

Exploring bilingual first language acquisition: an ethnographic analysis of a bilingual child's
language development in a naturalistic setting

by

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B.A., Faculdades Integradas Curitiba, 2006

M.A., American Military University, 2011

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AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Manhattan, Kansas

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Abstract

This ethnographic study dissertation analyzes language development of a bilingual child in a naturalist setting in the United States. This research was conducted based on my personal and professional experience as an educational leader, a language teacher and a mother of a bilingual child. Through a qualitative method approach, including videos and audio recordings, I observed the child's linguistic abilities, social interactions, and the factors that influenced their language development, specifically how the language input impacts the output response. Results indicate that the quantity and quality of the input language impact the output response. Moreover, there was no evidence that there is a dominant language over the other. However, it is possible that one language might be stronger over the other when it comes to certain topics. There are language learning and acquisition strategies outlined in the last chapter that serve as a valuable resource for those invested in promoting and facilitating bilingualism in children. Overall, this study sheds light on the impact of the input to the output response in a bilingual child and contributes to understanding how language learning occurs in natural environments.

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Chapter 1 - Introduction

The ability to use language and communication effectively is essential to all humans. It's through language that we are able to express our thoughts, ideas, and emotions, and it allows us to connect with others on a meaningful level. Without language and communication, our ability to interact with the world around us and form relationships with others would be severely limited. Acquiring proficiency in two languages is academically, culturally, socially and economically important to our society in a globalized world.

Speaking more than one language in the United States has become more and more popular across the country. Today, at least 20% of the United States population speaks two languages according to the 2019 U.S. Census Bureau report. In addition to that, there has been an increase in the number of bilingual educational programs throughout the United States. According to Kreeft and McCabe (2023); in 2021 there were more than 3,600 dual language educational programs identified across the United States. In today's rapidly changing world, it has become increasingly important for parents, educational leaders, teachers, and policymakers to raise awareness of the importance of bilingualism and equip children with the skills that they need to thrive in their future. Bilingual language development will enable children to be prepared to succeed in a rapidly changing world.

This ethnographic research was conducted based on my personal and professional experience as an educational leader, a language teacher and a mother of a bilingual child that was born and raised in a bilingual household in the United States. The framework for this research study was based on language development and learning theories. Merriam's theory was also relevant for this research because according to Merriam (2015), the epistemology that should

orient qualitative methodology is constructivism, as the way people make sense of the world is based on their own experience, as knowledge is constructed through social interaction and experiences.

I was born and raised in Curitiba which is located in the south of Brazil in the state of Parana; and my first language is Portuguese. I lived in Brazil for 22 years and I had never traveled abroad until after I graduated with a bachelor's degree. I studied International Relations at Faculdades Integradas Curitiba, Brazil in 2001 and it was a requirement to graduate with a Bachelor's degree in International Relations that students would take at least two different language courses. I chose to learn Spanish, English and French as a second language.

My language experience learning English started early on during middle school. In Brazil middle and high school students are required to take one language course per year in order to graduate high school. I struggled a lot learning English during middle school and my family lacked any form of language background support. However, during high school I noticed that my language skills have improved.

During my undergraduate degree program in Curitiba, my English skills continued to improve and I decided to challenge myself to learn another language. In addition to the English classes, I started to take French classes at a private institution. Due to the similarities of French and Portuguese as both are from the Latin language, I found it easier to learn French and I achieved intermediate proficiency in 2 years. Spanish classes were offered at the university during the last year of the course. When I started to learn Spanish, I felt it was less difficult compared to English. Once again, because Spanish comes from the Latin language, it was easier to learn as the words were written similarly to Portuguese, there were several cognitive words. The challenging part of learning Spanish for me was the pronunciation because it is completely different from Portuguese.

I took Spanish during a semester at Faculdades Integradas Curitiba and my language proficiency level was intermediate/advanced at that time. However, I knew that English was the language I needed to focus on as it was the one I had struggled in the past; and I needed to be proficient in order to thrive professionally.

In 2005, I graduated with a B.A. in International Relations in Brazil and my interest for languages continued to increase. Knowing another language opened the doors for meeting new people and making friends that had the same interests as I. Language was a gateway to learn through socialization and I loved it. I was also very interested in the cultural aspect of the languages that I was learning. Therefore, I decided to take a step further and move to Buenos Aires - Argentina to immerse myself in the culture and consequently acquire fluency in Spanish.

I decided to enroll in a Spanish course at the University of Buenos Aires to improve my writing skills and increase my speaking proficiency skills in the language. After 6 months living in Argentina, I felt that I successfully accomplished my goal of increasing language proficiency and learning about Argentinian culture. I understood native speakers when they spoke with me and was able to communicate without any difficulty.

During my time learning Spanish in Argentina, I had the opportunity to teach Portuguese to Spanish speakers. I was thrilled to teach Portuguese for the first time and it was a great experience teaching Portuguese in Buenos Aires. My students were young adults and very interested in learning the language and Brazilian culture.

I enjoyed my experience of learning through full immersion in Argentina, and I liked learning the language through socialization. Learning the language in a naturalist setting was fun. I also benefited a lot from the academic course that I took at the University of Buenos Aires, especially my writing skills improved.

My next challenge was to use the same method to learn and acquire proficiency in another language, it was time to learn English. After moving back to Brazil in 2006 and speaking with one of my friends that have lived in the United States, I decided that going to the United States was the best choice to have a full and complete immersion experience.

Before departing to the United States I set up a plan to accomplish my goals. My goals going to the United States were the following: learn about American culture and acquire language proficiency in English by full immersion in American culture, and enroll in a graduate program in International Relations at a University in the United States. At that time, my dream was to become a professor in International Relations at an University in Brazil; and I knew that to have an outstanding curriculum I needed to have language proficiency in at least two languages, be knowledgeable about other cultures and have experience living abroad.

Before arriving in the United States, I thought I had intermediate language level skills because during English classes in Curitiba, I was able to comprehend spoken English and respond to prompts. Just until native speakers in American soil started to talk to me and ask a little more complex questions in English and I wasn't able to understand nor respond. I felt intimidated once I realized I was only able to understand and have a simple dialogue with native speakers. For example, hi how are doing, good morning, good afternoon, where are you from, etc. Looking back, it took me roughly about 2 to 5 years to fully understand a native speakers and have an academic conversation by responding to complex questions.

As a 22-year-old female latina student in the United States, I faced a significant challenge in learning American culture and traditions. Coming from South America, the American culture was vastly different and it took me a long time to adjust. The cultural differences were numerous and complex, making it difficult for me to understand, internalize, and adapt to the American way

of life. For instance, physical contact in Brazil is interpreted in a markedly different way than in the United States. Brazilian people often use hugs and kisses to greet others informally, whereas in the United States, shaking hands is the norm. Personal space is meticulously taught in American schools from a young age, whereas in Brazil, handshakes are reserved for formal occasions and are rarely used in casual encounters as it may mean the person is not interested in establishing a closer connection.

Another major cultural difference between South America in general and the United States, was that Brazil and Argentina have a different view of foreigners that come visit or live in their countries. In Brazil, typically foreigners are seen as potentially beneficial to the economy by creating jobs rather than taking them. In Argentina, there is diverse mix of cultures represented by small business owners, including Chinese and Arab communities.

From my previous experience, the majority of the American people in the United States have a unique view of a foreigner, specifically why they come to the U.S.A and what they are doing in their country. Those that understand American cultural background and history, know that there is a history behind this cultural attitude. It is important to remember that the United States had the 9/11 incident and that made people in general be suspicious of people from abroad. I started to develop intercultural competence by recognizing that history plays an important role on a country's culture, people's behavior and understanding the cultural differences. Intercultural competence is when someone effectively communicates to others and has the ability to see the world from another perspective. Even though learning the English language was difficult because of the grammatical structure of the language and language pronunciation, developing intercultural competence helped a lot in the process as I started to immerse myself in the culture by interacting with people, accepting our differences and adapting to their way of living.

In 2011, I graduated with a Master's degree in International Relations from the American Military University (USA) when I was living in Savannah Georgia. The graduate course was fully online and my writing skills had tremendously improved. However, I felt that my spoken English needed to improve academically and one way to achieve that would be to enroll in an on-campus Master's degree program. My next stop was Miami - Florida, the University of Miami offered a Master's degree in International Administration focusing on world cultures. I applied to the program and was accepted in 2011. It fascinated me that Miami had a tremendous cultural diversity from people from all over Latin America. Spanish was commonly spoken in the streets of Miami; the population was welcoming and the weather was great.

When I was studying at the University of Miami, there was a study abroad opportunity to go to Peru and work in an educational project in Cuzco. Because I love traveling and new adventures, I decided to participate in the study abroad program during summer 2012. It was a rich experience going to Lima and Cuzco in Peru and immersing myself in the Peruvian culture. It was easy to adapt to the Peruvian culture, as Spanish was a language I was proficient in and the culture was somehow similar to Brazilian culture. The food from Peru was indescribable amazing, people in general were welcoming and willing to help foreigners.

Finally, in 2014 I graduated with a second Master's degree in International Administration focused on Global Cultures from the University of Miami. After graduation, I decided to continue to travel and learn more about other cultures. However, I was satisfied with being fluent and proficient in Spanish and English and having two Master's degrees was enough at that time. I started a new season in my life and that was the season for visiting countries for a short period of time. My next stop was going on a trip to Oranjestad in Aruba.

Aruba is an island in the Caribbean. The official language in Aruba is Papiamentu, but people will understand Spanish and English. I went to Aruba for one week and I enjoyed my time in Aruba as people were very warm and welcoming. There were a lot of people from all over the world visiting Aruba and I had no difficulties communicating with people in the island because English or Spanish were well understood and spoken around the tourist part of the Oranjestad city in Aruba.

In 2015, I went on a short trip to Mexico and I visited 3 cities: Cuernavaca, Puebla and Ciudad de México. I was able to communicate with native speakers without any issues and I was understood by them as well. I enjoyed eating authentic Mexican food and the Mexican way of treating tourists. In 2017, my husband and I went to the Dominican Republic for our honeymoon. I really enjoyed the island, and the food was great. I have also been to Keflavik in Iceland and Darmstadt in Germany in 2016. Traveling throughout Latin America and Europe was fun and I plan to continue to do that with my daughter Nikita. Learning a language and the culture is an interesting and a rich experience once you embrace the people's culture of that country.

My teaching career officially started when I became a public school Spanish teacher in 2015. I received my Maryland Teacher license in 2017 after completing 2 years of teaching course work at the Anne Arundel Community College in Maryland; passing the praxis test; and passing the Spanish national language exam.

Since 2015 I have been teaching in the Maryland public school system. I am currently a Spanish certified teacher by the Maryland State Department of Education with an Advanced Professional Certificate - Grades K-12. I taught in a middle school Spanish level 1 and Spanish level 2; and French 1. At the high school, I taught various levels of Spanish: Spanish 2, Spanish 3, and Spanish for Native Speakers and Heritage learners level 1 and 2. In 2023, I started the process

to become nationally board certified and I have completed 1 of the 4 components that are required to be nationally certified in Spanish.

As a language teacher and a mother of a bilingual child, I believe that people are capable of obtaining language proficiency in any given language at any age and use that learned or acquired language for a variety of purposes. Children tend to acquire knowledge faster than an adolescent and an adult as they have less distractions in their everyday life and they are open to learn just about anything because by nature they are curious, interested in learning, self motivated and less concerned about making mistakes.

There are various ways that a language can be acquired and learned. For example, children can learn and acquire language proficiency in two languages simultaneously and from birth, other children might learn a second language after they acquired the first one. Children that acquire two languages by birth a lot of times are heritage speakers and they learn one language from one parent and the other language by the other parent. Children can also learn and acquire a second language from a bilingual caregiver or full immersion in a dual-lingual educational program in a bilingual school.

The main goal of this ethnographic research study is to describe my personal experience educating a bilingual child, specifically focusing on the language development of the child in both English and Portuguese; from birth to 4 years old by analyzing the influences of the environment, culture and parent's background on the child's language learning experience; specifically the impact of the input language on the child's language output response. This study will also create strategies for parents and/or educators to support bilingual language development, whether the two languages are acquired simultaneously since birth or after the first language has been acquired.

My daughter Nikita was born in Annapolis, Maryland in 2018; and I am Brazilian and her father is American from Wisconsin. I am a world classical language teacher and her father had no previous language experience prior to meeting me in 2013. He also didn't have much knowledge about the Portuguese language and Brazilian culture besides the fact that Brazil has a great soccer team and won the world cup 5 times.

Because I am a language teacher, I have been actively observing my daughter's language development since her birth as she heard two languages from birth on a daily basis. From birth to 3 years old, I applied the one parent one language strategy, at home I only spoke Portuguese to her and her father only spoke English to her. Even though I live in the United States and English is the official language that people communicate with each other; I have decided to continue to speak Portuguese with Nikita at home and in public.

As time went by, I realized that it was important to consider the role of intercultural competence when educating my child. Language learning is just as important to learn as the cultural component, indeed compromising and adapting to major differences will enrich the experience. Therefore, I use intercultural competence to make a decision whether I should use or not the language I want to speak with my daughter. For instance, if I know that people around me have no experience abroad or with foreign people, and have very limited access to culturally diverse people. I am sensitive to the limited amount of cultural experience of the people around me, and if the person feels uncomfortable having me speaking another language, I speak with Nikita in English. It was difficult to figure out something that would work for me as well, but with time I was able to switch back and forth when interacting with people that spoke only English. Therefore, the environment and the situation did impact what language I was going to be speaking with my daughter.

Nikita is a single child in a bilingual household. During 6 months to 3 years old, Nikita stayed home with my mother mornings and afternoons. My mother Nilce is Brazilian and only speaks Portuguese to Nikita. At night, Nikita was interacting with myself and my husband, and she was listening and talking in Portuguese and/or English simultaneously, it depends who was talking to her at the moment. I observed that it was natural for my daughter to switch between the two languages at the same time and that skill fascinated me.

Nikita - a 3 years old child was able to handle a conversation with 2 different people using two different languages all at the same time. As a contrary, when I taught Spanish and French in 2020, I would have trouble code switching between Portuguese and English when I came home from work. I was teaching Spanish and French to English speakers during the day. In the afternoon, after work it was difficult to speak with my mother in Portuguese and switch to English when I was talking to my husband. I found myself not being able to separate the four languages: English, Portuguese, Spanish and French; and a lot of times I would speak English when I was thinking in Portuguese or speak Spanish when I wanted to say something in English.

Language development is an important aspect of children's cognitive development. The quality and quantity of the input language that the child receives on a daily basis will impact their cognitive development, especially the child's vocabulary. Children build knowledge based upon their experience, if the child is exposed to two different languages from a variety of input and sources, the child's vocabulary will most likely increase.

I have been actively exposing my daughter Nikita to different languages and cultures since her birth. In addition to speaking in Portuguese with Nikita on a daily basis, when she was 2 years old I played a youtube video in French about the big bad wolf story. I was aware that it was her first time hearing French and she probably didn't understand what was happening based on what

was been spoken, but she definitely enjoyed to watch the story and characters of the videos. The video was colorful and age appropriate. She liked so much the story that I decided to buy a book that had the story in English so my husband could read the story for her in English.

