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Increasing Students' Levels of Fluency by Reinforcing Sounds and Syllabic Recognition in their First Language of Spanish

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Increasing Students' Levels of Fluency by Reinforcing Sounds and Syllabic Recognition in their
First Language of Spanish.

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Abstract

This research studied the effects of an intervention, which the participants, received in their first language. It analyzed the effectiveness of having extensive knowledge of phonics in one's first language in order to read fluently in one's second language. It explored the student's ability to transfer their phonetic knowledge in their first language of Spanish when reading in English, their second language. The research examined the efficacy of didactic material in Spanish used during the research intervention. The goal of the intervention was to help English Language Learners transfer their phonetic knowledge from Spanish to English and as a result, improve their understanding of sounds in their second language to become fluent readers.

Keywords: cross-language transfer, phonological knowledge, reading fluency

Increasing Students' Levels of Fluency by Reinforcing Sounds and Syllabic Recognition in their
First Language of Spanish.

Baker and Sienkewicz (2005) stated that bilingualism has become an important topic. When bilingual individuals are biliterate (literate in two languages), they have many communication advantages; such as access to two literatures, open up different traditions, ideas, ways of thinking and acting. Biliteracy gives the opportunity of reading novels or magazines, it enhances educational writing and reading, which provides great opportunities in the employment field (Baker & Sienkewicz, 2005). According to the US Census Bureau (US Census Bureau, 2019), schools in the United States, especially at the Elementary level, have experienced an increase in the diversity of their student enrollment. These students are mostly students whose first language is not English. According to Trainin, Wessels, Nelson, and Vadasy (2017), Spanish is spoken in seventy-two percent of students' households who speak another language. When these students are integrated into the school system, educators tend to not evaluate their academic knowledge in their first language. Thus, García, and Tyler (2010) stated that the majority of English Language Learners have been misidentified because these students struggle academically for causes other than their second language status. Such as sociocultural backgrounds and educational history due to the fact that the majority of these students arrive to the United States school system with reading deficits.

In a previous study, Riccio et al. (2001) concluded that the incorporation of the phonological integration of Spanish in students whose first language is Spanish into the bilingual curriculum may facilitate the transferring process when reading in English. Sun-Alperin & Wang (2009) found that Spanish phonological processing skills facilitate bilingual reading acquisition. Sun-Alperin & Wang (2009) states that the Spanish language compared to English

language is phonetically regular because it contains 29 graphemes, which generally correspond to nearly 25 phonemes. According to Goodrich, Farrington and Lonigan (2015), there is a large degree of overlap between letters and letter-sound correspondence in Spanish and English.

These similarities help English Language Learners to have a rapid acquisition of English. The goal of the research is to answer the following question: Will the students be able to associate their knowledge of sounds and syllabic recognition of their first language (Spanish) when reading in English *and* Spanish?

Goodrich et al. (2015) states based on Cummins (1979) developmental interdependence hypothesis that when children acquire phonological skills they acquire the knowledge that words are made of units of sounds. As a result, children manipulate those sounds of words in any language they receive. Riccio, Amado, Jimenez, and Hasbrouck (2001) found that proactive interventions of Spanish in the phonological process could result in the prevention of reading difficulties in both Spanish and English. Consequently, based on previous studies, the intention of this study was to reinforce the phonological awareness in order to increase fluency levels of participants in both languages English *and* Spanish.

Walczyk and Griffith-Ross (2007) stated that there is a very strong and positive relation between reading fluency and comprehension; therefore, those who are fluent readers have better comprehension. The current building goal at the Dual Language Elementary School (where the study took place) is to increase the students' fluency levels from the previous academic year by at least ten percent by the end of each academic year.

Since fluency is such an important goal at the Dual Language Elementary School, it is imperative that educators do everything in their power to help students increase their fluency levels. The research study intended to increase the participants' Phonemic Awareness in order facilitate reading fluency in first language as well as their second language.

The hypothesis to be tested in this study is, by reinforcing students' Phonemic Awareness in their first language, Spanish, throughout a phonetic intervention, the students will be able to cross-language transfer their Spanish Phonemic Awareness skills in Spanish when reading in English; As a result, this will increase their levels of reading fluency in English *and* Spanish.

