

“EXPRESSIVE SPEECH OF DUAL LANGUAGE LEARNING HEAD START CHILDREN

WITH DIFFERENT CONVERSATIONAL PARTNERS”

by

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Abstract

This study examines the expressive speech of Head Start Dual Language Learners (DLL) in situations with different conversational partners. The target children and conversational partners were categorized into four different groups (Fluent bilingual, Spanish dominant, English dominant, or Emerging bilingual) based on their language abilities. Children were filmed in various areas of their classrooms as part of a larger study. Conversations involving children who were Fluent Bilinguals, Spanish Dominant, and English Dominant were transcribed and analyzed using Systematic Analysis of Language Transcripts (SALT) to gauge their expressive language with different conversational partners. Expressiveness was determined by Mean Length of Utterance (MLU) and Number of Different Words (NDW) across both of the DLLs' languages. There was no difference between the DLL children's speech with Fluent Bilinguals and Same Dominance partners. There were trend level findings that indicate that DLL children were more expressive with Same Dominance partners than Opposite Dominance partners. They were also more expressive with Fluent Bilingual partners than Opposite Dominance Partners.

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Introduction

Across the United States, discrepancies in academic achievement between children of low and high socioeconomic status (SES) continue to be a major issue. Children from low SES households tend to perform more poorly on measures of academic achievement than their peers from higher income families (Duncan & Brooks-Gunn, 1997). These differences extend to both reading and mathematical achievement (Aikens & Barbarin, 2008; Coley, 2002).

Hart and Risley (2003) attributed these academic differences to early exposure to parental vocabulary. According to their study, children's verbal knowledge in kindergarten predicts their academic success later in life. By age three, children from families of low SES have heard, on average, 30 million words less than children from families of higher SES. Children tend to emulate the speech of their parents and 86-98% of their words are ones they have heard their parents use (Hart & Risley, 2003). In this way, children's language is largely representative of the adult language that they have heard. Importantly, the quality of the language input predicts children's future academic success (Hoff, 2013).

This word gap is particularly relevant for early education centers, such as Head Start, which serve preschoolers from low income households. In addition to serving children of low income households, 30% of the families with children enrolled in Head Start programs identify as speaking a language other than English at home (Office of Head Start Administration, 2014). Of the families that spoke another language, 25% spoke Spanish. The terms used to describe the population of children whose home language is not English vary based on age and other criteria. Of these titles, some are deficit focused and hone in on the children's acquisition of English without giving them credit for the language that they already know. For example, many programs use the terms English Language Learners (ELL) or Limited English Proficient (LEP).

The term ELL typically refers to a child who is above third grade and learning English (Williams, 2014). The children that are of main focus in this review will be referred to as Dual Language Learners (DLLs), because they are learning two languages at once: one spoken at home and one in their classroom or mainstream culture. This term will also be used for purposes of consistency, as the United States Department of Education and the Office of Head Start also use it (Espinosa, 2013).

Not only are the DLLs of Head Start programs facing the effects of the 30 million word gap, but also those of another achievement gap. DLLs consistently score lower on standardized tests than their native English-speaking peers (Owens, 2010). They are also nearly twice as likely to drop out of school as their classmates (Espinosa, 2013). Even from an early age, this achievement gap is present. Upon entering kindergarten, children of immigrants perform more poorly on assessments of school readiness than do children of native born parents (Koury & Vourtuba-Drzal, 2014; Hibel & Hall, 2014). The population of children learning multiple languages in the United States is ever increasing within the public school system. Latino children make up 25% of the population of kindergartners to twelfth graders enrolled in public schools (U.S. Census Bureau, 2012). Children who speak a language other than English at home make up 20% of the public school population. Of the DLL population, 44% of DLL children are concentrated from preschool to third grade (Kindler, 2002). Due to the increased risk for the DLL population, it is important to understand how DLLs use language in their early years.

Given the high concentration of DLL children in lower grades, and the fact that the early years appear to be the time in which the word and achievement gap begin, preschool is a critical time to study DLLs of low SES households (Kindler, 2002; Hart & Risley, 2003; Koury & Vourtuba-Drzal, 2014). Preschool provides an atmosphere in which children residing in low-

income households are exposed to adult speech from caregivers, other than that of their parents (Gamez & Levine, 2013). This atmosphere gives children an opportunity to receive more diverse verbal input. Monolingual low-income preschool children can capitalize on verbal input from their teachers; however, DLL children may not initially have this additional resource because of language barriers (Bowers & Vasilyeva, 2011). Bowers and Vasilyeva (2011) suggest that preschool DLLs and monolingual children require different types of input from their teachers. Whereas monolingual children's vocabulary benefits from the number of different words that were used by the teacher, DLLs' language skills improved when the total number of words from the teacher was higher. DLLs vocabulary was negatively associated with utterances that were longer. This indicates that DLLs' speech may be impacted by the amount and quality of input that they receive in their preschool classrooms. Studies investigating the speech of low-income DLLs provide insight into how to improve future academic achievement for this population.

Because the verbal abilities of preschoolers predict their future academic outcomes across multiple domains, it follows that an understanding of these early verbal abilities is critical in understanding best how to facilitate learning. In, order to study the language of DLL children, there are multiple variables which need to be considered. These variables include external environmental factors such as the languages used, the contexts in which they are used, and the people with whom the children use them. It is also necessary to gauge DLL children's individual proficiencies over their two languages. The aim of this study is to examine the language of DLL Head Start children within their natural classroom environments to determine whether or not it varies under different conditions.

Literature Review

The purpose of this review is to introduce the theories that describe the environments in which DLL children acquire their languages. Next, it will present aspects of acquisition and language use that are unique to DLLs. Studies investigating variations in DLL speech across different contexts and with different partner will also be examined. Finally, this section will review ways in which DLL speech is assessed and analyzed.

Bioecological model and the influence of the environment on DLLs

According to Bronfenbrenner (2006), every child is situated within an environment and any number of influences or circumstances can act upon that child. Bronfenbrenner illustrates the child's nested position within his environment using a series of concentric circles. The center circle, in which the individual is located, contains that individual's age, sex, gender, race, and ethnicity. These elements represent the immediate factors that impact an individual's identity and self-image. Within the microsystem, the circle closest to the individual contains influences from family, peers, and institutions. Further away from the individual are influences from politics and the media. The largest circle in the system is comprised of the attitudes and beliefs of the culture in which the individual is situated.

The Bioecological Model is extremely relevant in the case of DLL children. In order to assess DLL children, one must first understand the factors that influence their lives. Because there are myriad influences on any given individual, this review will focus on the factors that affect DLL children in their school environment. Specifically, this literature review will examine: characteristics of bilinguals, effects of environment on and conversational partners of DLLS, and typical ways to assess and analyze their language.

Sociocultural Theory of Language Acquisition

Although the Bioecological Model provides an overarching framework for the development of DLLs, it does not explain the manner in which or the motivations for acquiring their second language. In following with Bronfenbrenner's theory, Vygotsky's Sociocultural Theory provides an explanation of second language acquisition that examines both the child's individual use of language and highlights the role of other people on a DLL's road to bilingualism (Kaplan, 2002).

Vygotsky (1978) asserts that language is tied to the child's early cognition (Richardson, 1998). He observed three-year-olds attempting to acquire an object that was just out of reach with the use of tools. During the process, the children narrated to themselves the actions that they were performing; something that other primates did not do. Vygotsky (1978) concluded that language plays an important role in cognition. He states that language is necessary for planning and organization of thoughts and actions.

This theory places the learner as an active agent in his environment. Sociocultural Theory also stresses the importance of culture and other people in the child's language acquisition (Richardson, 1998). A developing child uses language as a means of communication with those around him. Learning how to use language allows the child to participate in the society in which they live. Language is a tool, rather than an end goal, that mediates interactions with other people (Razfar, Licón Khisty, & Chval, 2011).

Vygotsky's (1978) theory emphasizes the relationship between novice and expert in language acquisition. Acquisition of new knowledge occurs through this dyad. The novice learns from the expert through the zone of proximal development (ZPD). This zone is the area between what a novice can achieve alone and what can be accomplished with assistance from an expert.

One of the most valuable aspects of this theory is that the roles are dynamic. In one dyad or situation a person might be a novice, while in another she is an expert.

It would follow, based on the major points of Vygotsky's (1978) Sociocultural Theory, that language is a means of expressing thoughts with others. All children use language as a tool to navigate their environment. The language that children learn to use is modeled by adults or other children in their surroundings. In some instances, DLL children are novices learning from adults or peers how to navigate language use. At other times, DLL children are experts, shaping the language use of their peers or, potentially, that of their parents and teachers. In the case of DLL children, the ZPD involves the transfer of a nuanced set of cultural rules. This population is often situated in an environment with two or more cultures and they must learn from experts how to be members of each. In addition, these children can act as experts and further spread their cultural knowledge to others in their community.

Characteristics of Acquisition and Language Use Unique to Bilinguals and DLLs

The term DLL is broad and encompasses a large group of children. It is important to break down this title in order to understand that DLL children's language abilities vary by individual. This section will discuss differences in individual exposure and use of language among DLL children.

Simultaneous versus sequential second language acquisition. Differences in exposure to language are important when investigating the language use of DLL children; specifically, the amount of a DLL child's exposure to each language corresponds to their knowledge about their languages (Baker, 2011). DLLs can be divided into two different categories based upon when they acquire their second language. The term simultaneous bilingual describes children who have been exposed to two languages before the age of three (Baker, 2011; Hoff, 2009). A sequential

bilingual refers to someone who has been exposed to a language after the age of three. Sequential bilinguals typically go through four stages of second language acquisition (Tabors, 2008). In the first stage, the nonverbal period, they will use their home language, L1 even in contexts where their second language, L2 should be used. If an L2 speaker approaches a child in L2, the child will continue to use L1. During the second stage, DLL children begin to understand that their L1 cannot be used in all contexts. They may become nonverbal while they attempt to take in information about their L2. Their communication often changes to pointing and gesturing until they are able to pick up words from L2. In the third stage, children begin to use words and phrases to communicate in L2. By the fourth stage, children are productively using their second language and forming sentences. The duration of these stages of language acquisition varies among individual DLLs, even given comparable exposure to an L2 (Tabors, 2008).

Code-switching. Bilinguals and DLLs frequently alternate between their two languages, or code-switch, based on context and conversational partner (Baker, 2011). Code-switching is a behavior that makes this population different from monolingual speakers and necessitates assessment in both languages. There are two main reasons that code-switching occurs. The first is as a marker of one's bilingual identity. In contexts that include bilinguals who speak the same languages, code-switching reflects the fact that both parties belong to a mutual language community. Any given bilingual community determines the type and frequency of code-switching that a DLL will begin to employ in his or her speech (Paradis & Nicoladis, 2007). Code-switching that is dependent on community is consistent with Vygotsky's (1978) Sociocultural Theory and Bronfenbrenner's (2006) Bioecological Model, which highlight the role of the social atmosphere in language acquisition.

The second reason that code-switching is present in DLL speech is a potential lack of knowledge in one language (Kaplan, 2002). According to Bolonyai (2009), this type of code-switching only occurs 14% percent of the time in adults. This percentage may be higher in simultaneous DLLs as their lexicon is initially spread over two languages (Baker, 2011; Hoff, 2009). It can also occur more frequently in younger DLLs because of a domain specific knowledge. For example, DLLs may be better able to talk about their home environment in their first language (L1) because that is where they use it. Likewise, their second language (L2) may be better for communication of school related topics if that is the environment in which L2 is used. For this reason, attempting to talk about home matters in L2, and vice versa, may prove difficult for DLLs.

There are multiple ways in which code-switching can happen in bilingual speech. This mixing of languages can occur between sentences (intersentential code-switching) or within sentences (intrasentential code-switching) (Baker, 2011). Code-switching tends to follow the syntax and grammatical rules of one of the two languages, which demonstrates that it is structured and not random. Because code-switching can be commonplace in bilingual conversation it is necessary to take into account what is said in both languages when studying this population.

