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The Effects of Bilingual Intervention on Alphabet Knowledge and
Emergent Literacy Skills

By

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A Graduate Field Experience

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Abstract

This research study explored the effects of bilingual intervention on the development of alphabet knowledge and emergent literacy skills in bilingual kindergarten students. The study consisted of 15 African- American or Hispanic participants' ages five and six, 7 of which were part of the intervention group. The intervention group received explicit bilingual literacy instruction for six weeks. Three major findings were 1) student participants experienced increased alphabet knowledge in their first and second language 2) students demonstrated growth in emergent literacy skills in their first language and 3), the students' first language development was not negatively affected by the bilingual intervention in the second language. The results indicate that explicit bilingual intervention is beneficial for the development of alphabet knowledge and emergent literacy skills.

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CHAPTER ONE

Bilingual education in the United States has been the center of controversy since its implementation in the early 1800s. Even though bilingual education has been part of the history of education in the United States, it doesn't stand without controversy (Collier, 1995). The controversy emerged due to the influx of immigrants into the country in the past two decades. The influx of immigrants has drastically changes the student population and demographic of many school districts in the United States. With a change of student population educators also face the challenge of teaching these students. What is the best way to reach these students and effectively teach them the necessary academic skills to be successful? Many argue that bilingual education is not cost-effective and promotes first language development versus English language acquisition (Collier, 1995). Supporters of bilingual education on the other hand believe that bilingual education is essential to support academic development of the current student population in the United States. Many supporters have conducted research in order to defend the advantages of teaching and learning in two languages. Most importantly it is critical to remember that bilingual education doesn't seek to replace English language development. Its goal is to develop students' first language in order to transition and flourish in their second language (Cummins, 1991). It is important to recognize and value the complex process that individuals go through when acquiring their first language and the parallel process that takes places when acquiring a second language (Collier, 1995). Many bilingual language models have been created in an attempt to accommodate and promote bilingual education.

There are several bilingual models that are used in schools across the United States (Mora, Wink & Wink, 2001; Lessow-Hurley, 2005). Some might argue that the best model to follow only promotes the acquisition of English. There are other language models that promote the maintenance and development of a child's first language before tackling second language acquisition. These models include a Maintenance model, a Dual-language model and more recently a Bi-literacy model (Mora, Wink & Wink, 2001; Lessow-Hurley, 2005). There has been much research conducted on bilingual language models and their need in order to support bilingual students in American schools (Gomez, Freeman & Freeman, 2005). One model that is relatively new is the Bi-literacy model (Dworin, 2003). This model promotes the development of two languages simultaneously.

Teachers have faced the constant challenge of meeting the needs of this growing population. Many see Bi-literacy as a possible solution to the controversy. Theoretically this model empowers both languages and promotes the development of both simultaneously. This is important for the motivation and learning of the student. Even though this model may be beneficial to students it might present new and even more challenging situations for teachers. Due to the lack of research in this area the Bi-literacy language model was the focus of this research. This research was designed to observe the effects of the Bi-literacy model on the development of early literacy skills of bilingual students through bilingual interventions.

This chapter contains a description of the state, district and school population and academic data. An overview of the programming model and decision-making processes is also examined. A description of the student population that was involved in the project is provided followed by a summary of the best practices related to Bi-Literacy. Finally, chapter one will be brought to an end with an overview of the research project.

Description of the State, District and School

The large urban school district involved in this study was located in the Midwest. During the 2009-2010 school year, the state had 871,262 students enrolled from kindergarten through 12th grade. According to Wisconsin's Information Network for Successful Schools 76.0% of the state's population was white and 8.4% were Hispanic. Other ethnic groups that were included as part of the WINNS data included American Indian (1.5%), Asian (3.7%) and Black (10.4%) (WINNS, 2010). The minority population of the state is very small compared to the district.

During the 2009-2010 school year the school district in this study had 82,096 students enrolled from kindergarten through 12th grade. The number of students enrolled in this district had been decreasing in the past ten years. In the 1996-1997 school year the district had 101,007 students enrolled and in the 1997-1998 school year there were 101,253 students enrolled from kindergarten through 12th grade. This decrease in total student population can be correlated to the decreasing number of white students in the school district. For example, in the 2009-2010 school year, there were 15.2% white students enrolled were as in the 1995-1996 school year there were 23.6% white students in the district. The decrease in white student population can be correlated to the low standardized test scores this district has faced in the past couple of years. While the population of white students in the district has decreased, the district experienced an increase in Hispanic student population in the past ten years. In the 1995-1996 school year the district had a total Hispanic student population of 12.1% while in the 2009-2010 school year the Hispanic population rose to 22.7%. The rise in Hispanic population brought on special challenges that the district had to accommodate for.

When comparing the standardized test scores of the Wisconsin Knowledge and Concepts Exam (WKCE) (2010), the state and district have significantly different proficiency levels in

reading and math. As summarized in table 1 the district falls considerably below the state average in reading.

Table 1

WKCE – Combined Grades 3, 4, 5 – READING (November 2009 Data)

	Number of students enrolled	Advanced and Proficient Test Scores
District	34,474	58.9%
State	433,373	81.6%

Source (WINNS, 2010)

Table 2 also reveals that this school district has fallen behind in math.

Table 2

WKCE – Combined Grades 3, 4, 5 – MATH (November 2009 Data)

	Number of students enrolled	Advanced and Proficient Test Scores
District	34,474	50.8%
State	433,373	77.3%

Source (WINNS, 2010)

Since the district had an increase in English language learners their scores have been included in table 3.

Table 3

WKCE – Combined Grades 3, 4, 5 – English Language Learners (November 2009 Data)

District	Number of students enrolled	Advanced and Proficient Test Scores
Limited English Proficiency (LEP)	669	56.2%
English Proficient	4515	58.9%

Source (WINNS, 2010)

The data indicated that limited English proficient students scored similar to their English proficient counterparts at the district level.

The urban school involved in this study was located in the east side of a large urban city in the Midwest. The school population was of 413 students during the 2009-2010 school year. Of those 413 students, 235 were Hispanics, 94 were Whites and the rest were American Indian, Asian and Black. Compared to the state and district this school had a low Asian population and a large Hispanic population. According to the WINNS database, 29.3% of all students were of limited English proficiency during the 2009-2010 school year (WINNS, 2010). The academic performance of this school is summarized in the next section.

Programming Model and Decision Making Processes

There were major changes in the intervention and language program at the elementary school that provided needed resources for bilingual students. Among these was a major change in language model. Just two years before this study, the elementary school functioned under a dual-language model. Through investigations done by the learning team at the school, a decision was made to switch to a bi-literacy language model. This model implements the learning of two languages, Spanish and English simultaneously. Starting at the kindergarten level, students are expected to receive literacy instruction in their first and second language. This translated to the fact that very young children are expected to learn how to read and write in Spanish and English.

The decision to change language model was promoted by the learning team. The learning team is comprised of staff and administrators. The team met in several occasions to review research and discuss the challenges the school faced and had to propose a solution to staff. Once the decision was made staff had the opportunity to share their opinions and

objections to the change. After much discussion the school as a whole decided that the best adjustment would be to change the way bilingual children were learning to read and write.

The new language model would make needed accommodations and implement much needed interventions to aid student's language and literacy development. Along with this model, bilingual students have additional resources that support their learning. Among these were the English as a Second Language (ESL) program. English as a Second Language facilitates the instruction of English for students that have a first language other than English. The ESL program functioned under a sheltered content environment at the upper elementary level while a structured pullout model was implemented for the lower elementary grades. The English Language Learners (ELLs) that were pulled from the classroom and serviced by the ESL teacher comprised of students from various classrooms at the same grade level and students at different academic levels. Students are not grouped according to their abilities. It is believed that students at a higher academic level will help other students and could be used during instruction for the students that are having a harder time acquiring English. A pullout structure allows children to develop background knowledge before being exposed to the material in the classroom. On the other hand, upper elementary students receive ESL support in the classroom. ESL services are usually offered during Writer's Workshop, science and social studies so students don't miss out on critical literacy instruction.

Student Population for the Research

Several young bilingual children were chosen to participate in this study. The sample of the study ranged in age of five to six years of age. The language proficiency of each student also varied. Each child had a different proficiency level in their first language as well as their second language. The students involved in this study were of Hispanic, African-American and

Caucasian background. I choose a total of 16 students, 7 students who received the intervention due to the lack of basic alphabet knowledge, phonemic awareness and phonological awareness the students possess. Three of the students were English-dominant, three were Spanish-dominant and the last participant was bilingual. An informal classroom assessment that measures the students' alphabet knowledge revealed that these nine students were performing below grade level putting their reading development in jeopardy.

Students Language and Academic Data

According to WINNS data, 3rd grade standardized reading tests showed that 68.5% of all 3rd grade students were advanced or proficient in the 2005-2006 school year and only 50.9% of students were advanced or proficient in the 2009 school year.

Table 4

WKCE – Combined Grades 3– READING (November 2005 & November 2009 Data)

	Number of students enrolled	Minimum Proficiency	Basic Proficiency	Advanced and Proficient
2005	54	N/A	N/A	68.5%
2009	55	10.9%	38.2%	50.9%

Source (WINNS, 2010)

This decrease in performance was not evident after further examination of the standardized math test. Standardized 3rd grade math test scores indicated a growth over the past five years. During the 2005 school year, 40.7% of all the 3rd grade students were advanced or proficient compared to 69.1% of all 3rd grade students performing within the advanced or proficient spectrum in the 2009-2010 school year.

Table 5

WKCE – Combined Grades 3– MATH (November 2005 & November 2009 Data)

	Number of students enrolled	Minimum Proficiency	Basic Proficiency	Advanced and Proficient
2005	54	N/A	N/A	40.7%
2009	55	20.0%	10.9%	69.1%

Source (WINNS, 2010)

After the 4th grade data was analyzed it revealed that about half of the student population scored at the advanced or proficient level. The standardized reading score was 51.7% during the 2009-2010 school year, compared to 72.7% in the 2005 school year (see Table 6).

Table 6

WKCE – Combined Grades 4– READING (November 2005 & November 2009 Data)

	Number of students enrolled	Minimum Proficiency	Basic Proficiency	Advanced + Proficient
2005	44	N/A	N/A	72.7%
2009	48	29.2%	27.1%	51.7%

Source (WINNS, 2010)

This decrease over the years was also experienced with the standardized math scores. The 2009-2010 school year revealed an advanced or proficient score of 52.1% while 75.0% of all students advanced or proficient in the 2005 school year (see Table 7).

Table 7

WKCE – Combined Grades 4– MATH (November 2005 & November 2009 Data)

	Number of students enrolled	Minimum Proficiency	Basic Proficiency	Advanced + Proficient
2005	44	N/A	N/A	75.0%
2009	48	31.3%	16.7%	52.1%

Source (WINNS, 2010)

When compared to the 3rd grade data the 4th grade class is performing at a decreased rate.

The 5th grade standardized reading test scores showed 61.2% of all students were advanced or proficient in the 2009-2010 school year, and the 2005 reading scores showed 58.0% of students were advanced or proficient (see Table 8).

Table 8

WKCE – Combined Grades 5– READING (November 2005 & November 2009 Data)

	Number of students enrolled	Minimum Proficiency	Basic Proficiency	Advanced + Proficient
2005	50	N/A	N/A	58.0%
2009	49	16.3%	22.4%	61.2%

Source (WINNS, 2010)

The data indicated a slight growth in reading performance. When the standardized math scores were examined, 69.4% of all students were advanced or proficient in the 2009-2010 school year. In the 2005 school year students scored 24.0% at the advanced or proficient level. This indicated a growth in math performance (see Table 9).

Table 9

WKCE – Combined Grades 5– MATH (November 2005 & November 2009 Data)

	Number of students enrolled	Minimum Proficiency	Basic Proficiency	Advanced + Proficient
2005	50	N/A	N/A	24.0%
2009	49	28.6%	2.0%	69.4%

Source (WINNS, 2010)

The data analyzed above indicate that the performance of 3rd, 4th and 5th grade students at the school fluctuated. Over the past five years the 3rd grade class had experienced a decrease in reading while a growth in math. Unlike the 3rd grade class, it was observed that the 4th grade class scores decreased for reading and math, while the 5th grade class showed growth in both reading and math. This improvement could be accredited to many factors including school programming, staff, home environment, language, culture and motivation. Of those factors this study looked at the importance of social interactions and bilingual development in a bi-literate environment.

Since this study investigated the academic performance of English language learners (ELLs) in literacy, the percentages related to their performance for reading were also examined. The data revealed that there has been a slight decrease in ELL population at the school. Overall the standardized reading scores for grades 3, 4, and 5 have all experienced a decrease in performance.

Table 10

WKCE – ELL Combined Grades – READING (November 2005 & November 2009 Data)

	2005	2009	Trend
Grade 3	55.0%	43.8%	Decrease in performance
Grade 4	45.0%	23.5%	Decrease in performance
Grade 5	26.1%	30.8%	Increase in performance

Source (WINNS, 2010)

In 2005, 55.0% of ELL students at the 3rd grade level were advanced or proficient, while 43.8% of these students were advanced or proficient the 2009-2010 school year. In 4th grade 45.0% of ELL students were advanced or proficient in the 2005 school year while 23.5% were advanced or proficient in 2009. Finally, the 5th grade ELL population scored 26.1% in the advanced or proficient category in 2005 while the 2009-2010 school year data revealed that 30.8% of the ELL students were advanced or proficient.

Summary of Best Practices

With the major changes in language model and reading curriculum, the school searched for ways to service students to their full potential. Using age-appropriate curriculums in English and Spanish allowed for the integrity of the model to be maintained. Along with the curriculum, the school strived to provide effective accommodations and interventions for students. A comprehensive literacy plan was put into place that promotes the use of small group instruction to provide appropriate and effective instruction for bilingual students. Research shows that intervention and small-group explicit instruction is critical for a student's success in literacy (Vukelich, Christie & Enz, 2008). This type of intervention also allowed the new language

model to function to its full potential. Providing student-specific instruction helped students succeed in their first language as well as their second language.