Review of the Literature

Phonological skills in the first language are essential to better process the acquisition of a second language Sun-Alperin and Wang (2009). Research conducted by Atwill, Blanchard, Christie, Gorin, and Garcia (2010) suggests that it is important for both the teacher and the student to ensure the student has appropriate phonemic awareness for his or her age, in order to transfer that knowledge to the second language. They also stated that as for the Spanish-speaking students lacking age-appropriate abilities in regards to phonemic awareness and vocabulary skills in Spanish (their first language), educators should consider adjusting the curriculum to meet these varying educational needs. Atwill et al. (2010) emphasize the need for more empirical research that explores the expected growth of students' first language and second language precursor skills among children learning two languages, as well as the curricular strategies through which to maximize this growth.

Yopp and Stapleton (2008) indicated that students who learn a new language tend to read and have better comprehension of the second language, only if the students demonstrate phonemic awareness in their first native language. By addressing the importance of phonological awareness in students' native language, Yopp and Stapleton (2008) suggested that those ELL educators who do not speak their students' native language might support students' phonemic awareness in their native language by encouraging family engagement in native-language Phonemic Awareness activities. All these practices will allow students to develop effective Phonemic Awareness skills that will be able to transfer when reading in their second language of English.

Raynolds, Lopez-Velasquez, and Olivio (2016) state that when young children acquire phonological awareness, they become aware of the smaller parts of words. They also found that these phonological skills are necessary in order to blend sounds together. The lack of phonemic awareness is associated with poor word recognition, which will persist through adult life. Direct instruction in various aspects of phonological awareness are necessary to prevent reading failure in children (Riccio et al., 2001).

According to Ruiz-Felter, Cooperson, Bedore, and Peña (2015), bilingual children acquired most of their phonemic awareness in the same order as monolingual children. In regards to bilingual children, their phonological skills are affected depending on the stage of their second language acquisition development and the age of exposure. Ruiz-Felter et al. (2015) mentioned the three patterns that might occur between the phonological systems of bilinguals. The three patterns that might occur are acceleration, deceleration and transfer. Acceleration refers to the faster acquisition of certain aspects of language that might occur between two phonological systems of bilinguals. Declaration refers to the slower acquisition due to the lack of interaction with the language. Transfer refers to the language feature that transfer from one language to the other such as similar phonemes (Fabiano-Smith & Goldstein, 2010).

Goodrich and Lonigan (2016) mentioned the importance of the development of phonemic awareness skills among language-minority children due to the strong relation between Spanish and English. To the contrary, a study conducted by Vokic (2011) states the visual similarities shared by the Spanish and English alphabet tend to negatively interfere with the phonological awareness and speech production in the students' second language, depending on the age of the English language learner. In contrast, Yopp and Stapleton (2008) emphasized that phonemic

awareness is an understanding in the nature of spoken language, and this understanding transfers from one language to another, facilitating the phonemic awareness in the second language.

English Language Learners with Reading Deficits

Garcia and Tyler (2010) indicated it is important to consider students acquiring a second language and having a learning disability or a reading deficit because they lack of important skills in their native language associated with English proficiency such as vocabulary, grammar and punctuation. According to Riccio et al. (2001), there is insufficient research about the phonological processing measures in Spanish to identify English language learners, particularly Spanish-speaking children who might be at risk for reading difficulties in either language Spanish or English.

According to Vaughn, Linan-Thompson, Mathes, et al. (2006), due to the lack of research in regards to English language learners with reading deficits, it is difficult for educators to identify the cause of reading deficits in these students. It is very challenging to know if the reading deficit is caused by language difficulties or learning disabilities. As a result, educators have a hard time providing proper interventions for these particular students.

Riccio et al. (2001) specified the lack of proper measures to evaluate possible learning difficulties in for Spanish-speaking students, which has negative implications for service. Nevertheless, Landa and Barbetta (2017) emphasized the importance of educators being able to differentiate the challenges of English Language Learners as well as the challenges of English Language Learners *with* learning difficulties in order to implement effective practices for both groups of students.

According to Sparks and Ganschow (1993), learning difficulties among foreign language learners rely on students' native language difficulties caused by a specific deficit in the phonological process. For example, if a student has poor phonological skills in his or her native language, associated difficulties will arise with the phonology of the second language. Four important variables contribute to the failure or success in learning a foreign language. These include, phonetic coding, grammatical sensitivity, inductive language learning ability and rote memory. (Sparks & Ganschow, 1993).

As stated by Sparks and Ganschow (1993), children learn to speak and listen in their native language to varying degrees. Students' language competence is determined by their speech processing and production; this is related to their reading acquisition. This means that if the student has difficulty listening and speaking in his or her native language, speaking a second language will be difficult due to weak phonological skills in his or her native language. In other words, if a student has trouble learning his or her own first language, he or she will have the same issue when learning his or her second language.