I also played Spanish videos on youtube with songs to her that had very colorful pictures so even if she didn't understand Spanish, she demonstrated interest and would look and see what was happening in the story or song. My intention in exposing her to other languages was teaching her a couple things. First, it is ok to not understand the words and sounds of a different language that is spoken. Therefore, if that would happen again in the future, she will keep calm and not develop fear or panic for not understanding the sound of different words. Second, context cues can be developed by understanding and observing what is happening in the surroundings. I wanted to make sure she is able to put together the information she is seeing from body language and non verbal communication.

In addition to exposing her to videos in another 2 languages, I also bought a couple coloring books and one of them had Spanish words under each picture. One day, as I was coloring with her, I would state the words in Spanish and explain to her that Spanish words are very similar to Portuguese words. All of the social interaction was in a naturalistic setting through social interaction and she enjoyed coloring.

Speaking more than one language in the United States has become more popular in recent years. According to Dietrich and Hernandez (2022), there are 67.8 million people in the United States, almost 1 in 5 in 2019, who spoke a language other than English at home, according to a 2019 U.S. Census Bureau report. Even though English is the official language of the United States, and it will continue to be the world's major language for world trade and diplomacy, proficiency in English is not sufficient to meet the demand of the 21st century's skills.

It is a fact that twenty percent of the United States population speaks a language other than English, and if the trend continues that means that in 40 more years half of the population will be bilingual. Multilingual exposure in the United States is therefore not so uncommon as the general population might suggest. Some people believe that multilingualism might cause developmental language delays and it seems to prevail among the public at large and the some study suggests that multilinguals develop some aspects of language more slowly than monolinguals exists (Gathercole, 2002; Silva-Corvalán & Montanari, 2008).

Bilingual education has also increased in popularity in the United States in recent years due to its benefits. Bilingual education in this study is defined that the same academic curriculum is taught in more than one language besides English. A recent study done by the American Academy of Arts in Science (2016), of students in dual-language immersion courses, found that by the time the students reached the 5th grade, they were an average of seven months ahead in English reading skills compared with their peers in non-immersion classrooms. By the 8th grade, students were a full academic year ahead.

Currently, there are 14 bilingual schools and centers in the state of Maryland that offer bilingual educational programs for pre-k students and above grades. (See appendix 9 for the list). The dual language education for Pre-k and elementary students in Maryland only offers 3 languages: French, Spanish and Chinese. Bilingual education is popular among families in which parents see value in speaking two languages and exposing children to other cultures early on in life will benefit them. Promoting bilingualism has also become more affordable. Even if a child is not attending a bilingual school, it is really easy and cheap to buy a variety of children's bilingual books, they are available for purchase online on websites such as amazon, at the dollar stores

across the United States, and free of charge at a local library. There are also a variety of bilingual videos available online free of charge on youtube and other video platforms.

I believe this study matters not only to me but to our society in general, specially to parents, educational leaders, school administrators, and teachers because it will provide evidence of the importance of early bilingualism for our future generation. Acquiring proficiency in a second language whether is by birth or later on in life will increase the chances of having a more inclusive society as people will be more willing to accept differences and minority languages will not be lost but will be valued by our society.

It is important to note that language learning and acquisition is a process that is different for each individual person. There are many variables that play a role when a child is learning a first or second language or both at the same time. For example, the environment plays an important role when someone is learning a language, such as who is interacting with the child, the level of education of that person and whether the society supports bilingual language development. In addition to that, socialization in the context of learning a language also plays an important role. Societies that value bilingual language development offer more opportunities for children to be exposed to that language and culture. For example, having story time at a local library done in another language promotes bilingualism.

I believe that my professional experience will enhance the quality of this research study. This research will also create strategies for bilingual educators, bilingual and monolingual parents that want to support bilingual language acquisition by providing the best practices and resources that support bilingual language development in children. One of the major factors that motivated me to conduct this research is that language learning and acquisition is what I do everyday whether it is in my personal life or professional. It is important to note that this study might be limited due

to the fact that I am not comparing my own daughter's language learning development to another child's language development that had a similar situation of my own.

I also decided to conduct this research study because it is part of my own identity to be multilingual and of my interests that my daughter continue to learn her heritage language, embrace Brazilian culture and learn to explore and connect to other cultures, specially Latin American cultures. The United States has a growing number of bilingual children because they are heritage learners. According to Kreeft and McCabe (2023), heritage language (HL) speakers are individuals who speak a language other than English in their home and community; and they are individuals born in the U.S. or first-generation immigrants. According to the Center for Applied Linguistics, the term heritage language learner is used to describe a person studying a language who has proficiency in or a cultural connection to that language (Kelleher, 2010).

It is important that we educate our society about the importance of bilingualism. The American educational system and bilingual parents needs to continue to advocate and support bilingual language development because language can be easily lost if not used or valued. According to Valdes (2005), heritage language learners are children or adults who are in the process of learning a heritage language. Some heritage language learners may be ancestrally affiliated with a language and culture, but if not practiced they could lose the ability to use the language in personally meaningful ways as they have intrinsic motivation and cultural knowledge that second language learners do not. According to Polinsky (2014), by definition, a heritage speaker's exposure to the heritage language is based around the home and family. This opens up the possibility for a great deal of variation in the language experiences of different heritage speakers. The length and manner of home exposure will determine the development of the child's heritage language.

Finally, my goal as an educator leader is to promote bilingual language learning and cultural awareness by celebrating diversity in the United States. A population that is bilingual is culturally diverse and consequently more open and accepting of differences. By embracing differences in culture, language, religion, and socioeconomic status, we can create a more evolved and successful society that values and respects each individual for who they are.

Chapter Summary

My personal and professional experiences learning and teaching languages have helped me to become proficient in Portuguese, English, Spanish, and French over time. My experiences with language immersion and socializing with native speakers have significantly contributed to my language development and intercultural competence. A globally interconnected world requires our society to recognize that language and communication skills are essential for academic, social, and economic success. Bilingual and multilingual education programs have been on the rise in the United States, and there is an increased awareness of the importance of equipping children with 21st-century language skills. My personal experience as a mother of a bilingual child and a language teacher highlights the importance of bilingual language exposure and maternal responsiveness in early childhood language development. These factors have significantly contributed to my daughter's ability to code switch and comprehend information accurately in two languages: Portuguese and English. My experiences demonstrate the in addition to learning a language, it is of importance to understand the cultural of the language and build intercultural competence in the current society we live. My traveling experience to various places in Latin America and Europe has provided me with an unique opportunity to develop my language skills. This ethnographic research study on bilingual language development will provide strategies for

supporting bilingual language development for monolingual and bilingual parents, instructor, teacher and educators alike. Bilingual language learning and acquisition is a process that varies from person to person and is influenced by various factors such as the environment, socialization, and societal support. It's essential to educate our society about the importance of bilingualism and to advocate for bilingual language development to prevent language loss and promote cultural awareness.

Chapter 2 - Literature Review and Theoretical Framework

Many important language learning theorists such as Chomsky, Krashen, and Vygotsky have developed theories about language development, specifically how people acquire or learn a first, second language or both at the same time to the degree of proficiency. Bilingual First Language Acquisition (BFLA) is a term that has been well defined by De Houwer - a Belgian linguist, academic, researcher and author of the book *Bilingual First Language Acquisition* published in 2009. According to De Houwer (2009), BFLA is the development of language in young children who hear two languages spoken to them from birth, they learn two first languages and none of them comes before the other one but at the same time.

Language development in a child starts very early in life through a set of process: spoken words (sounds and tone of voice) and body language; with two different types of communication: verbal & non verbal that are central to language development. From birth to 2 years old, non verbal communication is focused on body language, which includes gestures, facial expressions, and eye contact. The elements of verbal communication includes words & tone of voice and this is the focus of this research. Listening is the first language skill that Bilingual First Language Acquisition newborns start to develop; they listen to two different languages at the same time. The speaking skills among infants and toddlers are developed at a later time after they are able to process information so they can speak; and it is also developed with the support of those around them and without formal instruction.

The speaking skills of Bilingual First Language Acquisition children are developed based on the quantity and quality of the listening input they receive from a person or a source, such as a

tv, an audio book or a toy. Bilingual children from birth are constantly making choices and switching between languages in a natural way when they are expressing them through words.

Another important term is the term bilingual because it can a lot of time cause confusion as it is a very broad term. In order to understand the meaning of the term bilingual, it needs to be specified in what context it has been used. The word Bilingual by itself is a word that can be either an adjective or a noun. Bilingual as an adjective is used when referring to a person or a thing such as bilingual education, bilingual dictionary, bilingual children. Bilingual as a noun is referring specifically to a bilingual person that can speak two languages fluently.

The term bilingual can have a variety of interpretations depending on the person who is using it and for what purpose. Sometimes it's used to describe someone who has strong proficiency in two languages across all four language skills (listening, reading, writing, and speaking) and various modes of communication. Other times, it may simply describe someone with basic communicative abilities in two languages. According to Bialystok, (2016), bilingual can mean different things with respect to individuals' linguistic competence, ranging from two native competences to basic communicative abilities.

The term Bilingual has also been commercialized in the educational field and it is used to claim more profit from customers that are unaware of the real meaning of the term bilingual. For example, if a school claims to provide students with bilingual education, how much time of direct or indirect instruction is conducted in one language versus the other and what is the mainly instructional method used for this kind of learning. In addition to that, how much input students received on one language versus the other language. How much percent of the language students are required to speak or students are free to respond in whatever language they chose to respond.

There are so many variables that play a role in defining the meaning of the term bilingual, it needs to be specified in what context it has been used.

Proficiency is another important term that goes hand in hand with the term bilingual. There is a strong connection and relationship between the both terms bilingual and proficiency. According to Petrescu (2014), it is not easy or simple to define what it means to be bilingual because language proficiency doesn't have a minimum requirement in which someone will be qualified as a bilingual person. In order for a person to be considered bilingual, they do not have to master the two languages equally and fluently. According to Petrescu (2014), the majority of the bilinguals acquire and use the two languages to different degrees, for different purposes, in different contexts, with different people and to accomplish different goals.

Language proficiency refers to a person's ability to communicate accurately and use a language for a variety of purposes, and it could include one or all of the language skills: speaking, listening, reading, and writing skills. Proficient speakers demonstrate accuracy and fluency in the language that they are speaking. Native speakers of a language can be fluent without being considered proficient. However, Petrescu (2014) says it is not appropriate to compare bilinguals' language performance on traditional monolingual tests with the monolinguals' performance. Instead, research with bilinguals should account for the context of acquisition, the nature of bilingual language development as well as the structure and organization of the bilinguals' language competence.

The American Council on the Teaching of Foreign Languages (ACTFL) defines language proficiency as what individuals can do with language when using the four skills in real-world situations in a spontaneous and non-rehearsed context. In an educational context, proficiency is commonly measured by teachers using guidelines developed by the American Council on the

Teaching of Foreign Languages (ACTFL). The ACTFL Proficiency Guidelines measure proficiency on a scale of ten levels: Novice Low, Mid, and High; Intermediate Low, Mid, and High; Advanced Low, Mid, and High; and Superior.

In this research study, proficiency is only measured based on two skills: listening and speaking because a child below 5 years old cannot write or read, but parents can read and the child can interpret the story as the parent instructor asks questions. According to Swain (1995), language learning is acquired not only with comprehensible input, but also with comprehensible output. The output becomes collaborative dialogue, in which learners co-construct their linguistic knowledge and mediate their understanding, and consequently develop proficiency because interaction through problem-solving and knowledge-building is a social activity. According to Bates et al. (1995), grammatical development depends upon the establishment of a critical lexical base, in which word combinations appear when the vocabularies fall between 50-200 words; verb morphology emerges when the vocabularies are within 400-600 words; and finally, sentence complexity is observed to increase significantly when the children's vocabulary exceeds 400 words.

Acquiring language proficiency is an important component of language development, how each individual person achieves proficiency can vary from person to person because it depends on who is measuring that proficiency level and what kind of rubric has been used. For example, if it is a teacher analyzing the level of proficiency or if it is proficiency guidelines provided by private language organizations.

Early bilingualism language development in children means two languages were acquired during early childhood and it can be acquired simultaneously or consecutively after the first language was acquired, typically 2 to 3 years old. It is natural that bilingual children tend to mix

up the languages when their vocabulary is limited. In addition to that, it is common for children to have a limited vocabulary at a young age since they are in the process of developing their language skills and expanding their vocabulary. The vocabulary will start to increase as they are exposed to comprehensive input in both languages.

There are several studies done in the past years about early bilingualism that argue that there is one language that will be stronger than the other. It is believed that one language would be predominately dominant over the other. This is debatable and still subject for more investigation because before defining language dominance, it is necessary to define how proficiency is been measured.

According to Yip and Mathews (2006), the term language dominance is often defined in terms of proficiency: the dominant language is that in which the bilingual is considered to be most proficient. However, as stated before, there are many ways that proficiency can be measured because it depends in what context is been used. In the educational field, the majority of language educators evaluate proficiency based on the learner's performance on the four language skills: listening, reading, speaking, and writing.

Language development is not static, it is a process that continues to happen as language is being learned. According to Yip and Mathews (2006), how language dominance is measured at a given stage of development and over time is a complex issue that is still under-researched. For example, there isn't one language that is dominant all the time, it depends on the context. If a child has a more dominant language in a school, at home the dominant language can be switched. The same would apply if a child is traveling to a country that only speaks one language, the dominant language would be the one the child can speak fluently. Therefore, the dominant language can change and it is contingent on the environment that language is spoken.

There are some research done that states that language development in children typically follows a pattern. According to Llano (1989), she stated that in 1978 Volettra Taeschenerbelive that there are three stages of language development in bilingual children, a single lexical system comprised of words from birth languages in complementary distribution, then two lexical systems with one syntactic system operating and finally, two distinct lexical and syntactic system.

Children typically start talking by the age of 1 years old, regardless of the language they chose to express themselves. According to the American Speech Language Hearing Association (ASHA) 2022, between 7 months to 1 year old a child should speak 1 or 2 words that might or might not be clear (understandable). Furthermore, the Mayo Clinic (2022) states that a 18 months old child should speak about 10 words, and 50 words by the end of 24 months. The Stanford Medicine (2022) states that 2 to 3 years old should be using 3 word sentences, and answer simple questions. According to a the Children's Hospital of Philadelphia (2022), 3 years old children should speak 300 to 500 words by the age of 3. According to the child development Institute (2022), a 4 to 5 years old child should know about 900 words.

The amount of words a child will speak by a certain age can vary because there are several variables that play a role in a child 's language development. According to Fabian (2016), a bilingual child might have more vocabulary of one language and less of another language. For example, a bilingual child might know certain words used to name family members (aunt, uncle, cousin, etc.) in her home language because that is the language in which those words are used. However, at the daycare not many of those words to name family members are used, so the child does not know those words in the dominant language. In contrast, the child might know the names of the shapes and colors, for example, in the school language because that is what the teachers and caregivers use, but she might not know those words in her home language, because her parents

never talk about those items. In addition to that, the number of people that the child interacts with will also impact the quality of the child's output response. According to Core (2013), input from multiple people is likely to be more diverse than input from fewer people.

