Two-Way Dual-Immersion Programs

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Two-Way Dual-Language Immersion Schooling: English and Spanish

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Honors Thesis
Introduction

According to the 2010 U.S. Census, “of the 281 million people aged 5 and over in the United States, 55.4 million people (20 percent of this population) speak a language other than English at home” (Center for Applied Linguistics). As this number of English language learners, also known as ELLs, continues to grow, families and educators alike are looking for effective programs and instructional strategies to serve these children and adults (CAL). The interest in dual-language education has increased dramatically in the last 15 years (Gomez, Freeman, and Freeman, 147) due to the influx of Spanish speaking immigrants to the United States. “Dual-language education” is an umbrella term used for an additive form of education in which students are taught literacy and other content (reading, writing, mathematics, science, and social studies) in two languages. These programs use the partner language, a language other than English, for a minimum of 50% of the day. There are four main types of dual-language programs. This thesis focuses on one of those types, two-way dual-language immersion programs with an emphasis on native English and native Spanish speaking learners. The limited focus of this thesis is due to my current Intern teaching placement at El Sol Elementary in Kalamazoo, MI. El Sol is a two-way dual-language school that fosters both native English and native Spanish speaking students. The research presented on two-way dual-language programs reflects my current experiences and observations at El Sol as well as extensive investigation of published materials in the field. The thesis will inform readers of what dual-language programs are in general, specifically examining two-way dual-language immersion, including the benefits and drawbacks or hesitations of these programs.
Dual-Language Schooling

Dual-language education programs are growing each year in the United States. Over a ten-year period Thomas and Collier studied the effectiveness of Spanish dual-language programs in many states, including Texas, New Mexico, New York, California, Illinois and the Washington, D.C., metropolitan area. The dual-language programs in these states have shown positive results in student academic achievement and overall success in school. According to the Massachusetts Association for Bilingual Education, the four main types of dual-language education are: “1. Developmental, or maintenance, bilingual programs. These enroll primarily students who are native speakers of the partner language. 2. Two-way immersion programs. These enroll a balance of native English and native speakers of the partner language. 3. Foreign language immersion, language immersion or one-way immersion. These enroll primarily native English speakers. 4. Heritage language programs. These mainly enroll students who are dominant in English but whose parents, grandparents, or other ancestors spoke the partner language.” Throughout the country, these various types of dual-language programs are implemented differently and have varying effects on learners.

The Center for Applied Linguistics reports that dual-language programs “provide the same academic content and address the same standards as other educational programs.” The goal of dual-language programs is to offer an enriched, sustained form of instruction that allows all learners to receive support in their first language while learning a second language. In particular dual-language programs, “offer English learners a mainstream curriculum, which leads to full English proficiency and curricular mastery, with instruction provided by monolingual and multilingual teachers who already work within the school system” (Thomas and Collier, 64). The ELL students are not given alternative curriculum, which some worry can leave them trailing behind both academically and socially. Although
the majority of dual-language programs in the United States use Spanish paired with English, there are other programs for speakers of different languages. Some dual-language programs involve various languages including French, Cantonese, Korean, Portuguese, Haitian-Creole, Tagalog, Arabic, Japanese, and many more. Wilson reports that, “Over the past decade dual-language programs have grown tenfold, with an estimated 2,000 now operating, including more than 300 in the state of New York alone, according to Jose Ruiz-Escalante, president of the National Association for Bilingual Education” (1).

Based on a study conducted by the National Center for Education Statistics mentioned in Culatta, Reese and Setzer’s research article, “58% of children from Spanish speaking backgrounds read below basic reading levels by fourth grade” (67). These researchers also claim that, “effective early literacy instruction in the children’s native language provides a foundation for reversing this trend, allowing children to rely on their more developed language base for initial learning of literacy skills” (67). This is the main goal of dual-language programs; to provide the ELL students with instruction in their native language, which allows learners to develop and enhance their literacy skills in a language that is already familiar to them. Gerena reports that, “Dual immersion programs are often referred to as the best model for language maintenance for English language learners and second language immersion for native English speakers” (57). By learning literacy skills in the students’ native Spanish language, Culatta et al. claim that these skills transfer over to the second language, English. The conclusions made from the research done in both Gerena and Culatta et. al’s studies is limited to the transferable skills from English to Spanish and Spanish to English. The scope of their work refers to these two comparable languages though it does not explore the possible transferable skills from other languages with different alphabets and systems of reading and writing.
However, Reily reports to the Los Angeles Times that parents experience trepidation that their children who are entering first grade learn to read and write in Spanish before English. There are some parents who fear this may hinder their child’s academic success in the classroom. These individuals believe dual-language immersion programs will leave students trailing behind academically, and that students will be testing below grade level. Families hesitate placing their child in a dual-language program because they worry learning literacy in Spanish before English will not allow their child to be successful in English literacy later down the road. These concerns are very real and are asked quite often by parents of native English speaking children at the kindergarten level. The decision to choose whether or not to enroll their child in the dual-language program can be difficult. However, Culatta, et. al state that an important early literacy component that transfers from one language to another is phonological awareness. As mentioned in their research, “The term phonological awareness denotes a child’s ability to recognize, analyze, and manipulate the phonological components of spoken language. These skills include rhyming, blending sounds into words, identifying first or last sounds, and isolating sounds in words” (68). These transferable skills that make up phonological awareness are the basis of learning how to read and spell.

Additionally, researcher, Linda Gerena, reports that in dual-language programs biliteracy is the ultimate goal. She defines biliteracy as, “the acquisition and learning of the decoding and encoding of and around print using two linguistic and cultural systems in order to convey messages in a variety of contexts. Biliteracy is all and any instances in which communication occurs in two (or more) languages in or around written material” (56). When students are literate in their first language, this sophisticated literacy knowledge of print carries over with meaning into the second language being learned. While Gerena agrees that phonological awareness is a transferable skill, she adds supplementary biliteracy skills to the Culatta et. al list of transferable abilities, including motor skills (spatial, directional, eye-hand
coordination); orthographic skills (alphabet systems and punctuation use); auditory skills (perception and memory); comprehension strategies (predicting, inferring main idea, using the cueing systems); study skills (note taking, information retrieval); and habits and attitudes toward literacy (56). Regardless of the language being taught, these biliteracy skills are taught to the children in dual-language programs in their native language with the intention of the students using the skills in both languages, Spanish and English.