There are other factors that also influence learning difficulties and or reading deficits related to language. The factors include high levels of anxiety, failure of a teaching methodology to match student's learning style, and personality variables among the teacher and the student (Sparks & Ganschow, 1993). Coincidentally, Silverman, Proctor, Haring et al. (2015) state that language skills may be implicated in the reading deficits of bilingual students. Atwill et al. (2010) concluded that if educators do not ensure the appropriate age literacy skills in students' first language, literacy difficulties will emerge when learning a second language and as a result, students may never be successful in their second language. In order to meet the academic needs of English Language Learners with learning disabilities, collaboration across school

administration, general education teacher, English language teacher, and Special Education teacher is a priority.

Reading Fluency

According to Pikulski and Chard (2005), reading fluency refers to efficient, effective word-recognition skills that allows the reader to construct meaning of the text. Fluency is demonstrated in accurate, rapid, expressive oral reading, which facilitates reading comprehension. Pikulski and Chard (2005) describe the reading development and fluency stages researched by Ehri (1995, 1998). These four stages explain how readers systematically progress in the stages to achieve fluency. Stage 1 is the Pre-Alphabetic stage in which children attempt to translate the unfamiliar visual forms of print into familiar language words. Stage 2 is the Partial Alphabetic stage in which readers have learned that letters and sounds are related. Stage 3 is the Fully Alphabetic stage; at this stage, children know the sounds that are associated with the letters. Stage 4 is the Consolidated Alphabetic stage, in which readers recognize whole words instantly and develop coding skills. In addition, Kuhn, Schwanenflugel, Meisinger, Levy, and Rasinski (2010) agreed that in order to develop accuracy and automaticity in reading, phonemic awareness and letter-naming factors are very important components.

According to Welsch (2006), a common characteristic of students with learning disabilities or reading deficits is the deficiency of reading fluency. In a research study conducted by Begeny, Krouse, Ross, and Mitchel (2009), different reading strategies such as repeated reading, passage preview, listening passage preview and listening were only implemented to increase fluency levels of students. Begeny et al. (2009) concluded that the strategies that benefit students the most were repeated reading and listening passage preview. Another study

conducted by Stevens, Melodee, Walker, and Vaughn (2016) concluded that repeated reading has a positive impact on students' reading fluency levels because it not only improves students' fluency, but also their comprehension. Repeated reading is fluency practice in which students repeatedly read a passage aloud to increase oral reading fluency Stevens et al. (2016).

Landa and Barbetta (2017) also determined the positive impact that repeated reading produced in their students. The research conducted with English Language Learners with learning disorders reaffirms the findings of Stevens et al. (2016) in regards to the benefits of implementing this strategy with students with learning disabilities or reading deficits, as well as their English language peers with learning disabilities.

Rubin (2016) described the challenges that English Learners, particularly Spanish speaking, face when learning to read in their second language. The students' socioeconomic status, native language fluency, their parents' level of education, and whether or not the students have a learning disability play an important role when the students are learning to read in English. Rubin (2016) determined the implementation of a repeated reading program that focuses on phonemic awareness and sight word identification has the potential to better assist English Language Learners with learning disabilities or reading deficits. English Language Learners have the same academic expectations as their monolingual peers; consequently, it is key to focus on reading comprehension and reading fluency instruction in early grades in order to make students successful in the later school years Rubin (2016).

Spanish to English Phonological Transfer

Sun-Alperin and Wang (2009) cited the importance of strong phonological processing skills at the age of four and five because these skills predict the reading and spelling ability at

ages eight and nine. Sun-Alperin and Wang (2009) described the positive impact in the reading abilities of those students with strong phonological skills in their native language of Spanish when reading in their second language of English. These particular students were able to identify letters in both English and Spanish, word recognition in both English and Spanish, and reading real words and pseudo words in English and Spanish.

According to Riccio et al. (2001), the phonological process that involves beginning and ending sound recognition of rhyme, and phoneme/syllable deletion in Spanish, have a significant relation to Spanish reading fluency. This relationship transfers the reading fluency in Spanish to the reading fluency in English. However, Sun-Alperin and Wang (2009) found that those students who do not have a strong phonemic foundation tend to decode English words letter by letter, which may result in a non-accurate pronunciation of the English language. Sun-Alperin and Wang (2009) concluded that phonological skills in Spanish will contribute significantly to English word reading and spelling even after English phonological skills were learned.