Parents play an important role in the child's language development. For instance, parents working status such as if both parents work full time or if one parent work and the other stay home will influence language development in a child. The economic status of the family will also determine how many books are purchased in one language or both languages. Furthermore, if parents can afford it, they may hire a bilingual caregiver or babysitter, however, bilingual professionals may come with a higher cost as compared to monolingual professionals or less qualified professionals.

Children's language development will also depend on the parent's cultural and educational background. For instance, the level of education of the parents will impact how much value they give to education and bilingual language development. Parents that have been exposed to other cultures or traveled to other countries are more likely to understand the importance of speaking another language and have knowledge about other cultures. Parents that value bilingual education typically buy a variety of books and read to their children. In addition to that, traveling abroad enhances life's perspective and exposes you to different cultures, customs, and ways of life. Therefore, people that travel abroad are open-minded and appreciative of diversity.

Child language development is also impacted by the parent's language proficiency in one of both languages. Native speakers' parents will most likely influence the child's pronunciation of the language they are learning or acquiring. In addition to that, exposure to the native speakers' culture will also be influenced by the amount of interaction the child has with them.

According to Weinert and Attig (2020), the language skills of preschool children differ substantially and that these differences are highly predictive of their later academic success and achievements. Especially in the early phases of children's lives, the importance of different structural and process characteristics of the home learning environment has been emphasized and research results have documented that process characteristics such as the quality of parental interaction behavior and the frequency of joint activities vary according to the socio-economic status of the family. Further, both structural and process characteristics are associated with children's language development.

Skinner believed that children acquire language through what is called operant conditioning because every time they say a word for instance milk, they get the milk, or if they say bread they will get some type of food. According to Skinner, children get rewarded because they receive the milk or some type of food and this reinforced the use of language. According to Mourad (2019), children not only imitate words from adults but also imitate actions with a degree of precision that is much higher than that of an adult.

The Unitary Language System Hypothesis proposed by linguist Brian MacWhinney in the late 1970s suggests that language abilities are interconnected and integrated within a single language system rather than being separate and distinct. This hypothesis emphasizes the interdependence of various language skills, such as speaking, listening, reading, and writing, and how they all contribute to overall language development.

According to the unitary language system hypothesis, studies on bilingual acquisition were interpreted as evidence that, although children are exposed to distinct sets of input, they go through an initial stage in which their two languages are represented in a unitary or fused system (Genesee, 1989). It is possible that bilingual or multilingual children go through prolonged language

development as they differentiate their languages early on. Some theorists argue that children cannot differentiate languages due to a number of reasons, for example their lack of vocabulary, others say that children can actually choose language appropriately according to the language of the context or interlocutor around age two, suggesting that pragmatic differentiation occurs relatively early from their first steps into the acquisition process. In this study, input refers to the language in which the child listens to and the linguistic environment that the child is exposed to and if plays a role on the children's language output.

If it is accurate that children have a fused language system than code mixing is a natural part of the process. According to Genesee and Nicoladis (2005), child bilingual code-mixing is grammatically constrained because children usually mix the two languages at points in an utterance where the grammar of both languages is concordant; they seldom mix at points where the grammar is not concordant. An example of a concordant grammatical structure in English and Portuguese is when the article appears before nouns: "the elephant" in English and "o elefante" in Portuguese. An example of a non-concordant structure would be in English "my pink jacket" and Portuguese would be "minha jaqueta rosa" translated to "my jacket pink".

The environment plays an important role in language development. According to Ivan Pavlov, learning is the involuntary association of stimulus and response - either positive or negative as the environment shapes the behavior - for instance learning a second language - also known as classical conditioning. Children learn a language out of a desire to communicate with the world around them; language emerges from, and is dependent upon, social interaction. Vygotsky (1896), believed that the child gradually internalizes external and social activities, including communication, with more competent others. According to Vygotsky, learning originates through social interaction and his theories are the basis for the sociocultural

constructivist view of learning, specially language learning. In the 19th century, the social interactionist approach emerged from influences of Vygotsky through the behaviorist (imitation and habit-formation) and innativist theories (role of mind and cognitive processes). The interactionist approach focused on the role of social interaction in language learning. Based on this approach, learners should be exposed to comprehensible, negotiated, or modified input in their attempts to acquire a language. The interactionist approach combines ideas from sociology and biology to explain how language is developed, the environment you grow up in will heavily affect how well and how quickly you learn to speak either first, second and even third language.

The learner's age plays a role in language acquisition and learning, as people become older, they are less likely to retain information due to a variety of reasons. For example, the motives of that person trying to learn a second language influence how quick that person will acquire proficiency in a language. In 1967, Eric Lenneberg proposed the Critical Period Hypothesis, which says that age plays a role in developing proficiency in a second language because there is an optimal period for language acquisition. Typically in early childhood, during which individuals are more receptive to language learning and have a higher likelihood of achieving native-like proficiency.

Culture will also heavily impact the person's learning process as it will dictate how much input the person will use for that primary stage of the learning process. If the person will be in a regularly basis in contact with the person that speaks another language as it is a family member, language input will increase, therefore there will be more vocabulary exposure.

According to Krashen (1980), there is no fundamental difference in the learning process when we acquire our first language and our subsequent languages because the end result is the same. He claims that humans have an innate ability that guides the language learning process.

Infants learn simply by listening attentively to spoken language that is made meaningful to them. Krashen provides an explanation about the two options of developing a language. According to Krashen's Acquisition-Learning Hypothesis (1998), there are only two ways of developing language ability: by acquisition and by learning. Acquisition is a sub-conscious process, as in the case of a child learning its own language or an adult by simply living and working in a foreign country. Learning is the conscious process of developing a foreign language through language lessons and a focus on the grammatical features of that language. If a child is exposed to the two processes it is more likely that child will learn quicker than another child that is one exposed to one kind of process.

It is known that a child acquires a language not just through social interactions and everyday experience, but also out of their innate desire to communicate to others. If an adult, a parent, or teacher takes the time to explain that there are two different ways of saying the same thing, I would say that the child is learning a language by using both: acquisition and learning methodology, per Krashen's theory of acquisition & learning.

Chomsky is an important linguist that have made significant impact in understanding language development in children. He also believes in the input and output theory. According to Chomsky (1978), children will never acquire the tools needed for processing an infinite number of sentences if the language acquisition mechanism was dependent on language input alone. Chomsky rejected Skinner's (1957) behaviorist theory that language learning is habit formation through stimulus and response. According to Chomsky, humans possess an innate language learning ability, called the special inborn language capability the Language Acquisition Device (LAD). From this he developed the theory that all languages share an underlying system named universal grammar (UG), which is often confused with grammar. The UG was created to explain

how language acquisition is acquired biologically as the brain is already programmed to learn a language naturally without explicit instruction, as Chomsky believes that language acquisition is not a step-by-step process of generalization. It is a valid claim that environmental factors are insufficient in describing the acquisition of language because language production output can be more than just what was received through input.

There are several benefits of raising a bilingual child or supporting bilingual language development. According to Sheng et al (2009), empirical evidence suggests that bilingualism in children is associated with increased meta-cognitive skills and superior divergent thinking ability (a type of cognitive flexibility), as well as with better performance on some perceptual tasks such as recognizing a perceptual object “embedded” in a visual background and classification tasks. According to Petrescu (2014), among other benefits bilingual children have superior control of attention that enables them to be more efficient problem-solvers; do better academically and form better family relationships and stronger links to their heritage.

There are other benefits of learning another languages early on in life important to note. According to Bialystok, Craik, Green, and Gollan (2009) found that the impact of bilingualism on non-verbal cognitive functioning in children and adults is an enhancement of executive control functions, such as inhibition of distraction, switching between tasks, and holding information in mind while performing a task. According to Kovelman, Ioulia, Baker & Petito (2008), metalinguistic awareness has been shown to develop faster and more effectively in young bilinguals as compared to young monolinguals. Furthermore, the age of first bilingual language exposure – and not just the length of bilingual exposure, the child/family’s socioeconomic status, or the level of language proficiency – indeed impacts reading and language development in young bilinguals. Early bilingual exposure, before the age of 3 years old, had such a powerful positive

impact on reading and language development that it may possibly have ameliorated the negative effect of low literacy. On the other hand, according to Carroll (2015), the quantity and quality of input is what matters regardless of the age of the learner.

Other studies report that bilingualism has a negative impact on language development and is associated with delays in lexical acquisition and a smaller vocabulary than that of monolingual children. Bilingual children score on par with their monolingual counterparts on tests of verbal ability by middle school, and well-controlled studies provide no evidence for lower intellectual abilities of bilingual children compared to monolinguals. Bilinguals face greater ambiguity during language processing because they consider similar-sounding words from two languages (instead of one) during comprehension and must choose between languages during production. However, according to Petrescu (2014), what starts as being a possible disadvantage disappears as the bilingual children grow older, after which the benefits of having two languages becomes much clearer.

According to Petrescu (2014), when examining the studies that yielded contradictory evidence about the benefits of growing up with two languages is that they lack contextual information like socioeconomic background, participants' linguistic history, or the degree of exposure to both language one and language two, all factors linked to bilingual development outcomes. In fact, such contextual information is critically missing from the majority of research on early bilingual development.

Based on the literature review that I conducted during this research study on language development, I have created a term Born Bilingual Children (BBC) to better describe and explain my personal experience educating a bilingual child from birth in a naturalist setting. It is possible that there are other children that have been raised in a similar situation. Therefore, the term Born

Bilingual Children (BBC) will refer to the children that were born listening to two different languages, comprehend or process the information in either the two languages and are able to speak those two languages fluently by the time they are able to have a conversation with another person, whether the child is pretty clear or conscious about which language they are speaking or not.

Born bilingual children (BBC) doesn't imply that the child will have the same level of proficiency in both languages that he or she was born listening to. A born bilingual children (BBC) combines the acquisition and learning process of developing two language skills at the same time. Learning can happen without formal direct or explicit instruction methods; but through experiential learning and problem-based learning. The input the child receives is from a language proficient person or another source such a video, a toy or an audio book. The acquisition of a language for this particular type of bilingual children typically happens through socialization in a naturalistic setting.

Born bilingual children (BBC) better explain the situation in which it is not two languages in one but rather two languages that influence and interact with each other. For example, born bilingual children learn from early on from a language proficient person to use language development strategies such as using cognates of a given language and apply the concept to other languages. If the child has never heard of a particular word, they are able to activate prior knowledge and see if there is any similarity with the words they already know. BBC are able to make connections between the two languages as they are aware that both are different languages. For example, a cognitive word in Portuguese is aeroporto which in English is airport, they are very similar as they come from Latin language. Another example would be, the word organization in Portuguese would be organização, they are very similar words. There are about 3,000 cognitive words in English and Portuguese today and that knowledge can be transferred among all languages

that share the same cognitive words. The same would apply for other romantic languages, such as Italian, French and Spanish.

Born bilingual children (BBC) have significant and meaningful exposure to two languages since birth. BBC learns from early on that each language has its own culture. As a child is acquiring two languages at the same time, it is part of the process that they might get confused throughout the process, mixing up the languages, making mistakes and forgetting the words they don't use frequently.

Literature Review Summary

Several language learning theories have been analyzed to understand children's bilingual language development. Bilingual First Language Acquisition is defined as the development of language in young children who hear two languages from birth and learn them simultaneously without one language coming before the other. Language proficiency and early bilingualism language development in children needs to consider the context of acquisition and the nature of bilingual language development when assessing language performance. It's natural for bilingual children to mix up languages when their vocabulary is limited, and exposure to comprehensive input in both languages can increase their vocabulary and language proficiency. There are several factors that influences a child's language development, such as the parent's involvement with the child, their economic status, cultural and educational background, language proficiency, and exposure to other cultures can all impact a child's language development. The development of code-switching skills for bilingual children is dependent on exposure to both languages and having a high proficiency in both. However, if language proficiency isn't achieved at a certain level, code

switching can become code mixing, which can lead to confusion and frustration. The environment plays a significant role in language development, as learning a second language is heavily influenced by social interaction and the environment. Learners should be exposed to comprehensible, negotiated, or modified input in their attempts to acquire a language. There is a number of factors that can influence language acquisition and learning, including social interaction, age, motivation, cultural input, and the distinction between acquisition and learning. Both the quantity and quality of language exposure are crucial for language development. There are many benefits to raising a bilingual child, such as increased meta-cognitive skills and superior divergent thinking ability. However, there are some studies that suggest bilingualism can have a negative impact on language development, particularly with delays in lexical acquisition and a smaller vocabulary.

Chapter 3 - Methodology

This ethnographic research uses qualitative methodology for data collection and analysis. This research uses a qualitative approach due to two main reasons: the individual experience of the participants are the product of individual interpretation; and the context of an experience is a major element of its nature; the task is to identify the conditions under which a certain relationship or condition or response holds true.

The data collected in this research includes observations, video recording with a cellphone and audio recordings through zoom app. My observations started when Nikita was born all the way when she turned 4. The data from videos and audio were collected in 2022 during a period of three months: October, November and December. I have recorded a total of 14 videos and 18 audio conversations through the app zoom. The relevant audios and videos were transcribed for this research and categorized into themes.

The idea of observing my daughter's language development since birth came up after I read a case study done by Timothy Longworth in 2001 that was based on an ethnographic design of his own daughter. The difference is that he observed his daughter language development from birth to 2 years old and I have observe from birth to 4 years old. There are several previous studies that analyzed different ways language develops early in life (whether is first or second); but I like some of the things that Timothy Longworth did on his own case study ethnographic design of his own daughter. The author observed his daughter's language development in English and Italian from birth to 24 months.

Timothy Longworth specifically observed his daughter - Giuliana - patterns of lexical development compared to other bilingual and monolingual children. Timothy Longworth used the

one parent one language theory with dad speaking English and mom Italian. The author observed that Guiliana produced words within the range of monolingual children at 12 months with a total of 23 words. Also, at 23 months old a total of 9 words were reported as being comprehended but not produced. The author believed in language dominance and he claimed that Italian was the dominant language. However, it was not clear why the author thought there was a dominant language, such as the number of words pronounced in the language or her understanding of one language over the other.

Timothy Longworth concluded that Guiliana was not able to differentiate between the two languages English and Italian. The author stated the two languages seem to be combined into one during his observation period, perhaps because of the number of cognate words. However, according to Schmid & Yilmaz (2018), to date, such integrated models of bilingual development have been strongly biased toward speakers for whom development in both languages goes hand in hand: simultaneous or early bilinguals for whom acquisition of L_y begins while L_x is still at an early stage of development. Findings indicate that the highly active phases of language development during childhood and adolescence allow great flexibility when it comes to shifts in language proficiency and dominance, with changes in external circumstances or exposure – such as the start of (nursery) school, a move between countries, or a return to the home country – often causing spurts of development and/or regression that may fundamentally change the overall multilingual balance within months.