Recently much research is available that allows for a deeper understanding of bilingual education. The following chapter provides a summary of research articles that explain best practices related to this research study. Many researchers have investigated the effectiveness of dual-language bilingual models. For example, current studies, such as Dworin's 2003 article, "Insights into bi-literacy development: toward a bidirectional theory of bilingual pedagogy," described the importance of gaining additional knowledge of this new direction in bilingual education instead of focusing on less effective language models. He explained that schools have the power and potential to assist students in developing bi-literacy and the study also highlighted the importance of re-examining children's development in two languages (Dworin, 2003). Additionally, the research in the area that investigated bilingual models also indicated the benefits of dual-language programs.

Another important aspect of bilingual education and development is social interactions. Research indicates that students need to interact with peers and adults in order to develop their first and second language. Among the many perspectives and theories that explain this complex process is the social interactionist's perspective that stresses that a child's environment affects language development (Vukelich, Christie & Enz, 2008). Several of the studies that were examined more in depth in the following chapter agree on the important influence social interactions have on the overall success of language and literacy development in a child's second language. In the 2008 article, "Emergent bi-literacy in young Mexican immigrant children," the author, Patricia Azuara explored the relationship between specific learning experiences and how these experiences shaped their bi-literacy development. Moreover, research suggests that social

interactions such as parent-child interaction related to language influences how children view and value a certain language.

Additional research on the final component related to this study focused on emergent/early literacy skills expected in young bilingual children. According to the research study, “Emergent literacy skills in bilingual children: evidence for the role of L1 syntactic comprehension,” a cross-linguistic relationship exists between phonological awareness as well as syntactic development (Gabriele, Troseth, Martohardjono & Otheguy, 2009). Moreover, other research indicated that the emergent literacy skills of Spanish-speaking ELLs could be enhanced using a small-group emergent literacy intervention (Farver, Lonigan & Eppe, 2009).

Based on the current research and best practices in the area of bi-literacy and emergent literacy skill development, the purpose of the research project was to support literacy development in two languages simultaneously. The school where the project was conducted was in the second year of implementing a bi-literacy language model that supported the investigation. To be successful in a bi-literacy language program students have to develop emergent literacy skills in both target languages. The purpose of this research study was to give explicit literacy intervention in both languages to the students’ in the bi-literacy language program.

Overview of My Research Project

The district at hand had experienced an influx of bilingual students in the past few years. With that said, it was critical that the education and development of these students become a priority.

According to Vukelich, Christie and Enz (2008), scientific research indicates that students need appropriate phonological processing skills in order to be prepared to learn alphabet knowledge. I believe I can improve the amount of phonics knowledge my students have by

laying down the proper foundation of phonemic and phonological awareness. Scientific research also indicates that students must develop these skills in their first language before tackling a second language (Cummins, 1981). My research though, will also consider the effects of a Bi-Literacy language model, where students are expected to develop their first and second language simultaneously.

The students involved in this study were of Hispanic, African-American and Caucasian background. A total of 16 subjects were chosen, 7 of which received the intervention due to the lack of basic alphabet knowledge, phonemic awareness and phonological awareness the students' possessed. Three of the students were English-dominant, three were Spanish-dominant, and the last participant was bilingual. An informal classroom assessment that measures the students' alphabet knowledge revealed that these seven students were performing below grade level putting their reading development in jeopardy. Due to this observation and supported by research I hoped to increase these students phonological and phonemic awareness so they were able to develop their alphabet knowledge (Vukelich, Christie and Enz, 2008).

The students in this research participated in a six-week study in which they received intervention on alphabet knowledge, rhyming and phoneme segmentation/blending. The researcher conducted three weeks of the intervention in English while the other three weeks were conducted in Spanish. Students met for 5 days a week for 45 minutes. During those 45 minutes students received 10 minutes of alphabet knowledge, 15 minutes of rhyming, and 20 minutes of phoneme manipulation. These 20 minutes included phoneme segmenting, phoneme blending, phoneme isolation, letter-sound matching between words and letter-sound isolation between words. Students were explicitly taught how to segment using their bodies, by touching their head, waist and feet to help them locate individual phonemes. This technique also helped

students when isolating and matching letter sounds/phonemes between words. During the 10 minutes of letter name and letter sound practice the students used “alphafriend” cards from the District mandated Journey’s Reading curriculum. I decided to incorporate the usage of these “alphafriend” cards due to the high interest on the students’ behalf. Research indicates that students usually have inherent high interest on activities that incorporate the usage of their names (Vukelich, Christie and Enz, 2008). Since this study was conducted later in the school year, students had already learned their classmates’ names. Therefore, the use of the “alphafriends” substituted their classmates’ names, but helped retain the high interest of the students. During the 15 minutes of rhyming the researcher incorporated songs, nursery rhymes, games, puzzles and picture cards to the intervention. The students’ progress was measured by using pre- and post- test on alphabet knowledge (Appendix C & Appendix D) and phoneme manipulation. All the assessments mentioned were given in both Spanish and English. The researcher was interested in finding whether or not the students made progress by receiving intervention in two languages. The data also gave some insight into which language group made gains or stayed the same.

Conclusion

Overall, I provided the students the opportunity to develop their emergent literacy skills through small-group explicit intervention. Students experienced the small-group intervention in their first-language as well as their second language. Using best practice techniques such as rhyming, songs, total physical response and phoneme manipulation students were able to receive the needed intervention to develop necessary alphabet knowledge that helped them begin to be successful readers. There is a need for additional research in the area of bi-literacy intervention. While this chapter has addressed the background and importance of the research, the next

chapter will review research studies that support the use of bi-literacy language programs as well as small-group intervention for the success of bilingual students.

CHAPTER TWO

Introduction

Before implementing my research design, many current research articles were reviewed in order to support the research process. The general direction my research design took was to look at the effects of bilingual intervention on children with various levels of language dominance. This research topic was very complex and challenging. It encompassed elements of emergent literacy including alphabet knowledge, phonics, phonemic awareness, language, vocabulary, and second language acquisition. Therefore, articles related to these topics were included in this chapter. The articles in this chapter were summarized and categorized into three broad categories: social interactionist influence on language and literacy development, effective bilingual models, and emergent literacy development in bilingual children.

There has been much research conducted investigating language development in children. Among the many perspectives and theories that explain this complex process is the social interactionist perspective that stresses the importance of a child's environment on language development (Vukelich, Christie & Enz, 2008). From childbirth children begin to develop language and later on literacy skills depending on their interactions with others around them. This process continues once the children are in school and interact with peers and other adults. The authors of the three articles in this section take a closer look at how social interactions influence bilingual students' language and literacy development. Reyes and Azuara's (2008) study on young Mexican immigrant children found that children do not construct meaning on their own; instead they need to socially interact with family and friends in order to develop and build the knowledge they have about language and literacy. Martinez-Roldan and Malave's (2004) case study of a Mexican-American boy and his family also found that a child's emergent

ideas about language are influenced by his parents' discourse of language. In addition, Gort's (2008) study investigated the effects of peer interactions on language and writing development. In the following section the effects of social interactions on language and literacy development will be examined.

Social Interactionist Influence

The purpose of a study by Reyes and Azuara's (2008) was to focus on early biliteracy development and how children's environment affects this development. The study began by following two main questions: 1) What knowledge of biliteracy do young emergent bilingual children develop in the early years? 2) How do context and the specific language of their environments influence the development of biliteracy in young Mexican Spanish-English bilingual children?

The research was formulated by drawing information from two theoretical frameworks. The first was a sociocultural framework, which focuses on how children learn language through their social interactions with people in their immediate context. The second was ecology of language framework, which incorporated ideas and theories from anthropology, biology, educational linguistics, and psychology. This framework outlines the importance the child's environment plays in their dual language development. The researchers stated that in order to gain insight into biliteracy development it is critical to consider the importance of both languages and how these two languages interact with one another.

The sample of this study consisted of twelve 4 and 5 year old emergent bilingual children. These children had a first language (L1) of Spanish and a second language (L2) of English and had been exposed to both languages from a very early age. The children and their families lived in Tucson, Arizona. This community was more than 30% Hispanic at the time of

the study and was predominantly bilingual. The children attended a public, state-funded preschool that was part of an early education program in the district. All the children in the study qualified for free or reduced lunch. The school functioned under a monolingual English model. The teacher was not Hispanic but did use Spanish in the classroom to make clarifications and to communicate with parents. The teacher's ability to speak Spanish allowed parents to feel comfortable and allowed parents to view the teacher as a friend of the family by the end of the three-year study.

The researchers used a variety of data collection tools to guide procedures of this study of biliteracy. The subjects of this study participated in a reading assessment and were also interviewed at school to learn more about their phonemic awareness. Students were also observed in their home environment. The researchers observed the subjects during a variety of activities in their home environment to get a more accurate representation of their language use at home.

The study began with the authors assessing the students' language development by using the English and Spanish versions of the Peabody Picture Vocabulary Test – Revised (Dunn & Dunn, 1981; Dunn, Padilla, Lugo & Dunn, 1986), in order to get a baseline of their comprehension abilities. Then, the students' family and friends were interviewed to get a better understanding of the language environment in which they functioned. Lastly, the students' reading and writing knowledge was assessed with an environmental print awareness task, a book handling task and a concept of print task. When using the environmental print assessment tool the examiner asked students to identify labels by name. Students were scored on their ability to name, use a generic name, name the function of the product or correctly "read" the name of the label. For the book handling assessment, students were asked to read a book to the teacher in

one session, individually, during center time. If children refused to read the teacher read to them and asked them questions that elicited the children's knowledge of general concepts of print such as: directionality, book format, identification of letters and words and book terminology.

Several findings surfaced after the analysis of the data collected was complete. First, the authors found that children were developing knowledge and becoming metalinguistically aware of print in both languages. This means children at early ages begin to understand that Spanish and English are written in different ways. Students were able to identify these differences depending on the word's intonation and phonology when pronounced. Secondly, it was found that families used a variety of written ways of communication in both languages. This means students were exposed to both written languages from an early age. Lastly, the finding helped the authors clarify that learning was reciprocal. The adults in the child's life served as experts who scaffold print knowledge, whereas the child served in many cases as a translator for the adults. As an overall finding, researchers stated that children do not construct meaning on their own; instead they need to socially interact with family and friends in order to develop and build the knowledge they have about language and literacy.

Reyes and Azuara (2008) discussed that the environment and context in which children are exposed greatly affected their language and literacy development. Children's social interaction with parents and peers also influence their views and opinions of school and the importance of language. While this study looked at the bilingual language development of students the next article examined the parental influence on language development of a bilingual child.

Carmen M. Martinez-Roldan and Guillermo Malave conducted a qualitative case study of a seven-year old boy and his family. The research was conducted to get a better idea of how

the “child’s emergent ideas about language develop and how his parents’ ideological discourses on language” effect the child’s language development (Martinez-Roldan & Malave, 2004, pp 157).

The sample of this study consisted of one child and his parents. This family had been part of two previous research studies that Martinez-Roldan and Malave conducted. Steve and his family were chosen for this case study because they demonstrated a negative perception of the Spanish language and Spanish speakers, even though Steve and his father were also Spanish speakers. Steve was a student of a public elementary school in the southwest of the country. The students in this school were predominantly of Mexican descent and received instruction that operated under a dual language bilingual model.

The researchers used a variety of data collection methods to guide the study of biliteracy in the case study. Observations and videotaping of Steve’s language use were collected while in school and at home. Steve and his family were also interviewed and the researchers conducted home visits to get a better idea of how the Spanish language was used in the household. The data collected from home visits and parent interviews yield important findings about the development of children’s language beliefs and the role of Mexican immigrants and Mexican-American parents on this language development. Once the data was collected, the researchers continued by studying the language used by the student and the parents. The researchers used critical discourse analysis (CDA) to interpret the data and results.

The findings suggest that Steve was developing a negative image of Mexicans that may affect his self-image as he becomes aware that peers in and out of school refer to him as a Mexican boy. Steve also had contradictory emergent ideas about being bilingual. Steve demonstrated this when reading a story and commenting that it wasn’t fair that the little boy in

the story was not able to speak Spanish at school. He continued by stating that he was able to use both languages to communicate in school. Steve's comments are contradictory because he usually had negative comments and ideas of students using Spanish in the classroom. Steve stated Spanish speakers were not smart. This statement negates his earlier discussion of the story and the actions of the teacher in the story being unfair with the Spanish-speaking student. There was yet another instance when Steve was reading a book in class and stated that he did not want to speak Spanish. Researchers were concerned when they found that Steve did not want to speak Spanish because he believed that was what his father wanted from him. The literature discussion and texts chosen for literacy instruction in Steve's classroom allowed students to develop ideas and attitudes towards the languages being used in the classroom. This type of instruction also brought out how parent ideologies shape children's ideologies of language.

It was also found that Francisco, the father, had very similar contradictory ideas of the use and development of the Spanish language and Spanish-speakers. During an interview, Francisco commented that Spanish-speaking immigrants should not be forced to speak English when they arrive to the United States but during the same interview, he also mentioned that the Spanish language requirement for English-dominant students at the school his child attends was an abuse against his child. Francisco's negative ideologies toward the Spanish language transferred over to Steve during their everyday social interactions at home. This indicates children's social interaction with peers and adults affect their beliefs and usage of language. More importantly, the social interactions children experience out of school influence how they view language in school. The findings in this study point out the importance of considering the factors that affect children outside of the classroom and school context. These factors will influence the child's development of literacy and language during early childhood. The

following article focuses on the interaction between classroom peers during writing. The students in the following study were part of a dual-language classroom and were expected to use Spanish as well and English to communicate in their writing. The authors of the following article were in search of the effects of peer interaction on writing development as well as the language students choose to write in.

Mileidis Gort's (2008) study on bilingual children focused on the interactions that occur between students in a two-way partial immersion bilingual model during writer's workshop. The study began with two guiding questions: (1) what is the nature of spontaneous peer interactions across Spanish/English integrated learning contexts? (2) What role do Spanish-dominant and English-dominant emergent bilingual peers play in mediating each other's dual language and literacy learning in a two-way partial immersion (TWPI) program?

The sample of this study consisted of six first graders in a Spanish/English Two-Way Partial Immersion Program in an urban and culturally diverse elementary school located in the northeast of the United States. These students were also identified as having a history of working well in pairs or small groups. The six children represented a variety of oral language and literacy abilities in Spanish and English. At the time of the study, this school serviced the highest percentage of ELLs in the district. It is also important to keep in mind that a classroom that supports second language learners in a two-way immersion program should provide an environment that encourages students to use the target language and provide an even number of proficient speakers of the target language for others to hear. The high percentage of English Language Learners (ELLs) in this school compromises this bilingual program to have the needed demographics for it to function properly.