Riccio et al. (2001) stated that it has been demonstrated that interventions implemented to improve phonological processing in monolingual students have had a positive impact, which results in improvements in their reading ability in that particular language. Unfortunately, there is a lack of studies about improving phonological process in second language learners. By taking into consideration the positive aspects of cross-linguistic transfer of phonological process from Spanish to English, interventions in Spanish for those English Language Learners with reading deficits whose first language is Spanish might be the key to remedy their reading difficulties (Riccio et al. 2001).

The research study in regards to effectiveness of Spanish for English Language Learners at risk for reading difficulties conducted by Vaughn et al. (2006) noted that Spanish-speaking students with reading deficits in English language difficulties haven't mastered the alphabet principle in their native language (which means being able to decode the sounds of the letters).

Vaughn et al. (2006) concluded that those students who received instruction in Spanish were significantly prepared for the following academic year. The results demonstrated that there was a growth in English and Spanish because of this intervention in important areas of English oral language, word reading, fluency and comprehension. Students were able to successfully transfer their decoding fluency and comprehension skills from Spanish to English. According to Vaughn et al. (2006), the achievement gap between struggling readers and typical readers was closed because students made significant growth in the critical areas of phonemic awareness, word attack, fluency, passage comprehension and oral language skills.

According to Trainin et al. (2017), there is a lot of evidence that supports first language transfer to second language. Spanish-speaking parents, for example, can use Spanish literacy activities to help their students enhance their literacy skills. These native language activities will benefit the literacy development in English. Trainin et al. (2017) explains that the "*founds of knowledge*" that Spanish-speaking students develop at home, are essential for a successful acquisition of English.

According to Trainin et al. (2017), English Language Learners have the ability to transfer their phonological process, oral language and literacy skills when they acquire a second language. Trainin et al. (2017) emphasized the need for educators to learn about their students' literacy abilities in their native language. By inquiring about the home literacy practices of the

students (if any) and supporting those practices, the teacher would provide the opportunity to enhance the students' native language or *founds of knowledge*. As a result, the teacher will promote the foundational strands for English literacy and bi-literacy.

On a phonemic awareness evaluation based on Initial Sound Fluency conducted on Spanish-speaking students, Atwill et al. (2010) indicated that those students with first language skills that were average had better performance than those students with below-average skills. The scores on this assessment demonstrate strong positive correlations between English and Spanish, which means that phonemic awareness tasks were measured in the same way. According to Atwill et al. (2010), children with average native language skills demonstrate positive phonemic awareness scores correlated across languages; this means that cross-language of phonemic awareness was apparent.

As for students with below-average skills in their native language (Spanish), there were no indicators of cross-language transfer of phonemic awareness. The results discovered the important role that strong phonemic awareness skills in Spanish-speaking English Language Learners play in the development of phonemic awareness in English as their second language (Atwill et al., 2010). The research concluded that the strength in the Spanish-speaking English Language Learners would predict the phonemic awareness performance in their second language of English, as well as their future reading abilities.

Atwill et al. (2010) discussed the positive findings of those students with strong phonemic awareness in their first language (Spanish). Unfortunately, students who lack these abilities and the students that lack the age-appropriate skills will be listed as at-risk of developing emergent reading skills in English. Thus, instructional decisions for English Language Learners

who lack age-appropriate language skills in their native language may be different from their peers with strong skills in their native language. Atwill et al. (2010) stressed that young English Language Learners with limited phonemic awareness and vocabulary skills in their native language, will have greater risk for vocabulary development, not only in their native language, but also in their second language of English. Consequently, reading achievement in native and second language will be affected.

Atwill et al. (2010) expressed that it is important to pay attention to students' native language skills and take this into consideration otherwise English Language Learners will not be able to develop age-appropriate literacy skills in their native language. Therefore, English Language Learners will develop literacy difficulties in their second language and it will be difficult, if not impossible, to reach their grade level literacy skills.

Riccio et al. (2001) encourages a prompt identification of phonological processes skills in Spanish of second language learners to provide the proper interventions. According to Riccio et al. (2001), by providing effective interventions in students' first language of Spanish, students will receive the skills needed to succeed in both their first language and their second language. As a result, students will successfully cross language transfer their phonological skills from their first language Spanish to their second language English.