Based on the data collection that I conducted during a period of 3 months of my daughter, research on second language acquisitions theories and observations that I have conducted in the past 4 years about early childhood language development, I wonder why Timothy Longworth limited his observation from birth to 2 years old and why he started so early, as it is uncommon

for children to start talking before 2 years old. According to the author, his daughter started lexical production at 9 months old, which is the same range as monolingual children and her daughter spoke a total of 23 words. In my opinion, it would have been appropriate for him to start his observation when the child would produce understandable words, and not bubbling sounds. It is possible that the author could influence the results by guessing the bubbling words the child was trying to say, but doesn't really said it correctly and understandable.

Because I am a language teacher, I have been observing Nikita's language development since her birth. I focused on observing the child language's input and output language behavior specifically focusing in the two modes of communication: interpretive and interpersonal.

The method that I used for data collection in this research was the videos and audios that were recorded for a period of 3 months. The video recordings and audios were conducted typically on Saturdays at my home and in a public setting for about one hour during the 3 months period. During the period of 3 months, I specifically observed how Nikita's social interactions played a role in her output language of choice response: whether her interpretive skills during input process or output production were done through interpersonal speaking. The videos I recorded were able to capture the richness environment of a naturalistic setting in which language development took place.

A qualitative method approach was used to analyze and understand language development in a first bilingual language acquisition child. All the data that was collected turned into seven themes that used to classify key patterns during my observation period. The classification is somehow similar to case study research because of the way I divided the themes into topics. According to Yin (2009), researchers should use prior knowledge and expert knowledge in order to analyze a research study. According to Stake (1995) data collection and analysis will show

patterns that will be known in advance, drawn from the research questions, serving as a template for the analysis. Sometimes, patterns will emerge unexpectedly from the analysis.

I used themes to categorize data because data that was collected during the period of 3 months were in Portuguese and English. The observation data that I conducted since her birth were in four different languages: English, Portuguese, French, and Spanish. For this research I have focused mainly on data that was done in English and Portuguese because a lot of time videos and audios are less accurate of what has been said so sound accuracy played a role. Only the most important and relevant videos and zoom audio recording were used for analysis.

Data analysis could start at any time according to Stake (1995), as analysis is a matter of giving meaning, taking something apart...having an impression and simply having observations. The ACTFL Performance Descriptors for Language Learners helped me analyze language accuracy and separate the data into seven themes. Language accuracy is important because it measures the average of spoken vocabulary words, connections made with the language, and cultural knowledge or awareness.

Stake (1995), states that the data should be analyzed as it goes and making sense of them as the analysis process is a continue process. He suggests that data should be conducted and collected simultaneously with the analysis process and that it was done in this research. According to Merriam (1998), data analysis is the process of making sense of the data in which involves interpreting what people have said and what researchers has seen and read. In terms of data validation, Merriam and /or Stake states that it is not feasible to apply the concepts of validity and reliability into qualitative inquiry based on positivistic notion and that is why I am using the constructivist approach. According to Merriam's approach, reality is holistic, multidimensional and ever changing.

Throughout my data analysis I thought that by being the mother of the child that I am studying could have been seen as an obstacles. However, after reading several studies and conducting the literature review I realized that there were so many successful stories that direct participants of a case study or an ethnographic study were able to capture the real picture because they were very close related to the main subject of the study.

Methodology Chapter Summary

This ethnographic research was conducted based on my own daughter's language development from birth to 4 years old. I used a qualitative approach for data collection and analysis. The data was collected through observations, video recording, and audio recordings. This research focused on observing how social interactions played a role in my daughter's language development and the data was collected based on video and audio recordings. I used a qualitative approach to analyze the data and categorized it into themes. The analysis showed key patterns observed during the time period of 3 months and mainly focused on data collected in Portuguese and English.

Chapter 4 - Data Analysis

Nikita's language development has been observed by myself since she was born in 2018. In 2022, when I started to conduct this ethnographic research study Nikita was 4 years old. I video recorded and audio recorded for the period of three months: October, November and December. I initially planned to record Nikita's social interactions in a public setting during the weekends, but I had to adjust that because it wasn't always possible to video or audio record as planned due to unforeseen circumstances such as if she was sick or if there was something unexpected happening that particular weekend. Therefore, I had to adjust the pre-arranged data collection schedule and record during the week as well whenever it wasn't possible during the weekend.

During the period of 3 months, I recorded a total of 14 videos using my cellphone camera and 18 zoom audio recordings that were stored on my student account on the Kansas State University. I have used a combination of videos and audios recording on zoom to record Nikita's social interaction and communications at home and in the public.

I initially divided the evidence data by month as each month had its main events that took place during that particular month. After revision, I decided to categorize by themes as I was looking specifically for language patterns and not dates. The data analysis for this research study identified and analyzed significant patterns derived from language acquisition theories. The data was inductive in which the themes and categories come from the data.

The videos that I recorded provided more accurate and rich data because of the naturalist setting in which I was able to see everything that was happening and the words that were not spoken but evident through body language, but were important to the context. After an initial analysis of the most important video recordings by themes, I conducted a second round to make

sure the data was supporting as an evidence to the research questions. I have synthesized the most important themes and categorized them into relevant topics that correlate to theories and patterns of language development.

Social interaction: the Spider

Two months before I started the video recording and audio recording a major event happened that impacted my data collection analysis. Nikita started to attend pre-school in August of 2022, she went to school only three times per week from 7:30 am to 12:00 pm. I started to observe some changes on her language patterns after she started to attend preschool. In September of 2022, just after a month of her starting to attend preschool, I noticed that her spoken English has tremendously improved and her Portuguese output response slightly decreased.

On September 27th, I recorded a video of Nikita and I at home. We are in the living room and we were having a conversation in Portuguese about an activity that she did at school, which is a brown spider with 8 legs on a piece of paper. I asked her a couple questions in Portuguese in regards to the spider's number of legs, the color and the eyes.

Nikita has learned in the past from me the colors in Portuguese, and as well the numbers, animals and body parts. She also has learned from my husband the same information in English. The conversation I was about to have with Nikita could be a challenge for her because she completed the activity in school so her vocabulary in English was fresh and Portuguese was probably in the back of her mind.

For the first question, I decided to start with a mathematical question by asking her to add the total number of the spider legs. I asked in Portuguese how many legs the spider had, she started to count in Portuguese and stopped at four. Therefore, I decided to encourage her to re-count hoping that she would get the right total of spider legs. After noticing no response, I told her: let's

count again, and she started counting but got to 5. I continued to encourage and said let's count with me and for the third time and together we got the right response. Nikita counted with me 1 through 8 and her pronunciation was clear and excellent in Portuguese. There was no code mixing during this question and response. I then proceeded and asked her to count in Portuguese how many eyes the spider had and she responded by counting one and two in Portuguese.

Nikita responded correctly and accurately to my question about how many eyes the spider had in Portuguese. There was no code mixing issues for those two questions, so I decided to challenge her by asking her to code switch to English. I asked in Portuguese for her to tell me how to say two eyes in English. I decided to code switch because answering two eyes is easier than counting one through eight legs. She responded two eyes in Portuguese. Therefore, she didn't code switch.

I decided to continue to challenge her to code switch. I then pointed to the spider's legs and asked her to count in English the number of legs, and she currently counted the number of legs in English. Then I asked her to count the number of eyes in English and she did perfectly count the 2 eyes. I asked Nikita in English how many eyes the spider had and she responded correctly two eyes. I then asked in English if the eyes were big or small and she showed me by pointing what part of the eye was big and the other was small. I decided to code switch back to Portuguese by asking in Portuguese what color was the spider and she responded in English gray. I switched back to English with the same questions and she continued to say gray. She then asked me what color the spider was and I responded it was brown.

Nikita's response has demonstrated that the majority of the time she accurately responds to the language that the person is asking her. Therefore, the input impacted Nikita's output response and she followed the same language pattern of the person that was speaking. Regardless

to the fact that I typically speak with her in Portuguese, she was able to separate the person from the language and code switch without major issues.

Nikita has shown great language control as the accuracy of her phonology skills were displayed during the conversation about the spider paper activity she did at school. She has demonstrated an incredible capacity to code switch between the two languages. The mistakes she made were not significant to impact her recalling abilities of the input language response.

The input language influenced the child's language output response to a certain degree. When Nikita didn't have the vocabulary necessary to continue the conversation, she used the vocabulary she had at that particular moment. The spider conversation showed that Nikita's translation skills have been gradually developing and she is able to translate without making major syntax mistakes. Because Nikita is constantly being exposed to two language input, she can more easily collect information to use at a later time.

The environment influences the output response because sometimes the stronger language will move to be weaker depending on the environment that Nikita is. For example, when Nikita is at home her Portuguese language flows more naturally, versus when we are in public she tends to speak less Portuguese because all she hears is English, even if I continue to speak in Portuguese with her. The language that is currently stronger can become weaker because it is not something static, the strong language can potentially become the weaker one as the environment changes.

The spider conversation has demonstrated that Nikita's language functions are outstanding. Nikita is able to express her opinions, ask questions and provide information that is requested in both languages. For example, Nikita asked me what color the spider was. She wanted to know and learn information.

In terms of language form, Portuguese and English language are very different from each other. For example, the majority of the Portuguese words have either feminine or masculine gender, and the opposite is true to the words in the English language. The gender of the Portuguese words also affects the form of the other words that relate to, such as adjective, articles and pronouns. The grammatical structure of words and phrases in Portuguese and English has been greatly handled by Nikita. Nikita showed that she was able to count, by saying the spider has “dois olhos” - two eyes as she indirectly knows the difference between singular and plural form when relating to numbers.

She shows great interest in speaking both languages. The fact that she started going to preschool didn’t impact her interests in continuing to speak Portuguese. She did show some confusion in relation to the spider’s color, she continued to say gray, but the actual color was brown.

Nikita is self-motivated to learn Portuguese. For instance, when she asked what color is gray in Portuguese is an evidence that she continue interested to learn Portuguese. She shows interest in learning in Portuguese in a daily basis. Even when she makes mistakes she is ok to continue to learn. Children have just the right amount of motivation to learn, and they typically are not afraid of making mistakes.

Table 1

Social interaction: the Spider		
	English	Portuguese
Andreia Input: listening		Vamos contar de novo?
Nikita Output: speaking		Um, dois, três, quatro, cinco. Mm, dois,mm , quatro

Andreia Input: listening		Agora conta comigo
Andreia & Nikita		Um, dois, tres, quatro, cinco, seis, sete, oito
Andreia Input: listening		Andreia: Quantos olhos tem a aranha?
Nikita Output: speaking		Nikita: Um, dois
Andreia Input: listening		Andreia: E como seria em inglês dois?
Nikita Output: speaking		Nikita: Dois olhos
Andreia Input: listening		Vamos contar agora em inglês (I am pointing to the spider's legs)
Nikita Output: speaking	Nikita: One, two, three, four, five, six, seven, eight	
Andreia Input: listening	Andreia: Good job! How many eyes the spider have?	Excelente.
Nikita Output: speaking	Nikita: One, two	
Andreia Input: listening	Andreia: Is it big or small? Which one is big	
Nikita Output: speaking	Nikita: this one	
Andreia Input: listening	Andreia: Which one is small?	
Nikita Output: speaking	Nikita: this one	
Andreia Input: listening		Andreia:Qual que é o grande?
Nikita Output: speaking		Nikita: esse aqui
Andreia Input: listening		Andreia:Qual é o pequeninho?
Nikita Output: speaking		Nikita: esse aqui
Andreia Input: listening		Andreia: Que cor que é a aranha?
Nikita Output: speaking	Nikita:gray	
Andreia Input: listening	Andreia:What color is the spider?	

Nikita Output: speaking	Gray? What is this color	
Andreia Input: listening		Andreia: It's brown

Picture Book: an Artful Thinking Approach

I have been teaching for the past 10 years and I developed some language teaching strategies that have most helped my students to develop critical thinking skills. This year I have been teaching two language classes for heritage speakers. Although my students are high school students, artful thinking strategies are adaptable to any grade level classroom and any age, the only difference is in the curriculum content that can be focused on a certain grade level. When I teach language to my students one of my favorite instructional strategies is using the artful thinking approach to develop critical thinking skills.

Artful thinking approach has a set of six thinking dispositions: questioning & investigating, observing & describing, reasoning, exploring viewpoints, comparing & connecting, and finding complexity. I have used the I see, I think and I wonder strategy because it helps develop the following thinking dispositions: observing & describing, and questioning & investigating. According to the 2006 Artful Thinking Final Report (2006), there are many thinking dispositions worth cultivating – curiosity, open-mindedness, and reasonableness . Artful thinking focuses on a set of six thinking dispositions that explores works of art and other complex topics in a curriculum. In addition to that, thinking dispositions can be used to create connections between oneself culture and the art.

On October 22nd of 2022, I purchased a picture book called Anno's Counting Book and started to have a conversation with Nikita about the book in Portuguese. A couple days later I decided to have the conversation in Portuguese and English. Finally, I decided to start the conversation in English and watch what language Nikita would continue. There were three

different possibilities: Nikita would continue the conversation in English, Nikita would respond in Portuguese and or use both languages. I wanted to see if Nikita would associate me with the language and would respond in Portuguese even if I would be speaking with her in English. I also wanted to have my husband part of the conversation to see if that would play a role on Nikita's decision making process and responses.

On October 27th of 2022, I recorded a video in which I am having a conversation with Nikita and my husband at home. Because we had an English speaker, the conversation started in English and the goal was to see what language Nikita would go with the conversation.

I decided to use the artful thinking approach to make Nikita comfortable to express her opinion and pick either language to express herself. The artful thinking strategy is used by teachers in general and entails in developing analysis of any visuals by engaging students thought processes and helping her See (observe), Think (make inferences with reasoning), and Wonder (ask questions). Artful thinking is a strategy that I have used throughout my teaching career mainly so that students can develop critical thinking skills as students make observations, interpretations and inferences about a picture. The goal is to guide Nikita and help her develop critical thinking skills by creating her own storytelling by combining language learning, math and arts.

The picture book Anno's Counting Book was the perfect book to have Nikita develop critical thinking skills as this book had a combination of language learning, math and arts. The picture book was created and illustrated by a japanese author Mitsumasa Anno. The Anno's Counting picture book is recommended for ages 4 to 8; it is a wordless picture book that has watercolor pictures that shows a landscape changing through the various times of day and the turning seasons, months and years, and the activities of the people and animals who come to live there. It is a great picture book to develop critical thinking skills because every time you look at

the picture book again you will see more things, and start to build upon the previous page and previous knowledge. In my opinion, the mathematical relationships of the pictures would be a great way to help Nikita understand the concept of numbers, observe the relationship and draw conclusions.

This is such a unique picture book because each time you look at a page in the book you will find another application of a natural mathematical concept that you had not noticed before. On the first page there is a winter landscape, a blue sky and a white hill, and there is the number zero. On the next page there is a number one, one tree, one bird, one house. The following page is number 2 and the snow has started to melt. On page number 2, there are two buildings, two trucks, two trees, two children, two dogs, and two adults. The objects on each page corresponds with each consecutive number, and in addition the number of items on the page increases all the way to number 11.