When these skills are taught properly in both Spanish and English, students create a strong base for phonological awareness. This allows scaffolding to higher achievement in reading, spelling, and writing throughout their schooling. To support the growth and development of these skills in both languages, the authors note that teachers in dual-language programs must engage in meaningful, hands-on activities within a print-rich and interactive environment that targets both languages (Culatta et. al, 73). Dual-language programs are implemented with the awareness that educators and administrators should be aware of the needs of all learners. These ELL students must engage in authentic activity in order to process both languages successfully. If applied properly, dual-language programs have extraordinary results for students’ academic achievement in both languages.

Martin-Beltran warns that some dual-language immersion programs face challenges, including programs that foster only “parallel monolingualism’ instead of bilingualism.” Parallel monolingualism comes from the idea that the language acquisition process is being separated during instruction rather than seen as continuous bilingual language development. However, dual-language programs are created with the goal of fostering students’ fluency in both languages, Spanish and English. As Wu mentions “dual language programs aim to produce students who are fluent in both languages (41). The goals of these programs are full bilingualism and biliteracy in English and a partner language (CAL).
Hadi-Tabassum states, “Research shows that both majority and minority language students in such programs score high on standardized language tests in both languages and outperform their monolingual peers academically by the time they reach 5th grade” (51). On the other hand, some educators opposing dual-language education tend to take a monolingual perspective. These individuals look at the two languages each student speak as separate and compare the students to monolingual speakers in each language. In addition to educators questioning a dual-language approach to education, legislators have pushed for an “English Only” effort as well. For example, California Proposition 227 (1998) English Language in Public Schools Initiative Statute called for all Limited English Proficient (LEP) students to be taught solely in English. The provision of this initiative had the effect of nearly eliminating all “bilingual” classes in most schools. Provision 227 was drafted by Rob Unz, a wealthy man of great influence, who financially supported the “English Only” push [Appendix A]. According to Beeman and Urow, “These educators generally see the students’ use of a second language as a deficit and label their performance in both languages as ‘low’”(2). To rebuke these educators’ beliefs, overwhelming data has been accumulated showing evidence of high academic achievement for both ELL students and native English speaking students.

In Kirk Senesac’s 2002 article, she provides data taken from student test scores on the Illinois Standards Achievement Tests (ISAT). Before 2000 these tests were called Illinois Goal Assessment Program (IGAP) and are used to measure skills in reading, writing, mathematics, social science, and science. The data was collected from students attending Inter-American Magnet School in Chicago, IL. Inter-American is a two-way dual-language school that serves both native Spanish and native English speaking students from kindergarten to eighth grade. It is important to note that the LEP students exempt from these tests were those that had not yet attended three years of schooling in the United States. Kirk Senesac points out that:
Reading, writing, and mathematics are presently tested in grades 3, 5, and 8. However, previous to 2000 these areas were tested in grades 3, 6, and 8. The 1998-2000 test results for Inter-American (IAMS), the Chicago School District, and the state of Illinois are presented in Table 2. Science and social studies, tested in grades 4 and 7, are presented in Table 3. The results of the ISAT/IGAP show that Inter-American students consistently surpass the achievement levels of students within the district. While there is considerable variability when compared to state results, Inter-American students achieve at nearly equivalent levels and, in many cases, exceed that of students statewide” (88). [Appendix B]

This study can be seen as problematic for accurately comparing one Chicago Public School (IAMS) to the entire Chicago School District. It is not clear if the demographics of IAMS represent all cultures, socioeconomic statuses, languages, and races found throughout the Chicago Public School District. As one can see IAMS surpasses the achievement levels of students within the district. On the other hand, when IAMS students are compared at the state level, test scores are generally equivalent and at times greater than students in Illinois as a whole. One can question, if students are testing academically at the same level as students in normal education programs, what is the point of two-way dual-language immersion schooling? These programs tend to cost the state more money. Why take extra money from the state’s education budget on the programs? I argue two reasons: 1. It is evident that two-way dual-language is not negatively effecting student academic achievement. 2. While other students are achieving similar testing levels, IAMS students are gaining knowledge of two languages rather than only one. Furthermore, Garro states in his research that recent findings in an ongoing study by George Mason University show that children learning two languages makes for fewer high school dropouts and a better chance for students entering college fluent in a second language.
Those who are against dual-language immersion, where both English and Spanish are taught, believe that this method may divide society and limit Latinos’ opportunities to succeed. In addition, the advocates for English-only instruction believe that their process of learning may even avoid segregating language learners, promote assimilation of immigrants, and help students learn English as quickly as possible. An English-only, or one-way immersion, prohibits the use of Spanish during instruction. The ELL students solely learn in English throughout the day. However, the opposite of segregation occurs in dual-language programs. Both students, native English and native Spanish speaking, are given the opportunity to interact in the classroom, on the playground, and outside of school. This fosters learning their non-native language in more meaningful ways. Students work together throughout the school day and become accustomed to using both English and Spanish.

