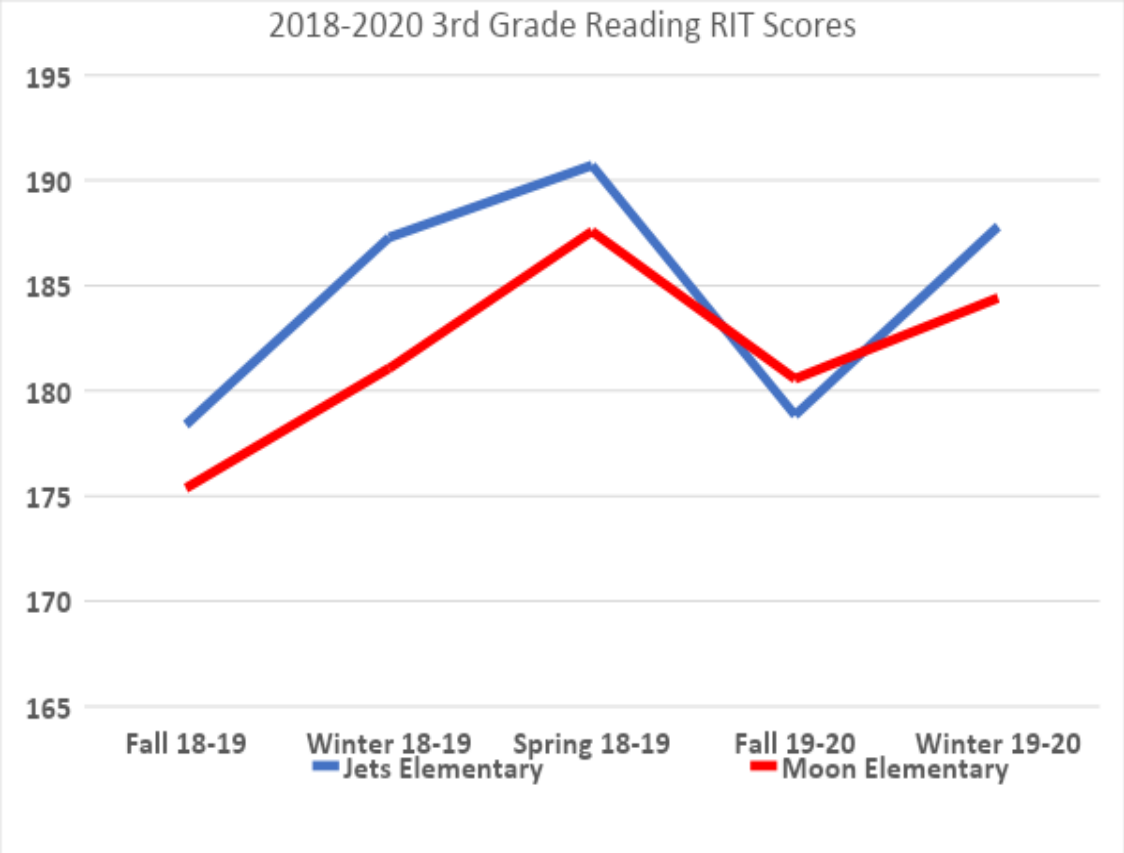
2018-2019 Jets and Moon Elementary Demographics

Students' Characteristics	Jets Elementary	Moon Elementary
Total number of females	*N* = 148 (46%)	*N* =78 (47%)
Total number of males	*N* = 173 (54%)	*N* = 87 (53%)
Students receiving free and reduced lunch	*N* = 225 (70%)	*N* = 130 (79%)
English Only (EO)	*N* = 90 (28%)	*N* = 28 (17%)
English Learners (EL)	*N* = 106 (33%)	*N* = 57 (35%)
Reclassified Fluent English Proficient	*N* = *121* (38%)	*N* = *62* (38%)
Total in grades 3-5	321	165

MAP data contrast between Moon Elementary and Jets Elementary demonstrated that students at Jets Elementary, a dual language school, outperformed students from Moon Elementary, an English-only school during the 2018-2019 and 2019-2020 school years for each grade 3-5. These grades were used for the comparison because these are the grades when students are tested and because previous research indicates that it takes about five years for ELLs students to catch up with their English only counterparts in achievement scores in English. The graphs show the performance of three different MAP test administrations for the school 2018-2019 school year, see Figure 5. 1 below. However, during the 2019-2020 school year only Fall and Winter MAP test administrations occurred. Spring 2020 did not occur because of the COVID-19 world pandemic.