Language proficiency. Children learning multiple languages have different levels of proficiency in each of their two languages. Because this study aims to examine language abilities in different situations, it is important to first gauge a baseline measurement of language abilities. Rarely are bilinguals balanced, or able to speak both languages equally well (Baker, 2011). This is especially true of DLLs, as they have only just begun to learn their second language. There are several ways in which children can learn two languages. The section above made the distinction

between simultaneous and sequential bilinguals. In reference to proficiency, simultaneous bilinguals are exposed to both languages early in development. Some children may hear one language from each of their parents, a technique called: one parent one language (Baker, 2011). Creating this type of distinction based on conversational partner does not guarantee that DLLs will be proficient in both of their languages. The child may only actually speak one language while being able to passively comprehend the other. In the case of sequential bilinguals, preschool children may only have had exposure to their home language with minimal access to their second language. That being said, different children have different amounts of exposure to their target languages. Due to variation in amount and quality of exposure to each language, DLLs tend to be more dominant in one of their languages (Baker, 2011).

Another important aspect of DLL proficiency to consider is a DLL child's level of receptive and productive skills in both of her two languages (Baker, 2011). Receptive skills include listening, understanding, and reading. Productive abilities are speech and writing. Typically, DLLs have better receptive than productive skills. Since DLLs can generally understand more than they are able to say, assessing them solely on their productive skills may not display all of their lexical knowledge. Although this is true, Hart and Risley (2003), measured children's productive abilities and found that they were correlated with academic outcomes. In other words, children's speech is an important indicator of their future academic success; thus, studying proficiency levels in a DLL child's expressive speech provides insights into that child's academic future.

DLL sensitivity to environmental language

Consistent with Bronfenbrenner (2006) and Vygotsky's (1978) theories, DLL children are sensitive to the linguistic expectations of the environment surrounding them (Baker, 2011).

Ballinger and Lyster (2011) performed a study examining first, third, and eighth graders in a Spanish/English dual immersion program. This program had designated times when English and Spanish could be used. In the classes where teachers would use English during Spanish time, the students were more likely to follow the model set by their teachers; the students also used English during Spanish time. In one eighth grade class where the teacher was notorious for expecting students to adhere to the Spanish only rule, the same students who spoke English with another teacher spoke Spanish in this class. This demonstrates that, given the expectations of the classroom, children will use the language that they believe will best suit the environment. It also shows that children are conscious of the expectations that adults around them hold.

Other studies have also shown children's knowledge of the classroom dominant language and desire to adhere to the expectations of speaking that language. In Mozambique, instruction typically occurs in Portuguese, a language that children do not encounter until they enter school (Chimbutane, 2013). A study was performed with children ranging in age from nine to thirteen to examine teacher's language use in the classroom. There was variation in the amount of L1 used across classrooms. Through this ethnographic study, Chimbutane (2013) notes the importance of L1 use in scaffolding learning for DLLs. One particularly salient example of this language scaffolding occurs when a teacher asks a question in the classroom language (L2) and receives no response. She tells the children that they may respond in their L1 and still receives no answer. It is not until the teacher begins speaking in L1, that she is given the correct answer in L1. The children were unable to answer the teacher's question in the language of the classroom and said nothing. When the teacher catered to the students by using their home language they became more actively engaged. Having a classroom language that differs from the L1 can make DLL students reluctant to join class discussions or answer questions that they may know in their L1.

Context and Activity

Classroom language expectations vary based on context. Research has been done specifically investigating the differences in language use. For example, in a preschool classroom, there may be less structure at meal times or in dramatic play areas (Kultti, 2014). There may be more highly structured speech with teachers at circle time or science area (Peterson & French, 2008). Language variation at mealtime may also differ based on culture (Aukrust, 2002). In an American preschool, turn-taking was more frequently enforced by teachers at mealtimes, whereas in Norwegian preschools, narratives were valued. Conversations during meal time were focused on the children's lives (Ødegaard, 2006; Ødegaard, 2007). Thus meal time gave children an opportunity to discuss non-concrete scenarios and life events.

Some studies examining children's language focuses on specific areas of the classroom, such as the block area (Ramani, Zippert, Schweitzer, & Pan, 2014; Ferrara, Hirsh-Pasek, Newcombe, Golinkoff, & Lam, 2011). Preschool language in the block area was found to contain vocabulary about the spatial orientation of objects. It also tended to discuss ideas and items that were physically present in the block area.

It is clear that there is much language variation within a preschool classroom based upon the context of speech. In addition, culture also appears to play a role in the type of speech that is prized. This idea further supports the theoretical framework laid by Bronfenbrenner (2006) and Vygotsky (1978), which cite the importance of the cultural environment. Few studies have been done to examine the speech of Spanish/English DLL children in different contexts. However, based on prior research, it is likely that their language use also varies in different contexts.

DLLs and Conversational Partner

Sociocultural Theory indicates that children are sensitive not only to their environment as seen in the aforementioned studies, but also to their conversational partners (Ballinger & Lyster 2011; Chimbutane, 2013). Children exposed to multiple languages display an ability to use the appropriate language both within a familiar context and with a known interlocutor, this is a skill known as pragmatic differentiation (Nicoladis & Genesee, 1996). This ability appears to develop over time for DLL children. Nicoladis and Genesee (1996) performed a longitudinal study examining the pragmatic differentiation of children from the time that they were one year and seven months to three years of age. The children had one parent who was a native French speaker and one parent who was a native English speaker. They were observed and recorded while engaged in an activity with each parent. During the first sessions, half of the children demonstrated the ability to determine which language was appropriate to use. By the last session, all except one child showed that they were able to discern what language should be used with which parent. The one child who did not employ pragmatic differentiation in the last session, had done so in previous sessions.

Another study of three and four year old bilingual children also demonstrated that young children are able to discern which language is most appropriate when addressing their conversational partner (Paradis & Nicoladis, 2007). Paradis and Nicoladis (2007) examined the speech of preschool bilingual children to determine if they were able to use pragmatic differentiation 90% or more of the time. The children were grouped based on their dominant language, either English or French. Each child was placed into two conditions, a setting where their interlocutor was French speaking and a setting where their interlocutor was English

speaking. All of the French dominant children were able to use discourse separation in both languages.

The English dominant children, however, only consistently used discourse separation in their English dialogues. Despite the fact that English dominant children did not consistently use French in the French setting, their use of English reflects the knowledge that the children have about their culture. Paradis and Nicoladis (2007) note that in this part of Canada, French speakers are generally bilingual and can understand English, whereas English speakers are normally monolingual. The French dominant children understood that it was important to converse with English speakers in English because they may not understand French. In contrast, English dominant children knew that English was understood by both French and English speakers. These preschool children indicate through their language use a nuanced understanding of their culture's rules of language.

Adults versus children as conversational partners. Children's language use also differs based on the age of their conversational partner and the culture of the child (Hoff, 2010). Several studies suggest that language use can vary based on the age of a conversational partner. Labov (1972) found that African American boys were more dynamic when speaking with one another than when they were interviewed by an adult. Likewise, Inuit children spoke more with peers than with adults (Genesee, Paradis, & Crago, 2004).

Hoff (2010) examined the speech of Caucasian, monolingual children, who ranged in age from twenty-one months to three years old. The study examined differences in children's speech with different conversational partners. When this sample spoke to their mothers as opposed to their older siblings (ages four or five and seven or eight), their speech contained more vocabulary. Mothers had a more elaborate vocabulary and asked more questions than the siblings

of the target children. They also gave the target children more opportunities to respond than siblings. Although the children's speech with their mother's contained a richer vocabulary, the mean length of utterance (MLU) was longer with siblings. This study indicates that with an older partner, children will be more expressive than when paired with another child.

Given the differences in the amount and quality of speech that occur with conversational partners of different ages, this appears to be an important factor for which to control when examining child speech. However, due to the cultural differences that take place within these studies, it is difficult to determine whether Spanish/English DLL children will be more expressive with adults or with other children.

Assessing DLLs

The methods for assessing DLL children's language abilities vary greatly depending upon what the researcher hopes to learn. This section aims to discuss popular ways in which DLL children can be assessed. The first means of gaining knowledge about child language includes asking parents the words that their child knows (Gamez & Levine, 2013). Asking parents about their child's language use is helpful to gauge a general understanding of what languages the child encounter and uses, however, it does not provide insight into the knowledge that a child has. This method can be used in conjunction with other methods or when studying a child's first words.

Another means of measuring DLL language is using a language assessment. Studies investigating the speech of bilinguals often use vocabulary tests, such as the Peabody Picture Vocabulary Test (PPVT) to ascertain the level of English vocabulary knowledge of the participants (Hammer, Lawrence, & Miccio, 2007). Language assessments provide a uniform model for examining and analyzing DLL language. Many, like the Bilingual English Spanish

Assessment (BESA) and Woodcock Language Proficiency Battery (WLPB), have been normed to suit the population that is being examined (Bedore, Peña, Gillam, & Ho, 2010; Gamez & Levine, 2013). Although this is true, assessments often do not fully capture the social context in which children are situated. Children in a preschool setting are more likely to incorporate Basic Interpersonal Skills (BICS) into their language rather than Cognitive Academic Language Proficiency (CALP) (Baker, 2011). Because the social context is generally removed from the assessment, the child is not able to fully represent all of the language that they have acquired. When social context is excluded, specific detail regarding the child's language is left out.

As remedies to these issues, some studies obtain speech samples from bilingual children. There are two different ways of doing this. The first is to prompt a narrative from a child, and record and transcribe what is said for later analysis. These studies result in speech samples which have been elicited in a systematic manner. The second way to obtain a speech sample is through naturalistic observation. Eliciting narratives prompts children to produce longer sentences than they would normally, creating an unnaturalistic sample of language (Bedore et al., 2010). The prompts are also given in a laboratory setting or a location where a child is not speaking with a familiar partner. Therefore, using video-recorded naturalistic observations allows a researcher to best capture the language a child uses in their daily life.

Analyzing speech of DLLs

In conjunction with finding a proper technique of examining child speech, it is also important to determine what aspects of language are being examined. There are several aspects of language that, across studies, provide insight into what knowledge a child has. These measures include the Mean Length of the Utterance (MLU) and the Number of Different Words (NDW) that were used. The MLU is used to represent the amount of speech that a child

produces. As children age, their utterances become longer (Yip & Matthews, 2009). When examining MLU across a child's two languages, it is possible to tell which language is dominant (Nicoladis & Genesee, 1996). The NDW examines the different classes of words that children use (Rojas & Iglesias, 2013). These aspects of language are used by many researchers as a means of quantifying expressive speech (Rojas & Iglesias, 2013; Yip & Matthews, 2006).

Present Study

The Bioecological Model and Sociocultural Theory provide frameworks for how to examine DLLs of low income households. They highlight both the importance of an individual and his or her role as a social member of a community. These children show an awareness of the language that is used in their classroom as well as a desire to communicate in that language independent of their proficiency (Ballenger & Lyster, 2011; Chimbutane, 2013; Nicoladis & Genesee, 1996; Paradis & Nicoladis, 2007). DLLs also demonstrate knowledge about different conversational partners and show competency in knowing what language is appropriate to use (Paradis & Nicoladis, 2007). This indicates that DLLs, in an environment where their home language is not the dominant language, will attempt to use their L2 to the best of their ability. At this stage, however, they are not fully fluent in L2 and are not necessarily benefiting from the language input that aids their monolingual peers (Bowers & Vasilyeva, 2011). This could, in part, explain the discrepancy in academic achievement of DLLs and their peers. It is important to assess the speech of low income DLLs over their two languages in order to have an accurate representation of their linguistic abilities. Observing DLLs with partners who may speak their L1, thus, provides a more nuanced understanding of these children's expressive language abilities.

Past studies examining the language use of DLL children have not been performed in a naturalistic environment (Bedore et al., 2010; Hammer, Lawrence, & Miccio, 2007; Han et al., 2014). A naturalistic setting enables researchers to analyze how DLLs and monolingual children actually use language on a daily basis in a social environment (Nicoladis & Genesee, 1996, Paradis & Nicoladis, 2007; Rojas & Iglesias, 2013; Yip & Matthews, 2006). Focusing on aspects of language such as MLU and NDW gives researchers an idea of the expressive language abilities of children and provides a standard means for comparison (Rojas & Iglesias, 2013; Yip & Matthews, 2006). This study aims to examine the speech of DLLs from low income households to discern whether there is a difference in their expressive language (quantity and quality) with different partners.