Garro, who is a product of dual-language immersion schooling, says that learning a second language and culture is a great benefit to becoming a well-rounded individual. With that being said, I can safely suggest that there are no drawbacks when it comes to expanding the mind with more knowledge and exposure to new information and ideas. Through this exposure to a new language and culture, students learn to respect differences among ethnicities. In addition, Gomez, et. al. claims that, “Dual language programs have raised the status and importance of languages other than English in many communities across the United States” (146). It is important to recognize that Spanish is the fastest growing language in our society. Educators need to be prepared to accommodate for a language difference among students [Appendix C]. Additionally, Gomez, et. al continues to explain that in some communities these dual-language programs have eased tension between groups who speak different languages. The language barrier is broken, starting with our young students, which can potentially knock down cultural barriers and create a safe and supportive community for all learners.
Cynthia Gorney, a writer for The Washington Post, talks about the debates over the actual value of dual language immersion programs. She reports that, “...the argument is really about the value and meaning of native language in a child’s schooling...” Gorney expresses that because of the limited number of dual-language immersion programs throughout the country, there may not be proper training of educators/administrators or funding for these programs. Most programs, she claims, are experiments and pilot programs with not much support. She asks what most parents are asking, “Are these programs worth it?” Many researchers and educators would say yes. These dual-language programs have been nothing short of a success in the classroom. As mentioned earlier, students achieve outstanding academic success, cultural awareness, and transferable literacy skills in both languages. The ELL students, in particular, benefit greatly from dual-language programs because they learn literacy skills such as phonological awareness including rhyming, blending of sounds, letter identification, reading, writing, and spelling in their native language. These students become strong in this area, which allows them to fluently transfer these skills in the second language, English.
Two-Way Dual-Language Immersion Schooling

Schools approach dual-language instruction using one of the four different models. Throughout the country these four models are implemented in various ways. One type of program is called two-way dual-language immersion. Two-way immersion programs are dual-language programs in which, “two language groups learn through two languages” (Gomez, Freeman and Freeman, 147). This means that half of the students enrolled in these programs are native Spanish and half native English speakers. Two-way dual-language education is labeled as an enrichment approach to bilingual education. According to Cobb, Konauge, and Vega, “The primary feature of these approaches is to develop fluency in either language minority or language majority students’ first and second languages” (29). The idea of these two-way dual-language immersion programs is that the learning is a two-way benefit for not just native Spanish speakers but native English speakers as well. Bilingualism for both students is the goal. The native English speakers will be gaining a second language, Spanish, while the other students, native Spanish speakers, will be learning English. In two-way dual-language immersion the native English and native Spanish speakers become, “bilingual and biliterate students who can switch effortlessly from one language to the other” (Wu, 42).

Two-way immersion is, “a unique kind of language education because it involves two languages in two ways: Two languages are used for instruction, and two groups of students are involved—students who are native English speakers and students from another language background, most often Spanish” (CAL). According to CAL there are many great benefits of two-way immersion education programs. The two-way immersion programs are integrated with native English speakers and English language learners (ELLs). These students are grouped together for core academic instruction, which includes mathematics, science, language arts, and social studies, for the entire day. This allows students to maintain a regular
schedule with the same peers throughout the day. I fully agree that stability and maintaining a normal schedule is critical to student success in the classroom. It has been my observation that students of all ages crave structure and familiarity.

The main triumph of two-way immersion programs is that students will develop high levels of proficiency in their first language and their second language, therefore native English and non-native English speakers will benefit in both ways. First, CAL says that, “This goal means that native English speakers will develop high levels of listening, speaking, reading, and writing ability in English, and English language learners will develop these abilities in their native language (e.g., Spanish). Neither group will have to forego development in the native language as second language proficiency improves.”

Additionally, CAL reports that in two-way immersion programs students develop high levels of proficiency in a second language. These “additive” bilingual programs benefit both groups of students. “They give all students the opportunity to maintain and develop oral and written skills in their first language while they simultaneously acquire oral and written skills in a second language” (CAL). For parents, the next benefit that CAL finds of two-way immersion language programs is that students will be at or above grade level. These programs follow the same academic standards as other curricula and such statement goals released by CAL should be comforting for parents of native English speakers. It is important for their child to develop high levels of achievement in not only Spanish but their native language as well. This may ease their trepidation of placing their child in a two-way dual-language program.

Two-way dual-language immersion schooling follows two main models: the 90/10 model and the 50/50 model. The 90/10 model is set up so that during pre-k, kindergarten, and first grade the daily instruction is taught 90% in Spanish and 10% in English. The 90/10 model is especially beneficial for ELL
students because they are being instructed in their native Spanish language. These students become strong, confident readers and writers in the language with which they are most familiar and comfortable. As stated above however, these skills are all transferable to the second language being learned, which in this case is English. The 90/10 model can look different in schools, but typically this model evolves into the 50/50 model. This states that the instruction will level off to 50% in Spanish and 50% in English by as early as third grade, or at the latest fifth grade. The 50/50 model, such as the one found in author Jill Wu’s classroom, originally began with 90% of the instruction in Spanish, for both native Spanish and native English speakers, and by fifth grade students received half of their instruction in each language (Spanish and English).

Other 50/50 models follow the format in which Spanish and English are both taught equally beginning in pre-k (preschool) or kindergarten. In this 50/50 model instruction is given half the day in Spanish and half the day in English. As a result, both native English and native Spanish speaking students are being exposed to both languages uniformly. This two-way dual-language program can be found at El Sol Elementary in Kalamazoo, MI. In some variations of the 50/50 model, it proves to be most effective when the two languages involved, Spanish and English, are separated into two distinct systems rather than using both intermittently throughout the day during instruction. The success in this model associates a specific language with a certain content/subject, time of day or day of the week, and division by staff (Hadi-Tabassum). For example, at El Sol Elementary School, a two-way dual-language immersion school, throughout all grade levels Language Arts and Social Studies are taught solely in English while Math and Science are taught only in Spanish. El Sol Elementary uses division by content for their instruction throughout all grade levels. The contextual model the school follows levels out to be a 50/50 model in which Spanish and English are taught for an equal amount of time during the day. Nicol claims that fixed separation of the two languages in the dual immersion model is based in
psycholinguistic research conducted within the last two decades. She finds, “that students must clearly distinguish between two languages cognitively so they can place each language on equal footing as they learn to listen, speak, read, and write in both” (3).

Additionally, 50/50 models can also divide their instruction with regard to the languages of staff and by time. Hadi-Tabbassum found that, “two teachers-one fluent in the minority language and the other fluent in the majority language-team teach the dual immersion classroom” (52). This would allow students to work on class assignments in the designated language with the teacher who is leading at that moment. To divide classroom instruction by time could include half-day, alternate-day, or alternate-week intervals for the two languages.