The video that I recorded on my cellphone on October 27th of 2022 was about 5 minutes total and I only transcribed the first minute because it is the most relevant part for this analysis. The conversation among Nikita, her father Brandon and I started in English. There were no expectations of what language we would end up speaking. I initially thought that it would be a code mixing of English and Portuguese because we had an English speaker and a Portuguese speaker. I started the conversation in English by telling Nikita that we were going to use the I see I think, and I wonder thinking approach. Before this video was recorded I explained to Nikita that picture books are great books to create stories by using the Artful Thinking approach with a See/Think/Wonder. I explained to Nikita that as she is looking at the pictures she can state what she sees, what she thinks about what she sees and what does she wonder about the picture she sees.

Unfortunately I forgot to press play to record the beginning of the conversation and I only noticed when we were already on page 4. The video started when we were already on page 4 and I started by saying in English: I see 4 fishes and counted: one, two; three, four. Nikita said: I wonder why there were no horses over here. I encouraged her by sharing her thoughts and I said good job.

I turned to page 5 and I asked Nikita in English what numbers she saw in the page and she responded 5 in English. She continued and said: I wonder if there are people by the horses and wonder the people are riding horses. Nikita did a great connection between the animals and its relation to the people. After that, I said: I see 5 flags and Nikita said: You need to wonder. I said: I wonder who put the flags there. There are two people in the picture and I said: I think they are getting married. My husband Brandon said for the first time during the conversation. Brandon said: I think there might be another train coming.

I turned to page 6 and said: I see number 6. Nikita said: I wonder who put the those stuff and said I don't know. She said I wonder who put the grass. Nikita said, no... no...you have to wonder. I said: I wonder why the ducks are going in the same direction. My husband said how the train turned around. Nikita said she wonders who put the tree there. I said: I wonder if there are more kids and Nikita said she wonders if there is a family in the house. She connected the kids with the family as she wondered in her comment. I then said: I see a rainbow.

The conversation is completely in English and there is no evidence of code mixing or code switch. Nikita comprehends English and speaks English as a native speaker. There is no impact on her output response the fact that I typically speak in Portuguese with her. Nikita output response is clearly following the language the person is speaking and not the person. There is no sign of

language confusion by Nikita. Nikita clearly handles an entire conversation in English. Nikita understands that she and I can have a conversation in either language.

Reading bilingual books is not the only way to use books to engage with children and develop critical thinking skills. Picture books are great to develop critical thinking skills because picture books give the freedom for children to tell their own story. Picture books is an opportunity for children to be storytellers on either language they chose. The Artful Thinking strategy was developed by Harvard Project Zero and I have used it several times throughout my teaching career.

Table 2

Anno's Counting Book			
Andreia	I see 4 fishes: one, two , three, four		
Nikita		I wonder how there are horses over here. There are no horses	
Andreia	Now, let's go to number...what number is this one?		
Nikita		Five. I wonder there is three people over here by the horses. I wonder the people riding a horse.	
Andreia	I see 5 flags.		
Nikita		No, you have to wonder.	
Andreia	Ok, I wonder who put the flags there		
Nikita		I wonder who put the the the this ones. Now, you wonder	
Andreia	I think they are getting married.		

Nikita		I think they are going home.	
Andreia	Good job!		
Brandon			I think there might be another train coming.
Nikita		Another train. Let's go...	
Brandon			And I wonder who is this...
Andreia	I see number 6.		
Nikita		Six, and I wonder this one who would be. I wonder who put this ... I don't know. Who put this...this...this...the grass. I wonder who put the grass	
Andreia	Good job. I wonder that too.		
Nikita		No, you have to wonder.	
Andreia	I wonder ... all the ducks are going all in the same directions.		

Caterpillar

Bilingual language development is more about the language a person is using for socialization rather than the process of language acquisition itself. The language socialization perspective implies that language is learned through social interaction. Nikita receives regular exposure to the two languages on a daily basis, simultaneous acquisition since birth. On October 13 of 2022, I recorded a video of Nikita 1:52 long at home and I was talking about a caterpillar that has 7 different colors. Nikita demonstrates through the conversation that she is able to clearly differentiate between the two languages.

In the past, I have taught Nikita how to say all the colors in Portuguese and English through informal instruction. Therefore, I was aware that she was able to successfully accomplish the task that was about to be asked during this social interaction. The names of the colors in Portuguese and English are not similar at all and there are no cognate words for colors.

Nikita is holding a caterpillar toy that has 7 different colors and I decided to start a conversation with Nikita. I was aware that because Nikita was physically holding and touching the caterpillar toy and this learning episode would be a great opportunity to embed learning since she was physically holding the object and she is using the human senses.

I asked Nikita in Portuguese to tell me what were the colors she saw in the caterpillar toy. I was not specific about the language output that I wanted her to say but I let her pick freely which language she wanted to respond to. Because Nikita was at home, I was asking the question in Portuguese and I taught the colors in Portuguese and I was assuming her response would be in Portuguese without any major issues.

Initially, Nikita responded to my question in English: yellow, orange, red, and then said there were several different colors. It could be that she forgot how to say the colors in Portuguese and responded in English. She continues to say the majority of the colors in English but includes one in Portuguese : yellow, orange, vermelho (red in Portuguese), purple, blue, green. For the third time, she says in English and Portuguese: yellow, orange, vermelho (again in portuguese), purple, blue, red (at this time in English). It is possible that she forgot the colors in POrtuguese so she lacked the vocabulary to respond accurately. Nikita demonstrated that she had code mixing because colors is something she talks about in school. Therefore, it is possible that made her confused.

I decided to continue to encourage her to speak in Portuguese and she continued to respond in English. Because there were many colors, I decided to focus on one color at the time, so I said let's say the colors in Portuguese, how do you say red in Portuguese. When she was telling me the colors in English the only color she said in Portuguese was red. Therefore I decided to give an example of my expectations as she stated the color red previously in Portuguese. Nikita translation skills.

During this interaction, Nikita shows that she doesn't associate the language with the person that is talking, but rather the language. She also demonstrates that when she lacks the vocabulary she goes to the default language in which she has the vocabulary. She is also able to ask me how to say that color in the language that she forgot.

According to Krashen and Terrel (1984), one of the strategies for learning a second language is to provide visual memorization to the learner as part of the comprehensive input. Nikita is not afraid of making mistakes. It is evident that Nikita shows interests in continuing to speak Portuguese.

Table 3

Social interaction: Caterpillar		
	English	Portuguese
Andreia Input: listening		Andreia: Fala as cores
Nikita Output: speaking	Nikita: Yellow, orange, red, there is a lot of one, there is a lot. Yellow, orange, vermelho, purple, green, yellow, orange, vermelha, purple, blue, green, yellow, orange, red, purple, blue.	Nikita: Ta bom.
Andreia Input: listening		Andreia: Agora em portugues.

Nikita Output: speaking	Nikita: Yellow, orange, red, purple, blue, there is pink.	
Andreia Input: listening		Vamos falar as cores em Portugues
Andreia Input: listening		Como que fala red in portugues?
Nikita Output: speaking	Red, mom look mom which one is red	
Andreia Input: listening		Qual cor que você está falando
Nikita Output: speaking		Vermelho

Book Little Red Riding Hood - Chapeulzinho Vermelho

On October 9th around 4:00 pm, I recorded a video of me reading the Little Red Riding Hood book in Portuguese to Nikita at home. I have read the story in Portuguese a couple of times in the past and Nikita likes the story. It is Nikita's birthday, Brandon's mother and stepfather speak English and do not understand Portuguese at all. Both grandparents - grandmother and grandfather are at our house to celebrate Nikita's birthday. There are 3 English speakers and 2 Portuguese speakers present at home. During this reading interaction there are three English speakers - Nikita's grandmother Lisa, myself and Nikita.

I am seated on the floor and reading the book for Nikita in Portuguese. I read the first page and I asked in Portuguese Nikita to explain to her grandmother what is happening in the story. I have specified which language I would like her to explain what I read, but I let Nikita pick the language of her choice.

Nikita communicates with Lisa only in English and Lisa only understands English. When I asked Nikita to explain what happened in the story, Nikita's grandmother asked Nikita what was happening in English. Lisa - the grandmother points to the picture of the bad wolf and follows up

by asking another question to Nikita. Lisa asks if the bad wolf is a nice guy. Nikita responds in English that is the big bad wolf.

I continued to read the book in Portuguese and after I finished reading the second page, I asked Nikita to tell grandmother what is happening in the story. Nikita tells grandmother what is happening in Portuguese. Nikita didn't code switch to English and it is possible that she didn't switch to English because I didn't specifically say to her to explain in English on that question. It is possible that she didn't have the required vocabulary to code switch. After Nikita responded to the prompt I asked, Grandmother says please tell me in English and Nikita replied in English that she didn't know how to say that.

During this interaction, Nikita is receiving input in Portuguese and is asked to produce an output in English. In order for Nikita to produce the output she first needs to comprehend what has been said in Portuguese. Nikita clearly comprehends the story and that is evident when I read the second page of the book and Grandmother Lisa asks a question to her about the big bad wolf.

There is no evidence of language dominance in this interaction. Nikita responds in both languages even when she says she doesn't know something. However, it is possible that Nikita was receiving more English input throughout these days because her grandparents were staying with her for a couple of days. Nikita shows no resistance to receive input in Portuguese even in the presence of an English speaker. She is motivated to listen to the story and she is having a good time.

Table 4

Book Little Red Riding Hood - Chapeulzinho Vermelho		
	English	Portuguese

Andreia Input: listening		Chapeuzinho vermelho. Era uma vez uma menina conhecida como chapeuzinho vermelho. Um dia a sua mãe pediu que ela levasse uma cesta de doce para sua vovó que morava do outro lado do bosque. Explica pra grandma o que está acontecendo aqui
Lisa Speaking	What is happening here? Who is that? I don't know who that is? Is that her momma?	
Nikita Output: speaking	Yeah.	
Andreia Input: listening		Caminhando pelo bosque a menina encontrou o lobo. Aonde vc vai chapeulzinho? Perguntou o lobo. Vou para a casa da vovó levar uma cesta de doce. Muito bem boa menina. Conta pra grandma o que aconteceu aqui.
Lisa Speaking	Is it that the nice guy?	
Nikita Output: speaking	No, the big bad wolf.	
Lisa Speaking	What is he doing? What did he say? Did he say hello?	
Andreia Input: listening		Quando chapeuzinho colhia as flores o lobo correu pra casa da vovó.
Nikita Output: speaking		Ele correu na casinha da vovó.
Lisa Speaking	Say in Portuguese	
Nikita Output: speaking	I don't know how to say that.	

Social interaction 4 Portuguese speakers at a Brazilian Coffee Shop

On October 15th of 2022, I recorded a video of Nikita, my mother, and I; and we are at a Brazilian coffee shop in Columbia - Maryland celebrating my mother Nilce birthday with two

other friends that speak Portuguese, they are Brazilian as well. Nikita knows the two other friends because she had interaction with them in the past; and when we are together we only speak Portuguese. There are four people talking and the input is in Portuguese; but it is a public place in which people speak both English and Portuguese because it is a Brazilian store.

It was lunch time and I asked Nikita in Portuguese if she would like to eat some french fries. Nikita responded in English that she would like to have some french fries. Nikita didn't respond in the language that I asked her. It could be that we are at a public place, and she would assume that only speak English there, which obviously was not the case. In addition to that, it could be that she related the food words to English as we typically get french fries at McDonalds.

I ordered the food and we were eating as I recorded this video interaction. I decided to continue to talk in Portuguese with Nikita. In the video, I recorded myself asking Nikita in Portuguese if the french fries are cold or hot and Nikita responds in Portuguese that she wants more french fries.

It is evident that Nikita demonstrates that she is able to hold a conversation in Portuguese regardless of being in a public place in which people talk two languages: English and Portuguese. Even after she responded in English, the second time I spoke in Portuguese, she responded in the language that I spoke with her. I would expect that she would not have code mixing issues since the four people were speaking Portuguese and we were eating at a Brazilian coffee shop. However, it was not the case.

Table 5

At a Brazilian Store		
	English	Portuguese

Andreia Input: listening		Deixa eu ver a bandeira, o que voce esta comendo?
Nikita Output: speaking		Batata
Andreia Input: listening		Ta gostosa, ta quente o fria?
Nikita Output: speaking		Eu quero mais mamãe

Code switching: Stuffed animals and colors

On October 3rd of 2022, it is almost 6:00 pm and I am at home with Nikita, she is in a good mood. Nikita is happily playing inside of a toy box that is full of stuffed animals. One of Nikita's favorite toys is stuffed animals, and she has several of them. I decided to start a conversation initially in Portuguese about the names of animals and colors to check her interpretive listening skills, comprehension skills and speaking skills. My intention was also to test her code switching and translation skills, my plan was to start the conversation in Portuguese and do the code switch to English in the middle.

In the past, I taught Nikita how to say the name of the majority of the animals in Portuguese and English. I also taught her all the colors in Portuguese and English. Learning colors is easier than learning the name of the animals because colors are adjectives and can be easily associated with anything or object, but animals are subjects and are not always easily associated with anything.

Nikita is inside of the toy box, in front of her there is a brown horse stuffed animal, on her right side there is a pink teddy bear and on her left side there is a yellow duck stuffed animal. I decided to start the conversation by using verbal and nonverbal communication by pointing out to a yellow stuffed animal that was inside of the toy box that she was also in. I asked Nikita in Portuguese to get the "yellow" stuffed animal for me. Purposefully I didn't verbalize the name of

the stuffed animal, but only the color. To reinforce which stuffed animal I wanted, I used body language to point to the one I wanted her to get it for me.

Nikita responded to my question by picking up a brown stuffed animal instead of the yellow one that I pointed at. I redirected again with verbal and nonverbal communication by pointing to the yellow one that I wanted. Finally, after I requested twice, she got the yellow duck stuffed animal. After I checked her initial comprehension skills, I noticed that she was holding in her hands a brown horse stuffed animal.

Because Nikita is holding on to her hands a brown horse stuffed animal, she is touching a stuffed animal, so she is feeling in her hands. I asked Nikita in Portuguese if that was a horse and she responded yes in Portuguese. I asked her what animal was the one I was holding, and she responded a duck in Portuguese. Nikita got the right name of the stuffed animals in Portuguese, so I decided to challenge her and test her code-switching skills.

I asked in Portuguese how to say duck in English and she code switched to English by responding “I don't know” in English. I said: duck in English. She didn't respond correctly to the task, but she did correctly code switched to say what she wanted to say. It is possible that she forgot the name of that particular animal in English.

It is evident that she understood that I wanted her to translate and communicate in English, but she forgot how to say the name of the animal in English. Therefore, I decided to ask the name of another animal in English. I asked in Portuguese: how do I say horse in English. She responded in English horse. I said cavalo in Portuguese and horse in English.

In this naturalistic setting it is possible to see Nikita great interests in learning both languages. Nikita wants to continue the conversation and she asks: English puppy dog. I asked how do I say puppy dog in Portuguese and she responded in Portuguese “cachorro”. She said tem

otro cachorro, and I said tem dois cachorros. I said: great job in Portuguese. She said: more, more, mommy in Portuguese. Niki said what fox means in English and I said in Portuguese raposa. She said no fox and I repeated.