In order to collect significant data, the researchers used a variety of data collection tools. The researcher used field notes and corresponding audiotapes from Spanish and English writer's workshop classroom observations. There were also over 300 student artifacts collected and audiotapes and field notes from bi-weekly interviews with the six students of the study focusing on peer collaboration during writing workshop.

The study was conducted over a period of six months where the researchers became part of the first grade community as researchers and observers. They shadowed the focal students and collected field notes and audiotapes of what the six students said and did as they created stories during writer's workshop. The researchers would be in the classroom from 45 to 60 minutes and also collect field notes on student's behavior, dialogue, audiotape peer interactions, documented informal conversations with the teachers, collected student work samples and interviewed focal students.

Significant findings arose after analyzing the collected data. First, it was recognized that spontaneous peer collaborations emerged naturally and frequently within and between Spanish and English writer's workshop contexts. These interactions provided opportunities for students to have ongoing negotiations of language and its meaning through "hybrid" literacy practices. Hybrid refers to the blending of Spanish and English languages and all the situated meaning that comes along with a student's cultural and social group membership. These peer interactions also helped students create intended meaning during the writing process and increased new vocabulary in the target language. Secondly, the researchers found that bilingual interactions were much more common during Spanish writing workshop than during English writing workshop sessions because students were more proficient in English than Spanish. Finally, this study supports that a two-way bilingual program is able to provide bi-directional learning

opportunities for all participants. These findings support the social interactionist theory that peer interaction supports language and writing development. While all the articles in this section support the theory of social interactionism in language development the following section of research articles will explore the effects of bilingual language models on bilingual students as well as their effect on non-bilingual students.

Bilingual Language Model

Barbara Culatta, Maren Reese and Lee Ann Setzer's (2006) study took a closer look at how effective early literacy instruction was in a Dual-Language bilingual program. The author's hypothesized that children from low socioeconomic households as well as second-language learners could attain phonological awareness and word recognition skills in both languages (English and Spanish) when instruction was combined with a highly engaging program (Culatta, Reese & Setzer, 2006).

Students from two half-day Spanish-English dual language kindergarten classes from an elementary school in Utah participated in this study. A total of 38 students were enrolled in the dual language program in order to provide cultural enrichment and appropriate literacy instruction. The student's language dominance was determined using parent questionnaires, teacher observations, children preference and information gathered from school's application. From the information gathered it was established that 11 students were Spanish-dominant, 4 students were bilingual, 5 students were exposed to Spanish but were English-dominant and 18 students had only been exposed to English. Along with the variations in language, the sample population also had learning disabilities and come from low socioeconomic households.

A Systematic and Engaging Early Literacy (SEEL) program was used with the participants because it was a meaning-based instructional program that used hands-on theme-

based activities to highlight target literacy patterns (Culata, Reese & Setzer, 2006). The themes from the literacy program were introduced in a weekly rate to the whole group of kindergarteners. The same theme was then infused and used to teach small groups. The small groups received explicit literacy instruction. The small-group instruction included phonological awareness and early phonics skills. Activities that incorporated rhyming, alliteration, sound blending, and letter-sound associations were used to increase literacy skills among the participants. The explicit literacy instruction in the small group lasted 12 weeks. During those 12 weeks the participants received an additional 55 minutes of explicit literacy instruction in both Spanish and English.

The data collected indicated Spanish-speaking children made significant improvement over the course of instruction. The SEEL instructional program used in the study was effective in teaching the students literacy skills in Spanish and English. One interesting finding was that Spanish-dominant students did not master the skill of rhyming but did become proficient in alliteration activities. The author's hypothesized that the delay in rhyming development was due to the lack of exposure students received of Spanish rhyming. It was noted that Spanish-dominant students participated equally in activities presented in Spanish or English, even though they needed additional language support and scaffolding when instruction was in English. Some Spanish-dominant students also voluntarily engaged in additional alliteration activities, adding to their mastery of that literacy skill. English-dominant students showed improvement on all early literacy skills specially rhyming and alliteration. Even though English-dominant students demonstrated a consistent increase in literacy skills, at the beginning of the study they were reluctant and hesitant when they received Spanish instruction. This fear of their second language diminished by week two and three; at that point it was observed that the English-dominant

students participated fully in the literacy activities. Overall, all students made gains and developed early literacy skills.

This study revealed very important variables related to early literacy instruction in a Dual-Language environment. The language of instruction as well as the size and type of activities were explored. In the next study the authors compared the literacy development of children who received different proportions of instruction in English and Spanish in a Dual-Language setting.

Lopez and Abbas collaborated in a 2004 research study that investigated the effects of a two-way bilingual setting, also known as a dual-language program. The purpose of the study was to explore the effects of a two-way bilingual education on the language development of English in ELL students in kindergarten and first grade. The study also looked at the language development of English-dominant students enrolled in the two-way bilingual program. The Spanish and English dominant students participated in an Extended Foreign Language (EFL) program whose objective was to develop and maintain students' oral and literacy skills in both languages. Literacy proficiency was determined using the student's reading and writing skills.

The participants in this study included 87 kindergarten students and 128 first-grade students. Students were classified using their language proficiency score. Students that were classified as gifted or of special needs were excluded from the study because they did not participate in the EFL program on a full-time basis; instead they were pulled-out during the day to receive special education support. The participants were students in an elementary school in the south who was being impacted by immigration to the region. The school as well as the district was predominantly composed of Spanish-speakers.

The study used an experimental group as well as a control group. The participants were not randomly placed. Instead a letter went home to parents explaining the experiment and asking for their participation. Once the participating students were identified they were placed in one of two homerooms. One of the homerooms housed English language arts and social studies while the second homeroom focused on math, science and Spanish language arts. The students switched in the middle of the day to receive instruction from the other teacher. Students in the experimental group received 2 hours of English language arts, 30 minutes of independent reading, 30 minutes of social studies in English, one hour of math in English, one hour of language arts instruction in Spanish and 30 minutes of science in Spanish on a daily basis. The students in the control group received instruction only in English, except for a weekly average of 2.5 hours of language arts in Spanish. All the teachers worked together to plan and make sure that the same curriculum was offered to all students. The only difference should be the amount of Spanish and English being used in the classroom.

The results of the pre-test indicated that a significant difference existed between the experimental group and control group. The control group had a better understanding of alphabet knowledge, sight word mastery as well as writing skills. These results supported the need for an intervention group due to their disadvantage in early literacy skills. At the completion of the program students underwent additional testing. The kindergarten post-test revealed that there was a decrease in the achievement gap between experimental and control group. The results demonstrated students in the experimental and control group both mastered writing and sight word skills. However, the experimental group remained behind the control group in the alphabet skills test. The authors' believe that difference could be due to the imbalance of proficient

English speakers in the two groups. The control group seemed to have more proficient English-dominant students than the experimental group.

The first grade post-test revealed that the two groups of children did not differ from each other in any of the seven indicators of achievement. The study found that after one academic year, there was no statistically significant achievement gap between the experimental and control group. The only variation between the groups that was found was that more students in the kindergarten class were of low socioeconomic status, which could have accounted for the slight difference in the alphabet skills tests.

This study had meaningful implication that could be useful in a dual-language environment. The following article looks into the academic achievement of African-American students in Two-way bilingual programs.

The purpose of a study by Nicoladis, Taylor, Lambert and Cazabon (1998) was to investigate whether two-way bilingual programs are as effective for African American students as they appear to be for minorities as well as majority language students. The unique structure of a two-way bilingual program allowed the researchers to explore the extremely delicate and controversial question of racial differences, specifically, “the relative contribution of sociocultural/environment factors and genetic/biological factors in determining the intellectual potential and academic achievement of African American students” (Nicoladis, Taylor, Lambert & Cazabon, 1998, p 134).

The students included in this study were enrolled in a voluntary two-way bilingual program in Cambridge, Massachusetts. The program strived to have an equal number of Spanish-dominant and English-dominant students as well as equal representation of language. The dual-language program was also trying to include more African-American students in the

student demographic, starting in the 1996-1997 school year. The study lasted seven years and there were a total of 278 participants.

Participants were enrolled in language equal classrooms, and received instruction in both target languages. The participants in the study were enrolled in a dual-language program that was developed by the Cambridge School Board and has been operating for over 10 years. The students received Spanish instruction for one week and would rotate to another teacher who would deliver instruction in English. The content of the weeks were not repeated or translated, instead the English instruction week build and continued were the Spanish week had left off. In addition to the language balance the school board in this district insisted that the racial balance of students be maintained in order to preserve the parameters of a dual-language program. This consistency in language program served as the foundation and procedure for the study and allowed for data to be collected on the racial variables the authors were interested in.

In order to collect information regarding English language progress and performance, Lopez and Abbas conducted standardized test with the participants. Students were administered three standardized tests: the California Achievement Test (CAT, 1985), the Spanish Achievement in Bilingual Education (SABE, 1991) and the Raven Coloured Progressive Matrices (Raven, 1986). The CAT measured students' English achievement in reading and math. All students were assessed with the CAT test. The SABE measures Spanish language achievement in reading and math. All students were assessed by the SABE. The final assessment, the Raven was also administered to all students. The Raven, unlike the other two assessments, measures non-verbal intelligence in order to determine whether the difference in achievement between English and Spanish can be attributed to prior differences in non-verbal intelligence among the groups.

The findings from the Raven Test revealed that the performance of African American students compared to white students is consistent with the national norms in terms of performance and achievement. In terms of Spanish achievement, African American children in the early grades performed equal to their majority peers. This finding supports the notion that sociocultural rather than genetics influence academic underachievement among African American students. In order to be consistent with the genetic interpretation, African American students would have had to perform poorly in Spanish when compared to their white peers. Since this study found that African-American students were performing at an equal level on second language variables as white students, the authors concluded that cultural factors have some part in the explanation of low scores on English achievement test. One additional finding was that these same results were not found in upper grades.

The following study takes a closer look at a new language model that has quickly gained popularity among bilingual schools. Joel E. Dworin examines the world of Bi-Literacy development.

Joel E. Dworin (2003) examined English-Spanish bi-literacy development among elementary school children. Bi-literacy is slightly different than dual-language because it seeks to develop students reading and writing skills in two languages simultaneously. Dworin's article titled *Insights into Bi-literacy Development: Toward a Bidirectional Theory of Bilingual Pedagogy* looked to focus on recent theoretical perspectives that described bi-literacy and its relevance on the development of bilingual education.

The study lasted one academic school year and investigated students' literacy development of Spanish and English in five elementary classrooms, from grades 1 through 5.

Four of the five classrooms participated in the bi-literacy study while the fifth classroom remained as the control group. The exact number of participants was not disclosed.

The researcher used participant observation, handwritten field notes, interview with teachers and students, and the collection of analysis of reading and writing sample to collect data throughout the school year. Dworin used a case study approach to document specific students' dual language and literacy development in the bi-literate classroom. Instruction in the classrooms varied in literacy activities used to teach. Some classrooms used basal readers in both languages and worksheets during writing instruction. Other classrooms emphasized the used of student inquiry where students actively used reading and writing in studying a variation of topics. Students in these classrooms also collaborated with peers to complete group and individual work. The data collected allowed the author to study emergent patterns. The field notes collected were coded and analyzed for themes and content covered in the classroom. The author also analyzed miscues during reading samples, coded content of transcribed interviews with students and coded informal conversation held between teachers and students to determine themes and topics.

The first finding was a key factor in the development and academic achievement of a bilingual student is a child's interest and desire to become bi-literate. The study revealed that children develop bi-literate skills at different rates and their development deviates from affixed sequence in literacy learning. Instead children were writing in their second language prior to developing oral skills in the second language. This finding alters the belief that children's bilingual progress is dependent on oral language ability. It was also found that many students were more proficient speakers in Spanish than English but better readers in English. Overall, it

was found that students' development in a bi-literacy environment is unique to the individual student.

The research articles summarized above took a deeper look at dual-language bilingual models and their effectiveness in reducing the achievement gap, effectiveness for students other than white and Hispanic background, and how dual-language could give a new way to bilingual education where students are learning literacy in two languages simultaneously. The following articles investigate the appropriate and expected early literacy skills that students in bilingual setting could be developing.

Emergent Literacy Development

Sylvia Linan-Thompson, Diane Pedrotty, Shirley V. Dickson and Kamiar Kouzekanani (2005) conducted a quantitative study of at-risk Spanish-speaking kindergarten students. These students had fallen behind their peers in their Spanish reading development. The study was conducted to see if an explicit and systematic Spanish literacy instruction would help these students. The researchers took into account how important it is for students to develop their first language in order to have literacy skills transfer to develop English literacy skills.

The sample of this study consisted of 128 Spanish-speaking kindergarten students. Of these 128 students, 70 were at one school and 58 were at a second school. Both schools were Title I elementary schools in an urban area of the southwest. The schools were matched on student demographics and achievement. All the participants were about the same age, and equal number of boys and girls participated from both schools. The students were divided into two groups. The Level 1 group included the students to be considered at level learners and the Level 2 group consisted of the at-risk students at both schools.

The researchers used limited number of data collection methods to guide the study of the effectiveness of Spanish literacy intervention. The researchers used pre-test and post-test results of the three subject groups to judge the effectiveness of the intervention. Classroom teachers administered the Tejas Lee (Texas Education Agency, 2000), which is a Spanish inventory that evaluates reading development and comprehension skills and the Rapid Spelling Test. The students were assessed with the Tejas Lee in early January and labeled as members of the Level 1 or Level 2 group. The students who were labeled as members of the Level 2 group received an intervention focused on systematic Spanish literacy instruction from the classroom teacher three times a week for 20 minutes each session. During the intervention sessions, students from the Level 1 group participated in independent literacy activities. The intervention included a total of 12 sessions. These sessions included phonological awareness, phonics, word and sentence reading, writing and spelling. Teachers focused on each skill for about 5 minutes during each session of reading instruction.

The results of the study were computed by comparing the pretest and posttest of the Tejas Lee and the Rapid Spelling Test. The student scores indicated that when comparing the Level 1 group to the Level 2 group, all pretest differences were statistically significant. After the intervention was implemented, the students were given a posttest. The results of the posttest indicated that the students in the Level 1 group outperformed students in the Level 2 group. When comparing the Level 2 groups from the experimental school and the control school, the researchers found there were no statistically significant differences between the performances of these two at-risk groups. After the intervention, researchers found there were no significant differences between the intervention students and the at-risk control group of students on any measure.