Figure 5. 1

2018-2020 3rd Grade Reading RIT Scores

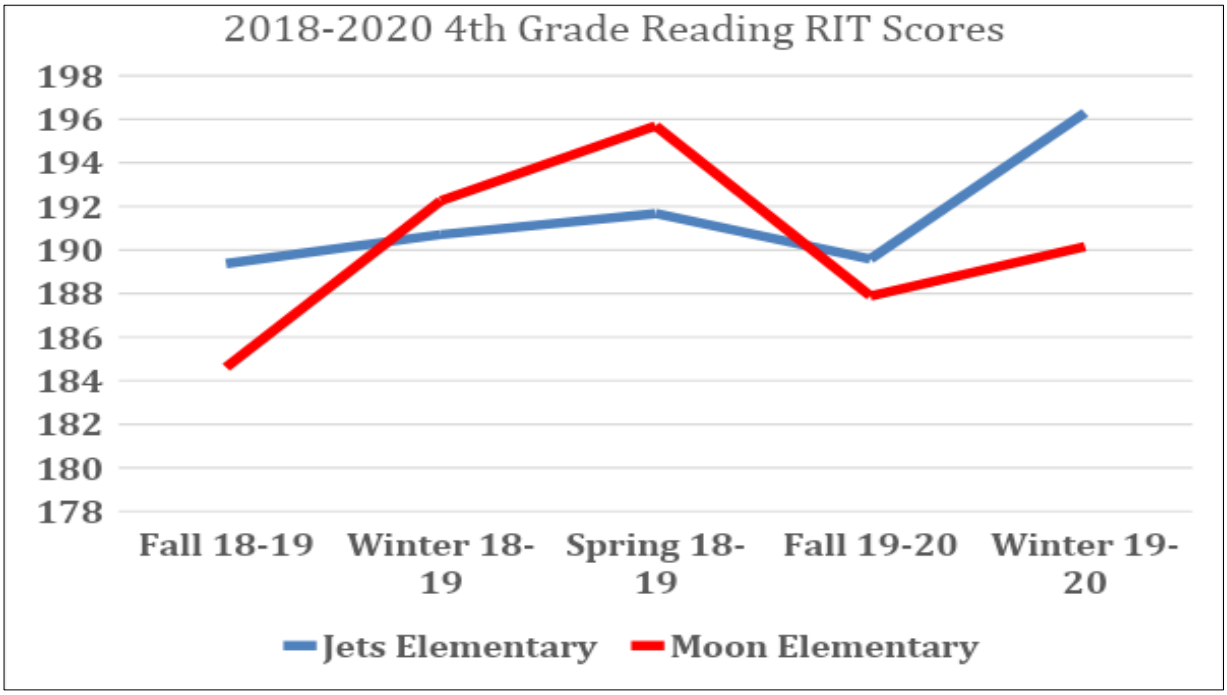


This graph compares the academic reading progress of both Moon and Jets Elementary third-grade students during Fall, Winter, and Spring 2018-2019 as measured by a RIT score (an estimation of a student's instructional level and student progress or growth in school). In third grade, students at Jets Elementary outperformed the students in four out of the five administrations. All the students at Jets Elementary had been in the dual-language program for at least three years. On the other hand, all students at Moon Elementary had always been in an English-only school. This is surprisingly early to show better achievement.

Next the same contrast was performed for fourth grade students across both schools, see Figure 6. 1 below.

