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Quality of Language in Spanish-Speaking Parents who are Learning English: Conversations with their Children

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QUALITY OF LANGUAGE IN SPANISH-SPEAKING PARENTS WHO ARE LEARNING ENGLISH: CONVERSATIONS WITH THEIR CHILDREN

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Amber A. Betances

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To: Dean Ora Strickland
College of Nursing and Health Sciences

This thesis, written by Amber A. Betances, and entitled Quality of Language in Spanish-Speaking Parents who are Learning English: Conversations with their Children, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

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Date of Defense: June 24, 2020.

The thesis of Amber A. Betances is approved.

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Andrés G. Gil
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Florida International University, 2020

DEDICATION

I dedicate this thesis to my mother, Ellianys Betances, who provided me with guidance and support throughout my life and during this project. Thank you for always being there for me and being patient with me.

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ABSTRACT OF THE THESIS

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Professor Alliete Alfano, Major Professor

The purpose of this thesis was to analyze adult language in Spanish-speaking parents who are English second language learners, during conversations with their children in both Spanish-only and English-only play sessions. Specifically, the purpose of this study was to determine the difference in the parents' Spanish and English skills across a variety of different variables such as mean length of utterance in words (MLU-w), number of total words (NTW), number of different words (NTD), type-token ratio (TTR), mazes, and complex sentences.

A total of 11 participants above the age of 18 years old with children between 12-46 months of age participated in the study. Parents' used significantly more words and different types of words when speaking Spanish versus when speaking English. The results of the study demonstrated that parents indeed expose children to more and richer language when they are speaking their native language (Spanish), versus their second language (English).

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Chapter I: Review of the Literature

Introduction

Language is the means of human communication, whether it is written or verbal. The quality of language, the way we use words, is essential to convey the meaning of our messages to others. The effect of quality of language on communication is what makes it so critical to children's early vocabulary and language development. Parental quality of language is the first and foremost influence in a child's early development because parents are the first exposure a child has to language before entering a school setting where further socialization occurs. Therefore, the quality of language the parents expose their children to will have a direct effect on the children's language, education, and future success.

Today, the United States has a significant high population of Hispanic parents, who are Spanish speaking. Many Spanish speaking parents choose to incorporate both English and Spanish in their households, especially when it comes to raising children. But these parents may believe that if children are raised bilingual they might be confused between the two languages, in turn harming their quality of language. Parents should have the right to speak their native language and not be forced to speak a language they acquired later in life in fear of negatively impacting their child's language development. This study will address the impact of the quality of parental language on children's language development, specifically in the case of bilingual parents with English as a second language. The research presented will describe the quality of parents' language production and how it changes in Spanish-speaking parents, who are learning English, during English-only versus Spanish-only interactions with their children. The review of

the literature will conclude with the summary and rationale, plan of study, and experimental questions for the current investigation.

Importance of parent language on development

Children learn language from their environment, primarily from their parents (Golinkoff, Hoff, Rowe, & LeMonda, 2019; Hart & Risley 1995; 2003). Hart and Risley (1995) found that prior to children beginning their own experience with other children in social groups outside of their home, everything they learned came from their families. They observed 42 children grow and become more like their parents in activity levels, vocabulary, and language and interaction styles. They noted that 86% to 98% of the words recorded in each child's vocabulary included words also recorded in the parents' vocabularies (Hart & Risley, 1995). Additionally, they noted that during children's first three years at home, children were easily shaped and dependent on their families for all their experiences.

Hart & Risley (2003) indicate that parent-child interactions, the home environment, and nurturing practices come together in the concept of parenting. In their study of young children's language productions and language-parenting environments, in which children learn to talk, they found that children of families of lower socioeconomic status (SES) received significantly less time and effort from their parents than children of parents of higher SES. They concluded that the quality of content of parents' utterances to their children was significantly related to the family's SES level. Specifically, they found that in families of lower SES, a large portion of parent utterances to children were prohibiting the children's activities, whereas, discouraging words were rarely or never heard in families of higher SES. In families of higher SES, children heard more

questions, numerous repetitions and explanations of their own topic. The differences in the quality of parent utterances was also significantly correlated with the child's IQ measures. The distinctions connected with differences in IQ were the time, attention, and talking families of higher SES invested in their children and their interest in what their children said. These observations suggest that children from parents of higher SES are more involved and they are exposed to more parental utterances through repetitions and explanations in comparison to children from families of lower SES.