The researchers also pointed out that at the end of the intervention, the experimental group demonstrated they were performing at the same level as their at-level peers when comparing skills such as: letter naming, letter sounds, initial sound identification, syllable segmentation, syllable blending and word identification. The study also found that when comparing these same two groups, the experimental group was not able to perform the same on more difficult phonological awareness skills as the at-level group. Even though the intervention did help the experimental group develop more skills, they continued to fall behind their at-level peers.

This research study is able to set a baseline for the skills that Spanish-speaking students can and should develop in order to be prepared to acquire a second language. The authors of the following study, however, explored other variables that influence early literacy development.

Elsa Cardenas-Hagan, Coleen D. Carlson, and Sharolyn D. Pollard-Durodola (2007) conducted a research study with a large group of bilingual kindergarten students. The researchers were searching for the effects of the students' initial first and second language proficiencies on their development of phonological skills in their second language dependent on the language of instruction. The researchers stated that knowing the proficiencies and deciding the best language of instruction is critical in the language and literacy development of students (Cardenas-Hagan et al., 2007). The researchers were aware of the significance that phonological awareness plays in the ability to read and they were also aware that much of the research examines the effects of their first language (L1) on their second language (L2), but not necessarily the variables that might be influencing this language and literacy development. They hypothesized that the language of instruction is one variable that greatly influences the development of literacy regardless of the proficiency level of the student's first or second

language.

The sample of this study consisted of a total of 1016 bilingual kindergarten students. The participants of this study lived in urban cities in Texas and California. There were a total of 35 schools that participated and these schools included bilingual schools that functioned under a dual language model and transitional bilingual model. There were also a few schools that were an English immersion school where English Language Learners (ELLs) did not receive any instruction in Spanish. The data for this study were collected during the first year of a longitudinal study that followed the sample of kindergarteners until they reached second grade. All the students were randomly selected based on the criteria of being Spanish speakers and having limited English language skills when they were in kindergarten.

The researchers used pre-test and post-test results for all participants. The assessments used in the study included the comprehensive test of phonological processing (CTOPP; Wagner, Torgesen & Rashotte, 1999), and the Woodcock language proficiency battery (WLPB-R; Woodcock, 1991). All the assessments were administered in English and Spanish to the participating students by trained research staff. The assessments lasted anywhere from 45 to 90 minutes and were always conducted in the same testing area. Another method used in the study was the timed reading record observation (TRR), which tracked what language the classroom teacher used during instruction. The research assistants collected data three times during the school year: during mid-fall, mid-winter and late spring. This study has a very large population and had many schools involved. The bilingual language model used at each school was recorded and was used to analyze the results. Each school followed its bilingual language model to teach letter-sound relationships, alphabet knowledge, phonological awareness, and oral language.

Since the language of instruction was the focus of this study, the language used during instruction was measured and compared to the language model implemented at that school.

The results of the study showed that at the beginning of the school year students were able to identify about one third of the names or sounds of the letters of the alphabet in Spanish and English. Students were also able to correctly answer about one fourth of the phonological awareness items in both languages. Finally, the data revealed that students came to kindergarten with higher oral language in Spanish than English. The researchers reminded the reader to keep in mind that even though the students' oral Spanish language was more developed, they were still below the norm in both languages. There were significant changes in students' scores at the end of the school year. The scores of letter name and sound identification skills in both languages went up. The students scored 71% in Spanish and 67% in English. Phonological awareness skills were also higher by the end of the school year. The students scored 44% in Spanish and 39% in English. Oral language on the other hand did not see any improvement in either language over the course of the year.

After analyzing the results the researchers supported the theory that skills in L1 can positively influence the acquisition of skills in L2. The students with stronger L1 skills performed better on the assessments in their L2 at the end of the school year regardless of the language of instruction. Students who had low L2 did not see a significant increase in skills in L2 at the end of the school year.

The findings of this study support the theory that development and mastery in L1 can positively affect the progress made by students in their L2. The following article also focuses on the role L1 plays in emergent literacy skills in bilingual children.

The authors of *Emergent Literacy Skills in Bilingual Children: Evidence for the Role of L1 Syntactic Comprehension* (Gabriele, Troseth, Martohardjono & Otheguy, 2009) examined the emergent literacy skills in a group of English Language Learners (ELLs) who are dominant in their first language (Spanish). The authors investigated whether or not there is a relationship between syntactic comprehension in their first language (L1) and the second language (L2) to the development of emergent reading skills in English. Having concrete knowledge of cross-linguistic factors is critical in the understanding of the role that each language should play in an ELL classroom. The researchers stated the importance of determining whether the relationship between phonological awareness and reading is connected to a particular language and if phonological awareness in the L1 only affects reading on L1 or are there a cross-linguistic relationship.

The purpose of the study was to investigate the role that L1 can play when ELL students have limited proficiencies in L2. This is why the researches chose to focus on Spanish-dominant bilingual children. The authors believed that a strong syntactic foundation in L1 would contribute to better performance on a test of emergent literacy skills in L2. The study also allowed the authors to examine the relationship between L2 syntax and L2 emergent literacy.

The sample consisted of kindergartens from two New York City public elementary schools that implement bilingual education programs. The study was comprised of 22 participants originally but the authors only reported finding on 13 of the 22 participants. The 13 students were Spanish-dominant and the average age was 5.9.

The students performed an act-out task, where the students used stuff animals and props to act out sentences that were read to them by a researcher. Each student completed the act-out activity individually and participated in a warm-up session which included an introduction to the

props and an introduction to verbs. The child was then instructed to listen carefully to the sentence given by the researcher and was then asked to act out the sentence using the appropriate props provided by the researcher. After the warm-up sessions students were given additional sentences and asked to act-out. If students needed to have sentences repeated, the researcher repeated the sentence one time.

The researchers administered the Gates MacGinitie reading test (Riverside Publishing, 2000), which is a standardized test of reading readiness. This test was designed for kindergarten and first grade students and is comprised of four subtests: literacy concepts, oral language concepts, letters and letter-sound correspondence, and listening comprehension. The test was recommended by the participating school district. The study focused on the results of the listening comprehension piece, which measures a student's ability to understand connected text because it is a predictor for later performance in reading comprehension in both L1 and L2. The syntax measure was designed to evaluate children's level of syntactic development and looks at coordinate and subordinate structures. Coordinate and subordinate variables are good indicators of syntactic development in the literature of monolingual children.

The study identified syntactic comprehension as a precursor that was relevant to emergent literacy in ELLs. The relationship between syntax and reading was clear for monolingual readers but needs additional investigation for ELLs. The study also revealed that syntactic comprehension was the stronger predictor of L2 listening comprehension. The data collected from the Gates MacGinitie indicated that performance on coordination was better than performance on subordination in both languages. Students also had more difficulty in the two languages with subordinate sentences. The listening comprehension subtest of the Gates MacGinitie suggests that having a strong syntactic base in either L1 or L2 is related to better

performance on listening comprehension in a student's second language. The data revealed there was a strong connection between scores on Spanish syntax and English listening comprehension.

The implications of this study focus on the role native languages should play in the ELL classroom. This study supports the use of native language in the education of ELL students because syntactic development is not exclusively connected to a specific language. The authors of the study suggested that native languages be used in the ELL classroom when teaching reading but cannot ignore the correlation between L2 syntactic precursors and L2 text comprehension. The findings in this study suggested that the best environment for an ELL student is a bilingual reading program with strong native language support would be beneficial to developing syntactic comprehension.

This article favored of the idea that a bilingual student's first language is critical to the development of second-language literacy. While this study found first language use in a bilingual setting was beneficial to the development of second language literacy skills, the next articles focused on the type of language model that should be used to promote emergent literacy development in both languages.

Research related to effective bilingual language models indicate that there has not been concrete findings on which instructional model surpasses in quality and which one should be used in US classrooms that service preschool ELLs. Farver, Eppe, and Lonigan (2009) conducted a study to compare the impact of a transitional bilingual language model of instruction to an English-only program on the development of Spanish-speaking English Language Learner (ELL) children's emergent literacy skills in both languages (Farver, Eppe & Lonigan, 2009). This was one of the very first studies that tested the impact of an emergent literacy intervention with Spanish-speaking ELL preschool children. The authors of the study focused on two

specific questions: 1) What was the impact of literacy intervention on Spanish-speaking ELL's emergent literacy skills in both Spanish and English? and 2) What was the impact of the intervention when taking into account the language of instruction?

The participants of this study were enrolled in a Literacy Express Preschool Curriculum (Lonigan, Clancy-Menchetti, Phillips, McDowell & Farver, 2005) that focused on the development of oral language, emergent literacy skills, math, science and socio-emotional skills of preschool children. Ninety-four participants were Spanish-speaking ELL students. The participants were enrolled in 10 different classes in a Head Start preschool program. The schools were located in an inner-city neighborhood of Los Angeles. The children came from native Spanish-speaking households and all were born in the United States. The participants were randomly assigned to one of the three test conditions; a control group that received the schools traditional instructional curriculum, a second group that received the traditional curriculum along with small groups instruction following the Literacy Express Preschool Curriculum, and the last group that received their traditional curriculum, small groups of the Literacy Express Preschool Curriculum beginning in Spanish and later being transitioned to English Instruction.

The researchers used parent questionnaires and assessments to collect data on the effectiveness of the intervention. The parent questionnaire collected information related to the parent's education, employment status, occupation, country of origin, years of US residency and languages used at home. A home literacy questionnaire was also administered. This questionnaire sought to collect information regarding parent modeling of literacy activities used at home. These questionnaires helped the researchers learn about the student's background and preschool skills. The assessments used gave the researchers an insight into the children's oral language, phonological awareness and print knowledge. These skills were measured by using

the Preschool Comprehensive Test of Phonological and Print Processing (P-CTOPPP; Lonigan, Wagner, Torgesen & Rashotte, 2002) in English and Spanish. The assessments were administered before the intervention and at the end of the intervention.

The intervention used the core small-group activities from the Literacy Express Preschool Curriculum and those same activities were translated to Spanish and also used with small groups of children. The small-group phonological awareness activities included word games, picture puzzles, and manipulatives to teach ELLs to recognize phonemes. The print awareness group concentrated on teaching children the alphabet using pictures, letters and writing. The researchers followed the scope and sequence laid out in the Literacy Express Preschool Curriculum. The intervention lasted about 21 weeks and offered services to children four times a week for 20-minute sessions.

The results of the parent questionnaire indicated there was no difference among the parents' education, marital status, years of residency, or home literacy modeling. It was also found that the majority of the children that participated in the study were exposed to equal amounts of Spanish and English at home. These findings influenced the language used for the assessments. The assessment on oral language revealed that children used vocabulary from both languages and supported the classroom observations that all the children were bilingual. Therefore, the effectiveness of the intervention was dependent on the language of instruction. This finding supports the idea that traditional preschool environments don't provide a quality educational experience for at-risk children. When comparing the English language development of the participants it was found that students in the English-only group and transitional model group made improvement when compared to the control group. However, the students in the transitional group outperformed the children in the English-only group in print knowledge and

definitional vocabulary. The researchers observed that Spanish-language progress was only made in the transitional group.

This study provided support for the benefit of intensive small-group instruction for Spanish-speaking ELL children and the development of their emergent literacy skills. An implication from this study suggested that intervention used in conjunction with classroom instruction helped at-risk monolingual students as well as ELLs when seeking to develop early literacy skills. In the next study, the researchers examined the effects of maternal language on the development of bilingual children's vocabulary and emergent literacy development during head start and kindergarten.

Even though students can develop literacy skills in their second-language, research supports the value of providing initial literacy instruction in the language students understand best, which is their home language (Walter, 2004). Because home language plays such an important role in literacy skill development Hammer, Davison, Lawrence and Miccio (2009) examined the effects of maternal language on vocabulary and emergent literacy development during early elementary years. The objective of their study was to determine the effects of mothers' language usage at home during head start and kindergarten on children's Spanish and English receptive vocabulary as well as their English emergent literacy development.

The participants of this study included 72 children and their mothers. The average age of the children was 4.1 and there was a greater population of female students. Their mothers exposed all children to Spanish at home since birth. All participants attended an English Immersion Head Start classroom, where the primary language of instruction was English. The students' vocabulary and literacy skills were assessed using the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997), the Test de vocabulario en imagines Peabody (TVIP;

Dunn, Padilla, Lugo & Dunn, 1986), the Test of Early Reading Ability-2 (TERA-2; Reid, Hresko & Hammill, 1991) as well as a language usage questionnaire.

The study didn't focus on a specific intervention. Instead it assessed the participants at various point of the school year. The students were all enrolled in an English Immersion Head Start classroom. The instruction received was specific to that school and was not detailed in the study. The only aspect of the study implemented outside the classroom was the language usage questionnaire.

The data collected from the language usage questionnaires and the various assessments indicated that the children's use of Spanish at home did not impact the children's English receptive vocabulary. This suggests that changes in language used between mother and child or any variations to language interactions, may it be more English, more Spanish or equal amounts of both languages have no influence on the children's vocabulary growth. Additional finding demonstrate that changes in language used between mother and child did have an effect on children's Spanish vocabulary development. Therefore, speaking Spanish at home does not hinder the development of vocabulary in a student's second language instead it strengthens the student's L1 vocabulary development. The researchers also discussed the observation that mothers tend to speak more English with their sons than with their daughters.

Conclusion

In all the studies examined in this chapter, results indicated that bilingual education is beneficial to English Language Learner students as well as majority students (Nicoladis, Taylor, Lambert & Cazabon, 1998). Studies were conducted to get a deeper understanding of the effects of dual-language bilingual programs. It was demonstrated that a decrease in the achievement gap was attained when using quality dual-language bilingual models (Lopez & Abbas, 2004;

Culatta, Reese & Setzer, 2006). A variation in dual-language bilingual education that also increased student achievement was bi-literacy (Dworin, 2003). This new type of bilingual language model is able to give value and importance to various target languages. These bilingual models were successful due to the interaction between students in the classroom. The theory of social interactionism supports that classrooms which allow children to interact with peers will have positive development in language use as well as developing a positive concept of their second language (Martinez-Roldan & Malave, 2004; Gort, 2008; Reyes & Azuara, 2008). The demographics of a dual-language classroom allowed children to do just that in the various studies presented. The decrease in the achievement gap of students in the dual-language setting was accomplished through the development of early literacy skills. The emergent literacy skills of bilingual children benefited from small-group interventions (Linan-Thompson, Bryant, Dickson & Kouzekanani, 2005; Farver, Lonigan & Eppe, 2009) and results from various studies indicate there are benefits to supporting the development of native language use at home as well as in the classroom (Gabriele, Troseth, Martohardjono & Otheguy, 2009; Cardenas-Hagan, Carlson & Pollard-Durodola, 2007; Hammer, Davison, Lawrence & Miccio, 2009). The reviewed studies indicate the importance of bilingual education as well as effective interventions in the development of emergent literacy skills in ELL students.