Finally, I said send me a kiss and she does and I asked how old are you going to be and she responded in Portuguese: four. It is evident that Nikita enjoys learning both languages and she is happy with the social interaction I am having with her handling both languages at the same time. In this learning episode, I am using verbal and nonverbal communication to activate three of her human senses: touch, hearing and vision.

Nikita is not afraid of making mistakes and making mistakes is part of the learning process. A mistake is an opportunity for learning to occur. Nikita is learning and acquiring the language through her daily experiences and social interactions.

Table 6

Stuffed animals and colors: code switching		
	English	Portuguese
Andreia Input: listening		Andreia: Tchau, tchau, tchau
Nikita Output: speaking		Nikita: Quero ver mamãe
Andreia Input: listening		Andreia: Pega então o ursinho amarelo ai pra mamãe
Nikita Output: speaking		Nikita: Esse aqui
Andreia Input: listening		Andreia: não, o amarelinho eu quero
Nikita Output: speaking		Nikita: Nao esse. Ta
Andreia Input: listening		Andreia: obrigado
Nikita Output: speaking		Nikita: faze assim com o ursinho

Andreia Input: listening		Andreia: esse é um cavalinho?
Nikita Output: speaking		Nikita: ahan
Andreia Input: listening		Andreia:E esse aqui é o que?
Nikita Output: speaking		Pato
Andreia Input: listening		Andreia:Como diz pato em inglês?
Nikita Output: speaking	Nikita: I don't know	
Andreia Input: listening	Part1. Duck	Part 2.E cavalo como diz em inglês?
Nikita Output: speaking	Nikita:Horse	E cavalo
Andreia Input: listening		Andreia:isso cavalo em portugues e horse em inglês
Nikita Output: speaking	Nikita:I want to say puppy dog	
Andreia Input: listening		Andreia:puppy dog em ingles e em portugues como diz
Nikita Output: speaking		Cachorro. Tem outro cachorro
Andreia Input: listening		
Nikita Output: speaking	Nikita: What fox means?	
Andreia Input: listening		Fox?
Nikita Output: speaking		
Andreia Input: listening		Andreia: Mmm, tem um nome que a mamãe não lembra. Ah rapoza. Em ingles fix em portugeus rapoza
Andreia Input: listening		Quantos anos você vai fazer?

Code mixing: Conversation in the car

On October 1st of 2022, I recorded a video of Nikita, my husband, my mother in the car and I were going to Walmart around 5:00 pm. There are two Portuguese speakers and one English

speaker going to a place where people speak only English. My husband is driving and I am having a conversation with Nikita.

I asked Nikita in Portuguese what color her sock was; Nikita replied in Portuguese: “azul”. I asked Nikita in Portuguese what color was Pepa; and Nikita replied pink and blue in English. Nikita demonstrates that she comprehended the question but chose to respond in English. I then asked Nikita in Portuguese how do you say pink in Portuguese and she said “pink”. I asked in Portuguese: did you forget? She replied yes in Portuguese. I said: there is not a problem and the video ended. When Nikita is around her father she tends to rely a lot in English and her output response is more likely to be code mixed. If she would have been only with me, it is more likely her response would have been in Portuguese.

The car conversation shows that Nikita code mixed the colors. It is evident that code mixing will happen but it doesn’t mean that there is one language more dominant than the other. It is actually a positive thing that the child is using the language vocabulary that she has available at that moment. The conversation was not entirely code switched, but just a few words.

Table 7

Code mixing: Conversation in the car		
	English	Portuguese
Andreia Input: listening		Andreia: Ah meu amor
Nikita Output: speaking		Nikita: Mamãe você esquece pra ponha no pequeninho
Nilce Input: listening		Nilce: Você quer um tênis pequeninho, esse aqui e menor
Andreia Input: listening		Andreia: Não eu acho que tem alguma coisa ali no tênis

Nilce Input: listening		Nilce: Deixa a vo ver o que tem dentro dele, daí eu vou por. Tem nada Kiki.
Nikita Output: speaking		Nikita: Tem que fazer assim
Nilce Input: listening		Nilce: A ta a meia que não está esticada.
Andreia Input: listening		Andreia: Kiki que cor e essa meia ai?
Nikita Output: speaking		Nikita:Azul
Andreia Input: listening		Andreia:E que cor que e a pepa?
Nikita Output: speaking	Nikita:Pink and purple	
Andreia Input: listening		Andreia:Como fala pink em portugues?
Nikita Output: speaking	Nikita:Pink	
Andreia Input: listening		Andreia: Você esqueceu
Nikita Output: speaking		Nikita:Sim
Andreia Input: listening		Andreia: Não tem problema.

Data Analysis Chapter Summary

This ethnographic research study on Nikita's language development was conducted from the time of her birth in 2018 to the age of 4 in 2022. The qualitative data collocation used in this research were videos and audio recordings for a period of three months and categorized the data by themes to identify significant patterns related to language acquisition theories. The videos provided the most accurate and rich data for your analysis, and the most important information was synthesize and organized by themes and categorized them into relevant topics.

Chapter 5 - Analysis of Findings

Acquiring two languages at the same time and at the same rate requires discipline by both the learner and the instructor. To ensure effective language learning, it's important for parents and instructors to maintain consistent daily exposure to both languages. This is because children need time to process and absorb new information. By providing a consistent language environment, parents and instructors can help children develop their language skills more effectively.

Babies are born with the ability to listen to people speak, but they aren't expected to start talking until after several months. Medical professionals generally anticipate that infants will begin speaking two-word phrases after listening to others talk for around 24 months. Learning two languages is not different and it takes time to produce output, especially in two different languages as they typically have different grammatical structures.

After watching all the videos, I recorded during this research study and reviewing the zoom recordings, I didn't realize that I have been using language teaching and learning techniques on a daily basis when interacting with my daughter. For example, I used language correction techniques on September 27 during the Spider interaction when a code mixing situation happened. During the Spider interaction, Nikita and I were having a conversation and I asked in Portuguese what color the spider was and instead of Nikita responding brown in Portuguese, Nikita responded gray in English. Nikita's response shows that she understood and comprehended the question. However, she responded in the other language that was asked: in English. I followed up with the same question again but now in English. Nikita still responded gray in English and finally I said brown. I have not stated in any moment that her response was wrong, but when I responded brown, my tone of voice was warm and caring.

Another example of a language correction technique that was captured in this research is when I have repeated what Nikita said but without the error. I don't use negative corrections to correct grammatical mistakes or language confusion. I focus on using positive feedback and implicit correction. According to Lyster and Ranta (1997) the most common feedback given to learners when they produce incorrect forms are recasts, a repetition of the learner's utterance minus the error; however, they also found that recasts were the kind of negative feedback learners were most likely to ignore. Therefore, it is important to keep consistent when correcting mistakes because a lot of times children will copy what you say.

It is evident that Nikita shows interest in learning both languages and shows no resistance to continue to speak in Portuguese with me. Nikita code switch skills are remarkable, she is able to translate words and interpret information without major problems and the mistakes that happened did not impact the meaning of the context. For example, on October 3rd of 2022 I had a conversation with Nikita about the animal's name and colors in Portuguese. Nikita was playing inside of a toy box full of stuffed animals and toys and I asked Nikita in Portuguese how to say duck in English and she responded in English that she didn't know. I then asked how to say horse and dog and she correctly responded in English. It is evident that she also shows interest in continuing to learn new vocabulary in Portuguese because she later asked me how to say fox in Portuguese. It is in her personality to be social and she is a very curious person. She asks questions when she doesn't know the answer.

Nikita shows that her code switching skills are remarkable because the majority of the time she replies in the language that the person is talking to her, and not by topic as a major determinant of language choice. Nikita's performance on both languages shows her incredible ability to code switch even if the person that is talking use two different languages whether is in the same

interaction or on different occasions. It is evident that Nikita is highly proficient in Portuguese and English and has outstanding code switching skills. Bilingual Children that have high proficiency in both languages will code switch after they process the information in one language and produce in another language accurately. Nikita is able to comprehend the information in one language, interpret in context in another language, and produce the output back to the original language if required. I would partially agree with De Houwer (1995), that children can code switch naturally around the age of 2 years old. However, based on the evidence of this research study, only if they are exposed to daily input in both languages and required to produce output in both languages.

It is normal that a highly proficient child in two languages will code mixing sometimes because they are in the process of learning the two languages at the same time. Born bilingual children (BBC) will develop Code switching skills if they are proficient in both languages. Code switching skills require children to develop accuracy and it will come naturally with time because culture plays a role in interpreting and translating. If high levels of language proficiency is not achieved at a certain point of exposure of both languages, code mixing can become a problem, which is evident that is not the case of Nikita.

Born bilingual children (BBC) will most likely develop Code switching skills if they are highly proficient in both languages. They need to be exposed to both languages on a daily basis and receive input from both languages. Code switching skills require children to develop accuracy and it will come naturally with time because culture plays a role in interpreting and translating. If proficiency is not achieved at a certain point of exposure of both languages, code switching skills can become an issue of code mixing and it can become a sign of confusion and later develop into frustration.

Code mixing is considered a natural part of bilingual language learning and should not be a cause for concern. In fact, it demonstrates the individual's adaptability and flexibility in navigating different linguistic contexts. For example, when Nikita and I are talking about the colors of the caterpillar, I asked her to tell me the colors in Portuguese, but she responded in English. I asked again but stating to her that I explicitly wanted her to tell me the colors in Portuguese, but she continued to mix up the colors in English and Portuguese. In addition to that, it is evident that on October 1st of 2022 during a conversation I had in the car with Nikita she again said the colors in English. It is evident that she felt more comfortable saying the colors in English, and it is possible that she has been practicing the name of the colors in English at her school and that influenced her output decision making process. Therefore, the school context does impact Nikita's output response on a daily basis. It is also possible that Nikita code switch to English when she doesn't have the necessary vocabulary in Portuguese. However, it doesn't necessarily mean she is less proficient in Portuguese because at that particular moment she didn't have the vocabulary to accurately respond to the question she has been asked.

Even when Nikita code mixes the two languages, Nikita's language pronunciation in both languages are native like skills. Portuguese and English languages have completely different pronunciations. Portuguese uses a lot of nasal sounds found in such words: São Paulo, coração, Maranhão. The Portuguese language also doesn't use three consonants in a word. On the opposite, the English language has unique sounds that are found in words that have the "th" sound. In addition to that, English words also can have three consonants in a single word such as the word "three".

Receiving input in the target language is extremely important. Children will develop their listening skills if they receive a variety of input information throughout the day in both languages

whether they are aware of the language or not. Even when the child seems to not understand what is being said they are still learning as their brain is acquiring new information because subliminal perception is happening as children acquiring another language. Subliminal perception refers to the ability of the brain to process information that is presented below the level of conscious awareness. It refers to the processing of sensory information, such as visual or auditory stimuli, without the person being consciously aware of it. However, according to Schmidt (1990), subliminal language learning is impossible, and that intake is what learners consciously notice. This requirement of noticing is meant to apply equally to all aspects of language (lexicon, phonology, grammatical form, pragmatics), and can be incorporated into many different theories of second language acquisition.

Reading books to children in both languages will increase children's vocabulary in both languages and enhance their capacity to retain information. According to Nation, Dawson, Hsiao, (2022), exposure to book language provides opportunities for learning words and syntactic constructions that are only rarely encountered in speech and that, in turn, this rich experience drives further developments in language and literacy. As a language teacher, I have purchased several books for Nikita and I read on a regular basis. I focus on reading books in Portuguese because I am the native speaker, and my husband reads the books in English as he is the native speaker.

Reading books to children is important for learning a language and improving comprehension skills. I read books to Nikita at least twice a week because I believe it will enhance the working memory of a spoken word and she will be able to recall information in the future. In addition to that, reading books to a child will increase vocabulary; whether is every day or academic vocabulary. According to the National Center on Early Childhood Development, Teaching and learning (2022), the quantity of words that children hear is important for language

development, but so is the quality of language that they hear. Quality of language can refer to word diversity and to the quality of the speech signal.

It is important to use new and different words for children to expand their vocabulary. Books often include words that adults would not otherwise use, like names of plants or animals. Reading to children helps develop important pre-literacy skills, like story understanding and critical thinking. As a teacher, I use as many indirect instructions as possible but to the extent that will benefit her language acquisition journey. When I am reading a book for her, I ask questions through the reading, and she is also free to ask questions and make comments.

Nikita has demonstrated throughout this research study her higher order thinking skills. The questions that she has asked reflects higher order thinking skills because of her capacity of linking events, connecting information, and synthesizing ideas. For instance, during the Chapelzinho vermelho story, Nikita was able to connect the story she knew in English to the story in Portuguese, both stories have similarities and differences due to their cultural context. However, in both stories there is a common character that is the bad wolf. Nikita demonstrates that she understands the difference and similarities between both stories.

In order to fully understand the most accurate child's language skills, the naturalistic recordings of Nikita's speech are essential to capturing her understanding of her surroundings and the naturalistic setting is in a constraint-free speech. The free interactions provided information about Nikita's ability to respond to questions, ask clarifying questions, make inferences and statements and draw her own conclusions. In addition to the information about Nikita's language production, these recordings also provided information about the input the children received and the interactional processes and patterns, which helps form a more accurate and comprehensive

view of the child's linguistic ability and the impact of a bilingual home as the major influence of her environment.

The family background and the home environment of a bilingual household has provided the child a rich opportunity to thrive in learning two languages simultaneously just by her daily social interactions with family members. In addition to learning the language, Nikita also learned a lot about both cultures and that is evident throughout the books that I read for Nikita. Family plays an important role in maintaining the heritage language alive because it is possible that if the language is not used and appreciated by family members, it can lead to a heritage language loss. Therefore, as per Krashen's Acquisition-Learning Hypothesis language, language is best developed by using the acquisition and learning process all together.

Mothers play an important role in a child's life, especially the early years. Even though I work full time as a language teacher, when I come home from work, I still interact with my daughter and spend as much time as possible so she can thrive. Research indicates that maternal responsiveness positively affects children's developmental outcomes. The positive developmental approach considers culture and understands that maternal behaviors may differ depending on socio-economic status, culture, and ethnicity. According to Ramirez (2001), the mother's warmth, acceptance, and responsiveness, all of which are intrinsic in healthy mother-child interactions, are strongly related to children's language skills. According to Tamis-LeMonda et al (1998), children of more responsive mothers were able to achieve a vocabulary growth spurt, combine multiple words, and talk about the past sooner than that of children who had less responsive mothers.

It is also known that mothers also tend to be more responsive and attentive to their child's needs. Therefore, the mother is one of the major influences of the child's language development

skills in your age. The mother is mainly the one that provides feedback and encouragement and that can foster the language acquisition process.

Learners will benefit if the instructor receives appropriate feedback from a person that knows both of the languages. The adult should correct code mixing issues early on through positive reinforcement techniques. The focus should be on the words and sentence structures that are right, and not explicitly say to the child what she or he has done wrong. However, modeling behavior and the appropriate words and sentences structures is the key for improving language proficiency.