Figure 6. 1

2018-2020 4th Grade Reading RIT Scores

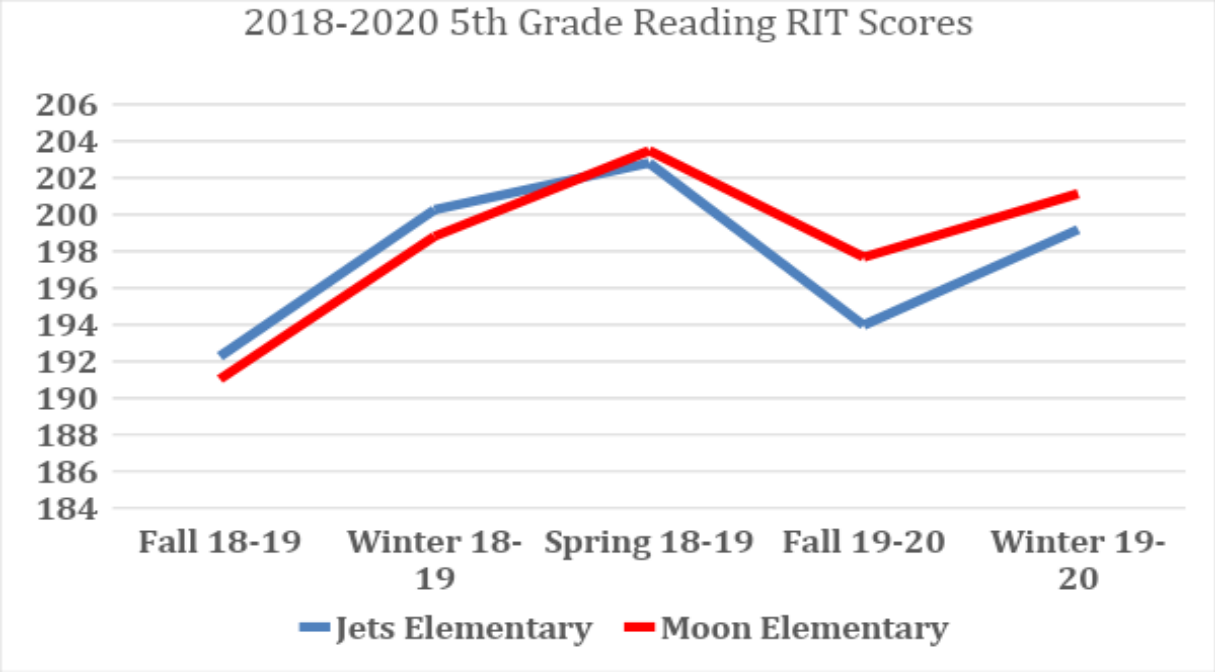


This graph shows that in fourth grade, in the Fall 18-19 and Fall 19-20 students at Jets Elementary outperformed students at Moon Elementary only in three out of the five data points. Winter and Spring 18-19, students at Moon Elementary did slightly better.

Finally, the same contrast was performed for fifth-grade students across both schools, see Figure 7. 1 below.

Figure 7. 1

2018-2020 5th Grade Reading RIT Scores



This graph shows that in the fifth grade, in Fall and Winter 18-19, students at Jets Elementary did slightly better than students at Moon Elementary. In Spring 18-19, Fall 19-20, and Winter 19-20 Moon Elementary did slightly better than Jets Elementary. However, these differences were not statistically significant.

Overall, the graphs show that Jets Elementary did better in fourth grade in Fall 2018-2019 and in Fall 2019-2020 than Moon Elementary. On the other hand, Moon performed better in the third grade in Fall 2019-2020, in the fourth grade in Winter 2018-2019 and Spring 2018-2019, and in the fifth grade in Spring 2018-2019, Fall 2019-2020, and Winter 2019-2020.

Additionally, the researcher ran a t-test to find out if there was a statistically significant difference in MAP test scores during the five different administrations during the 2018-2019 and 2019-2020 school years. During the Winter 2018-2019 school year, a p-value of 0.016 indicated that there was a significant difference between the MAP reading assessment data in the third-

grade winter administration. During this administration, students in the third grade at Jets Elementary outperformed students at Moon Elementary. A similar situation was observed during the Fall administration in the year 2018-2019 school year where fourth-grade students at Jets Elementary outperformed students at Moon Elementary in MAP reading. A p-value of 0.009 indicated a statistical significance between the MAP reading assessment data in the fourth grade Fall administration. In summary, students in the third and fourth grades at Jets Elementary performed significantly better than students at Moon Elementary during the 2018-2019 and 2019-2020 school years.

The differences in MAP reading achievement were surprising given that the longer the students attend the dual language program, the better they should do. However, the third-grade students in the dual language program in the present study performed statistically better in two out of fifteen administrations in third and fourth grades and performed slightly better in nine out of fifteen administrations than students in an English-only program. Then, by fifth grade their performance decreased with the time in the dual language program. This is something that the researcher was not expecting.

Program Implementation Perception from Interviews

The following narrative data was chosen because it represents the perception of teachers and an administrator about the factors that are important to dual language program implementation.

Effective Teachers and Effective Teaching Strategies

As cited in Schutz, (2019), Stephen Krashen proposed that children only need comprehensible input to activate the LAD and begin learning a second language. Krashen also argued that input becomes comprehensible when the teachers use strategies such as showing

pictures or visuals to accompany new vocabulary words and commutative concepts, incorporating gestures, drama, and music into lessons, designing lessons with hands-on activities, and manipulatives, repeating the new vocabulary and using translation. Chen's (2014) research supports Krashen's theory by suggesting that knowledge is socially constructed through interaction and negotiation of ideas of others.

Teachers and one administrator believe that for a dual language program to work, the teacher must be qualified and must be able to use effective teaching strategies. Ms. R. described an effective dual language teacher as one that can adapt and create new material to meet the needs of all students who are at different levels in Spanish. She stated that one of the challenges is having sufficient books and supplemental materials in Spanish. Ms. R. explained that the language arts curriculum that the district adopted is too high for her first graders. Dr. L. stated that as a school administrator the challenge is recruiting qualified teachers. However, he made an emphasis that at his school all dual language teachers are fully qualified to teach dual in a dual language classroom. Dr. L. also stated that effective teachers use "dictado" (journaling in English) which is a widely used strategy in all Spanish-speaking countries. Dr. L. added that dictado is typically not included in the curriculum adoption; however, it is a culturally relevant activity, and it is a safe way for kids to learn to write in Spanish. Ms. C. believes that an effective teacher understands that children come to kindergarten very low in their first language, which is Spanish. They also come low in English. The real challenge is to teach these students in both English and Spanish.