Methods

Participants

This research was conducted at a Dual Language Elementary School. The Dual Language Elementary school located in the Midwest. The Dual Language Elementary School has a high poverty rate, with 100% of its students receiving free and reduced lunch. Students in this building come from diverse backgrounds with 77% Hispanic/Latino, 10% African American, 5% Caucasian, 4% Native American, and 3% Asian American. Approximately 84% of students are English language learners, which indicates students speak a different language other than English at home. At the Dual Language Elementary School, students learn the state curriculum 50% of the time in English and the other 50% of the time in Spanish. The Dual Language Elementary School has 116 fourth graders. Five students were chosen to participate in this research study. These students are English Language Learners, whose first language is Spanish.

Participants were students from ages 9-10 years old. In the study, there were three males and three females. Participants came from Central America and had lived less than 10 months in the United States. Participants were selected because they were English Language Learners and new to the school system in the United States. Their length of enrollment in the American school system made them great candidates for the research study.

In order to conduct the research and determine the phonological areas of strength of the participants, a phonological assessment test was given. The assessment was called Diagnostic Evaluation from the intervention kit of Houghton Mifflin Harcourt, Caja de Herramientas para la

Lectura. The Evaluación Diagnóstica consisted of five sections. Each section contains activities according to the section being evaluated.

Reading fluency tests were conducted in English and Spanish using the FAST assessment through the FastBridge website. The FAST assessment is the Formative Assessment System for Teachers. The educators' baseline is based on a fluency assessment of the state mandated FAST assessment. The FAST assessment consists of giving grade level passages to the students and then timing students for one minute to determine their fluency level. Students will read three passages and the average words per minute score of the three is recorded. The reading fluency scores were used to compare the results obtained at the end of the intervention. The purpose of the study is to determine if at the end of the intervention, students were able to cross-language transfer their phonological knowledge from Spanish to English and thus increase their reading fluency levels in both English *and* Spanish.

Materials

In order to determine the reading fluency levels of the students, the student read a one-minute probe using the reading computerized program FAST from the FastBridge website. In order to determine their phonological awareness in their native language of Spanish, the Diagnostic Evaluation from the intervention kit Houghton Mifflin Harcourt, Caja de Herramientas para la Lectura, was given to the students.

Once scores from both reading fluency and Diagnostic Evaluation were gathered, it was decided in which section of the intervention students would begin. The intervention kit Houghton Mifflin Harcourt, Caja de Herramientas para la Lectura, was the stimuli utilized for this intervention. The intervention kit consists of five domains: 1. Conciencia fonológica

(Phonemic and Phonological Awareness) contains 90 lessons 2. Fonética y decodificación (Phonics and Decoding) contains 90 lessons 3. Fluidez de la lectura oral (Oral reading Fluency) contains 90 lessons 4. Vocabulario (Vocabulary) contains 90 lessons plus 6 vocabulary review lessons 5. Destrezas de comprensión de lectura (Reading Comprehension) which consists of 90 lessons. No evidence was found to establish that this kit was utilized for previous research studies. Dual Language teachers who teach Spanish at the Dual Language Elementary School used the intervention kit Houghton Mifflin Harcourt, Caja de Herramientas para la Lectura, to reinforce students' phonemic awareness in Spanish for those students whose first language is Spanish.

The FAST one-minute reading probes to progress monitoring students' reading fluency levels weekly were also part of the materials used for this intervention. Teachers within the Dual Language School District use the FAST assessment to measure students' reading fluency. Progress monitoring is normally used with both individual students and small groups. Research evidence suggests that using progress monitoring to guide instruction has benefits because students learn more, teachers based their instruction on students' performance, and students are more aware of their performance (Kovaleski, 2007; NCRTI, 2018; Shinn, 2008). According to the website fastbridge.org, expert educators and researchers who collaborate with FastBridge Learning recommend the use of CBMs (Curriculum-based-measure-Reading) as the ideal progress measure to monitor students reading fluency.