This research directly related to my research question of whether or not bilingual intervention would affect the development of students' emergent literacy skills. The research summarized in this chapter touched on the importance of quality dual-language education as well as the benefits of a dual-language environment for the language development of bilingual children. These studies inspired me to examine if explicit literacy instruction in English, as well as in Spanish, would increase students early literacy skills. Chapter two reviewed research

related to bilingual education and the development of emergent literacy skills in bilingual students while the next chapter will address and describe in more details the purpose, student population and procedure of this research study.

CHAPTER THREE

Introduction

In the previous chapter, pertinent research was explored in the areas of emergent literacy skills, the social-interactionist theory of language development and effective bilingual models. The purpose of this action research was to determine whether students who received bilingual literacy intervention experienced growth in emergent literacy skills. The research question was: Will bilingual literacy intervention effect the development of emergent literacy skills? Using relevant information from the previously discussed research helped develop the design of this research. The research incorporated bilingual intervention infused into the dual-language program already used at the school. This chapter discusses the sample population, procedures, and data collection process of the action research study developed to understand the effect of bi-literacy intervention on bilingual kindergarteners' emergent literacy skills.

Sample Population

The sample population used in this research study consisted of kindergarten students from a bilingual kindergarten classroom in a public school from a large urban school district in southern Wisconsin. The school functioned under a bi-literacy language model. This language model seeks to develop the literacy skills of students in Spanish and English simultaneously starting as early as the 4 year-old-kindergarten level. The school also receives federal funds under the Student Achievement Guarantee in Education (SAGE) program that allows for more effective instruction through the use of small classroom sizes.

In order to determine the effects of bi-literacy intervention on emergent literacy skills, a 5 year-old kindergarten classroom was used. The classroom consisted of 19 students. Two of the students were special education students with an Individualized Education Program (IEP). These

students did not participate in the research study because they were pulled-out of the classroom during the intervention time to receive special education services. The study sought to work with students that scored in the basic and minimal category of the Measure of Academic Progress (MAP; NWEA, 2012) reading test. From the remaining 17 students, 9 did have the requirements needed to participate in the study. The requirements were that they scored basic or minimal in the MAP reading test. Of those 9, one student left the week the intervention began bringing the total of the intervention group down to 8. Of those eight only seven returned the parent consent form (Appendix A & Appendix B). The intervention group was comprised of those seven students. The intervention group had two girls and five boys. The group can also be described by race as two African-American students and five Hispanic students. The five Hispanic students possessed varying levels of bilingualism, but their first language was considered Spanish. The two African American students were English-dominant.

The remaining eight students from the kindergarten classroom were part of the control group. These students received the regular literacy instruction but did not receive the bi-literacy intervention. While this section described the population, the next section will address the procedures of this study.

Procedure

The purpose of the bi-literacy intervention was to increase emergent literacy skills through small-group instruction, explicit phonological awareness instruction and bilingual intervention. The students participated in a 6-week study that followed a pre-determined lesson plan routine. The specific lesson templates were designed to set a predictable procedure for the students. This was developed with the intent on focusing on the content versus learning a new

activity. A predictable procedure also helped develop a routine that could be used during a Spanish week or an English week, without having to learn new procedures.

During the 6 weeks of the research the intervention group received 45 minutes of explicit literacy instruction. The intervention group received 10 minutes of alphabet knowledge instruction, 15 minutes of rhyming and 20 minutes of phoneme manipulation. The language of instruction changed every week. Week one, three and five were in English while week two, four and six were in Spanish. This procedure was adopted because that was the way students receive dual-literacy instruction normally. The same procedure was followed during the three weeks of English instruction and the three weeks of Spanish interventions.

During the 10 minutes of alphabet knowledge students practiced letter recognition and letter-sound relationships. The intent of the study was to see whether literacy skills such as alphabet knowledge, phoneme manipulation, and rhyming would progress with the bilingual intervention. Alphabet knowledge is a commonly known predictor of later literacy success in students, so a focus on this aspect of literacy was essential. The ten minutes were spent practicing the alphabet using “alphafriends.” The alphafriends were characters from the district mandated Journey’s Curriculum (2011). The alphafriends were included in the research study due to the high student interest. Since the study was conducted later in the school year, students had already learned to identify their own names and the names of their classmates. Therefore, the use of the “alphafriends” substituted their classmates’ names. The alphafriends were a new way for students to practice the alphabet but retained the high interest of the students when it came to learning names that are important to them. The students practiced identifying the letters with flashcards, matching upper and lower case letter, identifying letter sounds with flashcards,

placing letters in alphabetic order, and matching letters with alphafriend cards. A different activity was reserved for each day of the week.

During the 15 minutes of rhyming students were exposed to a nursery rhyme or song. After listening to the song students would listen to the rhyme/song a second time and listen for rhyming words. The last five minutes of the rhyming section were spent playing a rhyming game. Students practiced matching rhyming words, coming up with nonsense words that rhymed with pictures on a dice, or completing a rhyming puzzle. Students learned a chant they would practice before every rhyming section: “Rhyming words are words that sound the same at the end.” The same language was used every day to initiate the rhyming section of the research study. Students were also exposed to a second chant that allowed them to connect rhyming words, for example “Hat, cat they both have –at.” This chant really helped the students understand why words rhymed.

The last 20 minutes of every intervention session was spent manipulating phonemes. Students practiced stretching out words. Participants practiced doing this by using rubber bands to show how to sound out each letter in a word; they would also use their arm to segment three letter sounds. For example a word like cat would be segmented by saying the /c/ sound as one touches the wrist, then the /a/ sound as one touches the elbow and finally the /t/ sound as one touches the shoulder. This total physical response technique helped students slow down and be completely aware of every sound in a word. The same technique was used incorporating the students' body. The participants would touch their head, waist and feet as they identify the first, middle and final phoneme of a word. Students also manipulated phonemes by blending sounds together. I would say the sounds of a word and students would have to clap and say all the

sounds together as a word. Towards the end of every week students also practiced writing consonant-vowel-consonant (CVC) words they had practiced during the week.

Again, this procedure was completed in English and Spanish. The language of instruction was altered every week to comply with the integrity of the dual-language program already in place at the school. The altering of languages during literacy was the school's way of implementing the dual-language bilingual model.

Data Collection

Data collection occurred twice during the research study. First, all 16 students received a pre-test that included: letter recognition (upper and lower case) and letter-sound relationship created by the researcher (Appendix C and Appendix D). The participants were also evaluated using Indicadores Dinamicos del Exito en la Lectura (IDEL, 2003) and Dynamic Indicators of Basic Early Literacy Skills (DIBELS, 2010), which looked at nonsense word fluency, phoneme segmentation fluency and first sound fluency. The Spanish-dominant students were assessed using the IDEL, which was in Spanish and the English-dominant students were evaluated using the DIBELS, which was an English assessment tool. Students were assessed with either the IDEL or the DIBELS instead of both because it was thought that the students would show the most progress and development in their first language. The same assessments were given as the post-test at the conclusion of the six weeks of intervention. Again all 15 students in the classroom received the post-test in their corresponding dominant-language.

Conclusion

This chapter discussed the sample population, the procedure and the data collection tools used during the research study. The procedure involved six weeks of explicit bilingual literacy intervention. The intervention group consisted of 7 participants and received literacy instruction

in Spanish as well as in English. Student participants were exposed to activities that explored alphabet knowledge, rhyming as well as phoneme manipulation. The participants received the explicit literacy instruction in two languages. The study conducted English intervention during weeks one, three and five. The intervention group also received explicit literacy instruction during weeks two, four and six in Spanish. Even though the language of instruction changed from week to week, the same activities and procedures were used to maintain consistency for the participants. The data was collected through pre and post assessments evaluating the progress made by participants in the area of emergent literacy skills. The following chapter will analyze and summarize the results of the study.

CHAPTER FOUR

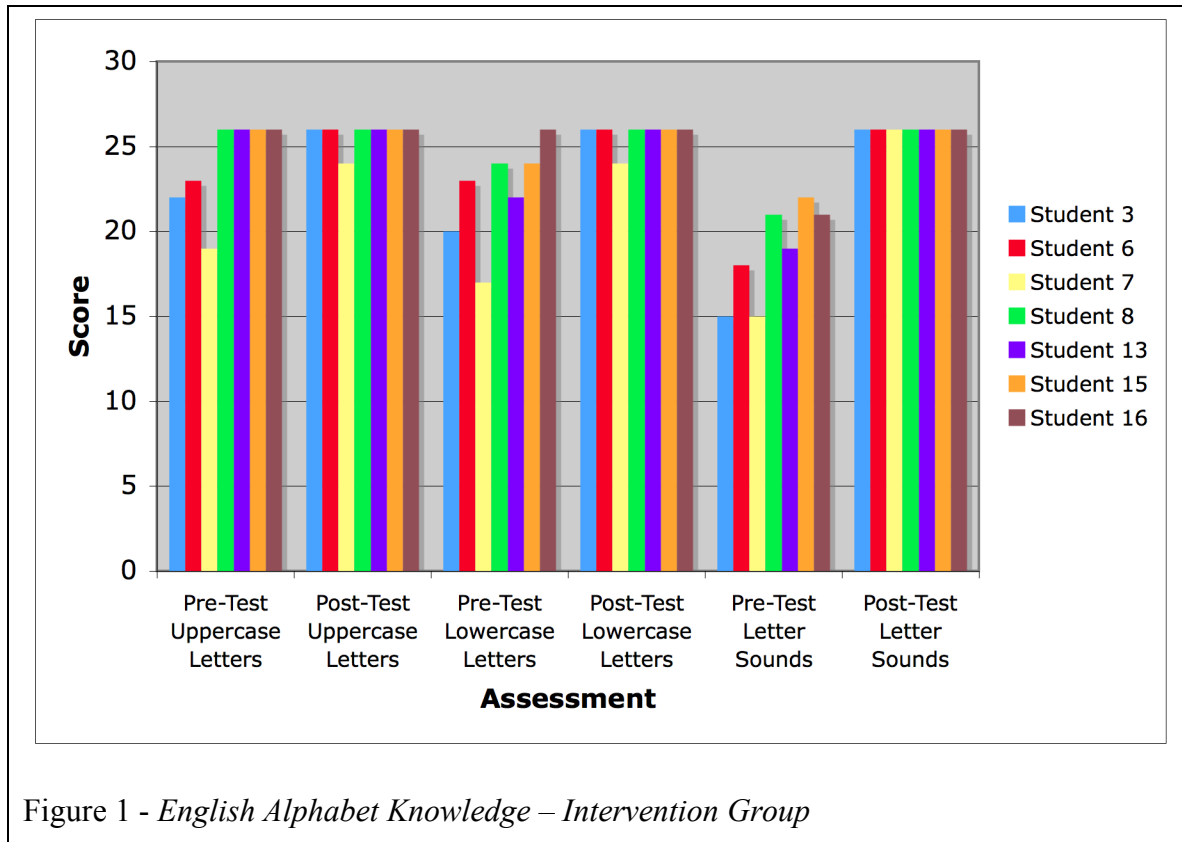
Introduction

In the previous chapter the sample population, procedures and the data collection process was outlined. In this chapter the results of the bilingual intervention is explored. The results from the pre and post alphabet knowledge assessment as well as the pre and post Dynamic Indicators of Basic Early Literacy Skills (DIBELS, 2010), and Indicadores Dinamicos del Exito en la Lectura (IDEL, 2003) will be discussed and compared. The alphabet knowledge assessment looked at uppercase letters, lowercase letters and letter sounds in English and Spanish. The DIBELS and IDEL looked at emergent literacy skills such as initial sound fluency (ISF), phoneme segmentation fluency (PSF) and nonsense word fluency (NWF) in English and Spanish. English dominant students took the DIBELS and the Spanish dominant students were assessed with the IDEL. It was thought that students would make the most gains in their first language; therefore the assessment chosen was regulated by the language of dominance of the participants.