How parental language influences child language

Golinkoff et al (2018) had emphasized the power of words. Specifically, words and the concepts they carry are born in the social interactions between adults and children. Parents conversations with children affect their early language learning, school readiness, and eventually, their school success. Thus, the more language adults use with their children, the better chances their children have of attaining school success. Golinkoff et al (2018) found that when parents read and spoke to children which focused their attention, children gained more than just language. Children also gained general knowledge and concepts that are important for listening and reading comprehension. Children are required to connect the words they hear to the objects and actions of their own attention. The quality of language addressed to children has two vital components being the vocabulary diversity of language input and the exchange of communication between parents and children (Golinkoff et al., 2018).

Gilkerson, Richard, Warran, Oller, Russo, and Vohr (2018) studied the interaction and quality of talk in the home environment during early childhood. They found these variables related to SES and could be utilized to predict early language and cognitive skill

outcomes 10 years later. Results indicated that the conversational turn count for young children between the ages of 18 and 24 months of age predicted IQ, verbal comprehension, and expressive and receptive language skills at 9 to 13 years old. Notably, the influence of increased early interaction on long-term developmental results go beyond the influence of socioeconomic factors and child skills.

Similar to Gilkerson et al. (2018), Rowe (2012) studied both the quantity and quality of parental input in children's vocabulary skills across early development. Rowe concluded that the quality characteristics of parental talk may have a greater impact on child language development at different ages and that the essential measurement of the quality of language input is in the diversity of parent vocabulary. This suggests that parents can support their children's vocabulary acquisition at different points in their development by giving them exposure to different types of talk.

Overall, research appears to indicate that the quality of adult language input in children's vocabulary skills and parent/child interactions are important during the early developmental years of children's language. The research makes a vital point of adult language being essential during the early years of child language development for later success in academics (Gilkerson, 2018; Golinoff et al., 2019; Rowe, 2012).

Weisleder and Fernald (2008) studied early language development in Spanish-speaking families of low SES as well as how the quantity of speech directed to children between 19 and 24 months influenced the development of their language processing skills and vocabulary learning between. They concluded that an important step in the path from early language development to later vocabulary awareness is influenced by parental language exposure on children's speech-processing skills. Additionally, Weisleder and

Fernald (2008)'s study noted that children who hear more language have more chances of understanding language and the ability to use the skills that are important for word learning. In turn, concluding that children who are more exposed to child-directed speech recognize familiar words quicker and correctly when interpreting speech in the moment. Children are then able to learn new words and rapidly increase vocabulary growth.

Hurtado, Marchman and Fernald (2008) investigated whether Spanish-learning children's early experiences with language would predict effectiveness in real-time comprehension and vocabulary learning between the ages of 18-24 months. They concluded that children begin to understand and produce words and sentences in their interactions with experienced speakers of the language they are learning. Furthermore, children who had mothers who spoke to them more had larger vocabularies at 24 months and made greater improvements in vocabulary compared to children whose mothers spoke less. The more a caregiver speaks to their child, the more they expose their child to different examples of words in context which later yields a richer databank of lexical and morphosyntactic cues to meanings of words.

Both Weisleder and Fernald (2008) and Hurtado et al. (2008) agreed that the more a child is exposed to child-directed speech from their caregiver the more the child learns new words and develops a richer databank of vocabulary. The home environment is where the parent interacts with the child and stimulates their language. The more exposure the child has in their home environment, the more language the child will develop. Chang (2017) reported that when parents are supported by people in their personal network and hold greater emotional and psychological resources, they are more prone to be stimulating in their parenting. These factors might be indicators of better

language development. The overall quality of the home environment demonstrates a display of parenting practices throughout this setting environment and the daily life of a family. The practices include parents behavior, for example providing educational interactions or making educational materials and activities in the home setting (Chang, 2017). Children's early language development is not at risk solely due to parental practices in the home, but is due in part to the parents own physical and emotional resources.

To summarize, children learn language from their parents and their environment. SES may impact children's language because if they come from a low SES they may receive less time and less exposure to language versus children who come from higher SES who get more time and more language exposure. The quality of parental language input for children during early language development can have consequences for years to come. The more a parent speaks to their child, the more exposure the child will have to new words which will lead to a bigger vocabulary. In addition to a larger vocabulary the language a child receives from their caregiver determines their academic readiness and eventually their academic success.