Measure

As it was previously mentioned, the Diagnostic Evaluation test from the intervention kit Houghton Mifflin Harcourt, Caja de Herramientas para la Lectura was used to evaluate students'

phonological knowledge in Spanish. The sections and activities of the Diagnostic Evaluation are explained as follows: First section: Destrezas de conciencia fonológica (Phonological Awareness). Activities: 1. Sonidos iniciales (beginning sounds) 2. Combinación de fonemas (phoneme combination) 3. Segmentación de fonemas (phoneme segmentation). Second section: Destrezas del alfabeto (alphabet skills). Activities: 4. Nombre de letras: Mayúsculas (Name of the letters: Uppercase) 5. Nombre de las letras: Minúsculas (Name of the letters: Lowercase) 6. Sonidos de las vocales (Vowels sounds) 7. Sonidos de las consonantes (Consonant letters sounds). Third section: Destrezas de lectura y decodificación (reading and decoding skills) Activity: A. Palabras con CVC (CVC words) B. Palabras con CVCV y diágrafos (CVCV words with diagraphs) C. Grupos consonánticos *l* y *r* (Consonant groups *l* and *r*) D. Palabras con *r* inicial (Words with initial *r*) E. Palabras con *r* media (Words with middle *r*) F. Diptongos (Diphthongs). Fourth section: Palabras de mas de dos silabas (words of more than two syllables) A. Palabras de tres silabas (three syllable words) B. Palabras de más de tres silabas (more than three syllable words) Section: Ortografía (orthography) A. Consonantes iniciales (beginning consonants) B. Consonantes finales (ending consonants) C. Palabras con diágrafos (words with diagraphs) D. Palabras con diptongos (words with diphthongs).

Along with the Diagnostic Evaluation, fluency probes from the FAST assessments were given to determine participants' reading fluency English and Spanish. Results from based on FAST assessment showed that students were 43% behind the reading fluency level for 4th grade. Therefore, in order to have accurate results, it was decided to progress monitor students using 3rd grade reading probes in Spanish and 1st grade probes for the English assessment.

Procedure

Once the students were selected, the Diagnostic Evaluation was conducted to determine their phonemic awareness in Spanish. The results indicated that student 1 had the lowest scores in all the areas tested. Student 1 was not able to produce any responses in the sections of two or more syllable words. In the orthography section, student 1 passed only activity A and was unable to produce responses for activities B, C and D. Student 2 did not show proficiency in the section of words of more than two syllables activities G and H. In the orthography section, student 2 did not show proficiency in activities C and D. Student 3 diagnostic evaluation showed non-proficient scores in all of the phonemic awareness sections. In the alphabet skills section, specifically in activity 7 that consisted of consonant sounds, non-proficient scores were also shown. For the section of two or more syllable words in both activities, non-proficient scores were also noticeable. As for the last section of orthography, non-proficient scores were shown in activities C and D. Student 4 showed proficiency in only activity G of the section words of more than two syllable words. Student 5 scored non-proficient on activities E and F. In the orthography section, student 5 was non- proficient in the activity C.

For this research study, it was necessary to evaluate students in two areas which were key to determining whether or not students were able to cross-language transfer their phonemic awareness in Spanish to English and as a result, increase their levels of fluency in English. Participants were selected because they were new to the American school system and their English fluency levels in English and Spanish were low. Once the participants for the research study were selected, a Diagnostic Evaluation test from the intervention kit Houghton Mifflin Harcourt, Caja de Herramientas para la Lectura, was administered to determine their phonemic awareness in their native language of Spanish. When the Diagnostic Evaluation results were

gathered, it was decided in which section of the intervention the students were going to begin. The intervention consisted of 30 minutes of phonemic awareness instruction daily Monday through Friday, leaving one day for progress monitoring. The kit provided skilled lessons and detailed scripts. The lessons have three progressive steps: teacher instruction and modeling, teacher and students work together and children work independently.

The intervention kit contains two binders, one for the student and one for the teacher. In the student binder, all the materials needed for the students are provided. The teacher binder explains systematically how the lessons need to be taught. The lessons were designed to be taught in one day. Student's progress will determine the sequence and time needed to teach the lessons. Each Thursday of the week will be designated to progress monitor students' reading fluency. In order to conduct the progress monitoring, every student individually reads a one-minute probe from the FAST reading assessment and the teacher tracks the number of correct words student read in one minute. Different passages were administered each week. The intervention was conducted in the classroom; therefore, conditions for all the participants were the same throughout the intervention for the research.

Results

The hypothesis to be tested in this study is reinforcing students' phonemic awareness in their first language, Spanish, throughout a phonetic intervention. Students will be able to cross-language transfer their Phonemic Awareness skills in Spanish when reading in English, and as a result, increase their levels of reading fluency in English *and* Spanish. Results obtained explain whether students were able to increase their fluency levels in English *and* Spanish because of the intervention.

Before and after the intervention, a Spanish Diagnostic Evaluation was conducted individually to assess the five different areas of the Phonological knowledge, in order to determine their Phonemic Awareness in their native language of Spanish, as well as the knowledge gained after the intervention. The assessment was obtained from the Houghton Mifflin Harcourt Intervention Kit, *Caja de Herramientas para la Lectura*. The FAST fluency assessment was given in Spanish to determine their fluency rate.