Research Hypotheses and Questions. Research hypothesis 1(a) investigates the use of language with different conversational partners. Because the linguistic knowledge and vocabulary of DLL children are spread over two languages, hypothesis 1(a) is that DLL children will be the most expressive with a Fluent Bilingual (Baker, 2011). This is because a Fluent Bilingual has a better grasp of both of the child's languages and can understand either language that the child uses. There may be words in one language that the child may not know in their other language. They may know how to say "spoon" in one language but not both. Additionally, as Nicoladis and Genesee (1996) discovered, preschool children are aware of a familiar conversational partner's language abilities. Because children are aware of their conversational partner's language abilities, DLL children may feel more comfortable using their dominant language with a same dominance partner, but *both* languages with a Fluent Bilingual partner.

Hypothesis 1(b) posits that DLL children will be the next most expressive with a child whose dominance matches their own (i.e. a Spanish Dominant child speaking with another

Spanish Dominant child). When a DLL child communicates with a person whose dominance matches her own, the probability for being understood in the shared language is high. However, the Same Dominance partner does not necessarily share the same vocabulary abilities in the target child's other language. For that reason, it is predicted that Same Dominance partners will produce the second most productive speech.

Subsequently, it was predicted that DLL children will be the least expressive when speaking with a child whose dominance is opposite of their own. This is because the difference in language dominances may prevent the children from understanding one another verbally.

Hypothesis 1(c) was created to predict any *general* differences in speech with particular partners. It differed from 1(a) and 1(b) in that it was designed to uncover whether children speak differently with a partner based on their partner's language status. For example, DLL children may have a longer MLUw with English Dominant speakers than Spanish Dominant speakers. In contrast to questions 1(a) and 1(b), this question did not take into account the language status of the target DLL child. It was predicted that DLL children would be the most expressive with Fluent Bilinguals. It was expected that there would be a difference in speech with Spanish and English Dominant partners.

Hypothesis 1(d) was created to see if DLLs are more expressive with adults or children. Hoff (2010) found that length of a child's utterances were longer with other children than with adults. The study also found that speech with adults contained a higher NDW. It was hypothesized that children will have a higher MLUw with children but a higher NDW with adults

There are two exploratory questions. The first, 2(b), examines the language abilities of preschoolers based on gender. Some studies have found that by age four there are no gender

differences in language abilities (Le Normand, Parisse, & Cohen, 2008). There have also been studies that have shown that there are fewer differences between genders and more similarities (Owens, 2012; Pillon, Degauquier, & Duquesne, 1992). Others maintain that girls are more expressive than boys (Clarke-Stewart, 1973). Based on the mixed findings, it is unknown whether or not there will be gender differences in this sample.

Method

Participants

Through the RISE (Readiness through Integrated Science and Engineering) Project, the current study is able to examine the speech of low income DLL children. This project is aimed towards creating home-school connections to enrich Science, Technology, and Engineering (STE) curriculum for preschool children. RISE project is partnered with Head Start programs in Boston, serving low-income children and their families. The populations of these Head Start programs enroll a particularly high concentration of children from immigrant families. Given the demographics of the local population with which RISE works, language necessarily becomes an area of interest. RISE is dedicated to improving STE learning experiences for DLL children.

Participants were recruited from a Head Start program in East Boston. The program served a total of 221 children in 12 classrooms across five sites. In this program, 73% of families identified as Hispanic from Central and South American countries. These children were from low-income households, as deemed by the requirements to enroll in Head Start programs. Their parents reported that the children had been exposed to Spanish at home. Overall, children in the program ranged in age from three to five years old, with the majority of children being 4-year olds. All children in this study were Spanish/English DLLs.

The research questions in this study were examined using Fluent Bilinguals as target children and without them. Language dominance is typical for both DLLs and bilingual adults (Baker, 2011). There were, however, five children who fell into the category of Fluent Bilingual, who had the required amount of utterances with all of the conversational partners. These children received the designation Fluent Bilingual because of their strong abilities in both English and Spanish. They were included to determine whether or not their language use was related to any significant trends. Fluent Bilingual children were included as target children, the sample for this study consisted of 18 children, 9 males and 9 females. They ranged in age from 4;0 years old to 4;10 years of age ($M= 4;5$). Of these children, five were Fluent Bilinguals, eight were Spanish Dominant and five were English Dominant.

The research questions were also answered without Fluent Bilinguals to ensure that their unique designation did not affect the results of DLL children evidencing language dominance. When the questions were answered without Fluent Bilinguals, the sample for this study consisted of 13 children, 6 males and 7 females. They ranged in age from 4;0 years old to 4;10 years of age ($M= 4;3$). Of these children, eight were Spanish Dominant and five were English Dominant.

A total of ten teachers and assistants participated in this study, representing five different classrooms. The teachers and assistants in this sample averaged more than 5 years of teaching experience. In addition, 28% of the teachers had a high school diploma, 32% had obtained an early childhood certificate, 28% had an Associate's degree, and 12% had obtained Bachelor's degree. Forty percent of teachers and teaching assistants identify as Hispanic and are Spanish/English bilinguals. Another 12% speak languages other than English and Spanish.

Inclusion criteria. In order to minimize age effects only four-year-olds were recruited for this study. Children were chosen if they had turned four years of age on or before September

1, 2014). Also, for the purposes of coding, only Spanish/ English DLLs were selected. Children were assessed using the preLAS2000 in English and Spanish and then chosen based on their language categorization: Spanish Dominant, English Dominant, or Fluent Bilingual. The children had to have spoken with a conversational partner from all of the aforementioned categories. With each type of conversational partner, the target child had to have spoken at least 20 utterances. Previous studies have determined that 20 utterances is a number that can reliably gauge a child's Mean Length of Utterance (MLU) and Number of Different Words (NDW) (Tommerdahl & Kilpatrick, 2013; Tommerdahl & Kilpatrick, 2014). For example, the target child had to have 20 utterances in conversations with a Fluent Bilingual partner, 20 utterances with a Spanish Dominant partner and 20 utterances with an English Dominant partner.

Measures

The preLAS2000 is an assessment that examines both receptive and productive abilities for children ages four to six years old (Duncan & De Avila, 1998). The test assesses children's language proficiency based on age. It was administered in both English and Spanish and used in this study to determine the language abilities of the target child and their conversational partners. The subtests used for the English preLAS2000 assessment were Simon Says and the Art Show. For the Spanish assessment, children were tested using Simon Says and Say What You Hear subtests. The Simon Says portion of the preLAS2000 was used to assess the children's receptive language abilities, while the Art Show and Say What You Hear portions were used to measure expressive language abilities. Although both English and Spanish measures used the Simon Says subtests, none of the items were duplicated. In other words, items in English were completely different from the items on the Spanish test. These are the first two items taken from the Simon Says portion of the prelas2000 in English and Spanish:

English preLAS2000	Spanish preLAS2000
1. Simon says touch your ear.	1. Simón dice tócate la cara. <i>(Simon says touch your face.)</i>
2. Simon says point to the door.	2. Simón dice baja la mano. <i>Simon says lower your hand.)</i>

The Art Show involved a flipbook with different pictures. Examiners pointed to a picture and asked the children “What is this?” If children responded to this subtest in Spanish, they were prompted to name the picture in English. For example the following interaction could occur:

Examiner: What is this?
Child: Un gato.
Examiner: What is this in English?
Child: A cat.

In this exchange the child’s answer would be scored as correct as this subtest is meant to gauge expressive English language.

Items from the Spanish Say What you Hear subtest required children to repeat a sentence that was played for them in Spanish. The children would then repeat exactly what they heard in Spanish. An example of this would be the sentence “Las casas son blancas.” For these items, it was only necessary for the children to repeat the underlined portions correctly in order to get it right. This particular example demonstrates that a child is able to correctly use subject-verb agreement in Spanish.

Expressive speech, amount and quality, was determined by mean length of utterance (MLU) and number of different words (NDW). The MLU was used to determine the amount of speech that a child is producing. NDW measured the different types of word classes (i.e. nouns, verbs, adjectives etc.) that a child employed in their speech. A higher number for MLU and NDW corresponds with more expressive speech. These measures have been used in multiple

studies to examine the productive speech of DLLs and monolingual children (Tommerdahl & Kilpatrick, 2013; Tommerdahl & Kilpatrick, 2014).

Procedures

Determining child language dominance. Children were first assessed to determine their language proficiencies using the preLAS2000 (Duncan & De Avila, 1998). Based on their scores from the preLAS2000 in English and Spanish they were separated into four groups: Fluent Bilingual, Spanish Dominant, English Dominant, and Emerging Bilingual. On the preLAS2000 a score of 4 or 5 on English and Spanish tests, designated a child as a “Fluent Speaker”. Scores of 2 or 3 designated a child as a limited speaker of the language in which they were tested. A score of one indicated that a child was not proficient in the language (Duncan & De Avila, 1998).

Children who scored a 4 or 5 on both the English and Spanish preLAS2000 were categorized as Fluent Bilinguals. Those who scored a 4 or 5 in English and a 3 or lower in Spanish were considered to be English Dominant. Likewise, children who scored a 4 or 5 on the Spanish test and a 3 or lower on the English subtest were grouped into the Spanish Dominant category. Children who scored a 3 or lower on both the English and Spanish versions of the preLAS2000 were placed into the Emerging Bilingual category and excluded from the study. Emerging Bilinguals were excluded in order to focus on children who produced more speech. Often, Emerging Bilinguals in this population fell below the age of four or did not speak or respond to the items.

Determining teacher language dominance. Due to the fact that teachers were included as conversational partners, it was necessary to assign them to one of the three conversational partner categories. As part of a larger study, More Than Words (MTW) the language proficiency of teachers was gauged using a survey. This survey was meant to obtain teachers’ views on DLL

children. Within the survey were questions inquiring about each teacher's own language abilities.

Teachers were asked the following questions to determine their language abilities:

1. What is your primary language (you may choose more than one)
 - a. English
 - b. Spanish
 - c. other languages (please specify_____)
2. When you speak to someone you don't know do you speak English...?
 - a. Not at all, meaning you don't speak English or you can only say a few words
 - b. Not well, meaning you can say simple sentences and ask simple questions
 - c. Well, meaning you can carry out a conversation even if it takes you extra time or you make some errors
 - d. Very well, meaning you are a native speaker or have abilities close to a native speaker
3. When you speak to someone you don't know do you speak Spanish...?
 - a. Not at all, meaning you don't speak Spanish or you can only say a few words
 - b. Not well, meaning you can say simple sentences and ask simple questions
 - c. Well, meaning you can carry out a conversation even if it takes you extra time or you make some errors
 - d. Very well, meaning you are a native speaker or have abilities close to a native speaker

Teachers who answered "c" or "d" for both questions two and three were considered to be Fluent Bilingual partners. If a teacher answered "c" or "d" for two but "a" or "b" for question three, the teacher was designated as an English Dominant partner. Similarly, if a teacher answered "c" or "d" for three but "a" or "b" for question two, the teacher was categorized as a Spanish Dominant partner. Teachers who reported in question one speaking a language other than English or Spanish were considered English Dominant partners. This is because the only language that they could converse with the Spanish/English DLL children in would be English.

Data collection. Data for this project are secondary in nature. Videos of classrooms were taken as a part of a larger study in three different formats. The first format was teacher-centered two hour long views of the classroom that were meant to capture a variety of activities. In these videos teachers wore microphones to better capture their interactions with children within various spaces in the classroom. The second format was more child-centered and consisted of

30-minute videos in different areas of the classroom (outside time, block area, sensory table, meal time, dramatic play and structured STE). The final format was more open-ended. These were interactions that teachers asked videographers to capture generally for purposes of showing Science, Technology, and Engineering related activities across the classrooms. The total number of videos collected in the RISE study are listed below (see Table 1).

Table 1

Catalog of all RISE videos collected.

	2 Hour Videos	30 Minute Videos	Other
Classroom 1	10	65	157
Classroom 2	10	51	13
Classroom 3	10	43	16
Classroom 4	3	27	9
Classroom 5	5	0	8
Classroom 6	5	0	0
Classroom 7	5	0	0
Classroom 8	5	0	3
Total	53	186	206

Initially, classrooms from the RISE project were excluded in this study if they did not contain conversational partners from each the three language statuses. The collection of video data from those classrooms where requisite conversational partners were present was then screened for instances containing children who were designated as Fluent Bilingual, Spanish Dominant, or English Dominant. Videos containing only Emerging Bilinguals or videos in which

conversations were only held with Emerging Bilinguals were excluded. The final sample of videos ($N = 73$), which met all inclusion criteria for purposes of this study, is listed below by area of the classroom in which the interaction occurred (see Table 2).