Bilingualism in the United States

Currently, in the United States (U.S), the number of Hispanics is 59.9 million (Alonzo, 2019). About 78.2% of the Hispanic population speaks English only and 21.8% speaks a language other than English (Alonzo, 2019). Most Spanish-speaking immigrants in the United States learn English once they arrive. Thus, their children often receive language input in their first language (L1) at home and in English, their second language (L2), in society. However, some believe that children will experience language confusion

if exposed to more than one language, but there is no research evidence supporting this notion (Baralt, Mahoney, & Brito, 2020; Genesee 2009; Guiberson, 2013; Hoff & Core, 2015).

Guiberson (2013) defines the language confusion myth as the inability of children to become bilingual without being confused between both languages. The indications of language confusion include: difficulties in (L1) and (L2), poor language, and code mixing. However, there is no evidence for language confusion, as bilingual children effectively separate and use their languages correctly with monolingual speakers in both of their languages. Infants are able to distinguish one language from another if exposed to two languages, as they develop two separate phonological, lexical, and grammatical systems (Hoff & Core, 2015). There are influences of each language on each other, as there are in adult bilinguals; however, this does not cause language confusion in children.

While bilingual children mentally represent their languages as two separate language systems, they do not always separate them when speaking. They can code-mix, which is the alternating between L1 and L2 within or across an utterance or phrase (Guiberson, 2013; Hoff & Core, 2015), which is also typical of adult bilinguals (Hoff & Core, 2015). There have also been studies on code-mixing that provide evidence against language confusion in bilingual children, confirming that exposure to two languages does not harm children's ability to acquire two separate language systems (Guiberson, 2013; Hoff & Core, 2015).

Genesee (2009) indicated that there is a significant amount of research on simultaneous dual language acquisition confirming that learning two languages is as normal as learning one language. When children are supported in their learning

environments, they are able to acquire two languages simultaneously in a similar way to how monolingual children acquire language. Evidence suggests that the learning environment is critical and that limited input that results from exposure to two languages during the preschool years does not affect certain aspects of language development in simultaneous bilinguals (Genesee, 2009).

Baralt et al. (2020) focused on the design and effectiveness of Háblame Bebé, which is a language-promoting phone application that supports low-income Hispanic mothers to speak more to their children in their native Spanish language. The goals of the application are to improve their children's early language environment, monitor developmental milestones and to promote bilingualism. They concluded that Háblame Bebé is an effective app to successfully convey health information about children's early bilingual language development. During phase I of the study, they noted their application was unsuccessful due to the idea that Hispanic mothers believe that the Spanish language would have no contribution to childhood language development. This belief may be due to societal expectations in the United States that in order to assimilate, one must be required to know the English language and abandon the Spanish language. For example, language classes in some schools are no longer a requirement.

The second version of the Háblame Bebé application promoted bilingualism pride and observed significant progress in mothers' language input. The mother's quality and quantity of language input improved from pre- to post-intervention and the families described experiencing discrimination and linguistic racism when using Spanish, but did report they felt more empowerment and sociolinguistic pride (Baralt et al., 2020).

Due to myths of bilingual confusion and linguistic racism, some individuals continue to suggest that children should be exposed to English only. However, if a child is exposed to English only, this may in turn affect their ability to speak the parent's native language if at all (Hoff & Core, 2015). This linguistic bias causes parents to feel uncomfortable speaking to their child in their native language and thus, children will experience limited quantity and quality of language. One indicator of quality recognized in studies of bilingual children is the amount of input provided by native speakers (Hoff & Core, 2015). Children can be exposed to both English and Spanish during early language development without language confusion or harmful effects to their overall language development.

Children can be bilingual

Infants are able to differentiate languages and bilingual infants acquire the basic means for keeping languages separate (Guiberson, 2013). Bilingual toddlers have the ability to effectively separate and correctly use their language with monolingual conversational partners and apply cross-linguistic transfer skills from one language to another. This may be due to routine language practices in the home setting (Guiberson, 2013).

Genesee (2015) studied dual language learning in both school and non-school settings, among simultaneous and sequential bilinguals. He found that the quality of the learning environment in which young children grow up and are educated, influences whether they would become fully bilingual and academically successful. The evidence suggested that children learning two languages simultaneously was as normal as learning one. In fact, given a sufficient language-supporting learning environment, children

develop each of their two languages similarly to monolingual children. The communicative ability of simultaneous bilinguals indicates that they are able to use their two languages appropriately with others and are able to adapt use of their two languages accordingly to the language abilities and preferences of whom they are speaking too. (Genesee, 2015).