A yearlong study was conducted by two researchers, Lopez and Tashakkori, in a two-way bilingual education program in a kindergarten and first grade classroom. The students were separated in two groups and were compared in terms of their academic achievement in English language arts. Both groups included, what the authors refer to as, LEP students, limited English proficiency, and non-LEP students in this EFL (Extended Foreign Language) program. One group was instructed in English approximately 70% of the time and in Spanish approximately 30% of the time while the other group attended the same school but in a regular single language education program. The two researchers make it clear that, “The main goal of the study was to examine the effectiveness of a two-way bilingual program in reducing the achievement gap between students with limited language proficiency and those who were relatively more proficient in English.” The results of the study between the two groups of students with LEP and non-LEP students are nothing less than astonishing. The experimental group that participated in the two-way immersion program showed significant growth in language arts in areas such as Sight Vocabulary (kindergarten and first grade) and Alphabet Letter Recognition (kindergarten).
The obvious substantial gap between the LEP and non-LEP students was no longer a substantial gap. Lopez and Tashakkori say that their study, “…confirms the potential usefulness of the two-way bilingual education programs in reducing the achievement gap between limited English proficient students and students whose English skills are more developed.”

A common question and possible uncertainty among educators and parents is, how will children benefit in the long run from two-way dual-language immersion programs? The lasting positive effects of these programs are similar to the academic gains made by students during their enrollment in regular elementary school. A study done on the effects of elementary, two-way dual-language immersion school programs conducted by Cobb, Vega and Krongauge, explores the idea of how student achievement goes beyond the primary years and continues well into junior high. This particular study collected longitudinal high stakes test data in reading and writing measured in sixth and seventh grade. The data used is from native English and native Spanish speakers from the two-way dual-language immersion programs and native English and native Spanish speakers from standard education programs. All data was taken from students within the same district. Their particular study was a small sample size of students based on their variable qualifications and research approach. Cobb et. al used data from students who had been continuously enrolled in the two-way dual-language program for at least the first four years of their elementary school experience allowing them to determine the longer term effects of the dual-language program on student achievement (Appendix D). Additionally, their findings regarding academic achievement show that students who had been enrolled in the two-way dual-language programs offered within the district had higher motivation to do well in school and an even greater ambition to attend college. The researchers also noted an unexpected side benefit that the students enrolled in the dual-language programs had a greater sense of “resiliency” among the Hispanic population, particularly low income and ELL students. Cobb et. al described the characteristics of a resilient student to be:
High self esteem, a motivation to study hard, and a belief in one’s academic competence; the perception of a positive school environment; a supportive family that places a high value on education and influences and monitors the education of their children; and a peer group that values education and does not use drugs (32).

It is also important to acknowledge student attitudes toward two-way dual-language schooling. As an educator, I find that it is important to ask students their thoughts and feelings about their school environment. The goal, in any classroom, is to create a safe, supportive and welcoming environment in which students can feel comfortable and happy. In a pilot study conducted by Gerena, she explored and measured students’ attitudes relating to, “(1) personal values of English and Spanish literacy, (2) perceived competence in English and Spanish literacy, (3) perceived social values of English and Spanish literacy, and (4) perceived personal and social values of biliteracy” (56). It is evident that students’ attitude ultimately affects academic success and learning. I have witnessed at El Sol that the overall school environment and atmosphere plays a large role in student achievement and happiness. Parents, teachers, and students who have positive attitudes toward academic progress and learning, typically results in high student growth rates.

Gerena explores the idea that possible hegemonic forces may influence students’ attitudes about dual-language education, specifically their personal beliefs regarding both Spanish and English literacy and social values. Hegemony is a word coined by Italian theorist Antonio Gramsci and is used to express how certain groups dominate others. These dominating tendencies shape the way people perceive their reality, remaining mostly unnoticed, and are guided more by an ideological consensus than basis in fact. In Gerena’s pilot study, she states that a hegemonic tendency present in today’s society (in the U.S.A.) is leading ELLs to believe that only literacy in English is important (58). These
beliefs come from the community, social networking, public opinion, and what is embraced in mainstream thinking. Gerena tested both English and Spanish dominant students, a total number of 33 students from both first and second grade. Of the students tested, 55% were Spanish dominant (n=18) and 45% (n=15) of the students were English dominant. (59). These students were enrolled in a two-way dual-language immersion program. The eight attitudes being tested were Personal Value of Spanish, Personal Value of English, Perceived Competence in Spanish, Perceived Competency in English, Social Value of Spanish, Social Value of English, Personal Value of Biliteracy, Social Value of Biliteracy (59-60). Each of the eight attitudes was tested for both English and Spanish perceived experiences. The validity of the testing instrument was tested and approved several times prior to the study. The results of the study indicate that, “the social value of Spanish begins to diminish as students spend more time in school” (67). She believes that this may be due to the hegemonic nature of English, it being the majority language of the American culture, school wide dominance of English, personal encouragement from parents, teachers, and school administrators, and many more (67).

As an advocate for two-way dual-language immersion schooling, this is disheartening to hear. The main goal of these programs is to sustain positive social and personal perception of both Spanish and English throughout the students’ schooling. It is noted that this may occur in some two-way dual-language schools. Although educators strive to maintain a 50/50 balance of equal importance of both languages for all aspects of learning, sometimes due to outside forces and attitudes, students and teachers alike tend to push for English more than Spanish. It is a reality that these programs are at the center of an English dominant culture and way of thinking. Some believe that this is a serious downfall of dual-language programs. With that being said, Gerena concludes that teachers, parents, and students need, “…to promote the academic and social values of both languages and to counter the hegemonic forces in society that diminish the value of languages other than English” (71).
The Bridge and Bridging

Additional features that occur in two-way immersion are the Bridge and bridging. “The Bridge” supports instruction that is given in both Spanish and English throughout the day. This technique, as stated in Beeman and Urow’s research, is used for biliteracy. These researchers claim that, “teaching biliteracy successfully has three parts: Spanish (or one of the two languages) instruction, the Bridge (both languages side by side), and English (or the other language) instruction” (4). The “Bridge” as detailed in their findings, is a two-way technique that alternates from Spanish to English and from English to Spanish smoothly and effectively. The Bridge is a planned strategy in two-way dual-language instruction that allows students to compare and contrast the two languages. In my own experiences, the Bridge is actively identifying where in the curriculum connections can be made across content areas and between the two languages. I have found that it is my responsibility to point out these opportunities for students to create the Bridge and allow them to use their language knowledge as a resource and tool. The Bridge engages students in the cross-linguistic transfer of Spanish and English and, “bilingual students who understand how their two languages are similar and different achieve higher levels of academic success (Beeman and Urow, 5).