Table 2

Number of videos in each area of the classroom (N=73).

	STE Activities	Meal time	Block Area	Dramatic Play	Sensory Table	Art Table
Number of Videos	26	15	12	11	6	3

The videos were viewed and transcribed according to the Systematic Analysis of Language Transcripts (SALT) Software protocol. The target children’s utterances were segmented by the researcher into C-units, the utterance level used to analyze transcripts in SALT. A C-unit is “an independent clause with its modifiers” (Miller, Andriacchi, Nockerts, 2011). For example, the sentence “The dog was running in the yard and then he jumped the fence.” would be segmented into two utterances:

1. The dog was running
2. And then he jumped the fence.

Transcription procedures also allowed words to be marked for bound morphemes in both English and Spanish. For example, the word “jumped” would be denoted “jump/ed”. This allowed for comparisons of the mean length of utterance on both a word and morpheme level (MLU_w and MLU_m). The software also allowed for identification of overgeneralized uses of words, word errors, and incorrect word order.

Overgeneralization error: “I *falled* down.”

Word Error: “Everybody *have* sleeves like this.”

Incorrect word order: “*I can* have more?”

Data Analysis

SALT Software was used to determine the mean length of utterance on the word level (MLU_w) and number of different words (NDW), for each set of twenty or more utterances. The quantity and quality of expressive speech, measured by MLU_w and NDW, served as the dependent variables in this study. For hypotheses 1(a) and 1(b) the independent variable was the language status of the conversational partner to whom target children spoke (Fluent Bilingual, Same Dominance, or Opposite Dominance). Hypothesis 1(b) is meant to take into account the language status of the target child by investigating same and opposite dominance. A repeated measures ANOVA was used to answer these questions because the same group of children was measured in multiple conditions.

Hypotheses 1(a) and 1(b) design

Target Child	Fluent Bilingual	Same Dominance	Opposite Dominance
Ana (Spanish Dominant)	20 Utterances with Fluent Bilingual Partner	20 Utterances with Spanish Dominant Partner	20 Utterances with English Dominant Partner
Sam (English Dominant)	20 Utterances with Fluent Bilingual Partner	20 Utterances with English Dominant Partner	20 Utterances with Spanish Dominant Partner

For research hypothesis 1(c), the child’s expressive speech remains the dependent variable. The independent variable is again, the language status of the child’s conversational partner but the analysis investigated differences in language use with Fluent Bilinguals, Spanish Dominant and English Dominant partners. The focus was on whether the conversational partner was Fluent Bilingual, Spanish Dominant or English Dominant. Another repeated measures ANOVA was conducted to respond to Hypothesis 1(c) because the sample of children remained the same, but their partner changed.

Hypothesis 1(c) design

Target Child	Fluent Bilingual	Spanish Dominant	English Dominant
Ana (Spanish Dominant)	20 Utterances with Fluent Bilingual Partner	20 Utterances with Spanish Dominant Partner	20 Utterances with English Dominant Partner
Sam (English Dominant)	20 Utterances with Fluent Bilingual Partner	20 Utterances with Spanish Dominant Partner	20 Utterances with English Dominant Partner

In research hypothesis 1(d), the dependent variable is still the expressive language use of the target child. The independent variable is the age of the conversational partner. There were only two designations for this variable; adult or child. A paired samples t-test was performed to examine the child’s expressive speech with these two partners.

For question 2(a), descriptive analysis was done to examine the language use of the children in this study. The utterances were designated as English, Spanish or Mixed to determine whether English or Spanish is more frequently used. This was done to inform whether language use differed with different partners. An English utterance was one in which the child spoke all in English. Similarly, an utterance was considered Spanish if it was all in Spanish. A mixed utterance was one in which the child code-switched at least once. Code-switching in this study captured intra-utterance language change like in the following utterance:

No, put it **así**.

Intra-utterance level code-switching could, on some occasions, also be intra-sentential, or within sentence code-switching, as in the example above. This is because the utterance above is both, a complete sentence and a c-unit (an independent clause with its modifiers).

Inter-sentential code-switching, or switching between languages from one sentence to the next was not captured. The inter-sentential code-switching was coded as two sentences; one Spanish and one English. In this study, it took the following form:

Esto está caliente. I'm going to eat all of the food.

Finally, hypothesis 2(b) was tested to determine whether or not gender played a role in the expressive speech of DLL children. The independent variable in this analysis was the gender of the child (male or female). An independent t-test was conducted to investigate potential gender differences.

Results

As aforementioned, analyses were conducted both with and without Fluent Bilinguals to determine what differences might be associated with including DLL children who are strong in both of their languages in the study. Most studies examining language categorize children into one language dominance, where this study acknowledges that DLL children may be strong in both languages. Due to the lack of research with this type of speaker, performing analyses with and without them provides a better understanding of their language use and may inform future directions for research.

Analysis with Fluent Bilinguals as Target Children

Research questions 1(a) and 1(b), which examined expressive language based on language dominance, are not relevant when counting Fluent bilinguals. This is because they are not dominant in either of their languages, but proficient in both.

In response to hypothesis 1(c), MLUw did not differ with conversational partners of different language statuses ($F(1.4, 18)=1.30, p=.281$). This was also true for NDW ($F(1.7, 18)=.471, p=.596$) (see Table 3).

Table 3

Descriptive Statistics With Fluent Bilinguals

	Mean Length of Utterance (MLU)		Number of Different Words (NDW)	
	Mean	SD	Mean	SD
1(c)				
Spanish	4.10	.57	.54	.09
English	3.80	.90	.52	.14
Fluent	4.01	.56	.58	.12
1(d)				
Adults	3.75	.83	.55	.15
Children	4.03	.54	.45	.10
2(b)				
Male	3.96	.46	.52	.07
Female	3.98	.60	.54	.10

When investigating the children’s language use with partners of different ages, MLUw did not differ between adults and children ($t(17)=-1.27, p=.219$). In contrast, NDW was significantly higher with adult conversational partners than with peers ($t(17)= 2.507, p=.023$).

Table 4

Percentages of Utterances in Each Language (with Fluent Bilinguals)

English Utterances	Spanish Utterances	Mixed Utterances
79%	20%	1%

Question 2(a) examined the actual language used with partners of different language statuses. Overall the DLL children in this community tended to speak English most frequently with partners of all language statuses 79% of all utterances were in English (see Table 4). The DLL children in this sample used Spanish 20% of the time and code-switched in 1% of their utterances. These numbers were further broken down by use with different partners (see Table 5).

Table 5

Percentages of Utterances of Each Language Used with Partners of Each Language Status (with Fluent Bilinguals)

Fluent Bilingual			Spanish Dominant			English Dominant		
English	Spanish	Mixed	English	Spanish	Mixed	English	Spanish	Mixed
73%	26%	1%	60%	39%	1%	97%	2%	1%

In instances where children were faced with an English Dominant speaker 97% percent of utterances were in English. The children used the most Spanish when speaking with Spanish Dominant partners, 39%. Equally striking, are the amounts of Spanish and English used with Fluent Bilinguals. DLL children used more English with the Fluent Bilinguals, but also used much more Spanish than they did with English Dominant speakers, as one might expect.

Table 6

Percentages of Utterances in Each Language by Classroom (with Fluent Bilinguals)

	English Utterances	Spanish Utterances	Mixed Utterances
Classroom 1	81%	18%	1%
Classroom 2	99%	1%	0
Classroom 3	100%	0	0
Classroom 4	98%	1%	1%
Classroom 5	41%	57%	2%

Each of the classrooms from which the final sample was drawn had different dynamics in terms of the type of peer conversational partner available (see Table 6). All of the classrooms had a different number of Fluent Bilingual, Spanish Dominant and English Dominant partners. Classrooms 1 and 4 had a more equal mix of partners from the three language status categories.

Classroom 2 had a higher population of younger children and interestingly most of these children were excluded from the study because they fell into the category of “Emerging Bilingual.” Other classrooms, like 3 and 5, were dominated by one type of conversational partner. English Dominant speakers made up 5 out of the 8 children who were chosen from classroom 3. Similarly, 10 out of 12 children in classroom 5 were Spanish Dominant.

Finally, for question 2(b), there was no significant difference when comparing the MLU of DLL children based on gender, $t(16)=.054, p=.957$ or NDW $t(16)=.578, p=.571$.

Analysis without Fluent Bilinguals as Target Children

Table 7

Descriptive Statistics (w/o Fluent Bilinguals)

	MLU		NDW	
	Mean	SD	Mean	SD
1(a and b)				
Same	4.21	.56	.52	.10
Opposite	3.66	1.00	.57	.14
Fluent	4.05	.52	.54	.10
1(c)				
Spanish	4.11	.16	.56	.08
English	3.75	.29	.54	.16
1(d)				
Adults	3.84	1.05	.54	.14
Children	4.06	.56	.56	.09
2(b)				
Male	4.09	.60	.50	.07
Female	3.87	.50	.58	.08

There were no significant differences in the MLUw used with Fluent Bilinguals, Same or Opposite Dominance partner ($F(1,13)=3.08, p=.090$) (see Table 7). There were also no significant differences for NDW ($F(2,13)=.781, p=.469$). In order to better understand the trend level finding, pairwise post hoc analyses were conducted. However, there were no significant

differences between the groups in the post hoc tests. Looking at the different means, there is a distinction between speech with Fluent Bilinguals, ($M=4.05$, $SD=.52$) and Opposite Dominance ($M= 3.66$, $SD=1.00$) partners. There is also a large difference in the means between Same Dominance ($M= 4.21$, $SD=.56$) and Opposite Dominance partners.

When examining the language status of the conversational partner (Fluent Bilingual, Spanish Dominant, or English Dominant), there were no significant differences in MLUw length ($F(1,13)=1.256$, $p=.292$). There were also no significant differences based on NDW ($F(2,13)=.184$, $p=.83$).

There were no differences between speech with adults and children for MLU, $t(12)= -.673$, $p=.116$ or ND,W $t(12)= 1.693$, $p=.514$.

Table 8

Percentages of Utterances in Each Language (w/o Fluent Bilinguals)

English Utterances	Spanish Utterances	Mixed Utterances
73%	26%	1%

When excluding Fluent Bilingual children from the language use analysis, English is still the language used most frequently (see Table 8). There is, however, a higher use overall of Spanish, without Fluent Bilinguals, 26% as compared to 20%, with Fluent Bilinguals included. There is also a higher use of Spanish with Fluent Bilinguals and Spanish Dominant speaker. Interestingly enough, there is still very little code-switching. Mixed utterances only account for 1% of the utterances used by the DLL children in this community (see Table 9).

Table 9

Percentages of Utterances of Each Language Used with Partners of Each Language Status (w/o Fluent Bilinguals)

Fluent Bilingual			Spanish Dominant			English Dominant		
English	Spanish	Mixed	English	Spanish	Mixed	English	Spanish	Mixed
66%	33%	1%	49%	50%	1%	97%	2%	1%

There were few differences in the classroom language use when Fluent Bilinguals were excluded (see Table 10). The use of Spanish decreased in classroom 1 increased when Fluent Bilinguals were removed. There were also slight changes in the language use in classroom 4.

Table 10

Percentages of Utterances in Each Language by Classroom (w/o Fluent Bilinguals)

	English Utterances	Spanish Utterances	Mixed Utterances
Classroom 1	76%	23%	1%
Classroom 2	99%	1%	0
Classroom 3	100%	0	0
Classroom 4	99%	.5%	.5%
Classroom 5	41%	57%	2%

There were no gender differences on MLU when excluding Fluent Bilingual children, $t(11) = -.694, p = .502$. There was a trend level difference for NDW, $t(11) = 2.078, p = .062$.