Dr. L. also added that effective teachers use word walls that are more like tricky words or 'palabras tramposas' in Spanish instead of high-frequency words. A dual language teacher must understand that in Spanish the issue is more with spelling such as words that are written with a b

or v, c, s, or z, m before b, etc. He also mentioned “the bridge” as a great strategy. The goal of this strategy is for effective dual language teachers to bridge between the two languages. He explained that the bridge could include a list of cognates that students use in science. For instance, when students do a unit on stability and motion (estabilidad y moción), by comparing the similarities between the words in Spanish and English students can compare both languages and solidify their learning.

To develop oral skills in Spanish and English, Ms. C. believes that students must be exposed to constant repetition. She firmly believes that it is important for students in kindergarten to repeat, repeat, and repeat. She mentioned teaching strategies such as “My Turn, Your Turn” and “Choral Response.” She believes that it is important for students in a dual language classroom to develop oral skills in Spanish and English. Ms. R. agrees with Ms. C. in that students should use different repetition activities. Furthermore, she believes that students should also have access to a wide variety of books in Spanish and English. Having sufficient books to read is not enough though. She believes that the teacher must designate a consistent reading time in the day for students to read all kinds of genres such as poetry books. She states poetry books provide an excellent opportunity for students to read mono-syllabic words; this, in turn, allows students to develop reading fluency and consequently reading comprehension and writing in Spanish.

Ms. S. stated that an effective strategy is the use of cognates in Spanish and English. She explained that there is a multitude of cognates that allow students to connect a lot of the words in English to those they know in Spanish. Students already bring many cognates with them. Ms. S. said that students are shocked when they realize that they can use cognates in both ways. The only small difference in Spanish and English cognates is the intonation. She further explained

that another effective strategy that she uses is sentence starters. For example, “yo veo _____.” (I see _____). The use of sentence starters allows students to get started in producing language. In addition to supporting students in developing their oral skills, they also learn that sentence starters can be used in both English and Spanish to develop each language. Ms. A. also agrees with Ms. S. in that the use of cognates is very important for students as well as using charts where the teacher writes the similarities and differences in English and Spanish.

Ms. G. stated that students learn better when the teacher uses visuals in both Spanish and English so that they can see what the teacher is talking about. She mentioned that some visuals include realia, or real objects, creating charts with visual representations, posters, labeling things in the classroom, and videos.

Dr. L. also indicated that the best strategy is to have a clear vision of where one wants to go. He mentioned that at his school the vision is to incorporate STEAM to prepare students for a global society being bilingual and bi-literate but also giving students the tools to potentially participate in those careers in the future. Having a vision is not sufficient, Dr. L. stated that the vision must be understood by everyone and communicated during staff and parent meetings. In addition to having a clear vision that guides a dual language program, Dr. L. also noted that teachers must use effective teaching strategies to meet the varying needs of dual language learners. It is clear from the narrative data that effective teachers use effective teaching strategies to promote academic success in a dual-language classroom.

Summary

In the present study the researcher used MAP reading assessment data for the 2018-2019 and 2019-2020 school years which demonstrated that dual-language program students in third, fourth, and fifth grades at Jets Elementary did slightly better than English-only students on 9 out

of 15 data points. However, on only 2 out of 15 data points dual language students at Jets (dual language program) did statistically better than the English-only students at Moon Elementary.

The findings of this study are different from the findings of Palmer et al. (2016) in which third-grade students performed poorly because they started the dual language program in first grade as opposed to kindergarten. In addition, this study validates the findings of Thomas and Collier (2001) which demonstrate that it normally takes at least four years (normally by third grade) of dual-language schooling to begin outperforming English-only students. Students in the third and fourth grades at Jets Elementary (dual language school) performed significantly better than students at Moon Elementary (English-only school) on 2 out of 15 testing periods.

An analysis of perception data through teacher interviews, surveys, and classroom walkthroughs demonstrated that the characteristics and beliefs of school personnel who support the dual-language program model include teachers valuing bilingualism/biliteracy, having high levels of confidence in their ability to teach dual-language classes, having high levels of school, district, and parent support. Some of the themes that emerged from the teacher and administrator interviews about important factors in a Dual Language Program and were observed in classroom walkthroughs included teacher effectiveness, teaching resources, professional development opportunities, positive beliefs about the dual language program, parent support, and teachers and parents working together. The most common instructional strategies observed during the classroom walkthroughs included fidelity to the 90-10 model, focus on writing instruction, and repetition. The consistency of these strategies across all classrooms was attributed to the fact that the researcher observed these six classrooms at around the same time during the language arts block.