When children learn two languages simultaneously, the level of development in each language may be minimally slower than the rate of single language development in monolingual children (Hoff & Core, 2015). Bilingual children tend to lag slightly behind monolingual children of their same age in their vocabulary and grammatical development when each language is measured separately. However, research shows that bilingual children catch up to monolingual children by the age of 10 years. Thus, children can acquire two languages at the same rate as monolingual children can acquire one (Hoff & Core, 2015).

While many studies focus on the development of language for bilingual people, as well as how two languages develop and share one conceptual system, Bialystok and Martin (2004) focused on bilinguals' cognitive development and organization. This study analyzed the skills of monolingual and bilingual children through a cognitive test, to solve a cognitive problem via a card sorting task to understand both the impact of bilingualism on children's solutions and the function of cognitive processes in development for both groups of children. They concluded that bilinguals have better inhibitory control than monolinguals for ignoring perceptual information that does not require attention during the task. However, they are not more skilled in analysis of representation than monolingual children. Analysis of representation is the process of

creating mental representations and recording information that is detailed, explicit and abstract before organizing them into categories. Thus, results from the study concluded that the important feature in solving the change card sort task is the demand for attention and inhibition. As previously mentioned, the results showed that early childhood bilingualism changes children's development of control of attention, while having little impact on their development of analysis of representations. This then means that bilingual children's cognitive development does not differ from monolingual children.

Forcing Parents to Speak Non-Native Language

When parents talk to their children in their native language, they tend to use a more varied vocabulary than when they talk to their children in their second language (Hoff & Core, 2015). This is true even when those parents were significantly proficient in English and speaking to 2.5-year-old children. However, it was noted that the vocabulary parents used in playing with zoo animals was an area of weakness for adult learners of a second language. Thus, these results indicate that when immigrant parents speak late-acquired English to their children, they may be exposing their children to poor English and also lessening their children's opportunities to learn the language of their heritage. It is noted that having poor English skills when entering school places children at risk for school failure (Hoff & Core, 2015).

Heritage language acquisition should be an appreciated aspect for children in immigrant families. Immigrant families should not be discriminated against or discouraged from speaking in their native language to their children (Hoff & Core, 2015). They should be able to maintain their cultural heritage; language being a big part of that heritage. Children from immigrant families who can speak to their parents in their

heritage language tend to have better family relationships and stronger ethnic identifies as well. These positive factors are strongly related to desired outcomes such as academic achievement (Hoff & Core, 2015).

Summary and Rationale

Language diversity is essential in child language development. Children are exposed to language through their environment, primarily their parents. Through parental interactions' children begin to develop their own vocabulary.

The rise in Spanish-speaking parents in the United States has also led to a rise in the belief that children cannot be bilingual without negative impacts to their early development and future success. However, there is no evidence stating that children who are exposed to both languages cannot be developmentally and academically successful. On the contrary, evidence states that children are indeed able to become bilingual, differentiate between two languages and developmentally perform on par with monolingual children. Thus, parents should be encouraged to speak their native language to their children, rather than exposing their children to just their late-acquired English. If parents are told to speak English only to their children when English is not their native language, parents are then being encouraged to introduce their children to possibly poor English language usage, which in turn can negatively affect their child's language development. There are very few studies that have systematically measured and compared language skills when parents are forced to speak English only or Spanish only. This study is being conducted to focus on bilingual language development in children and their exposure to language from their parents. Language is important for children to communicate and express themselves. Thus, if children are exposed to more diverse

words, they will develop a rich vocabulary system versus if they are exposed to a limited vocabulary system, they will obtain poor language skills and be unable to communicate well, possibly leading to failure in school. If parents speak their native language, in this case Spanish, they are exposing their children to a rich vocabulary of words versus when they speak English, they may be exposing them to limited vocabulary because the parents learned English as a second language. Furthermore, it is important to conduct a study like this in order to investigate the capacity of a parent's vocabulary system based on language speaking ability.

Plan of Study and Experimental Question

Therefore, the purpose of this study is to compare the quality of English-learning parents' English-only and Spanish-only play sessions with their children. The specific variables to determine the quality of language are total number of utterances, mean length of utterance in words (MLU-w), number of total words (NTW), number of different words (NDW), type token ratio (TTR), percentage of mazes (includes false starts, revisions, reformulations, and fillers), and percentage of complex sentences. The focus of this study is on parents' language during their interaction with their children. The specific research questions for this study are:

1. What is the difference between parents' total number of utterances in Spanish versus in English?
2. What is the difference between parents' MLU-w in words in Spanish versus in English?
3. What is the difference between parents' NTW in Spanish versus in English?
4. What is the difference between parents' NDW in Spanish versus in English?