Discussion

This study investigated Head Start DLL language use with different conversational partners. Measures of early linguistic abilities have been tied to future academic success (Hart & Risley, 2003). The children in this sample were from low income households and DLLs. This

puts them at risk for future academic achievement gaps. Examining their language with different conversational partners elicited differences in the amounts and quality of speech. Few studies have examined the role of a conversational partner's language status in DLL speech (Nicoladis & Genesee, 1996; Paradis & Nicoladis, 2007). This is the first study to have examined the language status of a DLL's conversational partner in naturalistic language interactions within a classroom setting.

Language Use Based on Conversational Partner with Fluent Bilinguals

When including Fluent Bilinguals in the study, there was only one significant finding. This was in regards to research question 1(d), which examined the expressive speech of DLL children with adults versus children. The NDW that DLL children use with adults is significantly higher than the NDW that they use with their peers. This may be due to the level of scaffolding that adults are able to provide (Vygotsky, 1978). This finding was consistent with the hypothesis and other research examining language use with adults and children (Hoff, 2010; Labov, 1972).

Without Fluent Bilinguals

Hypothesis 1(a) addressed, whether or not DLL children were more expressive, based on MLU and NDW when they spoke with Fluent Bilinguals. There were no significant differences. However, there were trend level findings suggesting differences with different partners. Research question 1(b) posited that DLL children would be more expressive when speaking with a partner of same language dominance than a partner of opposite language dominance. There was, again, a trend level finding. These trends confirm that there may be differences in language use with different partners. These findings suggest that language may be more expressive with partners who are Fluent Bilinguals and Same Dominance.

Descriptive Findings

Both with and without Fluent Bilingual children, the language used was predominantly English. When Fluent Bilinguals were added, there was a decline in the amount of Spanish used. Language use by adult speakers remained constant throughout the classrooms (one English Dominant adult and one Fluent Bilingual adult), however, there were many differences in the children's language abilities.

Although there were no gender differences when Fluent Bilinguals were included, there was a trend level difference for gender in regards to NDW. Girls used a higher NDW than boys within this study. The remainder of this section will discuss why the children may have used different amounts of expressive language with different partners.

Evidence of pragmatic differentiation. One of the most important reasons for the differences in expressive speech with the opposite dominance partner comes from DLL children's ability to recognize the language of their partner and adjust their language accordingly (Nicoladis & Genesee, 1996; Paradis & Nicoladis, 2007). This ability to switch language use based on partner was termed 'pragmatic differentiation'. The children in this study were paired with a more nuanced set of partners than children in past studies (Nicoladis & Genesee, 1996; Paradis & Nicoladis, 2007). In addition to having a partner for each of the child's dominant languages, this study included a third category: Fluent Bilingual. This category used a speaker who was proficient in both of the DLL child's languages. Therefore, congruent with Nicoladis and Paradis' (2007) findings, children in this sample were able to apply pragmatic differentiation to their social encounters, but future studies should employ larger samples to further examine differences in conversational partners.

In addition to knowing their partner's language abilities, the children in this study demonstrated that they were able to choose what language they want to speak. This occurred, sometimes, in spite of their own dominance. One child in particular showed pragmatic differentiation with younger conversational partners. Although she was English Dominant, she switched to Spanish when conversing with younger, Spanish Dominant children:

- ¹Kate:** Hija, vas a hacer la tarea mañana.
Daughter, you're going to do homework tomorrow.
- Kate:** Porque mañana no va a ser escuela.
Because tomorrow there is no school.
- Kate:** Y vas a traer tu libro.
And you're going to bring your book.
- Kate:** Aquí está.
Here it is.
- Kate:** Ponerlo aquí.
Put it here.

Additionally, in many instances, children who were Spanish Dominant chose to use only English when speaking with English partners. In the following dialogue, the English Dominant teacher has brought in fruits for the children to taste. A Spanish Dominant child describes his tasting experience to her.

- Teacher:** What is this?
- Carlos:** Melón.
- Teacher:** Okay, now you try that one... You can cut this and you are going to tell me which one is soft and which fruit is harder. Right here.
- Carlos:** I no having that.
- Carlos:** Where is mi cuchillo (*knife*).
- Carlos:** I like it!
- Teacher:** What?
- Carlos:** This.
- Teacher:** Okay, take this glove off. Now you put that in your boca (*mouth*). Now you try it.
- Carlos:** I no like it!

Teacher: Why? Why you don't like it? It's too strong? Only a little bit.

These utterances are not always grammatically correct or long, but certainly show the child's attempt to cater to his or her conversational partner.

Serving as an interpreter. DLL children sometimes find themselves in situations where they must serve as interpreters for others or themselves (Lee, Hill-Bonnet, & Raley, 2011). There were several instances in which children providing interpretation. In one example a child was inviting a friend to her house and describing how to get there. The English Dominant teacher arrived and the following exchange occurred:

Teacher: What it means? What it means para acá?

Cristina: That means this. Para acá. That means over there.

Teacher: Over there?

Cristina: Right over there is my house. You pass my house. Then right over there is my house.

Confronted by the teacher's inability to understand her, the child translated her directions into English. On another occasion, a different child found himself interpreting for a peer. Jaime, the English Dominant teacher, and another child are building in the block area.

Sam: Tengo una idea.

Jaime: He talk in English.

Jaime: He have an idea for-for building a house.

Although Jaime mis-identifies the language that Sam is using, he notices that the teacher has not taken in what has just been said. Because they are building in the block area, Jamie deems it necessary for the teacher to understand what Sam is doing and planning.

The same child took on a similar role in another situation without being solicited. One child was describing her picture to the English Dominant teacher. Jaime realized that the teacher had either not heard or not understood what was being said, and steps in to translate.

Carla: Una ventana de arco iris.

Jaime: She's saying a rainbow.

Teacher: A rainbow?!

Jaime: A rainbow window!

Teacher: A rainbow window! Okay! Thank you for translating. Rainbow window. Huh?

Lee et al. (2011) discovered that children who served as interpreters for others were seen as more capable and were placed in a position of power within the classroom. The interpretation done by the children in this study did indeed further conversations or activities. The unsolicited interpretations demonstrated that children were aware of the language abilities of the people around them. In the future, studies could examine the relationship between a DLL child's language abilities and the teacher's beliefs about that child's intelligence.

External Influences on DLL Language Use

Head Start policy on DLL Home Language. The use of English among this population may be explained by the community in which the children live. All of the participants in this study attend Head Start, a federally funded program. Many of the DLL children in this program are often encountering the English language for the first time. For that reason, it is Head Start's policy to support the home language of preschoolers enrolled (Office of Head Start, 2005). When the majority of children in a classroom speak a language other than English, Head Start sites are required, where possible, to hire at least one person who speaks the home language of the children. The program also promotes reading and literacy in English as well as in the children's home language. The Head Start stance on L1 use in the classroom has the potential to provide DLLs with the linguistic support that they may need when initially entering a setting with a new language. This federal Head Start mandate, however, clashes with state level public school language expectations.

Massachusetts Public School language policy. On a state level, Massachusetts mandates that DLL children are taught in Sheltered English Immersion programs (SEI)

(Massachusetts English in Public Schools Initiative, Question 2, 2002; Owens, 2010). These programs teach children in English and do not aim to foster their home language. In contrast, other states employ programs that allow for a higher usage of home language within the classroom. In essence, there is a clash between federal and state level approaches to supporting the home language in the classroom.

The goal of Head Start is to prepare low-income children for their kindergarten classrooms. Head Start teachers may view using more English in their classrooms as a way of fostering school readiness. This could account for the children's higher use of English in their classrooms. It is also possible that the children in these sites have siblings in the public school system who influence their language use. Head Start sites within this state are faced with finding a balance between preparing children linguistically for Kindergarten and respecting their home language and culture.

Classroom differences. In accordance with the federal Head Start mandate, each of the classrooms from which the children in the sample were obtained, contained one adult who was a Fluent Bilingual. The other adult in the classroom tended to be English Dominant or spoke English in addition to another language (such as Arabic). This language composition of the teaching teams in this study gave children access to a diverse language environment within their classrooms. Other studies have found that teacher language use is influential in the language that children use (Ballinger & Lyster, 2011; Chimbutane, 2013). Ballinger and Lyster's (2011) study found that when teachers expected children to use a certain language, children generally met those expectations. Chimbutane's (2013) study demonstrated that when teachers allowed children to use their L1, they were more likely to share their thoughts.

The differences in expressive speech can potentially be explained by the children's choice of English or Spanish. The children in Classroom 3 used English 100% of the time, whereas the children in Classroom 5 used English less than 50% of the time. Essentially, DLL children are active agents in creating and perpetuating a language environment for themselves (Vygotsky, 1978). Language use in this population was predominantly in English with few mixed utterances. The lack of code-switching may be due to the SALT Software protocol for segmenting language. There were only two types of code-switching noted within this study: intra-utterance and inter-sentential. Intersentential code-switching was not coded because the language data were divided, by the researcher, into separate utterances for the purposes of being analyzed in SALT. It was never the case that a sentence was broken where a child changed languages. For instance, the following kind of code-switching did not occur:

The frog was sitting on a rock **y se saltó**.

Levels of code-switching vary based upon community (Baker, 2011; Kyratzis, Tange, & Koymen, 2009). The fact that intra-utterance code-switching occurred while inter-utterance code-switching within the sentences did not, could demonstrate that this community favors one type over another or be a product of age (Ervin-Tripp & Reyes, 2005; Lipski, 1985). Studies suggest that there may be differences in code-switching at different ages of development; however, they do not describe how these variations occur on a sentence level. Other studies show that level of fluency in a second language plays a role in the type of code-switching used. People who are less fluent in their languages tend to employ intersentential code-switching whereas people who are more fluent used intrasentential code-switching more frequently (Poplack, 1980). Given the findings of a lack of code-switching in this study, it is possible that fluency played a role. Because the sample in this study consisted of children who may have been encountering L2

for the first time, the level of code-switching may have been low. In following with other findings, their levels of code-switching may increase over time and with more exposure to both languages.

It may also be the case that this particular community simply does not often invoke code-switching. Future research may wish to examine differences in code-switching based on different segmentations of language. Future studies could also compare expressive speech by language dominance of the classroom. For example, English Dominant classrooms could be compared to predominantly Spanish speaking classrooms or evenly balanced two-way bilingual classrooms.

Internal Influences on DLL Language Use

In addition to the environmental factors involved in a child's language use there are many internal influences. Much of what accounts for the differences in expressive speech stems from individual differences (Tabors, 2008). It is important to remember that even though DLLs are all learning multiple languages, that their acquisition depends on many individual factors. These factors include differences in, personal motivations, their personalities and other demographic characteristics like age, gender and exposure to languages.

Motivation. Motivations, both internal and external also differ on an individual basis (Tabors, 2008; Thomas, Apolloni, & Lewis, 2014). DLL children's thoughts and beliefs about language play a role in dictating the language that they will choose to use. In a study done by Saville-Troike (1988), researchers documented that one DLL child decided that she was not going to talk to English speakers because the language was too difficult. At the end of the year, the child had not progressed in learning English. Opinions and beliefs about languages were also relevant to the present study.

Some children in this study were more inclined to speak L1 in school, while others were very much opposed to using their home language in school. One child, Sara, brought attention to the fact that Spanish was not regularly used in the classroom. At circle time the children sang the “Happy Birthday song” in English and then in Spanish. Less people sang for the Spanish version of the song and the following exchange occurred:

Sara: Y por qué siempre nadie sabe hablar el cumpleaños feliz en español?
Why doesn't anyone ever know how to sing happy birthday in Spanish?

TA: Adonde? Aquí? O en general?
Where? Here? Or in general?

Sara: Aquí.
Here.

Teacher: Do you know how?

Sara: Yeah.

Teacher: Stand up tall. Do it. Work it out. Teach us.

(Sara stands up with a classroom research assistant and sings in Spanish.)

RA: Is there more? Did we get it right?

(Sara jumps in the air smiling)

Sara: Yes! Yes! Yes!

Other children, however, did not share Sara’s enthusiasm for using Spanish in the classroom. When the children had their language abilities assessed, using the preLAS2000, they were first asked whether or not they wanted to play in English or Spanish. This was done in order to gauge their personal language preference. One child, Liliana, upon being asked in Spanish, which language she wanted to play in first, remarked “I’m not gonna speak that”. This was in reference to the Spanish that the Research Assistant was using. The same child, while playing on the rug one morning noticed that one child was speaking only in Spanish and stated “She’s speaking like at home.” This child had a clear designation between where she believed English and Spanish should be spoken. She adhered to her designations until she noticed other

children speaking Spanish in the dramatic play area, an encounter which will be discussed in the following section.