Participants were considered to have low levels of reading in Spanish. Their reading fluency was assessed with third grade reading prompts (which is one grade lower than their current grade level). As for the reading fluency tests in English, these were done using first grade passages. The first grade passages consist of frequently used sight words, due to the low levels of English of the participants. Both English and Spanish fluency tests were done once a week using different reading probes in English and Spanish. The students were timed for one minute, while the teacher marked the number of words read correctly in one minute.

A dependent groups *t* test revealed that there was a statistically significant difference in pre-test scores on phonemic awareness in Spanish ($M = 168.40, SD = 37.90, n = 5$), as compared to post-test scores on phonemic awareness in Spanish ($M = 212.20, SD = 53.60, n = 5$) following a reading intervention with strong effect size, $t(4) = 5.20, p < .05, d = 1.00$. On average, there was a 1.00 point difference between the groups.

A dependent groups *t* test revealed that there was a statistically significant difference in pre-test scores on reading fluency in Spanish ($M = 69.80, SD = 40.10, n = 5$), as compared to post-test scores on reading fluency ($M = 90.20, SD = 47.80, n = 5$) following a reading intervention with moderate effect size, $t(4) = 4.60, p < .05, d = .50$. On average, there was a 1.00 point difference between the groups.

A dependent groups *t* test revealed that there was a statistically significant difference in pre-test scores on reading fluency in English ($M = 11, SD = 6.70, n = 5$), as compared to post-test scores on reading fluency in English ($M = 44, SD = 28.90, n = 5$) following a reading intervention with strong effect size, $t(4) = 3.20, p < .05, d = 1.60$. On average, there was a 1.60 point difference between the groups.

Results indicate that students made significant progress in their fluency in both languages English and Spanish. Observations made by teachers at the time of progress monitoring students in English, showed students using strategies learned during the intervention, such as sounding out words and blending sounds together to read words correctly. Results showed that students were able to cross-language transfer their Phonemic Awareness of Spanish when reading in English.

Discussion

Summary of Major Findings

The hypothesis evaluated in this study was if a phonetic intervention in the participants' first language of Spanish will increase their reading fluency levels in English *and* Spanish. Data collected indicates that students were able to increase their fluency levels by at least 10% after the intervention. This research study confirmed the findings made by Sun-Alpering & Wang (2011) that there is a strong connection between first language phonological skills and second language reading acquisition. Students made a significant growth in the amount words they read per minute in both English and Spanish. In this study, students demonstrated their ability to cross-language transfer their Phonemic Awareness in their first language of Spanish.

A research study conducted by Atwill et al. (2010) found evidence of cross-language transfer of Phonemic Awareness when reading in their second language, which is another factor that matches the findings made in this research study. For example, student 1 lacks of age-appropriate vocabulary skills in her first language; as a result, her progress during the intervention was nil. Despite the fact that students who participated in this study were below-grade-level readers, they were able to show growth in their fluency levels. However, as it was mentioned before; student 1 did not make significant progress in either language. In effect, student 1 was referred to the MTSS (Multi-Tiered System of Supports) team for further evaluations.

The results of this investigation agree with Vokic (2011) findings that refer to the negative aspect in which the visual similarities interfere when reading certain words in English. In this particular study, participants were not able to correctly read the English words with long

vowel sounds, as well as words that included diphthongs, or words with *h* at the beginning. Ex. *late, break, how*. As for the words with *h* at the beginning, it was expected that the students would not produce the initial sound of the *h* because in Spanish the letter *h* has no sound. The same happened with the English blend *ll*, which in English is pronounced as an *l*; in Spanish, this is considered a letter *Ll* and makes the sound of *y* as in the word *yoyo*. When students read the word *all*, this was read as *ay*, which is not a word in Spanish.

Since participants were acquiring their second language at a young age, the mistakes made during this research study will improve. Vokic (2011) stated that proper production of the students' second language depends on the age of the English Language Learner. The participants of this study range between 9 and 10 years old, which is considered a positive factor in regards to second language acquisition.

Limitations of the Study

There were many important limitations to consider in this research study. These include participants' behavior, time factor and not having a control group. When these limitations are taken into consideration, it makes it difficult to consider whether the results would have been different. In the sense of not having a controlled group, it leaves the researcher with no other results to compare the results obtained with the students who received the intervention. Another limitation was the lack of documentation that will certify the time or degrees of study in which participants received education in their countries of origin, as well as evaluations that will provide more information about their academic levels.