CHAPTER 5: CONCLUSION

This study investigated the impact a dual-language program had on reading achievement in a public elementary school (Jets Elementary) in Southern California. The first question was to identify the factors that contribute to the promising outcomes of the dual-language instruction program in a new Dual Language Program at Moon Elementary while the data about outcomes comes from an established program at a different school, Jets Elementary. Due to the unavailability of participating teachers and administrators at Jets Elementary, the characteristics and factors that contribute to the implementation of a promising dual language were investigated with a different sample of teachers and an administrator in the new dual language program at Moon Elementary.

The research question about the characteristics and beliefs of school personnel who support the dual-language program model was answered using the Moon Elementary sample from three sources of data. Based on the findings from the interviews, surveys, and walkthroughs, the themes about the perception and observation data suggest that the characteristics and beliefs of the personnel in the dual-language program include the following: teacher effectiveness, having sufficient and appropriate dual-language resources, professional development opportunities, teachers having positive beliefs about the dual-language program, having parent support, and having teachers' and parents' collaboration. These identified factors were, as expected, very similar to those identified in the results of previous findings. For example, Alanis and Rodriguez (2008) found that the factors personnel deemed important at a dual-language program at City Elementary School in south-central Texas were a) administrative and home support, b) having a socio-culturally school environment, c) high-quality instructional personnel, d) professional development on culturally relevant teaching, and e) having an

effective structural design and features. Also, Soderman (2010) found that effective dual-immersion programs need administrators, teachers, parents, and students who consider bilingualism a positive attribute rather than a linguistic, cognitive, and academic liability. Additionally, Soderman (2010) points to the need for dual-language programs to stress the importance of teachers collaborating, ongoing support, planning, using consistent ongoing assessment, and parent involvement. All these components of a successful program were shared by the teachers and an administrator at Moon Elementary.

Results about the evaluation of the dual language impact on students' achievement was addressed by comparing the academic achievement of Jets Elementary students during 3 years of dual-language instruction with the English immersion students at Moon Elementary before the Pandemic. The controversial argument against dual language is often the perception of achievement delays as the "cost" of second language acquisition in students attending these programs. The results of this study partially demonstrated that students receiving Spanish/English dual-language instruction for at least three years at Jets Elementary outperformed similar students in an English immersion program in reading scores across some of the data points compared, but not all. Although 9 out of 15 data points showed a difference in favor of Jet Elementary students, a statistically significant difference was observed only in two data points in the third and fourth grades. All the students at Jets Elementary had been in the dual-language program for at least three years, while all students at Moon Elementary had always been in an English-only school. In fourth grade, in the Fall students at Jets Elementary outperformed students at Moon Elementary, but again only one data point showed a statistically significant difference. In summary, students in the third and fourth grades at Jets Elementary only did better than students at Moon Elementary during the 2018-2019 and 2019-2020 school

years only in two data points. It might be that students are too young to demonstrate their gains in standardized testing. Thomas and Collier (2002) found that by high school, dual language students typically exceed their peers in academic achievement to those who receive instruction only in English.

Other findings on dual-language achievement have demonstrated that typically Dual Language students catch up to their English-only peers by 5th grade. This study showed some advantages, although not significant as early as third and fourth grades, dual-language students performed statistically and/or slightly better than students in an English-only program. These findings were surprising. The reason might have been that more Spanish learners come to kindergarten with stronger oral English skills in this school than they do in schools in other studies. This linguistic gentrification of language or features of language originally part of a way of life, has changed the Hispanic student population. In the past, most Hispanic students that joined the dual-language program were English learners. Presently, most are Spanish learners wanting to learn Spanish. The community where this sample comes from might also bring unique linguistic factors. The community is highly segregated because it is formed of a majority of Hispanics; however, this community is nested in a highly populated English-speaking region; thus, English exposure is wide and dense.

Escamilla (2000) explains that the environmentalist theory posits that environmental/outside influences on the learner play an important role in the acquisition of a second language. Despite all the social pressures that come with being surrounded by English-speaking cities where the most educational impact comes from local decisions, Hispanic children acquire the target language, Spanish, or English for a small number of English learners. In learning a second language, children need to feel: 1) accepted into the target culture and share

equal status with the target culture, 2) associate often with the target culture, and 3) be highly motivated to learn the language. Learning Spanish for dual-language students requires them to desire assimilation or acculturation into the target language group. This is known as the integration pattern. Although many children in this study did not have a strong foundation in Spanish when they started the dual-language program, exposure to Spanish in their home environment (i.e., mostly by older adults in the household) allowed them to maintain a positive attitude about learning Spanish. The cultural and language transfer between both languages, Spanish and English, allowed students in the dual-language program to not only maintain their strong language, in this case, English, but also learn a second language, in this case, Spanish. These bilingual/biliterate skills might have led to the surprising findings about their academic performance on the MAP reading assessment in English in third and fourth grades.