In my view, it is important to provide language support to the child and correction is imperative to developing accurate code switching in this stage of language development. Correction should be done through modeling behavior. For example, asking the child to repeat a phrase or rephrase what the child said but correctly. Even though both languages have a lot of differences there are few similarities. A parent or an adult that is fluent in both languages is aware that English and Portuguese language have a significant number of Latin-based words and thus share a large number of cognate words. Therefore, it can use those strategies as correction needs to be implemented.

Bilingual instructors or parents should take advantage of the similarities of the language and be aware of the language differences. As I stated before, Portuguese and English language structures have less similarities and more differences. For example, in Portuguese the adjective comes before the noun and in English it is the opposite. In Portuguese, sentences can have a missing subject but it can be indicated by the morphology of the verb or conjugated verb. For example, “vamos comer sorvete”, there is no explicit subject in the sentences, but it is know that is referring to “we” because of the way the verb is conjugated, which it was third person plural.

Learning a language through social interaction has been proven to increase language proficiency levels. For example, when a person goes to another country that speaks the language the person is learning, their vocabulary improves as they are required to learn how to ask for basic things on a daily basis. Another example of learning through socialization is when an adult that is proficient in both languages is teaching the child by playing with them in the language they are most proficient or native.

I have been using language acquisition strategies and learning methods to teach and help Nikita to continue to develop her two languages that were acquired by birth. Bilingual children in general have to be constantly receiving input and producing output in order to continue to be proficient in both language. Nikita receives two languages input everyday and produces output everyday in both languages. According to Benati (2017), input is absolutely necessary and there is no theory or approach to second language acquisition that does not recognize the importance of input. However, is input sufficient for language acquisition? There are a couple things I do to continue to expose her as much as possible to her Portuguese learning experience. I purposefully speak in Portuguese to her as much as possible, for example on a daily basis in basic everyday conversation. I also expose her to social interaction with my family that lives in Brazil through facetime or phone calls; so she can continue to develop her speaking and listening skills. I also read books in Portuguese and the questions I ask about the book are in Portuguese. I use instructional strategies to correct phonological pronunciation because it is an integral part of acquiring proficiency in a second language.

Analysis of Findings Chapter Summary

This research finds that Nikita is highly proficient in both languages: Portuguese and English. She has developed remarkable code switching skills and can comprehend and interpret information in both languages with accuracy. I have used several strategies to tailor her language proficiency such as language correction techniques, repeating what she says without errors and using positive feedback. Exposure to both languages on a daily basis is crucial for bilingual children to acquire high levels of language proficiency. Parental commitment and consistency in providing both language exposure through reading books is extremely important. It's also important to note the impact of the school context on Nikita's output response in both languages and how even when she does code mix, her pronunciation in both languages is native-like. The family's bilingual background and home environment have played a significant role in Nikita's language development and cultural understanding. There is also a positive impact on maternal responsiveness on a child's language skills and developmental outcomes.

Chapter 6 - Conclusion

The data provided in this research demonstrates that Nikita continues to develop the two languages simultaneously at a consistent and comparable pace. It is evident that the child's positive attitude towards acquiring and learning both languages simultaneously; plus parental commitment for learning the language affects the acquisition process and retention or loss of a language. There are several benefits of learning two languages during childhood. When children have early exposure to diverse cultures, they tend to be more receptive to new experiences. Moreover, children raised in a multicultural environment are more likely to support and promote diversity and acceptance, factors that promote tolerance and inclusive attitudes.

Nikita's attitude is positive towards speaking and learning Brazilian-Portuguese language, a language that is not commonly spoken in the minority population of the United States, where English remains the official language. She shows no resistance or preference in hearing or speaking one language over the other. Nikita does not show signs of confusion or discouragement when she is speaking or hearing Portuguese as an input whether is from myself or from someone else that also speaks Portuguese. Even though Portuguese is the language she uses the least in the current society she lives, she continues to show a positive attitude towards speaking Portuguese with me or anyone else that speaks Portuguese to her.

There is no evidence that there is always one dominant language over the other. One language might be stronger than the other one depending on different contexts and circumstances. This research finds that there might be significant vocabulary knowledge that shows one language is stronger when it comes to certain topics and the other one weaker in other situations. For example, when Nikita was attending preschool the colors and the name of the animals were easier

for her to remember as she would be practicing during school hours. My husband and I are very committed to Nikita bilingual language development and provide her with an array of opportunities to practice what she learns. It is evident that parent-child relationship makes a positive impact on the language learning process during childhood.

After analyzing the data of this research, it has become evident that there are multiple factors that influence a child's language output response. This study finds that the child's rates of language acquisition depend on both the quantity and quality of the language experience because it affects language development in both languages. For example, commitment by the instructor on planning what to learn and how to develop both languages is important because it will help analyze that the child is receiving a balanced input from both languages. It requires instructional discipline and commitment to make sure the child is receiving both language inputs on a daily basis. As stated before, I expose my daughter Nikita every day to two sets of input in English and Portuguese.

6.1 Strategies

Based on my professional experience as a multilingual language teacher, and the evidence of this research study there are important language strategies that can be applied to teaching and learning a second language and developing simultaneous bilingual language acquisition skills. These strategies are significantly effective, and it can be applied by monolingual or bilingual parents, language teachers and instructors. The strategies can be applied regardless if two languages are being learned simultaneously or after the first language has already been learned.

The first step in learning and acquiring two languages to the level of proficiency, it is imperative to have a good curriculum, especially if the language instructor has no experience

teaching. As an experienced language teacher, I have conducted extensive research on various curriculums that are tailored to children's developmental needs. It is crucial to have a bilingual language curriculum that has age-appropriate themes and topics that align with family's interests and needs. There are numerous bilingual curriculums available for purchase online that support children's bilingual language development.

A curriculum is required to follow if proficiency in two languages and bilingual language development is the main goal. The curriculum should have a solid foundation on language pedagogy, specifically the input should have appropriate videos and activities for the age level group that will be learning the language. The videos should have familiar stories and they should be interactive with rich and bright colors. Native speakers should be the ones modeling the correct pronunciation because phonology is an important aspect of achieving proficiency in a language. For example, there are bilingual audio books that native speakers can play or read to the learner such as the Little Red Riding Hood and the 3 little pigs that are available online for purchase in which the story comes in two different languages. In addition to that, tv shows such as peppa pig and baby Jojo are also available in many languages. However, if no native speaker is available for an in person instruction, the videos should be narrated by native speakers.

The academic language input that the child receives on a daily basis is just as important as the language learned through socialization. It is also important to have the child watch videos that have native speakers from the country in which the language is spoken. If the input is a video, the native speaker of the video should also be proficient in the language. The language of the videos should focus on building pre literacy skills and the language should also be academic. When the instructor gives the child activities that are meant to process the information learned from the video, it is important to give time for the child to process the information. However, if the child

doesn't understand the directions in either language, the instructor should use more familiar words and not default to the other language in which the child is comfortable and able to understand easier.

Bilingual curriculums that are well designed enable teachers, instructors, and parents to incorporate differentiated learning strategies into their lessons and the learner achieve greater success. It is important to consider that each child has its own pace to learn and as well their own preferences, so the curriculum should be flexible and provide a lot of opportunities for teachers or instructors to be creative and differentiate the lessons. For example, if a child is learning the name of animals in one language such as English, when the time to learn the other language such as Portuguese, the child should be aware that you will be switching languages in a conscious way. It is important to explain to the child in their own words that each animal and object have two different ways of saying the same thing, but one is in one language and the other is in another language. The instructor should make sure the child understands that those are two different languages as the learner is learning and acquiring two languages.

The instructor and learner interaction is another important component for successfully developing language proficiency in two languages. There are several benefits of learning and acquiring two languages through socialization in a naturalistic setting. Children that are exposed to a diverse and varied vocabulary on a daily basis on everyday conversations will acquire proficiency quickly. If the instructor is a native speaker, the native speakers should clearly pronounce the words because phonology is an important component of learning how to speak another language fluently. As previously discussed, being a native speaker doesn't automatically classify a person as proficient in a language. Therefore, the native speaker should be proficient in

the one of the languages the child is learning and be knowledgeable enough to understand the second language.

After selecting a good bilingual curriculum, it is important to organize the material and break down into sections. Backward mapping framework is a type of organization that teachers use so they know what students need to accomplish by the end of a unit that learning will take place. It is important to have a plan and know what lesson is best used for each learning opportunity. It is important to divide the topics by months, then by weeks and finally by days as well. Parents that would like to provide academic support in a home setting, should consider setting up a specific time of the day to provide input on language number one, an opportunity for the child to process the information from the input and then produce an output that can be accomplished through an activity at the end of the learning cycle.

The structure is not complicated because it follows the same pattern for each learning opportunity. Language number one should have an input from a video or the instructor giving directions or interacting in the target language. The output should continue to be on language number 1 and it should give the child options and focus on the speaking skills as this should be age-appropriate and for young children the speaking is the language skill that they will be acquiring proficiency. After language number one cycle has finished, it is time to start language number 2 and repeat the entire process again.

It is imperative that children and students are provided with a consistent routine that clearly conveys expectations and rules before the learning process starts. Following a structured routine significantly contributes to learning outcomes. In order to facilitate such an environment, children and students should be informed of the agenda of the day, beginning with an outline of the language they will be learning and speaking at that particular learning time. Subsequently, it is essential to

communicate the expectation, for instance that the children will be watching a video and during that time the need for silence is essential. Following the video, children and students will have time to process the information and participate in a discussion or a hands on activity that will be facilitated by the instructor and it should be age-appropriate activities. Children and students must be informed of the outcome of the lesson and what they are expected to do because this will enhance engagement levels and successful participation of the learner.

Although a routine is important to follow, it is important to be aware to the unique needs of each individual child. There must be a balance between diligence on following the curriculum or the program and making necessary changes to accommodate the needs of each individual child. For instance, if the learner is ill or not feeling well such as sick, engaging in a learning activity on that particular day or at that specific time will not be as effective if they would be feeling well.

Instructors and parents should fully utilize positive reinforcement techniques to reward good behavior and achievement. It is important to know that learning a language takes time and the first step is to help the child build confidence in themselves, so they thrive. I have used a reward system with Nikita to encourage her to use more Portuguese and code switch when there is an opportunity that she is required to code switch. Every time that she did a good job in an activity, she would receive one star on her chart and at the end of 10 stars she would receive a reward such as a small present. Instructors and parents would highly benefit if they use a reward system in which if the child achieves a certain amount of points, the child gets rewarded once they achieve a certain amount of points. This will encourage confidence and self-worth in children and show them that you are proud of them once they achieve their goal.

Another important aspect of learning a language is learning the culture of that particular language. Whether the language is a heritage language or if the language is being learned due to

personal interests, it is essential to acknowledge the cultural aspect associated with the language. There are many languages that are spoken in different countries and the culture differs from each country. For example, Portuguese is spoken in 10 countries around the world and the Portuguese spoken in Brazil is slightly different from the one spoken in Portugal. Therefore, exposing the child to the culture in which you wish the child to learn will increase the child's knowledge about that particular country too. The most effective way for a learner to acquire a language is to be introduced to the traditions and customs of the culture associated with the language. In 2023, I took Nikita on a trip to Curitiba - Brazil for 10 days. Nikita's experience was positive, and she had a positive attitude and was completely immersed in the culture and was not reluctant in adapting to Brazilian culture. Indeed, after the trip was over Nikita told me enjoyed her time in Brazil very much and asked me several times to go back and visit Brazil soon.

It is important for the children to keep some type of connection to the culture of the language they are learning. Maintaining a connection to the cultural heritage is essential for children who are developing bilingual language skills. For instance, participating in the activities of your local community that is connected to that culture and language that the child is learning can have long-term advantages for the child. It is in the local community that people will share common interests and develop friendships. Utilizing social media can be helpful in finding out about upcoming events and meetings in the area, and attending these events can be a great way for parents and educators to build relationships with individuals that have the same interest. Additionally, the internet can be of great benefit to find online resources and indeed connect with people from around the world who share common interests in the language, culture, music, and sports.

An important pedagogical technique that I have previously used with my students that demonstrates efficacy in activating prior knowledge involves connecting existing knowledge to the new material. As stated earlier, Portuguese, and English share several cognate terms. A great way to increase new vocabulary is to utilize cognate words to comprehend context and instructors can teach learners how to develop this skill. Leveraging existing knowledge will facilitate the development of new vocabulary because the learner will be connecting existing knowledge with new information. Cognitive words will be similar in both languages so they can be associated with the same meaning. According to Wen, Teng, Sparks (2023), typically cognitive strategies include orienting, repeating or repetition, organizing information, summarizing meaning, guessing meaning from context, reasoning inductively and deductively, and using imagery for memorization. Cognitive words strategies require learners to search for clues from surrounding materials and one's own background knowledge, guessing the meaning of the unknown, evaluating whether a meaning makes sense, and, if not, locating another appropriate meaning. It is important to note that Brazilian Portuguese and English languages have false cognitive words, in which are words that look similar in both languages but they actually mean different things. For example, pull in Portuguese is “puxar” that could easily be confused with the word “push” in English. However, push in Portuguese means “empurrar” and not “puxar”. Even high proficient adults can make mistakes when speaking two languages.

Speaking in the target language 100% of the time is very important for the learner to get familiar with the sound of the words. Instructors and parents should acknowledge that confusion and uncertainty are natural phenomena during the process in which children are acquiring a new language, and that it is acceptable for the learner to struggle to comprehend certain concepts initially. Instructors should provide the necessary support to the learner and start with simple tasks

and gradually work towards more challenging ones as age is extremely relevant for this process and should be considered when planning tasks. This process will ensure the learners are progressing and the learner is building skills and confidence over time. The instructor can use compensatory strategies to help the learner decipher the meaning of the words they don't know. For example, by using synonyms, talking around the missing word, and gesturing, it will all help the learner guess the meaning of the words and be able to put everything into context. For example, in addition to using verbal communication, I also used nonverbal cues such as gesturing by pointing to the stuffed animal that I wanted Nikita to get for me in one of the interactions I had with Nikita in this research study.

The learner needs to be highly proficient in both languages before the instructor challenges the learner to fluently code switch. Code switching should be done only when the learner has achieved a certain level of language proficiency because it could negatively impact their ability to code switch effectively. For example, if the learner is struggling to recall the name of an animal in the language they are learning, it would not be appropriate to ask them to translate it into the other language. In order for the learner to effectively code switching, instructors should always allow adequate time and space for the learner to think and then respond. For example, it would be helpful if the instructor counted at least 10 seconds in your head before offering help or guiding the child towards the answer. Allowing the learner time to think before responding will enhance their ability to connect information in the future.

As the learner continues to grow and achieve a higher level of proficiency in both language skills it is important to continue to provide appropriate feedback. Praising the child and students for doing a great job is just as important as giving corrective feedback because it supports the learning process and enhances their capacity to be better at connecting information. The purpose

of feedback is to guide the learner and that consequently will increase motivation, engagement, and independence, leading to improved learning and positive behavior towards learning both languages. Effective feedback must be strategically delivered, and goal directed; feedback is most effective when the learner has a goal and the feedback informs the learner regarding areas needing improvement and ways to improve performance. Feedback may be verbal, nonverbal, and should be done at the time it happens. The feedback should also be meaningful and age appropriate. Using intentional and systematic practice to maximize learning is very important.