To differentiate between the Bridge and bridging one must understand that the Bridge is a planned and organized feature of instruction. On the other hand, according to Beeman and Urow, “Bridging, or translanguaging, is more flexible and spontaneous than the Bridge, and need not involve the teacher” (5). Bridging is what educators call “a teachable moment.” This can happen at any time, for any reason throughout the day. Bridging, “occurs during the Bridge and whenever students and teachers make connections between the two languages” (5). Students can also make connections by using their background knowledge in both languages, identifying cognates, and other linguistic resources. During
instruction, bridging has occurred most often with my students during vocabulary lessons. One student raised their hand and noted that “lunar module” had the base word “luna,” meaning moon in Spanish. Although unconscious of what she had done, the student was bridging her knowledge of Spanish words to understand a new English vocabulary word. With training in these areas, teachers can successfully implement instruction in a dual-language immersion setting. However, with limited professional development available regarding how to correctly teach in Spanish, it becomes somewhat difficult for educators to properly implement instruction to meet students’ dual-language needs.

In an extensive study done by Melinda Martin-Beltran from the University of Maryland, she also supports that two-way immersion programs can apply a language bridge between Spanish and English. She believes that there are endless benefits of dual immersion education, including the opportunity for students to create an environment in which they can draw on two languages as an academic resource that will enhance learning. Martin-Beltran continues to confirm what others have also agreed upon; the success of dual-language programs can be measured in high academic achievement by students. She adds that dual-language immersion programs are designed from, “theoretical and empirical work in Second Language Acquisition (SLA), which has developed the input-interaction-out (IIO) model for language learning” (255). This model, IIO, clarifies that, “interaction between second language (L2) learners and ‘native speakers’ (L1) promotes language learning through negotiation for meaning, modified, comprehensible input, and opportunities for learners to produce language and test new output hypotheses” (255).

The environment of a two-way dual-language immersion classroom where interaction between students is at the center of learning has positive effects on language acquisition. Therefore, student-to-student interaction throughout the day fosters and supports language development in both native and
second language learners. Martin-Beltran’s research is based on collaborative dialogue among students to observe how, “learners work together to solve linguistic problems and co-construct knowledge about language” (255). This occurs during what is called a language-related episode, LRE, which is a unit of dialogue between two students. Martin-Beltran found in her own research that Swain and Lapkin define LRE as, “any part of a dialogue where the students talk about the language they are producing, question their language use, or correct themselves or others.” These LREs, or interactions between the L1 and L2, are what she claims to be the most useful tool in a two-way dual-language classroom. The LREs are full of spontaneous bridging opportunities between English and Spanish. The students sort through linguistic difficulties by drawing upon their knowledge using either Spanish or English to help them. Her study took place at Escuela Unida, a two-way dual-language immersion elementary school in California, focusing on one group of 30 fifth grade students. Escuela Unida used a 90/10 model starting in kindergarten and reached a 50/50 model by fifth grade. In her observations, she notes that the school’s environment was collaborative amongst teachers, which created a supportive, learning-centered atmosphere for both native English and native Spanish speakers.

Additionally, Martin-Beltran monitored engagement between students during collaborative writing in both Spanish and English. Her findings “…indicate that student interactions offer rich affordances for language learning when students are given opportunity to draw on two or more languages simultaneously in dialogue with members of distinct linguistic communities as they participate in joint activities” (260). Martin-Beltran claims, that as well as oral language exchange, writing activities allow learners to check and reflect on their language production and may be a tool for co-construction of knowledge. The LREs that occurred during the students’ writing activities promoted both opportunities for Spanish and English usage as well as metacognitive awareness of both students involved. With that being said, it is a safe conclusion that in a two-way dual-language school native
Spanish and native English speaking students can contribute greatly to a simple conversation using their knowledge of their language to help other students. These can be viewed as simple yet important learning opportunities for both sets of students.

She clearly states that, “two languages bridge gaps for one student and becomes a learning opportunity for another [student]” (260). During a conversation that occurred during a joint writing activity between one “strong” English speaker and one “strong” Spanish speaker, Martin-Beltran observed that, “each student [took] on the role as novice and expert at different points throughout the interactions, especially when comparing their letter writing across Spanish and English” (260). These language exchanges created opportunities for both students to strengthen their expertise in their native language, and also to learn new vocabulary in their second language just through conversing with their partner. In two-way immersion settings, these moments of language exchange between students empower ELL students. In mainstream schooling, ELL students are normally labeled as low achieving individuals with little confidence in their academic achievement. However, in the two-way dual-language immersion setting, the ELL student is placed in a position of prestige and allows the student to feel empowered in their native language. As a native English speaker myself, I am constantly asking my native Spanish speaking students how to say certain words or phrases in Spanish. I have watched my students become excited to teach me something instead of me always teaching them. They love sharing their knowledge of Spanish with me and other classmates. These programs allow ELL students to gain confidence in their native language instead of making them feel constantly lost in a second language school setting.

These bilingual interactions create a connective space between learners where interdependence becomes key and codeswitching becomes evident as well. Codeswitching is when one draws on two
languages, switching from one language to another in the same sentences. This interdependence allows for bridging opportunities between the two languages present in the classroom. Martin-Beltran notes that during these peer collaborations, students provided each other with comprehensible input when a word was unknown to the other, and together experienced learning opportunities in both Spanish and English. With those times of offering their knowledge to one another, there was evidence of uptake or “use and incorporation of the new vocabulary” (262) for both parties.