Presentation and Analysis of Data

On the pretest for the English alphabet knowledge assessment (Appendix C), student participants were asked to identify uppercase letters, lowercase letters and letter sounds. Figure 1 shows the results of the pre-test for the intervention group. The intervention group knew an average of 24 uppercase letters, 22 lowercase letters, and 18 letter sounds. The control group on average knew 26 uppercase letters, 26 lowercase letters and 24 letter sounds. Figure 1 also shows the results for the English alphabet knowledge post-test for the intervention group. The intervention group knew an average of 26 uppercase letters, 26 lowercase letters, and 26 letter sounds. The control group also averaged 26 uppercase letters, 26 lowercase letters and 26 letter

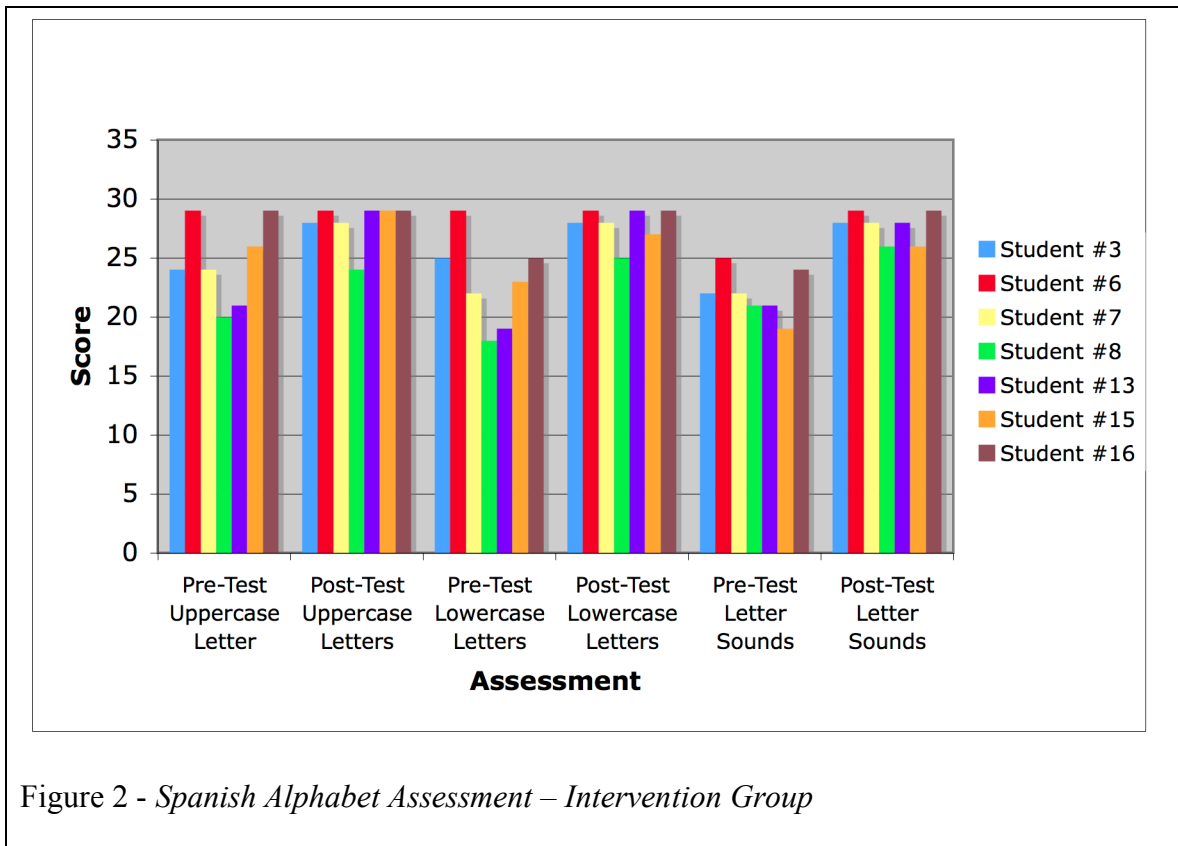
sounds. The pre and post alphabet knowledge assessment demonstrates that the intervention group scored identical to the control group. All the students in the classroom could identify all the letters and letter sounds in the English alphabet.



The students' alphabet knowledge was also assessed in Spanish using the teacher-created assessment (Appendix D). The Spanish alphabet has a total of 29 letters and 29 letter sounds. The results for the intervention group can be reviewed in Table 2. The pre-test indicated that the intervention group knew an average of 24 uppercase letters, 23 lowercase letters, and 22 letters sounds, compared to the control group who knew an average of 29 uppercase letters, 28 lowercase letters and 28 letter sounds. The post-test results for the Spanish alphabet knowledge assessment are also found in Figure 2. The intervention group averaged 28 uppercase letters, 28 lowercase letters and 28 letter sounds, while the control group averaged 29 uppercase letters, 29

lowercase letters and 28 letter sounds. The two groups could identify more than 96% of the Spanish alphabet. The scores in Spanish are comparable to the English alphabet results.

Students in the intervention group as well as the control group scored equally in the pre and post-test for English alphabet knowledge and Spanish alphabet knowledge assessment.



Along with the alphabet knowledge assessments students were also evaluated with the DIBELS and the IDEL. These standardized assessment tools measured emergent literacy skills. The DIBELS looked at initial sound fluency (ISF), phoneme segmentation fluency (PSF) and nonsense word fluency (NWF). The IDEL is the Spanish version of the DIBELS and it measured fluidez de palabras sin sentido (FPS) and fluidez de segmentacion de fonemas (FSF). The two Spanish assessments are comparable to NWF and PSF.

The pre-test for the initial sound fluency tool showed that the English-dominant students' average score was 38 and all were classified to be of low risk according to the tool's benchmark goals set for the beginning of the school year. Similarly, the intervention group was classified as low risk for the phoneme segmentation sub-test and had an average score of 52. Even though both the intervention group and the control group were labeled as low risk, we can observe that the scores for the control group are much higher than the intervention group. Finally, the participants' nonsense word fluency was measured and the average was the lowest of all tests at a 21 but the students were still classified to be at low risk. Reading nonsense words was the most difficult sub-test in the DIBELS assessment.

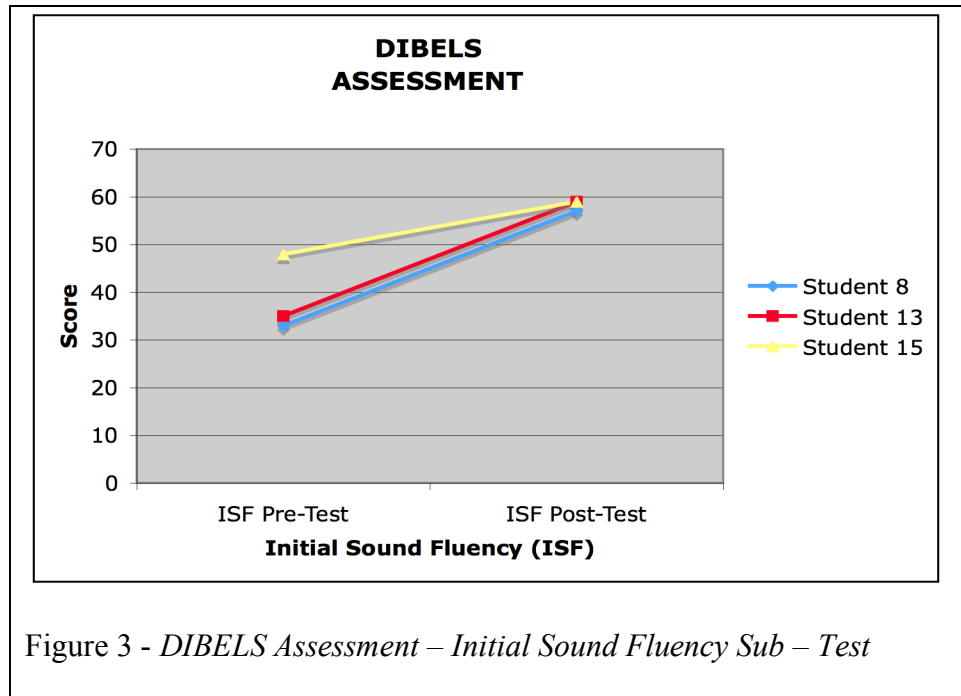
At the conclusion of the six-week bilingual intervention the English-dominant students were assessed again with DIBELS and their scores were collected. The post-test indicated that students made improvements and maintain their label of low risk with the exception of one student who was categorized as having some risk. This level of risk suggests that the student should continue to receive focused literacy instruction and intervention. The average ISF score moved up from 38 to 58, the PSF scores improved from 52 to 65 and the score for NWF increased from 21 to 25 on average. The data indicates that student participants made significant gains during the six-weeks of intervention in these areas.

Table 1

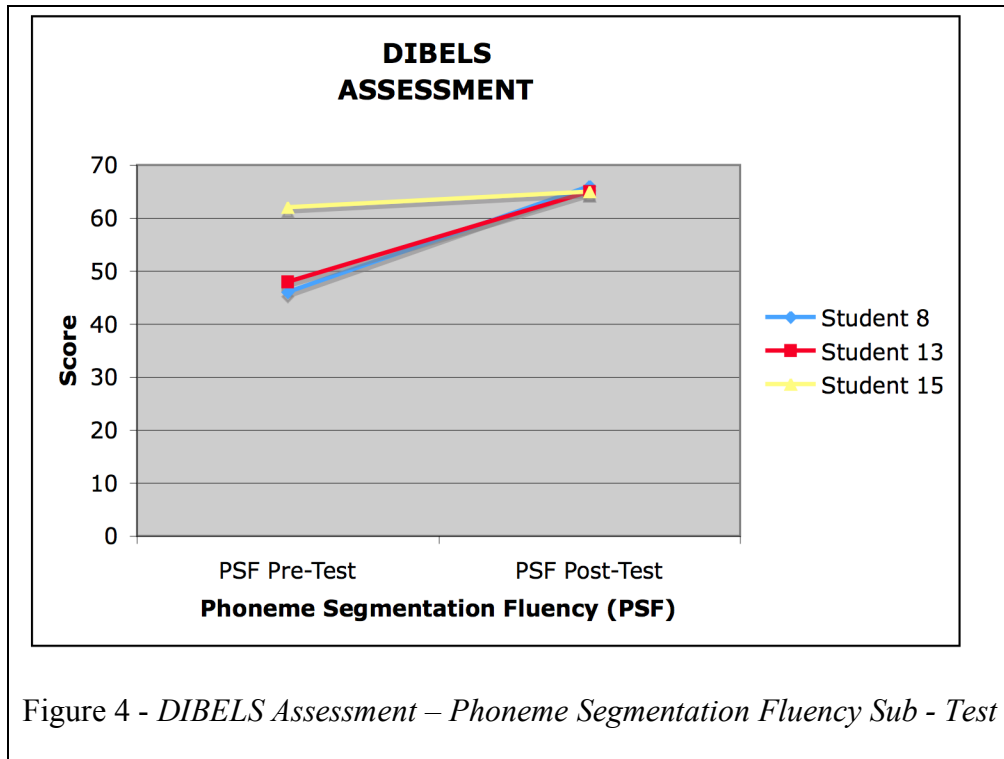
DIBELS Assessment Data – Intervention Group

DIBELS ASSESSMENT – Intervention Group Pre-Test (Mid-Year Benchmark)						
Student Participant	ISF	Goal	PSF	Goal	NWF	Goal
#8	33	Low Risk	46	Low Risk	20	Low Risk
#13	35	Low Risk	48	Low Risk	18	Low Risk
#15	48	Low Risk	62	Low Risk	25	Low Risk
Average	38		52		21	
DIBELS ASSESSMENT – Intervention Group Post-Test (Mid-Year Benchmark)						
Student Participant	ISF	Goal	PSF	Goal	NWF	Goal
#8	57	Established	66	Low Risk	27	Low Risk
#13	59	Established	65	Low Risk	28	Low Risk
#15	59	Established	65	Low Risk	20	Low Risk
Average	58		65		25	

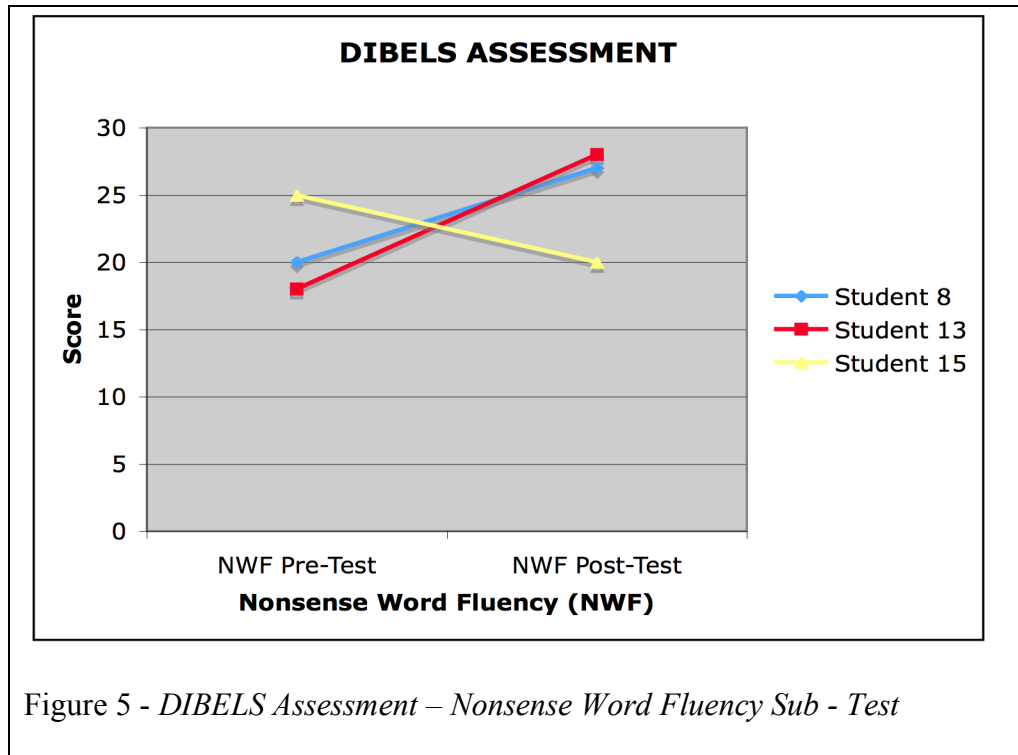
The initial sound fluency measured the student's ability to identify the initial sounds of words. The assessment was oral and no visual support was given to participants. Figure 3 illustrates the performance by the English-dominant students in the intervention group. The graph illustrates that the English-dominants made significant improvement in this English literacy skills.



The phoneme segmentation fluency was a sub-test in the DIBELS that measured the ability to identify all the individual sounds or phonemes in a given word. All English-dominant students assessed improved this skill with the intervention. Again, it is important to reiterate that the English-dominant students' emergent literacy skills were assessed in English not Spanish. The data suggests that bilingual intervention aids in the improvement of dominant language literacy development and does not hinder the development of emergent literacy skills in a student's dominant language. Figure 4 summarizes the data collected for the phoneme segmentation sub-test for the English-dominant students in the intervention group.