These two scenarios demonstrate that preschool DLL children are aware of the languages in their environment and at a very young age hold opinions about which one they want to use (Saville-Troike, 1988; Tabors, 2001). In addition, they make distinctions about which times are most appropriate to use one or both of their languages. One potential area for future research would be to examine DLL children's attitudes towards their languages. Language is often linked to cultural identity (Kyrtziz et al., 2009). Within this study there were several occasions where children, as young as four years of age, voiced strong opinions about their preference in language use. It would be interesting to see how those attitudes progress over time in relation to a DLL's language abilities.

Specific scenarios and particular partners. A DLL's individual desires to want to communicate with certain members of their classrooms could play a very important role in what language they choose to speak (Tabors, 2008). Liliana, the child who refused to speak Spanish, found herself playing with other children in the dramatic play area. She and an English Dominant child heard the other children around them and decided that they too want to speak Spanish. The following exchange occurred:

Ana: Mama, mama, ya no sirve esto. Yo no sé qué es.

Mom, this doesn't work anymore. I don't know what it is.

Liliana: What you wanna do Amy? You wanna talk in Spanish? So let's talk in Spanish.

Amy: Hola

Hi.

Sara: Hola

Hi.

Liliana: Hija, hija, dame tu dolares. No puedes la tener. Lo quieres?

Daughter, daughter, give me your money. You can't have them. Do you want them?

This exchange demonstrates that DLL children's language use is not a fixed formula; there are many factors at work. The other girls in the dramatic play area were speaking in Spanish, which seemingly prompted Liliana to use a language that she believes should only be used at home. DLLs are flexible with language depending upon the scenario or context. Kyrtzis et al., (2009) found that this type of social interaction frequently occurs during pretend play for DLLs. Liliana's dramatic play interaction also aligns with the idea that code-switching or use of both languages is a means of claiming in-group identity (Zentalla, 1998). The in-group refers to the particular speakers within a community. In Liliana's case, the children speaking Spanish are the in-group. In order to demonstrate that she too shares in the other children's language identity, Liliana makes a conscious decision to speak Spanish.

Speaking with adults was often a motivator for a child to use their non-dominant language. Oades-Sese and Li (2011) discovered that when low-income DLL preschoolers had strong attachments to parents and teachers they had higher English language abilities. Strong relationships with teachers were associated with stronger English language abilities. Relationships with teachers were a better predictor of strong English language abilities than relationships with parents.

However, the current study found no difference between language use with peer and teacher. Although this was true, close bonds like those found in Oades-Sese and Li's (2011) study could motivate children to use English. On many occasions Spanish Dominant children were very persistent in using English with their English Dominant teachers. The following example demonstrates that dynamic. Throughout the year the teacher frequently spoke with this child in the block area. Here is one exchange:

Miguel: Look it [teacher's name]!

Teacher: You have two paper holders together.

(a tiny koosh ball rolls through paper towel rolls)

Miguel: Get it?

Teacher: I don't got it. You got it?

Miguel: Too stuck.

Teacher: Why do you think it keeps getting stuck? Por qué? Why?

Miguel: It stuck.

Teacher: I'm asking you a question. Espera (Wait). Why does the ball get stuck inside?

Miguel: Because stuck. The ball's not moving.

Teacher: It's not moving. Should we use another kind of ball? See if it moves better?

Miguel: The marble!

In this dialogue the teacher requests language from the child. Although the utterances are short, for a child his age, the child is able to communicate that he understands what the teacher is asking him. His responses in English show a desire to communicate in the language that his teacher speaks. The teacher, although English Dominant, code-switches to match his dominant language, Spanish. Interestingly, the child continues the conversation in English.

These examples represent preschool DLL children's use of language as a very complex and nuanced system. Different scenarios can draw children to speak their less dominant language. These scenarios can frequently involve other DLL children and be a means of fitting into their bilingual community. Certain partners can lead DLL children to use their opposite dominance language. Strong relationships with opposite dominance partners can drive a child to learn L2 (Oades-Sese & Li, 2011). Within this study, anecdotally, Spanish Dominant children frequently spoke with English Dominant teachers. This may indicate that despite language barriers, some children wish to communicate with their teachers. Unfortunately, Oades-Sese and Li (2011) did not describe the language abilities of the teachers in their study. Future studies may wish to investigate specific language abilities of the teachers in regards to their relationships with DLL children.

Personality. Past research has found that DLL children who are more shy and anxious are less likely to have high receptive language abilities (Strand, Pula, Parks & Cerna, 2011). Another study examined the Big Five Personality traits in adults learning another language (Oz, 2014). Oz (2014) discovered that agreeableness, extroversion, and openness to experience were significant in predicting a language learner's willingness to communicate in their new language. Similarly, in some instances in the videos, children were extremely outgoing, and easily had many utterances with multiple conversational partners. Other children were much more guarded and spoke only when other children or close friends were present. In future studies, personality would be an interesting factor to examine in regards to DLL preschool language use.

Age of partner. Prior studies have examined the differences in language use of Caucasian or African American children with adults and children (Labov, 1972). The interactions in this study provided insights into the language use of Latino children with older and younger conversational partners. Unlike in past studies, age of the conversational partner did not play a role in the MLUw or NDW of DLL's language. However, other studies have shown that children tend to model the language that has recently been used by adults (Huttenlocher, Vasilyeva, & Shimpi, 2004). This was true in the present study. After encounters with adults, children would adjust their language to model that of adults. In one example a teaching assistant talks to a child about pinching. The other children essentially take the language that the TA has used and express their concerns about their peer's pinching.

TA: Yo ya te he dicho Ana, no más pellizcar.

I told you Ana, no more pinching.

TA: Sara dejame ver. ¿Porque ella te pellizco?

Sara, let me see. Why did she pinch you?

Sara: Yo no sé.

I don't know.

TA: ¿Por qué la pellizcaste?

Why did you pinch her?

Sara: Eso me dolió. Y hizo pero tengo el teléfono.

That hurt me. She did it because I have the phone.

TA: Dile que dolió. ¿Quieres que alguien te pellizque?

Tell her that it hurt. Do you want someone to pinch you?

(TA leaves)

Liliana: to Sara: You're gonna sit with us okay? It'll be fine okay?

Liliana: to Ana: ¿Te gusta cuando te pellizca?

Do you like when someone pinches you?

Liliana: ¿Te gusta?

Do you like it?

Liliana: Do you like when we do like this?

Liliana: Porque cuando te pellizcas...

Because when you pinch someone...

Liliana: Te pellizca nadie quiere así.

No one wants to be pinched like that.

Kate: Mire, eso duele.

Look, this hurts.

Kate: Si haces así, duele.

If you do this it hurts.

Ana: Stop saying that.

In another classroom, Nora is coloring. The teacher and TA ask her about what she is drawing. The adults leave, and Cristina, who is sitting nearby begins asking her friend, Sofia about her drawing.

Teacher: What is this? Tell me about it

Nora: Esta es mi mama y mi abuela. Estas son las abejas.

This is my mom and grandma. These are the bees.

Teacher: What do you call that? Your grandmother? And she's your mommy's mommy or papi's mommy?

Nora: Papi está en Honduras.

Teacher: He's in Honduras? Okay, what about this?

(Teacher asks TA to come over)

Teacher: Could you translate please?

TA: ¿Y qué es?

What is it?

Nora: El jardín. Son las abejas que viven en los flores. Aquí son los flores.

The garden. These are the bees that live in the flowers. Here are the flowers.

(Teacher and TA leave)

Cristina: ¿Y esto qué es?

And what is that?

Cristina: ¿Y el monstruo está llevando a la papá?

And the monster is taking the dad?

Cristina: ¿Y qué está haciendo?

And what is it doing?

Cristina: ¿Por qué está allí con el papá?

Why is it there with the dad?

Sofia: Él tiene mucho miedo que el monstruo lo coma.

He's scared that the monster will eat him.

Cristina adopts the language that both teachers have used. She almost exactly copies their question of “What is that?/ ¿Y qué es?”. Then she imitates the same style of questioning used by the teacher. Finally, Cristina fills in the gaps of Sofia’s story just as she has heard the teacher do. These scenarios depict the DLLs’ imitation of adult language and follow with findings made by Huttenlocher et al. (2004); that adults’ syntactic structures can influence those of children.

Exposure, age and gender. Exposure to a language and amount of speech heard are extremely influential factors in how expressive a child is with his language (Hart & Risley, 2003; Tabors, 2008). This is especially true for DLL children (Baker, 2011). The amount of speech heard and exposure in each language is associated with a child’s knowledge of a language. The amount of exposure that a DLL has to each language can differ greatly (Hammer et al., 2014). It would be impossible to catalog the amount of exposure that each child in this study has had to their two languages over the course of their lifetime. As noted by Hart and Risley (2003), the amount of exposure that these children have to language predicts their expression.

Age is positively associated with both MLUw and NDW (Rojas & Iglesias, 2013; Yip & Matthews, 2006). In an attempt to avoid differences in maturation, this study only included children who were four-years-old. However, even this range allows for a variety of cognitive and linguistic differences. Based on prior research with preschoolers from low-income homes and

DLL children, it was expected that children in this sample would fall below the average MLUw for their age (Hart & Risley, 2003; Hibel & Hall, 2014; Koury & Vourtuba-Drzal, 2014). That was not the case. Children in this study were relatively on par with children from a middle class monolingual population in terms of MLUw with Fluent Bilinguals and Same dominant partners.

In some studies, girls were more expressive than boys on measures of both MLU and NDW up to three years of age (Le Normand et al., 2008). At age four there were no gender differences in this study. There were other studies that did find differences in the speech of boys and girls (Clarke-Stewart, 1973). There were also mixed results for the DLL children in this study. These children were all at least 4 years of age. There were no differences between the speech of girls and boys when Fluent Bilinguals were included. However, when they were excluded, there was a trend level finding in the NDW that were used. Females used a higher NDW than males. Lack of consistency in findings may stem from the fact that expressive language use does not vary between the sexes (Owens, 2012; Pillon, Degauquier, & Duquesne, 1992) What may vary is context and the manner and motivations for which language is used. Future studies may want to examine how more specific aspects of pragmatic language use may or may not vary between genders.

The Interesting Case of Fluent Bilinguals

When this group was excluded from the sample, there were trend level findings in differences in expressive speech with just the Spanish Dominant and English Dominant children. Interestingly, when this group was combined with the Spanish Dominant and English Dominant children, the expressive language of children did not vary based on conversational partner. There is little research about children who are proficient in both of their languages (Baker, 2011). This is because language abilities are dynamic, especially in young DLL children (Han et al., 2014;

Rojas & Iglesias, 2013). The lack of findings when including Fluent Bilingual children may be attributed to the fact that this group is equally competent in both of their languages, so their MLUw and NDW did not vary. In other words, their language use remained steady, whether or not they spoke in Spanish or English, truncating the variation available to analyze.

Limitations and Qualifications

Many of the limitations in this study can be attributed to the secondary nature of the data. The sample size of this study was lower than desired due to the sampling frame of the larger RISE study, which was not focused on capturing language development, but rather STE practices. Essentially, this made it more difficult to capture the children interacting with each of the necessary conversational partners. For these reasons, it was difficult to obtain a large sample of children interacting with each of the three requisite language statuses. Thus, the study was underpowered. Future study should employ larger samples to further test the hypotheses of this research.

Similarly, due to the limited amount of speech overall, only 20 utterances were used to analyze speech. There are studies that show that this is a sufficient number of utterances to reliably predict MLU and NDW; however, there is a body of literature that suggests that 50 utterances are more reliable (Cabsy, 2011; Tommerdahl & Kilpatrick, 2013; Tommerdahl & Kilpatrick, 2014).

The way in which the utterances were segmented for purposes of analysis with SALT Software, made it difficult to catch inter-sentential code-switching, or code-switching that occurred between sentences. This may have led to a misrepresentation of code-switching within this population. Depending upon the purposes of future studies, it may be beneficial to code code-switching on a sentence or turn level.