The third question explored here was about the administrators' and teachers' perceptions of the factors that contribute to a successful program. The success of a dual-language program depends in great part on the program's support by school administrators, teachers, and parents as well as having a framework with a clearly defined vision and mission. The Center for Applied Linguistics, which created the Guiding Principles for Dual Language Education (2018) promotes Dual Language instruction by establishing a framework that includes three pillars of dual language education: bilingualism and biliteracy, academic achievement, and cross-cultural understanding for all students. Research indicates that effective schools consistently and conclusively demonstrate a cohesive school-wide shared vision; a set of goals that define their expectations for achievement; an instructional focus and commitment to achievement and high expectations that are shared by students, parents, teachers, and administrators.

After coding and analyzing the interviews with teachers and an administrator at Moon

Elementary, five themes related to how the perceptions of school administrators and teachers contribute to dual-language program implementation emerged: 1) teacher effectiveness, 2) teaching resources and professional development opportunities, 3) positive beliefs about the dual-language program, 4) parent support, 5) teachers, parents, and administrators working together, and 6) effective classroom instruction strategies. These factors were not necessarily independent, for example, Mrs. C. stated that in addition to teacher effectiveness, teachers must really enjoy teaching a dual-language class. Ms. S. calls this “teacher’s passion” or “interest” in teaching students about their language and culture. She believes that language comes from the students’ culture. Therefore, dual-language children must understand the interconnectedness of language and culture and it is the responsibility of the dual-language teacher to understand both concepts as well as their interconnectedness to teach these to their students. The findings of a study on school administrators’ perceptions that contribute to dual-language program implementation involve finding teacher candidates that are proficient in Spanish to provide content area instruction (Ramos et al., 1999). The research was conducted in six schools in the Miami area that followed the BISO (Bilingual School Organization Model). The results indicated that five principals agreed that candidates wishing to work as dual-language teachers needed to have high levels of Spanish proficiency to teach the Spanish component of the dual-language program, especially in grades 4 and 5, when the demands of language in learning are higher. The results also indicated that the participating principals believed that university teacher preparation programs should concentrate on augmenting the Spanish proficiency of the candidates and developing collaborative efforts in the augmentation of the Spanish proficiency of teacher candidates. The researcher's findings are similar in that what contributes to dual-language program implementation is having effective teachers.

In looking at how the three sources of data complement each other; it is obvious they are very complimentary. The teacher surveys contributed to understanding the phenomenon of dual language by having teachers respond to questions related to their perceptions about bilingualism, their need for more professional development opportunities, how many years they have taught in a dual-language class, and how prepared they feel to teach a dual language class. The survey and walkthroughs data demonstrated that teachers at Moon Elementary are fully qualified to teach dual-language students. The teacher and administrator interviews helped the researcher to capture their perceptions related to dual-language program success, challenges of teaching dual language classes, effective teaching strategies, extra support, and/or professional development needed. The classroom walkthroughs allowed the researcher to see the teaching strategies, resources, teacher preparation, student engagement, and many other aspects of a dual-language program in action. All these sources of data helped the researcher to understand dual-language program implementation, perceptions of administrators and teachers, and the characteristics and beliefs of school personnel who support the dual-language model. Although the findings in comparing the two programs through students' achievements and outcomes are controversial, the benefits of bilingualism are not only academic, but socio-cultural capital was also clear in the interaction and engagement of students. The direction of the contrast was very promising, and a larger sample might have contributed to the significance of the differences.

Limitations of the Study

The limitations of this study include not having qualitative data from the same school as the achievement data (Jets Elementary). This would allow us to link the results on the efficacy of the dual-language program and the perceptions of the teachers and administrators. In addition to the perceptions of teachers and administrators at Jets Elementary, the researcher would have

been able to conduct classroom walkthroughs that would allow him to observe the phenomenon of dual-language instruction, teaching strategies, quality of instruction, and student engagement strategies, teacher engagement strategies, etc. This information would have been helpful in connecting it with assessment data and getting a clearer picture of what is behind achievement data. In future studies, the researcher will ensure that qualitative and achievement data from both schools are accessible. Another limitation is that the researcher did not have access to the language proficiency of the students, or an objective measure to fully understand the Spanish language proficiency of students in the dual-language program. The sample for the qualitative data was also very small, only one administrator participated. Although these limitations were in great part due to COVID, having a large sample by adding more teachers and more administrators to the sample size would be much better. Finally, the contrast between the programs were also across schools, thus, we do not know if there are nested differences between the schools that are not necessarily differences between the dual language and English only programs. Comparing students to others in the same program and having data from teachers and students from the same school would have been much better. It would have allowed us to make inferences about teachers' factors that contribute to the success of students.