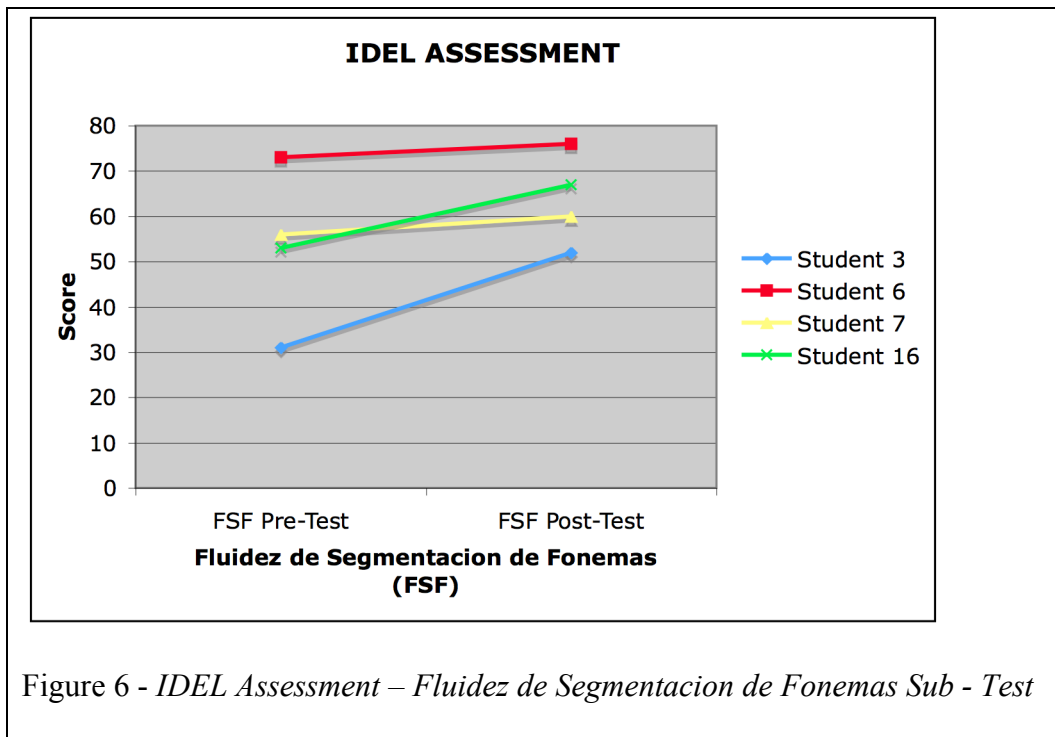
The most challenging sub-test of the DIBELS is the nonsense word fluency (NWF). This section measured the student's ability to read nonsense or made up words. Made up words are used so that students use literacy skills in order to decode and read the word instead of guessing or reading memorized words. The English-dominant students were measured using this assessment and two made gains while the third student's score decreased as illustrated in Figure 5. This was the first instance where a participant's score decreased.



Spanish dominant students were not evaluated using the DIBELS because it was an English assessment tool. Instead the Spanish dominant students were assessed with the IDEL, which is the Spanish version of the DIBELS. I choose these two assessments because they evaluate the same literacy skills and produce comparable data. In comparison to the DIBELS assessment the IDEL only had two sub-tests that were given to the students. The first was fluidez de segmentacion de fonemas (FSF), which is comparable and similar to the DIBELS sub-test of Phoneme Segmentation Fluency (PSF).

In this assessment students were also asked to separate a word into its basic individual sound or phonemes. When comparing the pre- and post-test all the students experienced an increase in their score. The participants' scores improved from a 53.25 to 63.75. All the Spanish-dominant students reached the assessments benchmark goals set for the end of the year and were categorized as “established”. Established refers to a student performing at grade level

with low risk of literacy delays. The student performance on the pre and post-test can be viewed in Figure 6.



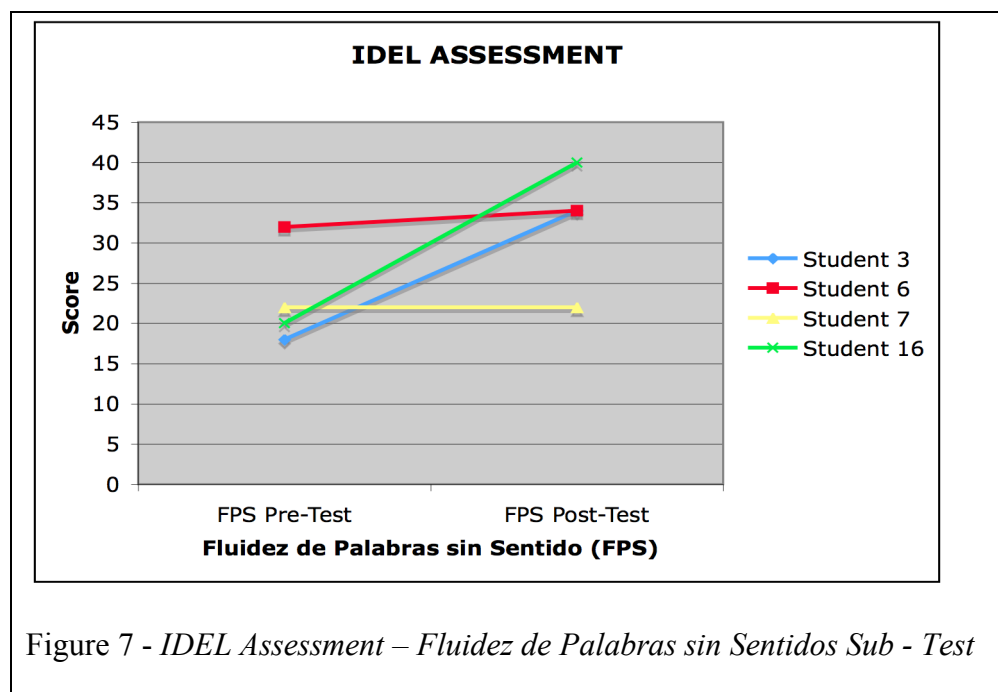
The following chart, Table 2, summarizes the Spanish dominant students' performance on the IDEL. Spanish-dominant students were assessed in Spanish not in English because it was thought that students would experience the most improvement in the area of emergent literacy skills in their dominant language. It also reviews the students' ability to reach the benchmark goal as well as the averages for all the assessment given to the Spanish-dominant participants.

Table 2

IDEL Assessment Data – Intervention Group

IDEL ASSESSMENT – Intervention Group Pre-Test (Mid-year Benchmark)				
Student Participant	FPS	Goal	FSF	Goal
#3	18	Some Risk	31	Low Risk
#6	32	Low Risk	73	Low Risk
#7	22	Low Risk	56	Low Risk
# 16	20	Low Risk	53	Low Risk
Average	23		53.25	
IDEL ASSESSMENT – Intervention Group Post-Test (Mid-Year Benchmark)				
Student Participant	FPS	Goal	FSF	Goal
#3	34	Low-Risk	52	Low-Risk
#6	34	Low-Risk	76	Low-Risk
#7	22	Low-Risk	60	Low-Risk
# 16	40	Low-Risk	67	Low-Risk
Average	32.5		63.75	

The Spanish-dominant students' ability to read nonsense words was also evaluated with the *fluidez de palabras sin sentidos* (FPS) in the IDEL. Like the DIBELS the students had to read nonsense words. Figure 7 illustrates that the four Spanish-dominant students experienced an increase ability of reading nonsense words.



Conclusion

The figures and tables throughout this chapter illustrated several results. First, students in the intervention group were able to identify all letters and letters sounds in both the English and Spanish alphabets. The students in the experimental group caught up with the alphabet knowledge skills possessed by the students in the control group. Secondly, the students in the intervention group also experienced growth in the area of rhyming and phoneme manipulation. The data collected reveals students that received the bilingual intervention made significant progress with emergent literacy skills. In this chapter the results of the teacher-created alphabet knowledge assessment, as well as the results for the DIBELS and IDEL assessments, were synthesized. In the next chapter, the results will be explained along with a deeper look at relevant connections to current research. The chapter will discuss the strengths and limitations experienced in the study and conclude with recommendations for future research.

CHAPTER FIVE

Introduction

In the previous chapter the results of the early literacy skills assessments and alphabet knowledge assessments were summarized. This chapter will discuss the results of the bilingual intervention. This section will include connections to existing research and the state's common core standards, followed by an explanation of the results of the study. The strengths and limitations of the current research will also be discussed followed by recommendations for future research in the area of bilingual intervention. The conclusion includes a review of this chapter as well as my plans for future practice and educational leadership in the area of professional development.

Problem

In order to develop the action research of this thesis, I identified a concern within my school and area of teaching. My school has now completed its second year of implementing a dual literacy language model. The program had demonstrated some benefits to students' language development but some speculation among teachers including myself still remained. Research indicates that bilingual dual-language bilingual models are effective for the academic development of bilingual and monolingual students (Gort, 2008; Nicoladis, Taylor, Lambert & Cazabon, 1998; Culatta, Reese, Setzer, 2006; Dworin, 2003; Lopez & Abbas, 2004). My concern was whether or not dual literacy was working for my students. My concerns were due to the differences between dual-language and dual-literacy, which is the simultaneous development of two languages. Was this language model affecting the development of their first language and was it supporting the acquisition of their second language? These questions were the catalysts of this study.

Connections to Existing Research and Common Core State Standards

The explicit teaching of alphabet knowledge was incorporated into every session throughout the six-weeks of bilingual intervention because research shows that intervention and small-group explicit instruction is critical for a student's success in literacy (Vukelich, Christie & Enz, 2008). Alphabet knowledge was incorporated into the intervention of this study because in addition to phonological awareness, an understanding of the alphabetic principal is needed for developing word recognition and decoding skills essential for children's future success in reading (Pullen & Justice, 2003). The alphabetic principal refers to the relationship between letters and letters sounds as well as the connection between phonemes found in words and the alphabet (Pullen & Justice, 2003). Alphabet knowledge falls under the literacy umbrella of print awareness and is an essential aspect of literacy development in children. A strong understanding and knowledge of the alphabet has been described as the best predictor of future reading success (Pullen & Justice, 2003).

The explicit teaching also continued with rhyming. Rhyming is a more abstract and difficult concept for young children to grasp, especially in their second language (Pullen & Justice, 2003). Rhyming is also a skill that is not commonly practiced nor taught in Spanish literacy (Culatta, Reese & Setzer, 2006). In order to promote the development of rhyming skills among young children, it is essential to implement explicit and repetitive instruction in the classroom (Pullen & Justice, 2003). Rhyming should be explored with easier tasks such as rhyme recognition followed by more challenging activities such as rhyme generation (Pullen & Justice, 2003). This study followed the idea that easier tasks involving rhyming should be explored followed with more challenging activities.

The last skill explored during intervention was phonemic awareness. A greater amount of time was spent on this skill due to its importance in the literacy development of young children (Cardenas-Hagan, Carlson & Pollard-Durodola, 2007). "Research indicates that phonological awareness is a necessary precursor to successful reading acquisition in all alphabetic languages (Cardenas-Hagan, Carlson & Pollard-Durodola, 2007, pp 251)." The researcher that conducted this study understood the importance phonemic awareness played in the literacy development of students that is why manipulation of phonemes was included in the study.

Along with the explicit instruction of alphabet knowledge, rhyming and phonemic manipulation, a critical component of this research study was the implementation of bilingual intervention. The three areas of literacy explored during the intervention were conducted in Spanish and English with students that were English-dominant or Spanish-dominant. The researcher wanted to know whether student's emergent literacy skills would improve or be confined due to the bilingual intervention. Would students make progress in their first language? In their second language? In neither or in both?

The use of bilingual intervention was decided upon with support from existing bilingual research. Even though much research supports bilingual education, there isn't much research that explores the idea of bilingual intervention for at-risk students regardless of their language dominance. Lopez and Abbas (2004) found that bilingual education decreased the achievement gap between low achieving students and high achieving students. Bilingual education has also been found to be beneficial for African-American student's academic success (Nicholadis, Taylor, Lambert & Cazabon, 1998). The procedure implemented in this study followed a dual-literacy model where students were taught literacy in Spanish and English by altering the

language used every week. This type of bilingual model is relatively new and more research needs to be conducted in this area of bilingual education. Dworin (2003) found that dual-literacy has many advantages, including the flexibility biliteracy instruction can provide in a bilingual classroom context and that language and literacy development for bilingual students is bidirectional.

I discovered that the objectives and outcomes of this research directly connected to the Common Core Standards in the following ways. First, students at the kindergarten level are to master concepts of print, which means that they should demonstrate an understanding of the organization and basic function of print (Common Core State Standards Initiative, 2010). Students fulfilled this goal by recognizing and naming all upper and lowercase letters in the English and Spanish alphabet. Students also demonstrated the ability to recognize that spoken words are represented in written languages by specific sequences of letters by stretching out the sounds in one and two syllable words.

Secondly, students were also able to demonstrate an understanding of spoken words, syllables, and phonemes (Common Core State Standards Initiative, 2010). Students in this study were able to recognize and produce rhyming words in addition to count, pronounce, blend and segment syllables in spoken words. The bilingual intervention implemented in this study also gave students the practice to isolate and pronounce the initial, median vowel and final phonemes in three-phoneme words (Common Core State Standards Initiative, 2010).

Finally, the participants on this study were also actively learning about phonics and word recognition. Students mastered the ability to know and apply grade-level phonics and word analysis skills in decoding words by demonstrating basic knowledge of one-to-one letter-sound

correspondence by producing the primary sound for each consonant in the English and Spanish alphabet (Common Sore State Standards Initiative, 2010).

Explanation of Results

There were three major findings as a result of this research. First, students experienced an increased knowledge of the English and Spanish alphabets. Secondly, students demonstrated growth in emergent literacy skills in their first language (L1) and finally the students' L1 development was not negatively affected by the bilingual intervention in the second language (L2).

In the beginning of the study, the intervention group knew an average of 24 uppercase letters, 22 lowercase letters and 18 letter sounds from the English alphabet, while the control group averaged 26 uppercase letters, 26 lowercase letters and 24 letter sounds. By the end of the research study the teacher-created assessment (Appendix C) indicated that the intervention group and the control group could identify all 26 uppercase letters, lowercase letters and letter sounds in the English alphabet.

The Spanish alphabet was also assessed with the Spanish teacher-created alphabet knowledge assessment (Appendix D) and the same progress was observed. The pre-test shows that the intervention group knew 24 uppercase letters, 23 lowercase letters and 22 letter sounds, while the control group averaged 29 uppercase letters, 28 lowercase letter and 28 letter sounds. There was progress made by both groups by the end of the research. The intervention group averaged 28 uppercase letters, lowercase letters and letter sounds in the Spanish alphabet in comparison to the control group who could recognize all 29 uppercase and lowercase letters and 28 letter sounds.

These overall results for the alphabet knowledge assessments illustrated the students in the intervention group scored the same as the control group at the culmination of the research when comparing their English alphabet knowledge. This was achieved through the implementation of explicit bilingual intervention. The scores in Spanish are comparable to the English alphabet results, indicating that children's alphabet knowledge can improve in their first language and second language simultaneously when receiving bilingual intervention. This finding also connects with Dworin (2003) theory that biliteracy fosters the development and progress of both languages simultaneously, due to the transfer of literacy skills from one language to another.