Often times I hear my students asking their peers, “¿Como se dice...?” or “How do you say...?” They use each other as a resource for balancing out their knowledge of both languages. The two-way analysis of student conversation demonstrated, in Martin-Beltran’s study and in my classroom, a decreasing gap between both Spanish and English. Both students benefitted from these interactions of simply conversing with each other. Students were able to expose each other to new vocabulary while co-constructing sentences they could not have done without each other. These opportunities of language exchange between native English and native Spanish speakers would not be possible in just a one-way immersion program. The obvious benefit of two-way immersion programs is having two language group learners in the classroom. The students use each other as language tools and resources, a feature of two-way immersion that cannot be replicated in other dual-language programs.

This interdependence demonstrates just how important a simple interaction or conversation can be between native Spanish and native English speakers in a two-way dual-language setting. Martin-Beltran mentions the importance of the social activity of learning during interactions.” This interaction demonstrates the complexity of a two-way learning process that constantly moves back and forth between languages” (265). The L1 and L2 are co-constructing meaningful language and use both English and Spanish as resources during their communication. Native English speakers and native Spanish
speakers in a two-way dual-language classroom depend on each others’ expertise in their appropriate language to collaborate and learn from each other. This bridge that both students form is key for comprehension for both parties involved. Furthermore, this interdependence between the native English and native Spanish speaker is limited to the demographic make-up of a particular district. Not all districts have a demographic make-up that can fulfill or provide students with these opportunities that occur in two-way dual-language programs. With that said, it can be assumed that interdependence typically occurs when there are similar amounts of native English and native Spanish speaking students enrolled.

Martin-Beltan continues to say, “Students drew on their resources in both Spanish and English to solve linguistic problems. Their dialogue could be described as throwing a metaphoric boomerang across languages, when they began their metalinguistic analysis in language A, transferred this knowledge to analyze language B, then returned to language A with new insight and possibly a deeper level of analysis that has transformed during their learning process” (266). Again, this occurrence is possible due to the demographic make-up found in a two-way dual-language classroom and is a clear indication that both students are benefiting from these interactions. It cannot be assumed that these interactions could occur in all dual-language schools. However, two-way dual-language programs offer more opportunities for students to share their language knowledge with their peers.

Another way Martin-Beltran shows that two-way dual-language programs can build a bridge between both native English and native Spanish speakers is the idea that students will use crosslinguistic comparison. Crosslinguistic comparison is used as a language mediation tool and as an object of analysis. She found that when students use crosslinguistic comparison, they are able to compare semantics and lexical choices in different contexts across English and Spanish (262). During a conversation with a
classmate, in Martin-Beltran’s study she observed a child named Heather verbalize her usage of floor versus ground by comparing Spanish and English (262). In this metacognitive moment, Heather was using crosslinguistic comparison to sort through the meaning of both words. In a two-way dual-language immersion classroom exploration of new vocabulary in the second language for all students is made possible by drawing upon the students’ knowledge in their first language. Students are encouraged to analyze and ask questions regarding the differences they come across during language exchange. Martin-Beltran finds that in a two-way dual-language classroom, academic language, in both languages, is encouraged. New vocabulary is used in meaningful ways, which allows students to comprehend the vocabulary in their non-native or native language better (265).

She also adds that, “in addition to their academic and linguistic knowledge, students offered deeper understanding of social language, which reflected their participation in very different communities of practice beyond the boundaries of the classroom” (267-268). Two-way dual-language programs offer opportunities for social language understanding for both native Spanish and native English speakers. This understanding occurs through authentic interaction between students and those within the school community. This school environment exposes students to what Agar and Lantolf call “languaculture” knowledge: the unity of language and cultural practices (Martin-Beltran, 269). At El Sol, students are often exposed to various types of music, dance, and food from different cultures. For example, the school holds an event called Taste of El Sol, or El Sabor de El Sol. The families from various cultures and backgrounds are invited to create authentic food dishes to share with other families within the community. This event brings together the families of the students as well as the teachers with the entire community. El Sol is one example of the many types of programs that bring together and build a bridge between members of distinct linguistic communities. Students are able to draw on and share their background of social and cultural knowledge with each other.
El Sol and other two-way dual-language programs offer rich opportunities for students to draw on both languages as academic resources and tools during the learning process. The existence of two languages in a school setting presents opportunities for students to build on each others’ knowledge and learn from interactions with one another. Martin-Beltran states that, “Using two or more languages created opportunities for multiple participants to be learning multiple languages in relevant moment-to-moment interactions...” (270). The students build linguistic bridges to alleviate the gap between both languages in their two-way dual-language classroom.
Conclusion

I am currently Intern Teaching at El Sol Elementary in Kalamazoo, Michigan. El Sol Elementary prides itself on being the only Kalamazoo Public School that follows the two-way dual-language immersion model. In addition, according to CAL El Sol Elementary is one of only four two-way dual-language programs for Spanish and English speaking students offered in Michigan. The other three schools are located in Detroit, Grand Rapids, and Muskegon. El Sol ensures that, “Students at El Sol Elementary will attain high levels of proficiency in their native language and in a second language, and meet or exceed district and state targets for achievement in all core academic areas. All students will demonstrate positive, cross-cultural attitudes and behaviors” (Kalamazoo Public Schools. com).

I feel blessed to have been given the opportunity to work within this tight-knit community of teachers and students. All educators who work in this building believe in their school’s mission of producing bilingual, biliterate, and fluent Spanish and English speaking students by the end of the fifth grade. The supportive and welcoming environment is a safe haven for all students, both native English and native Spanish speakers. The staff at El Sol strives to support the needs of all learners, including social, emotional, and academic. The culture found there is a rich mix of various backgrounds such as Caucasian, African American, Asian, Ecuadorian, Guatemalan, Mexican, Honduran, Dominican, and Costa Rican. I feel right at home at El Sol. I believe that all Americans should learn another language. With the large influx of Spanish speakers in the USA, Spanish is the ideal second language for all students to learn in school. Most countries worldwide learn a second language, which is typically English, and students are fluent by the end of their schooling years. I am an advocate for learning Spanish, not only because of the large percentage of speakers in the USA, but for the academic benefits it has on student achievement.
The students’ abilities, across all curricular and conceptual areas, are increased due to the knowledge of two languages. The benefits of knowing two languages in the students’ younger years are endless.