Recommendations for Practitioners

The researcher was able to capture from the six K-2 teachers in the study and from the walkthroughs some important recommendations for professionals working in the field of dual-language instruction including:

1. Providing students with ample opportunities to practice their oral language skills in both Spanish and English through repetition. The researcher observed during the classroom walkthroughs that all six K-2 dual-language teachers were not allowing their students to

interact with one another. The researcher would recommend those dual-language teachers to allow their students to interact more to promote oral language proficiency in both Spanish and English so that they can cement their learning.

2. Embedding the use of cognates in Spanish and English lessons. Connecting words in English to those they know in Spanish would cement student learning. Although most teachers mentioned the importance of using Spanish/English cognates during the teacher interviews, the researcher did not observe this strategy in action in any of the classrooms.
3. Including sentence starters in all lessons. For example, "I see the _____." Or in Spanish, "Yo veo _____." This strategy would also allow students to produce more language if sentence starters are used in conjunction with pair-sharing and other oral and written strategies. However, during the walkthroughs, the researcher was not able to observe any opportunities for students to interact with one another.
4. Providing students with a wide variety of leveled bilingual books in various genres in both fiction and nonfiction. Although the researcher observed classroom libraries with many books, most books were in English, and students were not interacting with the books during the walkthroughs.
5. Exposing visual learners to new vocabulary charts, realia, labels in the classroom in both languages, teacher and student-created charts, and video clips. During the walkthroughs the researcher was able to see a couple of teachers playing short video clips for students; however, this was not occurring in all six K-2 classrooms. In addition, only about half of the classrooms had vocabulary charts and teacher and student-created charts. The reality is that literacy cannot be built when students do not have a strong vocabulary. If vocabulary is limited in both languages, the focus should be on language acquisition. The

goal of dual-language instruction is for students to become bilingual and biliterate in both languages. However, many students come from homes with dual deficiency, meaning these students are low in English and Spanish. In this case, before they become bilingual in both languages, they should build a strong foundation in one language, Spanish. Explicit vocabulary instruction is critical for these students.

6. As part of the hiring process, the researcher recommends school administrators administer an attitude survey as well as a Spanish knowledge survey to new teachers. The results of this study demonstrated that teachers with a high value of bilingualism/biliteracy also have a high value of confidence. These two values are important because these teachers felt that they were more confident teaching a dual-language class and they believed it was important for their students to become bilingual/bi-literate. This in turn affected academic achievement.
7. Provide professional learning opportunities for teachers. This is important particularly for teachers teaching in a dual-language school. In this study, all teachers mentioned that they would like to receive additional professional learning opportunities throughout the year to become better dual-language teachers.

Recommendations for Future Research

There are several areas for future research based on the findings and limitations of this study. First, this study compared two elementary schools, one dual language, and an English-only school. A future study could expand to compare a larger sample of dual-language schools and English-only schools across the School District with different linguistic communities to be able to generalize the results to a wider population. It would be beneficial to also include more quantitative and qualitative data in the form of interviews with more teachers, administrators,

and curriculum specialists. Additionally, the study could include students' and parents' interviews. It would be interesting to understand the reasons why parents support their children in becoming bilingual and bi-literate and how students' feel about their bilingualism. Including qualitative data from students in the dual-language programs would also provide the researcher with important student perceptions data.

Additionally, a future longitudinal study might include dual-language and English-only middle school and high school students would add missing and valuable knowledge to the field. A longitudinal study would track the academic progress of students that continue to be enrolled in dual-language programs and students that never enrolled in dual-language classes all the way to college. Both groups of students could be compared in terms of graduation rates, employment opportunities, and socio-economic status (SES).

Other measures that future research should include are the language proficiency of students at the beginning of the program, particularly in Spanish. In addition, future research should include measures of achievement in Spanish. Understanding the language proficiency and the overall level of Spanish achievement would allow the researcher to understand where students stand and use this quantitative data to support his/her findings. Many students start school with a strong foundation in Spanish while others are more English-dominant, and we do not really understand what the ramifications of these differences are.