5. What is the difference between parents' TTR in words in Spanish versus in English?
6. What is the difference between parents' percentage of mazes in Spanish versus in English?
7. What is the difference between parents' percentage of complex sentences in Spanish versus in English?

Hypotheses

Parents who are native Spanish speakers and are learning English as a second language will produce higher total number of utterances, MLU-w, NTW, NDW, and percent of complex sentences in Spanish-only interactions versus English-only interactions with their children. However, parents will have fewer percent of mazes in Spanish-only interactions versus English-only interactions with their children.

Chapter II: Methodology

This quantitative exploratory study compared the quality of English and Spanish language in primary Spanish-speaking parents who are learning English as a second language.

Participants

The study consisted of 11 Spanish-speaking parents who are learning English and have typically developing children between the ages of 12-46 months old. The participants were recruited in the United States through schools and website forums. The inclusion criteria were: parents who a) are predominantly Spanish-speakers and have an English oral proficiency ranging from novice high to advanced low to be able to participate in English-only sessions, as determined utilizing the American Council on the Teaching of Foreign Languages (ACTFL) (n.d., 2015). Proficiency Guidelines b) have children between the ages of 12-46 months of age, and c) are older than 18 years of age. The exclusion criteria were: a) parents who were highly fluent in English or not fluent enough to play with their children for 15 minutes only in English, b) parents younger than 18 years of age, c) parents whose children are younger than 12 months of age or older than 46 months of age.

Procedures

This study was submitted and approved by the Institutional Review Board (IRB) at FIU. Participants were recruited through schools and website forums. Once participants expressed interest, they received a phone call from the researcher to see if they met the study's criteria. For participants who met the criteria, the first meeting was arranged, where informed consent was obtained. Data was collected in the lab (AHC3-

407A), in participants' homes, or via Zoom. At this first meeting, parents' proficiency levels in English and Spanish were tested utilizing the Woodcock-Munoz Language Survey-R NU (WMLS-R NU) (Schrank, McGrew, & Dailey, 2010).

The second visit occurred 1-2 days or weeks after the first visit. During the second visit parents played with their children for 15-minutes in one language and then 15-minutes in the other language, which were randomly assigned. For the sessions completed in the lab, parents were given one bag full of toys and books in English for use during the English-only play sample or one bag full of toys and books in Spanish for use during the Spanish-only play sample to play with. The bags both contained similar items which included: books, toy blocks, animals, Play-Doh, etc. A timer was used to time each play session and inform the parents as to when the 15 minutes had passed. Parents then were instructed to switch to the other language and given a new bag of toys. Parents who completed the play sessions in the home setting did not use these bags secondary to COVID-19 concerns; therefore, they used toys available in the home setting. The play sessions were video recorded. The language parents used first were randomly assigned. Parents were told to speak solely in the language they were assigned to for each of the 15-minutes play sessions. After each of the two play sessions in each language, the third visit was scheduled. The third visit occurred 1-2 weeks after the second visit. During the third visit the order of the languages were reversed and the procedures were the same as the second visit.

Measurement Techniques/Instrumentation

During the initial phone call, parents' level of English proficiency was determined utilizing the (ACTFL) Proficiency Guidelines. The parents who fell within the shaded

areas in Table 1 of the ACTFL below are the parents who were able to participate in the study.

Table 1

The ACTFL Proficiency Guidelines are:

ACTFL Level	**Language Functions**	**Corresponding Professional/Positions**	**Examples of Who is Likely to Function at this level**
Distinguished	Able to modify language to specific audience, persuade, and negotiate.	Foreign Service: Diplomat, International Specialist	Highly articulate, native speakers Language learners with current professional/educational experience in the target culture
Superior	Discuss topics expansively, support opinions, and hypothesize.	University language professor, lawyer	Well-educated native speakers
Advanced High		Physician, Financial advisor	Language learners with graduate degrees in language and extended

			educational experience in target environment
Advanced Mid	Narrate and describe in past, present, and future.	Banking and Investment Customer Service	Heritage speakers, informal learners
Advanced Low		K-12 Language Teacher, Nurse, Social Worker	Undergraduate language majors
Intermediate High		Fire fighter, tour guide	Language learners following 6-8 years of study or 4-6 semesters in college
Intermediate Mid	Create with language, initiate, maintain, and end simple conversations by asking and responding to simple questions	Cashier, Salesclerk	

Intermediate Low			Language learners following 4-years of high school or 2 semesters of college; or following an immersion language program in Grades K-6
Novice High			Language learners following content-based language program in Grades K-6
Novice Mid	Communicate minimally with simple utterances, lists, and phrases		
Novice Low			Language learners following 2 years of high school language study

*The shaded boxes represent the English oral proficiency levels the Spanish-speaking parents should fall in.