At the Dual Language Elementary, students change intervention groups every six weeks. In order to conduct the research study, participants were assigned to the phonemic intervention;

this means that at the end of the week six, students will move to a different intervention group. Changes in the intervention groups interfere with knowing whether or not if the participants had made more progress by continuing with the same intervention for at least four more weeks.

Participants' behavior and willingness to take part in the activities of the intervention due to social-emotional factors was also a limitation. It is important to highlight that participants were not only new to the school, but also new to the country. Being new to the country and the school, participants were going through an adaptation process, and for each participant, the adaption process is different according to his or her individual home life conditions. Especially if these conditions include repercussions in his or her family members.

At the time of the research, only five students in 4th grade were new to the Dual Language Elementary, which limited the opportunity of the researcher to include a controlled group. It would have been interesting to have been able to compare the results of a treatment group vs a controlled group. Unfortunately, as previously stated, participants under the same conditions participated in the research study.

When participants were enrolled in the School District, parents and tutors did not provide enough documentation in regards to prior years of schooling from the participants. The ELPA21, or English Language Proficiency Assessment, was given by the World Languages Department of the School District to determine their English level at the time of their enrollment. The required assessments for the participation in the research study were administered once students were at the Dual Language Elementary School. The lack of information is considered a limitation because it leaves the researchers with questions. Some questions to consider include what services the students might have received in their native country, if participants require

particular accommodations, if any of the participants received medications and if scores from previous grade levels could have been considered to support data obtained by the teachers at the Dual Language Elementary School.

Further Study

As stated by Sun-Alperin & Wang (2009), phonemic awareness and well as phonological processing skills obtained at a young age in individuals' first language are key when learning a second language; for this reason, it would be interesting to see the results of an investigation conducted with participants whose first language is not Spanish. It is also important to know what the implications would be if an investigation was conducted with students who do not present any deficit in reading.

Another alternative would be to encourage parents to read with their students at home in their native language in order to enhance their knowledge of their first language. According to Trainin et al. (2017), home literacy practices have great impact in literacy skills such as oral language, alphabetic knowledge, Rapid Automatized Naming (RAN), and phonological memory because all these skills are precursors of decoding, fluency and spelling. By implementing reading as a habit in the home, students might increase their reading fluency levels, not only in their first language, but also in their second language.

In a further study, it would be interesting to see the use of the intervention kit of Houghton Mifflin Harcourt, *Caja de Herramientas para la Lectura*, in older and younger English Language Learners whose first language is Spanish who also have reading deficits at the time of their enrollment in the United States school system. In this research study, the intervention kit proved to be successful for the participants and for the purpose of the implementation. Perhaps

providing participants with the same intervention along with an English phonological intervention would provide better outcomes.

Conclusion

The goal of this research was to conclude if by reinforcing students' phonemic awareness in their first language, Spanish, throughout a phonetic intervention the students will be able to cross-language transfer their Phonemic Awareness skills in Spanish when reading in English, and as a result, increase their levels of reading fluency in English *and* Spanish. Data obtained at the end of the intervention demonstrated that students were able to increase their reading fluency levels in English *and* Spanish, as well as increase their Phonemic Awareness in Spanish, proving the ability of students to Cross-language transfer their Phonemic Awareness from Spanish to English when reading in English. These results are attributed to the intervention carried out in this investigation because participants did not have a prior intervention before the intervention carried by the researcher.

This research is based on a phonetic intervention in Spanish, which is the first language of the participants. In future research, it would be interesting to know the results of parallel interventions, that is to say a phonetic intervention in Spanish (if this is the native language of the participants) and a phonetic intervention in English. Another future research could be the impact of a repeated reading intervention that includes rereading familiar texts in Spanish in order to increase English fluency.

The results of the intervention had a positive impact in the participants. Although the students continued to score below their grade level peers, results demonstrated that the students were able to make significant progress in their fluency after the intervention. Atwill et al. (2010) states the importance of providing students with the proper literacy skills in students' first language, or else literacy difficulties will emerge when learning a second language. By targeting

specific low areas of Phonemic Awareness of participants' first language and providing with a Phonemic Awareness intervention based on their evaluations results. Overall, four out of the five participants were able to successfully increase their reading fluency levels in English and Spanish because of the Phonemic Awareness intervention in their first language of Spanish.

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