Conclusions

This study identified the characteristics and beliefs of school personnel who support the dual-language program model. Teachers identified – teacher effectiveness as the first characteristic or considered most important in promoting bilingualism and biliteracy, however, they do not believe these characteristics are independent or exclusive. Second, dual language

teachers believed that having the right curriculum, materials, and professional development opportunities would allow dual language teachers to stay focused on student achievement because the curriculum matches the level of students and they do not have to create individual instruction themselves. Third, when parents, teachers, students, and school staff have positive beliefs about the dual-language program, students can sense that everyone cares that they develop bilingual/bi-literate skills. Fourth, parent support played an essential role. Fifth, teachers, parents, and administrators should work together. Finally, effective classroom strategies allow dual-language students to acquire Spanish and English simultaneously because dual-language teachers employ research-based teaching strategies. Many of these, but not all were observed in practice during the classroom walkthroughs. It was great to see bilingual and caring professionals at Moon Elementary who value literacy work in the field of bilingual education. There is no doubt that these bilingual and bi-literate students will become productive members of society who will have plenty of opportunities in their careers and in life.

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APPENDICES

Appendix A: Walkthrough Observation Protocol

The purpose of the observation is to witness the instruction and the interactions between the faculty and the students. An understanding of the uniqueness of this school is important to the research. By combining the interviews, surveys, and observations, the researcher will be able to create a more complete picture of the school and dual language instruction. The researcher would like to observe at least three dual language classes: one in third grade, fourth grade, and fifth grade. It will be up to the administrator of the school on what will be allowed to be observed.

The observer will be taking on an observant-participant role. The observer will enter the classroom. However, he will not interrupt instruction. The observer will write notes on what is observed.

The following are variables that the observer will observe:

- Setting
    - Number of students in the classroom
    - Student to teacher ratio

- Literacy activities examples such as reading activities, group work, model of instruction, samples of student work around the classroom.

- Instruction
  - Language of instruction
  - Student engagement during instruction
  - Teacher engagement during instruction
- Other Factors
  - Classroom environment/noise levels (learning noise, partner work, group work, etc.)
  - Student reactions to instruction (excited, bored, sad, enthusiastic, etc.)
  - Teacher reactions to instruction (excited, enthusiastic, etc.)

Appendix B: Observer Notes

Date: _____

Grade Observed: _____

Setting	Instruction	Other Factors

Appendix C: Teacher Interview Questions (Independent variable)

1. What are the challenges of teaching dual language students?

2. What do you like most about teaching dual language students?

3. What do you think contributes to the success of a dual language program?

4. Are you familiar with the collaborative teaching strategy known as, "Bilingual pairs?"

Yes……..1 No……..2

5. What teaching strategies have you found effective in developing students' Spanish and English oral skills?

6. What extra support, materials, or professional development would be helpful to you? Why?

7. Please describe a typical 'dual language immersion' student.

Appendix D: Teacher Survey Questions (Independent Variable)

Directions: Circle the correct numeric response to each statement

	Statement	**Survey Scale**: 1= Completely Disagree 2= Somewhat Disagree 3= Neutral 4= Somewhat Agree 5= Completely Agree				
.	I believe it is important that my students be bilingual.	1	2	3	4	
.	I believe it is important that my students be biliterate.	1	2	3	4	
.	I believe it is important that my students be bicultural.	1	2	3	4	
.	I believe that my principal is fully supporting me in	1	2	3	4	

	implementing the 90-10 model of dual language immersion.					
.	I believe that I need more professional development opportunities to become a more effective bilingual teacher.	1	2	3	4	
.	I am confident in my ability to use effective teaching strategies with my students.	1	2	3	4	

Appendix E: Teacher Demographic Survey

1. Mark ALL of the following categories that describe you.

- ❑ African American
- ❑ American Indian or Alaskan Native
- ❑ Asian
- ❑ Latino or Hispanic
- ❑ White
- ❑ Pacific Islander
- ❑ Other, please specify: _____

2. What is your gender?

- ❑ Male
- ❑ Female
- ❑ Other, please specify: _____

3. What is your age range?

- ❑ 18-25
- ❑ 26-33
- ❑ 34-41
- ❑ 42-49

- ❑ 50+

4. How many years have you taught in a dual language program?

- ❑ 1-5 years
- ❑ 6-10 years
- ❑ 11+ years

5. Where were you born?

- ❑ In the United States
- ❑ In a different country, please specify: _____

6. How many dual language trainings have you attended in the last year?

- ❑ 1-2 trainings
- ❑ 3 or more trainings

7. Did you participate in a dual language program in your K-12 education? If so, for how many years?

8. Are you bilingual and bi-literate?

Appendix F: Administrators' Perceptions Questionnaire (Confounding Variables)

1. What are the challenges of having a dual language program at your school?

2. What do you like most about having a dual language program at your school?

3. What do you think contributes to the success of a dual language program?

4. Are you familiar with the collaborative teaching strategy known as "bilingual pairs?"

5. What teaching strategies do you believe teachers at your school might benefit from?

6. What extra support, materials, or professional development do you believe would be helpful for teachers at your school?