During the first visit/meeting parent's language proficiency was tested in both English and Spanish with the WMLS-R NU. The raw scores of the subtests were calculated and converted to standardized scores for each subtest, as well as for the Oral Language and Listening Proficiency using the WMLS-R NU scoring software. These

scores were used to further determine parents' English and Spanish proficiency levels separately from the ACTFL. Play session language samples were transcribed from the video recordings and entered into the Systematic Analysis of Language Transcripts (SALT) (Miller & Iglesias, 2008) software. SALT software standardizes the process of prompting, transcribing, and analyzing language samples. SALT has specified transcription rules for both English and Spanish which were used in this study. Only adult utterances that were intelligible were used, as well as adult utterances that stayed the same in the same language. For example, if during a Spanish-only play sample a parent used an utterance that contained mainly Spanish words but had some English words, the utterance was not used in the analysis. The specific variables used to determine the quality of language were MLU-w, NTW, NDW, TTR, number of complex sentences, and analysis of mazes.

Data Analysis

For each participant who had two English samples and two Spanish samples results from the SALT, each of the language scores were averaged for comparison. However, four of the participants did not complete the third visit of the study; thus, their one-time scores for each language were used for comparison. Paired sample t-tests were used to compare the participants' MLU-w, NTW, NDW, TTR, number of complex sentences, and analysis of mazes.

Chapter III: Results

Descriptive Findings

Descriptive statistics for the samples are presented in Table 2. The participants were 9 female and 2 male parents above the age of 18 years with children between the ages of 12-46 months. Parents were fluent Spanish speakers with English oral proficiency ranging from novice high to advanced low as verified with WMLS-R NU.

Paired samples t-tests were used to determine whether there were statistically significant differences between total number of utterances-w, NTW, NTD, TTR, mazes, and complex sentences during Spanish-only play sessions compared to English-only play sessions in adults. Data are mean $\pm$ standard deviation, unless otherwise stated. No outliers were noted in any of the variables. Inspection of their values did not reveal them to be extreme and they were all kept in the analysis. The assumption of normality was not violated, as assessed by Shapiro-Wilk's test. Cohen's D was utilized to calculate and report a size effect for each variable. Participants produced significantly higher numbers of total number of utterances, total words (NTW), and different words (NDW).

Table 2

Analysis of paired samples t-tests for each variable and language

Variable	Language	M(SD)	Statistic T-value
Total Number of Utterances	Total Number of Utterances Spanish	315.9091 (80.75265)	3.087*
	Total Number of Utterances in English	245.9545 (56.15623)	
MLU in Words	MLU in Spanish	3.2691 (.51939)	

	MLU in English	3.2082 (.59346)	.501
NTW	NTW Spanish	880.0909 (248.72905)	2.854*
	NTW English	660.5909 (254.18584)	
NDW	NDW Spanish	204.7727 (39.62913)	5.514*
	NDW English	147.9091 (45.99229)	
TTR	TTR Spanish	.2491 (.05243)	1.013
	TTR English	.2373 (.04315)	
Maze	Maze Spanish	3.4091 (1.68550)	-1.926
	Maze English	5.1818 (3.02715)	
Complex Sentences	Complex Sentences Spanish	5.1145 (1.96492)	-.617
	Complex Sentences English	5.7591 (4.35229)	

Note: M= mean, SD= Standard Deviation. *p=<.05.

Total Number of Utterances

Participants produced significantly more total number of utterances in Spanish (315.9091 $\pm$ 80.75265) than in English (245.9545 $\pm$ 56.15623), t (11) = 3.087, p <.05, d=0.93.

MLU-w

Participants produced similar MLU-w in Spanish (3.2691 $\pm$.51939) as in English (3.2082 $\pm$ .59346). There was no statistical significance, t (11) = .501, p >.05, d=0.15.