In addition to these limitations, this study was unable to tease apart both the age and language status of the partner. Prior studies have shown that a child's language differs as a result of the age of a conversational partner (Labov, 1972). This study also attempted to examine these differences, but was unable to separate the effects that the combination of age and language status play on a child's expressive language due to a low sample size.

Finally, the expressive language subtests for the preLAS2000 were not necessarily psychometrically equivalent in both languages. This means that children may have had an easier task of answering items in one language over the other. This could potentially skew the sample to look dominant in one of the languages, but seemed unlikely and warranted to prevent practice effects. Future studies should employ language assessments that are equivalent in both languages to better categorize language abilities

Implications for Practice

This study suggests that there may be areas for improvement in practice in preschool classroom settings. Prior research, as well as the present study, provide evidence that teacher language influences a child's vocabulary (Bowers, & Vasilyeva, 2011; Gamez & Levine, 2013; Huttenlocher et al., 2004). Because this study found that children tended to use a higher number of different words with adults, corroborating other studies that have shown children emulate adult language, teachers may want to provide more conscious directional or intentional support for vocabulary development. In DLL preschool classrooms, support could include introducing new words in both L1 and L2, as support for the home language has also been seen to improve DLL language abilities (Gamez & Levine, 2013). It could also include one-on-one time or small group activities with teachers, which could help expose children to a higher quantity and quality of vocabulary. Small group interactions with teachers could also encourage children who are not

expressive to speak more and use more elevated vocabulary. A more purposeful introduction of new vocabulary and conversations with teachers could help improve expressive language abilities of low-income DLL children and shrink the achievement gaps that they face in the future.

In addition, exploratory findings from this study demonstrate DLL children's desires to communicate in the language of their conversational partner. Similar studies also show DLL children's sensitivity to the language used by their conversational partner (Nicoladis, & Genesee, 1996; Paradis & Nicoladis, 2007). This pragmatic sensitivity can be used to shape children's use of L1 or L2. For example, purposefully placing children with a conversational partner of a certain language status can serve as motivation for a child to use a language that they may not know well yet. Interactions with English Dominant teachers could strengthen a child's English abilities, while conversations with Spanish Dominant and Fluent Bilingual teachers could maintain home language skills.

In terms of assessment of language ability, findings from this study suggest a need to investigate assessments given to DLLs. If DLL children are more expressive with Fluent Bilinguals and Same Dominance partners, results of assessments may vary based on the assessor's language abilities. Children may be less expressive if they know that an assessor is not able to speak their dominant language well. Future research that aims to assess DLL children may wish to take this into account.

Conclusions

Various aspects of the environment influence a DLL's use of language (Bronfenbrenner, 2006). Within this study, children were influenced by both federal and state level mandates, that influenced program policy and classroom practice. Though teaching teams each contained one

Fluent Bilingual and one English Dominant teacher, the language status of peers, and attitudes towards the languages used varied. Though a thorough investigation of some of these variables was outside the scope of this study, they undoubtedly shaped the expressive speech of the target children in this study (Ballinger & Lyster, 2011; Chumbutane, 2014). This study did show that conversing with particular partners (e.g., Fluent Bilinguals and Same Dominance partners) tended to evoke longer utterances. In addition, being in certain scenarios sometimes elicited Spanish from children who were English Dominant, demonstrating that immediate motivations to communicate can overcome language dominance.

In addition to external influences, DLL children's internal beliefs and motivations also play an important role in their language use (Saville-Troike, 1988; Tabors, 2008). Personal beliefs about language as seen in the examples of children explicitly stating preference of one language over another appear important in deciding what language to use. It is possible that personal beliefs can play a stronger role in language use than external factors, as noted by the way children refused to use the language others were using or requested to use their other language. Though outside the scope of this study, there was preliminary evidence from the interactions in this study that suggested a child's personality and language abilities in L1 and L2 also act as factors in language use (Oz, 2014; Tabors, 2008). Taken together, there are many variables to consider when investigating the speech of DLL children.

This study took a unique perspective by investigating DLL language use within children's naturalistic classroom environment. It also contributed uniquely to the existing research on DLL language abilities by assigning language statuses to both target children and partners to better understand how language dominance affects language use. This included adding the category of Fluent Bilingual to encompass children who were strong in both of their

languages. Prior studies focus on children who are dominant in L1 or L2 but not those who are strong in both languages. Both the naturalistic environment and use of nuanced language designations, contributed to forming a distinct research design.

The present investigation found that there may be a difference in the expressive speech that DLL children use with different conversational partners. These children demonstrated the ability to make distinctions about their partner's language abilities. In addition, they were able to decide which language to use based on their understandings of their partner's capabilities. Children in this study even served as interpreters for English Dominant speakers without being solicited. The use of language by DLLs in this study, demonstrates an area of sociolinguistic pragmatics that monolingual children do not have to acquire.

DLL children exhibit rich metalinguistic and pragmatic abilities (Lee et al., 2011; Nicoladis, & Genesee, 1996; Paradis & Nicoladis, 2007). They are able to navigate social situations in an extremely nuanced manner (Kyratzis, 2009; Zentalla, 1998). Clearer understanding of these social and cognitive abilities should inform future classroom practices and research in assessment of DLL children.

Appendix A

Oral Language Component Form C

Test Examiner: Fill in the circles for correct responses.

Part 1 Simon Says



SAY We're going to play a game called Simon Says. Simon is someone who tells us what to do. You do exactly what Simon says.

→ Give the first practice prompt or start the audio cassette at Part 1 Simon Says. All the item prompts are on the tape.

An item is correct if the student follows the instructions given in the prompts, as follows:

Practice 1 Simon says look up.

Practice 2 Simon says look down.

1 Simon says touch your ear.

2 Simon says point to the door.

3 Simon says lift one foot.

If there is no response to any of the items above, move on to Part 2.

4 Simon says open your hand.

5 Simon says pick up the paper.

6 Simon says turn the paper over.

7 Simon says put one hand on top of the other.

8 Simon says knock on the table.

9 Simon says point to the middle of the paper.

10 Simon says put your feet together.

Number of items correct _____
No Response _____

Part 2 Art Show



→ Open the Cue Picture Book to Part 2. Point to each item, beginning with the first practice item.

SAY What is this? for each item.

Starting with item 5, after eliciting the label, **SAY** What can you do with it?

Correct responses are shown below.

Practice 1 Cat, Kitty

Practice 2 Dog, doggie, puppy

1 Apple

2 Frog, toad

3 Pig, hog, piggie

If there is no response to any of the items above, move on to Part 3. If there was no response in either Part 1 or Part 2, stop the test.

4 Bee

5 Book

6 Read, look at it

7 Cup

8 Drink

9 Knife

10 Cut, eat

Number of items correct _____
No Response _____

Part 3 Say What You Hear



SAY Listen to the tape, then say what you hear.

→ Start the audio cassette at Part 3 Say What You Hear.

The response is correct if the underlined structures are repeated exactly as shown below. See the Examiner's Manual (page 18) for examples of correct and incorrect responses.

Practice 1 Good morning.

Practice 2 I'm hungry.

1 Don't forget your coat.

2 He has three cars.

3 Who has Jane's pencil?

If there is no response to any of the items above, move on to Part 4.

4 The teacher smiled at me.

5 The kitten is smaller than the cat.

6 He did stand up.

7 She'll make dinner soon.

8 She is not sorry.

9 He hurt himself.

10 My cousin washes the windows.

Number of items correct _____
No Response _____

Part 4 The Human Body



→ Open the Cue Picture Book to Part 4.

SAY I'll point to a part of the body. You tell me what it's called.

→ Point to each item and wait for the student's response.

The correct responses are shown below.

Practice 1 Eye

Practice 2 Ear

1 Nose

2 Throat, neck

3 Hair

If there is no response to any of the items above, move on to Part 5.

4 Mouth or lips

5 Hand

6 Finger

7 Arm

8 Leg

9 Foot

10 Knee

Number of items correct _____
No Response _____

Page 2

Appendix B

Child ID: _____ Date: _____ Assessor: _____

Spanish Instructions

Examinador(a): Rellene los círculos para las respuestas correctas solamente.

Parte 1 Simón dice

Lápiz **Vamos a jugar a Simón dice. Simón es una persona que dice lo que debes hacer. Quiero que hagas exactamente lo que Simón dice.**

→ Diga el primer estímulo de práctica o empiece la cinta de audio en la Parte 1. Todos los estímulos están grabados en la cinta.

La respuesta es correcta si el niño sigue las instrucciones dadas en los estímulos.

Práctica 1 Simón dice mira para arriba.

Práctica 2 Simón dice mata para abajo.

1 Simón dice tócate la cara.

2 Simón dice baja la mano.

3 Simón dice dame el lápiz.

Si no hay ninguna respuesta a los ítemes de arriba, voye a la Parte 2.

4 Simón dice esconde el lápiz debajo del papel.

5 Simón dice levanta la mano.

6 Simón dice mueve la mano.

7 Simón dice muéstrame una cara alegre.

8 Simón dice muéstrame una cara triste.

9 Simón dice perdígame.

10 Simón dice síentame.

Total de respuestas correctas

No responde

Parte 3 Repetición de frases

Lápiz **Repita todo lo que oyes. Si oyes "Adios", ¿vas a decir...?**

→ Enciende la cinta de audio en la Parte 3. Repetición de frases.

La respuesta es correcta si repite la parte subrayada exactamente como se muestra aquí. Vea el Vocabulario para Examinadores (página 18) para ejemplos de respuestas correctas e incorrectas.

Práctica 1 Buenos días.

Práctica 2 Estoy bien.

1 Ninguno ganó.

2 Las cosas son blancas.

3 Vi el zapato de Fernando.

Si no hay ninguna respuesta a los ítemes de arriba, voye a la Parte 4.

4 No abriste la puerta.

5 Me levanté a las ocho.

6 Mi amigo tiene seis años.

7 No lo gane nunca.

8 A mi prima le gusta la playa.

9 Me senté con Julia.

10 Tengo mucha sed.

Total de respuestas correctas

No responde

Task	# Correct
Simon Says	x 2 = _____
Say What	x 2 = _____
Oral Language Total	= _____
Oral Language Level	= _____
(see chart below)	

CUT-OFF LEVELS AND INTERPRETATION OF SCORES

Total Score (4-year olds)	Total Score (5-6 year olds)	Proficiency Level	Interpretation of Numerical Level
0-22	0-24	1	NF
23-26	25-28	2	L
27-30	29-32	3	L
31-34	33-36	4	F
35-40	37-40	5	F

NF: Not Fluent in Spanish; L: Limited in Spanish; F: Fluent Spanish Speaker

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Appendix C

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Head Start Staff Demographic Form

Personal Background

1. What is your age? _____
2. What is your sex? Male Female
3. Which of the following ethnicity describes you? (you may choose more than one)

<input type="checkbox"/> Latino or Hispanic	<input type="checkbox"/> Asian
<input type="checkbox"/> White	<input type="checkbox"/> Pacific Islander
<input type="checkbox"/> Black or African American	<input type="checkbox"/> Other
<input type="checkbox"/> American Indian or Native	
4. What is your country of birth?
If other than the U.S., how many years have you lived in the U.S.? _____
2. What is your highest level of schooling?

1 <input type="checkbox"/> Some highschool	<input type="checkbox"/> Bachelor's degree
2 <input type="checkbox"/> High school diploma or GED certificate	<input type="checkbox"/> Some graduate courses but no degree
3 <input type="checkbox"/> Some college but no degree	<input type="checkbox"/> Professional degree (masters, law, medical)
4 <input type="checkbox"/> Associate's degree or professional certificate	
3. What country did you complete your highest level of schooling? _____
4. What certifications or endorsements related to working with DLLs/second language acquisition do you currently hold? _____

Language Background

5. What is your primary language? (you may choose more than one)

<input type="checkbox"/> English
<input type="checkbox"/> Spanish
<input type="checkbox"/> Other languages (please specify _____)
6. When you speak to someone you don't know, do you speak English....?