The students were also evaluated using Dynamic Indicators of Basic Early Literacy Skills (DIBELS, 2010), and Indicadores Dinamicos del Exito en la Lectura (IDEL, 2003). These assessment tools took a closer look at student's phonological awareness. English-dominant students were assessed with the DIBELS and the results indicate that progress was made in all three sub-tests administered at the beginning and at the end of the research. In the initial sound fluency (ISF) the scores of the intervention group moved from a 38 to 58. The scores for the Phonemic Segmentation Fluency (PSF) moved from 52 to 65 and the Nonsense Word Fluency (NWF) scores increased from 21 to 25. This progress indicated that bilingual intervention aids in the progress of student's first language. The use of Spanish instruction in a bilingual setting does not hinder the development of a student's first language, when their L1 is English.

The Spanish-dominant participants were evaluated with the IDEL, which is a Spanish translation of the DIBELS. The results of this assessment are comparable to the scores of the IDEL. Spanish-dominant students made significant progress in emergent literacy skills in their first language. In the FPS sub-test, which is similar to the Nonsense Word Fluency in the

DIBELS Spanish-dominant students' scores increased from 23 to 32.5 and the scores for FSF (comparable to Phonemic Segmentation Fluency – PSF) also increased from 53.25 to 63.75. The Spanish-dominant students also experienced progress in emergent literacy skills. Again, indicating that even though students received intervention in two languages their first language was not negatively affected.

Based on the results of this research study, overall progress was experienced by students in their first language as well as their second language in the areas of alphabet knowledge and emergent literacy skills. All six students in the intervention group demonstrated growth in both areas of the study due to the explicit bilingual intervention.

Strengths and Limitations

This research study had several strengths as well as limitations. One of the strengths was the intervention's structured and predictable routine, which students could rely on while learning new literacy skills (Shalaway, 2005). This structure in the procedures used during the intervention also helped students focus on the content being presented versus the changes of language from week to week. Structured routines and procedures for kindergarten-aged children are crucial for effective instruction as well as classroom management because they provide a sense of consistency (Wong & Wong, 2004; Shalaway, 2005). Secondly, the use of movement and engaging activities also helped to maintain participants active and interested in their learning (Shalaway, 2005). In conjunction with movement and engaging activities, the use of small groups also helped in the development of emergent literacy skills (Farver, Lonigan & Eppe, 2009). Small groups allow for repetition of key words and phrases, they require functional, context-relevant speech, and they can reduce student's anxiety (Hill & Flynn, 2006). Finally, students also benefited from a strong bilingual language implementer. The teacher was a native-

Spanish speaker as well as a proficient English-speaker. Having a strong language model also served to be beneficial because both languages are represented equally and both are seen as functional and valuable in the classroom (Lessow-Hurley, 2005).

Although this bilingual intervention study had several strengths, there were also some limitations. First of all, the students' emergent literacy skills should have been assessed in English as well as Spanish. This would have created stronger evidence for the argument that bilingual intervention is beneficial for the development of literacy in both languages simultaneously. Assessing the students' alphabet knowledge in English and Spanish helped prove that students experienced progress in both languages simultaneously but the same cannot be said for the other literacy skills because students were not assessed in both languages. Secondly, there were only a total of 15 students in the study and 7 students in the intervention group. A greater number of students would have been advantageous and would have yielded stronger results and evidence supporting bilingual intervention. One final limitation of the study was the time period that the intervention lasted. The intervention lasted six-week; I believe that students would have continued to experience progress if the intervention would have continued. Ideally the intervention should last eight to ten weeks and content changes would have been made based on students needs on assessment results.

Recommendations for Future Research

Future research in the areas of biliteracy education as well as bilingual intervention for children of different languages dominance is needed. The participants in this study experienced an increased knowledge of the alphabet and growth in emergent literacy skills with the bilingual intervention. This result indicates that bilingual intervention allows for the development of first language skills (L1) as well as cultivating second language literacy skills (L2). The bilingual

intervention does not hinder the development of either L1 or L2. I recommend future research in the effectiveness of bilingual intervention. It is essential due to the increasing number of school-aged children being of different cultural backgrounds as well as speaking a variety of languages other than English. Research in bilingual intervention should also explore different languages, Spanish and English bilingualism was used in this study but languages used by Asian students should also be investigated due to the increasing number of students with that language background.

A second recommendation for future research is in the area of biliteracy education, also referred to as dual-literacy. This type of bilingual model is relatively new and being implemented in very few school in the United States (Dworin, 2003). This language model allows for students to develop literacy skills in two languages simultaneously. This is a complex process for instructional purposes as well as a challenging acquisition process for students. This study revealed the benefits of dual-literacy process in instruction as well as intervention. Future research could help support this theory as well as pinpointing the factors that allow for this growth among students is needed.

Conclusion

This chapter has reviewed the results of this study on bilingual intervention and its effects on emergent literacy skills. I deem the students in this study made great gains in alphabet knowledge as well as other emergent literacy skills. I believe the work I have begun with bilingual intervention is important for the area of bilingual education and effective bilingual models used in schools. This study also outlines some of the benefits students experience from a bilingual education regardless of their dominant language. More research is critical in this field of study to support bilingual learners.

As a result of my research work I was able to learn that explicit teaching of emergent literacy skills in deed is effective for at-risk students, but the study also revealed that explicit instruction could succeed in a dual-language setting. This investigation will change my instruction because I truly discovered the value, importance and potential of a dual-literacy bilingual model. Therefore students will benefit from my deeper understanding of bilingual intervention and my knowledge of effective teaching strategies. I hope to use the leadership skills I've gained within the Master's program to support other teachers implementing dual-literacy in their classrooms as well as advocating for the bilingual education of my students.

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Appendices

Appendix A

Informed Consent Form – English

February 27, 2012

Dear Parent/Caregiver,

I am conducting a research project to study the effects of dual-language intervention on the phonemic awareness of the students in my classroom. I would like to include your child in this study.

Procedure: This study will involve all the children in my classroom. The students will be divided into two groups. One group will receive literacy intervention in Spanish and English while the second group will not receive the intervention. The group that will not receive the intervention will still receive their regular dual language literacy instruction. The students receiving the intervention have demonstrated that they are in need of that intervention due to their progress thus far in the school year and their performance on literacy assessments conducted in the classroom. The study will last six weeks and the intervention group will meet with me five days a week for 45 minutes during our regularly schedule literacy block.

Confidentiality: All information will remain confidential. I will not reveal your child's progress.

Risks: I do not anticipate this study will cause any type of risk, psychological or otherwise.

Benefits: The students in the intervention group will benefit by receiving additional support in the area of phonemic awareness and alphabet knowledge.

Participation is Voluntary: If at any time you wish to withdraw your child from this study, please feel free to contact me. Your child's responses to the assessments and results will be destroyed upon your request and your child will not be penalized in any way.

Use of Your Information: My goal is to present the results of this study for a paper required for completion of my Master's program. Any work examples or assessments will identify children with pseudonyms. Real names will never be used.

Contact Information: If you are interested in the results of this study, or if you have any other questions, concerns, or comments on this project, please contact me or my advisor.

My Contact Information:

Itzel M. Galindo
3255 N Fratney Street,
Milwaukee, WI 53221
414-267-1178

galindim@milwaukee.k12.wi.us

My Advisor:

Ruth Hoenick
1037 W. McKinley Ave
Milwaukee, WI 53203
262-644-0301
rahoenick@stritch.edu

If you have any complaints about this study, please call or write:

Joan L. Whitman
Cardinal Stritch University
1037 W. McKinley, Room 130
Milwaukee, WI 53205
(All complaints will be kept confidential.)

This research project has been approved by the Cardinal Stritch University Institutional Review Board for the Protection of Human Research Participants on February 1, 2012, for a period of 12 months.

Thank you for your cooperation.

I have received an explanation of the study and permit my child to participate in this study. I understand that participation is voluntary. I understand that participation includes the possibility that my child is videotaped and audio taped for purposes of the study.

_____ I agree to permit my child/dependent to participate in the study.

_____ I do not permit my child/dependent to participate in the study.

Name of Minor Child/Dependent

Signature of Parent or Legal Guardian / Date

Appendix B

Informed Consent Form – Spanish

27 de Febrero del 2012

Estimados padres de familia:

Como parte de mis estudios de maestría en la lectura, necesito hacer un proyecto final de estudios. Mi proyecto tomará lugar en nuestro salón de clases de kinder. La siguiente carta les pide permiso que su hijo/a participa en ese estudio. Favor de leer la carta, firmarla, y devolverla a la escuela. ¡Gracias!

Estoy haciendo un estudio acerca de la intervención bilingüe en el desarrollo de las destrezas fonéticas. El propósito de este estudio es para ver si, con mi guianza, los niños podrán desarrollar las destrezas que se necesitan para poder leer y escribir.

Procedimientos: En este estudio, estaremos trabajando en el salón regular de clase. Los estudiantes serán divididos en dos grupos. Uno de los grupos va a recibir la intervención bilingüe mientras que el segundo grupo continua participando en actividad regulares en el salón durante lectura. El segundo grupo no recibirá la intervención bilingüe. Los niños que si van a recibir la intervención han demostrado que necesitan ayuda en el área de la lectura comprobado por su progreso este año escolar y por los resultados de evaluaciones hechas en el salón. Este estudio durara 6 semanas. Los estudiantes que van a recibir la intervención van a reunirse conmigo 5 días a la semana por 45 minutos durante nuestro tiempo regular de lectura.

Confidencialidad: Toda la información será confidencial. No revelare las respuestas de su hijo/a a nadie.

Riesgos: El estudio no debe causar ningún tipo de riesgo, psicológicamente ni cualquier otro riesgo.

Beneficios: Los niños que necesitan ayuda van a recibir ayuda adicional que le ayudara a progresar en la lectura.

Su participación es voluntario: Si, en cualquier momento, quiere que su hijo/a deje de participar en este estudio, favor de ponerse en contacto conmigo. Las respuestas de su hijo/a y sus resultados serán destruidos si se lo piden, y su hijo/a no será afectado negativamente de ninguna manera.

El uso de su información: Mi meta es presentar los resultados de este estudio para un ensayo requerido para cumplir mi programa de maestría. Cualquier ejemplo de trabajo de los estudiantes y información escrito acerca de las grabaciones identificará a los estudiantes con pseudónimos (nombres falsos). Nunca se usarán los nombres verdaderos de los estudiantes.

Información de contacto: Si están interesados en saber los resultados de este estudio si tiene cualquier otra pregunta, preocupación, duda, o comentario acerca de este proyecto, favor de ponerse en contacto conmigo o con mi supervisora.

Mi información:

Itzel M. Galindo
3255 N Fratney Street,
Milwaukee, WI 53221
414-267-1178
galindim@milwaukee.k12.wi.us

Mi Supervisora:

Ruth Hoenick
1037 W. McKinley Ave
Milwaukee, WI 53203
262-644-0301
rahoenick@stritch.edu

Si tienen quejas acerca de este estudio, favor de escribir o llamar a:

Joan L. Whitman
Cardinal Stritch University
1037 W. McKinley, Room 130
Milwaukee, WI 53205
(Todas las quejas son confidenciales.)

Este proyecto de estudios estuvo aprobado por el Cardinal Stritch University Institutional Review Board for the Protection of Human Research Participants el primero de enero del 2012, por un periodo de 12 meses. Gracias por su cooperación.

AREA DE FIRMAR POR LOS PADRES. FAVOR DE FIRMAR Y DEVOLVER.

Yo he recibido una explicación del estudio, y permito mi hijo/a a participar en el estudio. Yo entiendo que su participación es voluntaria. Yo entiendo que su participación incluye la posibilidad que mi hijo está grabado por audio y video para los propósitos del estudio.

Favor de marcar TODOS que apliquen.

- _____ Permito que mi hijo/a participa en este estudio.
 _____ Mi hijo/a puede estar grabado por audio para este estudio.
 _____ Mi hijo/a puede estar grabado por video para este estudio.
 _____ No permito que mi hijo/a participa en este estudio.

Nombre del Estudiante

Firma del Padre / Fecha

Appendix C

Teacher Created Alphabet Knowledge Assessment - English

Alphabet Knowledge Informal Assessment - English

¹Teacher Recording Sheet

Student's Name: _____ Date: _____

Mark with a + the correct answers

Mark with a – the incorrect answers

Uppercase Alphabet	Letter Name	Lowercase Alphabet	Letter Name	Letter Sounds
Z		z		
A		a		
H		h		
C		c		
K		k		
B		b		
S		s		
N		n		
G		g		
D		d		
I		i		
W		w		
O		o		
E		e		
X		x		
P		p		
J		j		
Q		q		
L		l		
U		u		
F		f		
V		v		
R		r		
M		m		
T		t		
Y		y		

¹ There will be a teacher-recording sheet for all 17 subjects. The students will be measured with this informal assessment as a pre- and post-test.

Students Copy

Z A H C K B S

N G D I W O E

X P J Q L U F

V R M T Y

z a h c k b s

n g d i w o e

x p j q l u f

v r m t y

Appendix D

Teacher Created Alphabet Knowledge Assessment - Spanish

Alphabet Knowledge Informal Assessment - Spanish²Teacher Recording Sheet

Student's Name: _____ Date: _____

Mark with a + the correct answers

Mark with a – the incorrect answers

Mayúsculas	Nombre de la letra	Minúsculas	Nombre de la letra	Sonidos
Z		z		
A		a		
H		h		
C		c		
K		k		
B		b		
S		s		
N		n		
G		g		
D		d		
I		i		
W		w		
O		o		
E		e		
X		x		
P		p		
J		j		
Q		q		
L		l		
U		u		
F		f		
V		v		
R		r		
M		m		
T		t		
Y		y		
Ñ		ñ		
Ch		ch		
Ll		ll		

Students Copy – Spanish

² There will be a teacher-recording sheet for all 17 subjects. The students will be measured with this informal assessment as a pre- and post-test.

Z A H C K B S
N G D I W O E
X P J Q L U F
V R M T Y Ñ Ch
Ll

z a h c k b s
n g d l w o e
x p j q l u f
v r m t y ñ
ch ll