NTW

Participants produced significantly more NTW in Spanish (880.0909 $\pm$ 248.72905) than in English (660.5909 + 254.18584), t (11) = 2.854, p < .05, d=0.86.

NDW

Participants produced significantly more NDW in Spanish (204.7727 ± 39.62913) than in English (147.9091 ± 45.99229) t (11) = 5.514, $p < .05$, d=1.66.

TTR

Participants produced similar TTR in Spanish (.2491 ± .05243) and in English (.2373 ± .04315), no statistical significance, t (11) = 1.013, $p>.05$, d=0.03.

Mazes

Participants produced similar proportion of total mazes in Spanish (3.4091 ± 1.68550) and in English (5.1818 ± 3.02715), no statistical significance, t (11) = -1.926, $p>.05$, d= -0.58.

Complex Sentences

Participants produced similar proportions of complex sentences in Spanish (5.1145 ± 1.96492) and in English (5.7591 ± 4.35229), no statistical significance, t (11) = -.617, $p>.05$, d= -0.18.

Results Summary

These results demonstrate that parents' utterances richness was similar, the production of mazes was similar, and the production of complex sentences was similar in both Spanish-only and English-only play sessions. The complexity index (CI) of complex sentences was measured which is a ratio of total number of clauses by total number of utterances, which thus takes into consideration not only the number of complex sentences, but also the number of clauses within each complex sentence. Parents CI average in Spanish was 1.04 versus in English it was 1.05. No significance was noted. In contrast, the parents used more total number of utterances, total words and produced more different words in Spanish-only play sessions versus English-only play sessions.

Chapter IV: Discussion

The present study examined the quality of language produced by adults in Spanish-only play sessions and English-only play sessions during conversations with their children. We explored the differences between Spanish and English language within seven different variables, MLU-w, total number of utterances, NTW, NDW, TTR, Mazes, and complex sentences, and compared these variables with paired t-tests. The study revealed that English-only play sessions meant that parents would speak to their children with less words. Parents used more utterances, number of total words (NTW) and number of different words (NDW) in Spanish, which is their native language versus English which is the second language they learned. It is natural for one to speak more in the language they first learned.

These results indicate that while many variables show similarity between the two languages, significant differences were noted in the total number of utterances, number of total words and the number of different words during parents' Spanish only conversations with their children. While it was noted that the lexical richness was similar in both languages, the total number of utterances was higher in Spanish than in English. Thus, entailing that parents used more utterances in Spanish than in English, therefore there was an increasing number of words without increasing ratio.

Although these results are from a small sample of participants, the findings support that the parent's different words are an important factor in the quality of the parent's language (Golinkoff et al., 2018; Rowe 2012). This finding is important because our study noted that NDW in the participants' Spanish-only play session was greater than

NDW in the participants' English-only play session. NTW and NDW go hand in hand because the more words the parents used, the more exposure they were giving their children to different words, which in turn leads to a larger vocabulary for their children. If parents continue to speak their native language to their children, their children will be able to maintain their culture and language, but also build a strong relationship with their families (Hoff & Core, 2015).

These findings also support how powerful words are, especially words that come from social interactions between adults and children (Golinkoff et al., 2018). As Golinkoff et al (2018) mention, parents' conversations with their children affect their early language learning, school success and academic readiness. Thus, entailing that the more NTW and NDW in parents' language it may provide children with rich and diverse language. This finding supports our hypothesis that parents who are native Spanish speakers and are learning English as a second language will produce more NTW and NDW in Spanish only play sessions.

However, our findings do not support our hypothesis that they will produce higher MLU-w, TTR, and higher percentage of complex sentences in Spanish-only play sessions. Additionally, the CI of complex sentences demonstrated no significance and a similarly between Spanish and English-only play samples. Furthermore, findings do not support our hypothesis that parents would have ~~a~~ fewer percentage of mazes in Spanish-only interactions versus English-only interactions with their children. Parents produced similar MLU-w, TTR, percentage of mazes, and percentage complex sentences in both English-only and Spanish-only interactions with their children. It is important to note that despite MLU-w being a similar length in both Spanish and English, length is not the only

variable that makes a sentence richer. It is essential to note that although TTR was similar in both Spanish and English it also does not entail that lexical richness was not noted more in one language. Parents did produce more utterances and different words in Spanish than in English but the ratio did not increase.