Language learners need to practice what they are learning by producing output that is appropriate for their age level. Instructors should incorporate academic strategies such as analyzing, evaluating, comparing and contrasting, and predicting, so learners can develop critical thinking and problem-solving abilities while improving their language proficiency. Encouraging open-ended questions and detailed responses not only helps learners elevate their academic language but also further enhances their communication skills in both languages.

Incorporating movement into language learning activities can also help learners retain new information. For instance, drawing an animal and describing it in the language they're learning can be a great way to practice motor skills and encourage academic oral language production. Moreover, asking open-ended questions and encouraging more detailed responses will help the learner elevate their academic language and focus on either language one or language two. In addition to that, incorporating activities that involve movement can help enhance the learner the ability to remember and retain new information. For example, when teaching grammatical structures such as the use of prepositions, instructors can add a song to incorporate movement as they are learning the meaning of each preposition.

Children will do incredibly well if they are exposed to a song that requires them to stand up and sit down while also teaching them about prepositions because incorporating movement and music will enhance the child's ability to remember and engage with new information. Also, it is important that the learners pronounce the words correctly, but the instructor should carefully correct phonology using appropriate corrective feedback strategies because the learner needs to feel confident about their language skills so the feedback does not compromise the learning process.

Another important component for developing proficiency in both languages is to monitor learning and challenge the learner as the learning progresses towards the goals. It is important to continue to use new vocabulary with context so the learner can make connections to new information. One way of adding new vocabulary is to read books about different topics ranging from common stories to those they never heard before. Challenging the learner could also be done through high order thinking tasks such as comparing and contrasting activities or making a list of things to summarize learning. It is important to hold high expectations, but also allow the learner to make mistakes because that is when learning takes place and growth is seen in this process.

The instructor should utilize a variety of sensory experiences to enhance language learning. By incorporating visuals in the activities, it will help the learner comprehend the language. In addition to verbal support, it is important to have creative and engaging activities in which the learner will be able to explore the other senses. For example, having activities with toys in which the learner can touch and feel. If the topic of the lesson is the colors, having a toy of the color that has been talked about will activate sensory. Another creative way to amplify learning is to take advantage of food related activities. Learning through practical experience such as food, smell and taste will enhance the learner's capacity to retain information in a meaningful way. For instance,

having the learner try salt and sugar to explore different tastes and learn the differences and even more about their own preferences. Based on my experience, children will love to try candy and chocolate as they are learning languages. If the topics are related to fruits and vegetables, having the learners to try them will enhance the learning experience because utilizing taste will enable the learner to develop an emotion and information that is attached to an emotion has been proved to be easier to remember.

Sensory games are another great way to promote language development through the sense of touch. For example, if the instructor is teaching a topic that relates to opposites such as hot and cold, hard, and soft, light and heavy. Children can talk about what they're experiencing, and they will use the language to convey their thoughts and feelings. If the instructor gives a bowl with cold water and another cloth that is warm, the learner will be able to describe what they are feeling as they are touching with their hands. Sensory games are important because they are a fun way in which children explore and discover more about the world through their senses.

Fostering curiosity in children will enhance their learning capacity. Curiosity can help children develop critical thinking skills, problem-solving abilities, and creativity. When children are curious, they are more likely to ask questions, which can lead to a deeper understanding of the world around them. Encouraging and nurturing curiosity in children is an effective way to help them grow and develop. Curiosity should be implemented as much as possible because it promotes learning new things. Children are curious by nature and like exploring everything around them. Curiosity is an emotion that allows children to explore and investigate things. Playing educational games in both languages will promote learning as it will increase and support vocabulary building.

Finally, empowering children is another essential aspect of a strong parent-child relationship, especially when it comes to bilingual language development. When children are

empowered, they are more likely to develop proficiency in multiple languages. Encouraging persistence and confidence is essential in helping children develop a growth mindset, especially at something they have failed in the past. Failure is a natural part of learning and growth, and it's important to teach children not to be discouraged by it, but to use it as an opportunity to learn and improve. Modeling behavior is indeed very important and should be prioritized, as children learn a lot from observing how adults handle challenges and failures. Consistently exhibiting a resilient and modeling a positive attitude, instructors, parents, and other role model adults can help children develop these important skills for themselves. Always saying to the child positive things and words of encouragement will benefit the child in the long term. I always tell Nikita: You can do it.

Chapter Summary

The research finds that Nikita has a positive attitude about learning Brazilian-Portuguese language, with no preference between acquiring Portuguese or English. The findings of this research demonstrate that Nikita is simultaneously developing English and Portuguese at a consistent pace, without one language appearing to be more dominant than the other. In addition to that, the parent-child relationship was found to have a positive impact on language learning and language acquisition was found to depend on both the quality and quantity of the language experience. The research identified the importance of instructional discipline and commitment in providing balanced language inputs in both languages, and the need for a good bilingual language curriculum tailored to children's developmental needs and interests. It is important to have a curriculum that is well designed and structured in order to attain proficiency in two languages. It is important to have a solid foundation in language pedagogy, appropriate input materials, and flexibility in instruction to suit learners' unique needs and preferences. In this last chapter, there

were several instructional strategies and techniques that instructors can use to help learners activate prior knowledge, differentiate and scaffold learning, and incorporate cultural context. Additionally, the use of reinforcement techniques and feedback that is both encouraging and informative is crucial to building learner confidence and promoting success in acquiring language proficiency in two languages. This research study demonstrates that Nikita is developing both languages, English and Portuguese, simultaneously and at a consistent pace. It appears that Nikita's positive attitude towards learning both languages, as well as parental commitment to her language development, play a significant role in the acquisition and retention of two language skills. There is no evidence that one language is more dominant than the other language. However, each language have its strengths in different contexts. The study emphasizes the importance of both the quantity and quality of the language experiences in a child's language acquisition. Overall, the research highlights the significance of language learning strategies, parental involvement, the importance of the input in the target language, and planned instructional support.

Table 8

Strategies	
Parents	Teachers
Bilingual Curriculum	Curriculum
Input in the target language	Input in the target language
	Differentiation
Learning through socialization	Learning through socialization
	Backward mapping
Routine	Routine

Positive reinforcement techniques	Positive reinforcement techniques
Learn the culture of the language	Learn the culture of the language
	Pedagogical: activating prior knowledge
Speaking in the target language	Speaking in the target language
	Code switch
	Feedback
	Foster critical thinking and problem-solving
	Activities with movement
	Games
Foster curiosity	Foster curiosity
Empowerment	Empowerment

6.2 Further Research

Further research in the area of first bilingual language acquisition would greatly benefit our society. It would provide us with a better understanding of how children learn and acquire two languages simultaneously or after already attaining proficiency in their first language. This knowledge can be invaluable in developing more effective language learning approaches and educational programs for bilingual children. It is evident that from this ethnographic research that several factors significantly influence bilingual language development. These factors include the environment, culture, and the parent's background, all of which play a role in shaping a child's language learning experience. Furthermore, there is evidence to suggest that the language input a child receives has an impact on their language output response.

An ongoing research in language learning and acquisition should continue to deepen our understanding of the complex mechanisms behind bilingual language acquisition in order to inform language teaching practices and support bilingual children and students in their linguistic development.

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Appendix A - Data Collection

Appendix A.1 Video and Audio Timeline: October, November, December

Modes of communication: interpretive, interpersonal and presentational			
Place: home	Month 1	Month 2	Month 3
Week 1 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal
Week 2 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal
Week 3 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal
Week 4 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal

Appendix A.2 Video and Audio Timeline: October, November, December

Modes of communication: interpretive, interpersonal and presentational			
Place: in public	Month 1	Month 2	Month 3
Week 1 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal
Week 2 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal
Week 3 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal
Week 4 Saturday 1 hour	Interpretive Interpersonal	Interpretive Interpersonal	Interpretive Interpersonal

Appendix A. 3 Analysis of Vocabulary during three months.

Scale based on below average, average, above average.		
Input Output	English	Portuguese
ABC	Average	Average
Numbers: cardinal and ordinal	Average	Average
Colors	Average	Above average
Body parts	Above average	Average

Food	Average	Average
Clothes	Average	Average
Animals		Average
Time and sequence of events (for example, what happened first, second, or third)	Average	Average
Grammar: Verbs (present, past and future), pronouns, prepositions	Average	Below average
Emotions and feelings	Average	Average
Describes objects	Average	Average
Sizes	Average	Average
Social words	Average	Average
People	Average	Average

Appendix A.4. Average spoken words of a child based on several sources.

1 year	~ 5 to 10 words
2 years	~ 10 to 50 words
3 years	~ 50 to 300 words
4 years	~ 450 words
5 years	~ 1,000 words

Appendix A.5 Components of a language analysis: below average, average, above average.

Components of a language	Nikita
Phonology: the rules about the structure and sequence of speech sounds.	Average
Semantics: vocabulary and concepts expressed through words.	Average

Grammar: 1.Syntax: the rules in which words are arranged into sentences. 2. Morphology: the use of grammatical markers (indicating tense, active or passive voice, etc.).	Average
Pragmatics: involves the rules for appropriate and effective communication. Pragmatics involves three skills: using language for greeting, demanding, etc. changing language for talking differently depending on who it is you're talking to following rules such as turn-taking and staying on topic	Average

Appendix B - List of Bilingual schools and centers in Maryland

School	School Name	Age/Grades	Language
Private	Glenmont Montessori Bilingual school https://glenmontmontessoribilingual.com	Pre-K 3 Pre-K 4 Kindergarten	Spanish
	St. Nicholas Greek Orthodox Church https://stnicholasmd.org	PreK - 5th	Greek
	Montessori Luna Bilingual Macro school https://www.montessoriluna.com/	18 months to 5 years old	Spanish
	Leal Angeles Center https://www.lealangels.com	PreK	Spanish
	Baltimore International Academy https://www.biaeast.org/language-immersion-program-1	Kindergarten to Grade 2	Spanish
	French Immersion Montessori pre school https://myfrenchclasses.org	PreK	French
	L'enfant international pre school https://lenfantmontessori.org/french-summer-camp-montessori	PreK	French
	Arco Iris Bilingual children center https://arcoirisbcc.com	2 years to 5 years old	Spanish
	Rochambeau, the French International School https://www.rochambeau.org	3 years to 11	French
Public	Overlook Full Spanish Immersion https://www.pgcps.org/schools/overlook-full-spanish-immersion	PreK - 5th	Spanish
	César Chávez Dual Spanish Immersion https://www.pgcps.org/schools/cesar-chavez-dual-spanish-immersion	K-9	Spanish
	Phyllis E. Williams Elementary School https://schools.pgcps.org/phyllisewilliams/	K-5	Spanish

	Maya Angelou French Immersion School	K-8	French
	Dora Kennedy French Immersion School	K-8	French

Appendix C - Video Themes

	Date	Place	Video	Topic
	September 27, 2022	Home	Nikita and Andreia	Conversation about the spider
	September 28, 2022	Home	Nikita and Andreia	Conversation about the colors
	September 29, 2022	Home	Nikita and Andreia	Conversation about her birthday, how old she will be in October
	September 30, 2022	Home	Nikita, Brandon and Andreia	Input in Portuguese, Nikita output in English.
	October 1, 2022	Public	Nikita, Brandon, Nilce and Andreia	At walmart and in the car
	October 2, 2022	Home	Brandon and Nikita	Numbers and letter: In the morning, Nikita was having a conversation with her father completely in English about the alphabet letters, her responses were all in English. Later at night, around 7:00 pm she was drawing with my mother and the whole conversation was in Portuguese.
	October 3, 2022	Home	Nikita and Andreia	Conversation about the animals. Asking Nikita to get a yellow teddy bear and asking how about the colors. Working on code switching skills
	October 8, 2022	Home	Nikita, Brandon, Andreia, grandparents: Lisa and Ed	Nikita's birthday: Nikita's birthday party. American grandparents are at Nikita's house and the majority of the time they are speaking English.
	October 9, 2022	Home	Nikita, Lisa and Andreia	Reading Chapelzinho Vermelho
	October 11, 2022	Home	Nikita and Andreia	Letters
	October 13, 2022	Home	Nikita and Andreia	Tarantula

	October 15, 2022	Public	Nikita, Nilce and Andreia	Brazilian Store
	October 16, 2022	Home	Nikita, Brandon and Andreia	Coloring
	October 27, 2022	Home	Nikita, Brandon and Andreia	Picture book: Annes's book
	December 14, 2022	Home	Brandon and Nikita	Letters

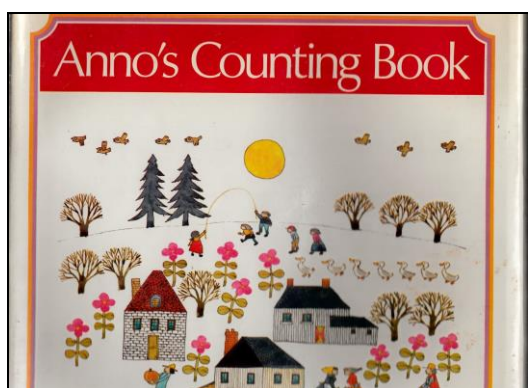
Appendix D - Audio Zoom Recordings Themes

	Date	Place	Audio Zoom	Topic
	October 16, 2023	Home	Nikita and Andreia	Ride in the car
	October 21, 2023	Home	Nikita and Andreia	Snakes
	October 22, 2023	Home	Nikita and Andreia	Ladybug
	October 23, 2023	Home	Nikita and Andreia	Bob Sponge
	October 26, 2023	Home	Nikita and Andreia	Popcorn
	October 30, 2023	Home	Nikita and Andreia	Homework
	November 12, 2023	Home	Nikita and Andreia	Conversation about school
	November 16, 2023	Home	Nikita and Andreia	Markers
	November 20, 2023	Home	Nikita and Andreia	Watching TV
	November 21, 2023	Home	Nikita and Brandon	Same or different
	December 3, 2022	Home	Nikita and Andreia	Spontaneous Conversation

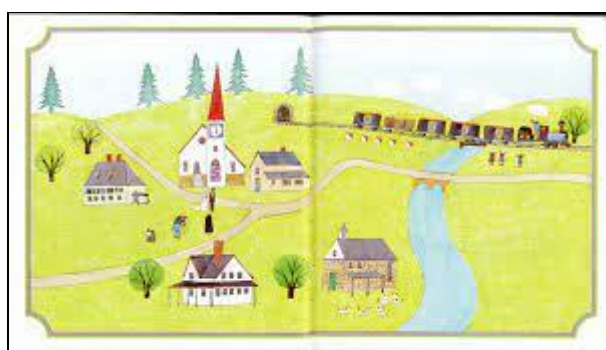
December 4, 2022	Home	Nikita and Andreia	Spontaneous Conversation
December 10, 2022	Home	Nikita and Andreia	Spontaneous Conversation
December 16, 2022	Home	Nikita and Andreia	Spontaneous Conversation

Appendix E - Anno's Counting Book 1977

Book cover



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Appendix F - Caterpillar Toy