I chose to focus my honors thesis on two-way dual-language immersion schooling because of my love for elementary education and the Spanish language. The perfect combination of both of my passions can be found in dual-language schooling. As a result of conducting extensive research on the various models of dual-language programs, and in particular two-way immersion schooling, my interest has strengthened in teaching in this type of school setting in the future. I can only hope to find a school community such as El Sol Elementary where both languages, English and Spanish, are equally celebrated and supported by its loving community. The information I have come across during my research has opened my eyes to the large number of two-way dual-language immersion schools in the United States. I have encountered many articles with research done in dual-language schools across the country, and in particular near my home of Chicago, IL. With that being said, I have further investigated these schools mentioned in the studies that I have come across and contacted several of them about possible employment for the upcoming fall based on their implementation of the two-way dual-language immersion model.

Participating in an open-ended research project such as this, I still have many questions regarding two-way dual-language immersion schooling. This thesis project has opened many other doors of interest for me regarding teaching in a dual-language setting. From here, I would like to continue to investigate where more of these schools are found, especially in the mid-west region. It was easy to see that the dual-language schools were located in big cities such as New York City, Chicago, and throughout Texas, but I would like to explore more locations of these up and coming schools. I have been researching the multiple elementary schools that follow the two-way dual-language model in Boulder
and Denver, Colorado and during conversations with my honors thesis mentor, I learned that Colorado received a substantial donation to their dual-language programs from Kalamazoo native Pat Stryker.

Each time I read an article regarding dual-language programs, I learn something new. I anticipate further study and investigation in the area of two-way dual-language immersion schooling and ultimately I look forward to teaching in this type of setting in the near future.
Appendix A:

California Proposition 227, Analysis by the Legislative Analyst

Background

California's public schools serve 5.6 million students in kindergarten through twelfth (K-12) grades. In 1996-97, schools identified 1.4 million, or 25 percent, of these students as "limited English proficient" (LEP). These are students who cannot understand English well enough to keep up in school. Eighty-eight percent of the state's schools had at least one LEP student, and 71 percent had at least 20 LEP students.

Under current law, schools must make their lessons understandable to LEP students. To help schools address the needs of these students, the State Department of Education created guidelines for the development of local LEP programs. These guidelines state:

• The main goal of all programs is to make LEP students fluent in English.
• Programs must allow LEP students to do well in all school work. In some cases, this means teaching some subjects to LEP students in their home languages.
• Schools must allow all LEP students the option of being in bilingual programs. A bilingual program is one in which students are taught both in their home language and in English.
• Schools must allow parents to choose whether or not their children are in bilingual programs.

How Are Students Currently Served?

Schools currently use a range of services to help LEP students (1) learn how to speak, read, and write English; and (2) learn academic subjects (such as math, reading, writing, history, and science).

Services to Help Students Learn English. Almost all LEP students get special services to help them learn English. These services are often provided during a part of the school day, separate from lessons on regular academic subjects.

Services to Help Students Learn Academic Subjects. Most LEP students receive special help in their academic subjects in one of two basic ways:

• Lessons That Use Special Materials. About 40 percent of all LEP students are taught their academic subjects in English. The class materials and teaching methods for these students, however, are specially designed for students who do not speak English well.

• Lessons That Are Taught in Students' Home Language. About 30 percent of all LEP students are taught some or all of their academic subjects in their home languages. These are what people usually refer to as bilingual classes. The remaining 30 percent of LEP students do not receive special help in their academic subjects. This is either because they do not need it or because the
school does not provide it. These students are taught their academic subjects in regular classrooms.

How Long Do Students Receive LEP Services? State guidelines say that schools should give LEP students special services until (1) they can read, write, and understand English as well as average English speakers in their grade; and (2) they can participate equally with fluent speakers in the classroom. Schools report that LEP students often receive special services for many years.

How Are LEP Services Funded? The state currently provides over $400 million in special funds for students--both LEP and non-LEP--who need extra help to succeed in school. These funds are known as "compensatory" funds. Schools report that the majority of this money is spent for LEP students. In addition, schools may spend federal and local funds for special services for LEP students.

Proposal

This proposition significantly changes the way that LEP students are taught in California. Specifically, it:

• Requires California public schools to teach LEP students in special classes that are taught nearly all in English. This would eliminate "bilingual" classes in most cases.

• Shortens the time most LEP students would stay in special classes. The initiative states that: (1) LEP students should move from special classes to regular classes when they have acquired a good working knowledge of English and (2) these special classes should not normally last longer than one year. This would eliminate most programs that provide special classes to LEP students over several years.

Exceptions. Schools would be permitted to provide classes in a language other than English if the child's parent or guardian asks the school to put him or her in such a class and one of the following happens:

• The child is at least ten years old and the school principal and teachers agree that learning in another language would be better for the child.

• The child has been in a class using English for at least 30 days and the principal, teachers, and head of the school district agree that learning in another language would be better for the student.

• The child already is fluent in English and the parents want the child to take classes in another language.

If a school lets 20 or more LEP students in a grade choose to take their lessons in a language other than English, then the school must give such a class. If there are not 20 students or more, then the school must let the students go to other schools that have classes in those languages.

Funding Provisions. The initiative requires the state to provide $50 million every year for ten years for English classes for adults who promise to tutor LEP students. In addition, the measure requires that any special funding currently spent on LEP students be maintained, if possible.
Fiscal Effect/ School Costs and Savings

This proposition would result in several fiscal impacts on schools:

Savings. By limiting the time LEP students can be in special classes generally to one year, the initiative would reduce the number of special classes schools would have to offer. This could result in major savings for schools.

Costs. The proposition could also result in new costs to schools, for a number of reasons. For instance, the one-year special classes could be more expensive than existing classes if schools provide more intensive services. Schools may also need to give LEP students extra help in academic subjects once they are moved to regular classes if they fall behind other students.