This research leaves many important questions from our hypotheses unanswered such as why there were no significant findings in MLU-w, TTR, percentage of mazes, and percentage of complex sentences? This may be because the interactions may have been too limiting to show these differences. This possibility may be due to parents directly reading from books or singing, which limited the amount of utterances that could actually be analyzed. It may be useful in future research to further analyze parents MLU-w, TTR, mazes and complex sentences. Further analysis may be useful to explain why our hypothesis was not proven correct while in other research authors note that MLU-w and TTR are important for language development. However, in our study there was no significance noted in these variables. It is possible that with further analysis we will better understand why these variables were not significantly different and if that has an impact on their children's language outcomes.

Chapter V: Conclusion

This study includes a sample of parents above the age of 18 years old who are native Spanish-speakers and learned English as a second language. The main goal of the study was to observe the quality of language in Spanish-speaking parents during Spanish-only play sessions versus English-only play sessions with their children, who are between the ages of 12-46 months. Sessions were recorded and transcribed to determine if parents would have higher MLU-w, total number of utterances, NTW, NDW, TTR and complex sentences in Spanish and if they had higher mazes in English-only play sessions versus Spanish-only play sessions.

As previously mentioned, the quality of language is essential to convey the meaning of our messages to others. Quality of language is specifically essential during conversations with children and critical in a child's language development. This research provides strong evidence that Spanish-speaking parents who learned English as a second language produced more utterances, NTW and NDW in Spanish than in English. Parents should continue to speak to their children in their native language. If encouraged to speak their native language, this will provide more language input to their conversations with their children. In turn, their children will have a more diverse vocabulary in Spanish during their early language development. However, when parents speak to their children in their second language, they may be limiting their children from hearing diverse vocabulary and, in turn, limit their language acquisition. This evidence does not suggest that children cannot be raised as simultaneous bilinguals; however, the languages the child is being exposed to should be rich in vocabulary from the parents to obtain a positive outcome in the child's language.

The results contribute to previous studies that a diverse vocabulary and the amount of language the child is exposed to during their early age will affect their language development. Further, other studies should be performed in order to continue to educate oneself on adult language and the impacts it has on children's language development, especially their bilingual language development. Thus, speech-language pathologists should encourage Spanish-speaking parents to continue speaking their native language for the enriched quality of language in their children.

Limitations

Further research should be made on Spanish-speaking parents who learned or are learning English as a second language to determine why or if there is an actual difference in the variables of MLU-w, TTR, mazes, and complex sentences during English only play samples versus Spanish only play samples. It would be important to find out to what extent these variables affect adult language input during adult child conversations and what it means to future bilingual children. Some changes that should be considered in future studies include recording longer play samples or having a wider variety of toys. Additionally, further control should be made on SES levels among Hispanic parents to identify how this variable in specific affects the quality of language.

Implications

The implications of this study for future bilingual families is to continue to expose their children to their native language. Parents' native language contains a much richer and diverse vocabulary that will allow their children to develop a rich and diverse vocabulary system of their own. The implications of exposing children to solely poorer-quality English from parents who are learning English as a second language,

contributes to a detrimental cycle of poorer language. The children's language development may suffer, as well as their academic success, which may lead to higher dropout rates in low SES Hispanic children, contributing to the cycle of poor language and lower SES for the next generation. Lastly, Hispanic parents should use all tools at their disposal to further their child's chances at academic success, including teaching and exposing them to Spanish and English at home.

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APPENDIX

FLORIDA INTERNATIONAL UNIVERSITY

Office of Research Integrity
Research Compliance, MARC 414

MEMORANDUM

To:	Dr. Alliete Alfano
CC:	File
From:	Maria Melendez-Vargas, MIBA, Coordinator
Date:	November 25, 2019
Proposal Title:	"Spanish-Speaking Parents Learning English: Quality and Quantity of Adult Language in Parent-Child Conversations"
	Approval # IRB-19-0144-AM02
	Reference # 107855

The Social and Behavioral Institutional Review Board has approved the following modification(s):

- Removed Funding.
- Updated Consent forms to remove compensation.
- Updated Consent forms to include data collection held in individual's homes.
- Updated Pre- and Post-Activity Questions.

There are no additional requirements in regards to your study. However, if there are further changes in the protocol after you commence your study, then you are required to resubmit your proposal for review. As a reminder, you are still require to receive continuing review and re-approval prior to your expiration date **April 26, 2022.** For further information, you may visit the FIU IRB website at http://research.fiu.edu/irb.

HIPAA Privacy Rule: N/A

Special Conditions: N/A

For further information, you may visit the IRB website at http://research.fiu.edu/irb.

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