Distribution of "Compensatory" Funds. The state provides "compensatory" funds to schools based in part on the number of LEP students. The proposition would likely reduce the number of students who are considered LEP at any given time. As a result, state funds would be allocated differently--some schools would get more compensatory funds and others would get less.

Net Impact on Schools. We cannot predict the proposition's net impact on schools. It would depend in large part on how people respond to its passage, including:

• Parents' decisions on the types of services they want for their children.
• Schools' decisions on the types and levels of services provided to LEP students.
• State decisions on the allocation of "compensatory" funds it currently provides to schools with LEP students.

The net impact could vary significantly by individual school.

State Fiscal Effects

Under the proposition, the state would spend $50 million each year for ten years for English classes for adults who promise to tutor LEP students. This provision, however, probably would not change total state spending for schools. (This is because the level of state spending for K-12 schools is generally based on a formula in the Constitution.) As a result, the costs to the state of this provision would likely reduce spending on other school programs by a like amount.

For more information visit: http://primary98.sos.ca.gov/VoterGuide/Propositions/227text.htm
Appendix B: Table 2 and Table 3 Data from student ISAT test scores from IAMS, Chicago Public School District and State of Illinois.

(Kirk Senesac’s 2002 article: Two-way bilingual immersion: A portrait of quality schooling)

Table 2

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<th>Writing</th>
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<td>5/6</td>
<td>8</td>
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<td>1998</td>
<td>87</td>
<td>73</td>
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<tr>
<td></td>
<td>1999</td>
<td>66</td>
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<tr>
<td></td>
<td>2000</td>
<td>76</td>
<td>63</td>
</tr>
<tr>
<td>Chicago School District</td>
<td>1998</td>
<td>45</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>33</td>
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</tr>
<tr>
<td></td>
<td>2000</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>State of Illinois</td>
<td>1998</td>
<td>72</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>61</td>
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Table 3

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<td>7</td>
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<tr>
<td>IAMS</td>
<td>1998</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>2000</td>
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<tr>
<td>Chicago School District</td>
<td>1998</td>
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</tr>
<tr>
<td></td>
<td>1999</td>
<td>53</td>
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<td></td>
<td>2000</td>
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</tr>
<tr>
<td>State of Illinois</td>
<td>1998</td>
<td>83</td>
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<tr>
<td></td>
<td>1999</td>
<td>98</td>
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<td>2000</td>
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Appendix C: 2010 Census Data

Languages Spoken at Home for the Population 5 Years and Over: 1980, 1990, 2000, and 2010
(For information on confidentiality protection, sampling error, nonsampling error, and definitions, see www.census.gov/acs/www/)

<table>
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<tr>
<td>Population 5 years and over</td>
<td>210,247,455</td>
<td>230,445,777</td>
<td>262,375,152</td>
<td>289,215,746</td>
<td>37.6</td>
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<tr>
<td>Spoke only English at home</td>
<td>187,187,415</td>
<td>198,600,798</td>
<td>215,423,557</td>
<td>229,673,150</td>
<td>22.7</td>
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<tr>
<td>Spoke a language other than English at home¹</td>
<td>23,060,040</td>
<td>31,844,979</td>
<td>46,951,595</td>
<td>59,542,596</td>
<td>158.2</td>
</tr>
<tr>
<td>Spoke a language other than English at home²</td>
<td>23,060,040</td>
<td>31,844,979</td>
<td>46,951,595</td>
<td>59,542,596</td>
<td>158.2</td>
</tr>
<tr>
<td>Spanish or Spanish Creole</td>
<td>11,116,194</td>
<td>17,345,064</td>
<td>28,101,052</td>
<td>36,995,602</td>
<td>232.8</td>
</tr>
<tr>
<td>French (incl. Patois, Cajun, Creole)</td>
<td>1,550,751</td>
<td>1,930,404</td>
<td>2,097,206</td>
<td>2,069,352</td>
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<td>Italian</td>
<td>1,618,344</td>
<td>1,308,648</td>
<td>1,008,370</td>
<td>725,223</td>
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<tr>
<td>Portuguese or Portuguese Creole</td>
<td>351,875</td>
<td>430,610</td>
<td>564,630</td>
<td>688,326</td>
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<td>German</td>
<td>1,566,593</td>
<td>1,547,987</td>
<td>1,383,442</td>
<td>1,067,651</td>
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<td>Yiddish</td>
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<td>213,064</td>
<td>178,945</td>
<td>154,763</td>
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<td>Greek</td>
<td>401,443</td>
<td>388,260</td>
<td>365,436</td>
<td>307,178</td>
<td>–23.5</td>
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<tr>
<td>Russian</td>
<td>173,226</td>
<td>241,798</td>
<td>706,242</td>
<td>854,955</td>
<td>393.5</td>
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<td>Polish</td>
<td>820,647</td>
<td>723,483</td>
<td>667,414</td>
<td>608,333</td>
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<td>Serbo-Croatian</td>
<td>150,255</td>
<td>70,954</td>
<td>238,865</td>
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<td>Armenian</td>
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<td>149,694</td>
<td>202,708</td>
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<td>Persian</td>
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<td>312,085</td>
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<tr>
<td>Chinese</td>
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<td>1,319,462</td>
<td>2,022,143</td>
<td>2,808,692</td>
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<tr>
<td>Japanese</td>
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<td>427,657</td>
<td>477,997</td>
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<td>Korean</td>
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<td>626,478</td>
<td>894,063</td>
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<td>Vietnamese</td>
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<td>843,251</td>
<td>1,224,241</td>
<td>1,573,720</td>
<td>231.9</td>
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</table>

The data above shows a 232.8% increase since 1980 until 2010 of those who speak Spanish at home.

For more information regarding the 2010 Census on Languages visit:

Appendix D: CSAP Scores broken down by Language Groups, Intervention, and Grade.

(Cobb, Vega, Kronauge’s 2006 article: Effects of an Elementary Dual Language Immersion School Program on Junior high School Achievement)
References