<input type="checkbox"/> Not at all, meaning you don't speak English or you can only say a few words
<input type="checkbox"/> Not well, meaning you can say simple sentences and ask simple questions
<input type="checkbox"/> Well, meaning you can carry out a conversation even if takes you extra time or you make some errors
<input type="checkbox"/> Very well, meaning you are a native speaker or have abilities to close to a native speaker

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7. When you speak to someone you don't know, do you speak Spanish....?
- Not at all, meaning you don't speak Spanish or you can only say a few words
 - Not well, meaning you can say simple sentences and ask simple questions
 - Well, meaning you can carry out a conversation even if it takes you extra time or you make some errors
 - Very well, meaning you are a native speaker or have abilities to close to a native speaker

Working with DLLs

8. Including this school year, how many years have you taught preschool children who are dual language learners? That is, children who are exposed to and use a home language in addition to English? _____ Years

9. How do you know which languages are spoken by the families of your children? (you may choose more than one)
- I get information from the children's enrollment forms
 - I ask parents what languages they and their children speak
 - I observe the children's family members talking
 - I observe the children talking in school
 - I observe the children talking in home.

10. The questions in the next section are about activities conducted with your class. These could be done as a whole group or small group activity.

	Daily	A few times a week	A few times a month	A few times a year	Never n/a
a. How often do you or another adult read books to children in a language other than English?					
b. How often do you or another adult read books to children that reflect different cultural or racial backgrounds?					
c. How often do you or another adult do specific activities to develop the home language of DLLs? In addition to singing songs.					
d. How often do parents of DLLs do activities in their home language with your class or with a small group?					
e. How often do you or another adult work with DLLs in small groups to build their English abilities?					

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11. Please indicate how frequently you do each of the following:

	Always	Often	Sometimes	Never n/a
a. I find out about the children's cultures from their families.				
b. I make a special effort to use body language and gestures when I talk to DLLs.				
c. I use pictures and visual props to help DLLs in my class understand what I'm saying.				
d. I encourage parents of DLLs to use English so they can help their children learn English.				
e. I teach vocabulary words in the DLLs' home languages.				
f. I recommend that parents of DLLs speak their home language to their children, even if the parents know English.				

12. Please tell me if you strongly agree, agree, disagree, strongly disagree with each of the following statements even if they don't apply to your class this year:

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I have a good understanding of best practices for teaching DLLs				
b. I have a good understanding of how children learn two languages				
c. I feel I need more training on how to teach DLLs				
d. I feel confident in my ability to teach DLLs				
e. I am able to communicate effectively with parents who only speak a language I don't know				

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13. Please tell me if you strongly agree, agree, disagree or strongly disagree with each of the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. Preschool DLLs learn English with minimal support from adults.				
b. DLLs are at greater risk for developing language and/or learning disabilities than children who speak only one language.				
c. DLLs learn English faster when their parents speak to them in English.				
d. Preschool DLLs catch-up to their English-only peers in less than a year.				
e. Teaching DLLs in all English is the best way to get them ready for kindergarten.				
f. DLLs use what they know about their home language to learn English.				
g. Learning two languages confuses children, which delays their cognitive and language development.				
h. Use of DLLs' home languages in the classroom helps them learn English.				
i. At the beginning of the school year, DLLs are uncomfortable in classrooms that use English for instruction.				
j. Parents of DLLs should speak their home language to their children, even if they know English.				

Appendix D

SEGMENTING UTTERANCES INTO C-UNITS

The analysis of oral language samples requires recorded speech to be segmented or divided into units. There are a few different approaches to segmenting utterances, such as phonological units, T-units, and C-units. This document describes the rules for segmenting utterances into Communication units (C-units), a rule-governed and consistent way to segment utterances.

Disclaimer: There is variation in the literature on how to segment utterances into C-units. All of the samples in the English SALT reference databases were segmented into C-units following the rules in this document. If you intend to compare your sample with samples selected from these databases, you should segment utterances following the same rules.

Definitions

- **C-Unit**
The formal definition of a C-unit is "an independent clause with its modifiers". It includes one main clause with all subordinate clauses attached to it. It cannot be further divided without the disappearance of its essential meaning.
- **Clause**
A clause, whether it is the main clause or a subordinate clause, is a statement containing both a subject and a predicate. Grammatically, a subject is a noun phrase and a predicate is a verb phrase.

Segmenting Utterances into C-Units

Main clauses can stand by themselves and can be segmented into one C-unit. Subordinate clauses **DEPEND** on the main clause to make sense. They cannot stand alone or be separated from the main clause. So a C-unit will either consist of a main clause or a main clause with its subordinating clause(s). The following examples are broken down into main and subordinate clauses. The **main clause** is bolded and the subordinate clauses are underlined.

The canary was perched on a branch when the man approached him.
Anastasia was angry with her mother because she didn't get to buy a toy.
When the boy looked in the jar he saw that the frog was missing.

Notice the subordinate clauses cannot stand alone or are incomplete without the main clause. Thus, they are not separated (segmented further) from the main clause. Each of the above utterances consists of one C-unit and would be transcribed as:

- C The canary was perch/ed on a branch when the man approach/ed him.
- C Anastasia was angry with her mother because she did/n't get to buy a toy.
- C When the boy look/ed in the jar, he saw that the frog was missing.

Coordinating and Subordinating Conjunctions

When segmenting into C-units it is important to understand the different types of conjunctions which are used to link clauses. There are coordinating conjunctions and subordinating conjunctions.

- Coordinating Conjunctions

The segmenting rule is simple when utterances contain coordinating conjunctions. These conjunctions link two main clauses which should be separated/segmented into two utterances (or two C-units) that can each stand alone. Common coordinating conjunctions include: and, but, so (but not "so that"), and then, then.

Example 1:

- C The frog was sit/ing on a lily pad.
- C And then it jump/ed in.

Example 2:

- C He had to catch the frog.
- C Or the waiter would make them leave.

Example 3:

- C He climb/ed up on the branch/s.
- C But they were/n't branch/s.

Example 4:

- C My aunt gave me money for my birthday.
- C So I use/ed it to buy some new jeans.

- Subordinating Conjunctions

Subordinating conjunctions link a main clause and a subordinate clause. A C-unit includes the main clause with all subordinate clauses attached to it. The following are examples of subordinating conjunctions:

Early Development: because, that, when, who

Later Development: after, before, so (that), which, although, if, unless, while, as, how, until, as__as, like, where, since, although, who, before, how, while

Examples:

- C He went to the store because he was out of milk.
- C When the boy saw it, the frog jump/ed.
- C The man, who usually come/3s to my exercise class, was/n't there today.
- C We can/'t find my cat who always run/3s away.

- "because" and "so"

Always consider "because" as a subordinating conjunction (it will never begin an utterance) unless it is preceded by the utterance of another speaker as in this example:

- C I like/ed the movie alot.
- E Why did you like it?
- C Because it was really funny.

The word "so" can be either a coordinating conjunction or a subordinating conjunction. If its usage means "so that", it is a subordinating conjunction. Otherwise it is a coordinating conjunction.

Example 1 ("so" used as a coordinating conjunction):

- C He had to go home.
- C So we could/n't go to the game.

Example 2 ("so" used as a subordinating conjunction):

- C He had to go home so his mom could take him to the dentist.

Other rules for segmenting C-units

- Sentence fragments

Sentence fragments are counted as separate C-units when the final intonation contour of the utterance indicates that a complete thought has been spoken. For example:

C The boy, the dog, and the frog, they were friend/s.

versus

C The boy, the dog, and the frog. { fragment based on intonation }

C They were friend/s.

- Elliptical responses

Elliptical responses (sentence fragments) to questions or prompts from the examiner are counted as separate C-units. For example:

E What did you do next?

C Shop/ed.

- Yes/No responses

Separate the yes/no response from the utterance which follows it. For example,

E Is that the Spanish teacher?

C No.

C That/s my Science teacher.

- Tags

Do not segment phrases such as "you know", "I guess", and "I mean" when they are used as tags. For example,

C He/s gonna live with his dad, I guess.

C And then, you know, they were go/ing to this town.

- Questions as Tags

Do not segment questions when they are used as tags. For example,

C They got in trouble, right?

C He miss/ed the bus, did/n't he?

C That movie was good, would/n't you agree?

- Dialogue Complement/Complement

Dialogue quotes which are embedded in, or as part of, an utterance are counted as one C-unit as in this example:

C And the boy said, "That/s my frog".

Successive main clauses that occur in dialogue quotes are counted as separate C-units. For example,

C And he said, "I/m ready".

C "I want to go to the store now".

Complement:

C She thought, Sam was incorrect.

C He realized, nothing has changed

- Grammatical errors

Ignore grammatical errors when segmenting utterances. For example,

C They is[EW:are] go/ing now. { child said, "They is going now." }
 C We *are go/ing too. { child said, "We going too." }

- Pauses and intonation

Do not ignore pauses and intonation when segmenting utterances but, whenever reasonable, segment utterances based on grammar rules. When listening to speech, for example, there is sometimes a significant pause (with or without ending intonation) between a main clause and a subordinate clause. This inclines one to segment the utterance. With C-unit segmentation, however, the utterance would not be segmented as in this following example where the speaker paused for two seconds between the main clause and the subordinate clause:

C I like/ed the movie alot :02 because it was really funny.

In the following segment, however, you have to consider pause time and intonation:

C I like/ed the movie alot.
 : :02
 E Mhm.
 C Because it was really funny.

If there is a significant pause and ending intonation (falling for statements, rising for questions) between the speaker's first utterance and the examiner's "Mhm", segment the utterances as show above. Otherwise, give the speaker credit for subordination and transcribe these "prompt sounds" as interjections as follows:

C I like/ed the movie alot :02 < > because it was really funny.
 E <Mhm>.

References

The rules for C-unit segmentation were summarized from the following sources:

- Hughes, D., McGillivray, L., & Schmidek, M., *Guide to Narrative Language; Procedures for Assessment*, 1997.
- Loban, W., *Language Development: Kindergarten through Grade Twelve*, 1976.
- Miller, J.F., Class notes from Communicative Disorders 640, Fall, 1999.
- Strong, C.J., *The Stong Narrative Assessment Procedure*, 1998.

Appendix E

Summary of SALT Transcription Conventions

1. **Transcript Format.** Each entry begins with one of the following symbols. If an entry is longer than one line, continue it on the next line.

- \$ Identifies the speakers in the transcript; generally the first line of the transcript. Example: \$ Child, Examiner
- C Child/Client utterance. The actual character used depends on the \$ speaker line.
- E Examiner utterance. The actual character used depends on the \$ speaker line.
- + Typically used for identifying information such as name, age, and context. Example of current age: + CA: 5;7
- Time marker. Example of two-minute marker: - 2:00
- : Pause between utterances of different speakers. Example of five-second pause: ::05
- ; Pause between utterances of same speaker. Example of three-second pause: ;:03
- = Comment line. This information is not analyzed in any way, but is used for transcriber comments.

2. **End of Utterance Punctuation.** Every utterance must end with one of these six punctuation symbols.

- . Statement, comment. Do not use a ~ Intonation prompt. Example: E And then you have to-
- ^ Interrupted utterance. The speaker is interrupted and does not complete his/her thought/utterance.
- ! Surprise, exclamation.
- ? Question. > Abandoned utterance. The speaker does not complete his/her thought/utterance but has not been interrupted.

3. **{ } Comments within an utterance.** Example: C Lookit {C points to box}.

Nonverbal utterances of communicative intent are placed in braces. Example: C {nods}.

4. **Unintelligible Segments.** X is used to mark unintelligible sections of an utterance. Use X for an unintelligible word, XX for an unintelligible segment of unspecified length, and XXX for an unintelligible utterance.

Example 1: C Give me the X. Example 2: C He XX today. Example 3: C XXX.

5. **Bound Morphemes.** Words which contain a slash "/" indicate that the word is contracted, conjugated, inflected, or pluralized in a regular manner. The root word is entered in its conventional spelling followed by a slash "/" and then the bound morpheme.

English

- /S Plural. Examples: KITTEN/S, BABY/S
Words that end in "s" but represent one entity are not slashed. Example: PANTS
- /Z Possessive inflection. Examples: DAD/Z, MARY/Z
Do not mark possessive pronouns. Examples: HIS, HERS, OURS, YOURS
- /S/Z Plural and Possessive. Example: BABY/S/Z
- /ED Past tense. Examples: LOVE/ED, DIE/ED
Predicate adjectives are not slashed. Examples: WAS TIRED, IS BORED
- /3S 3rd Person Singular verb form. Examples: GO/3S, TELL/3S
Irregular forms are not slashed. Example: DOES
- /ING Verb inflection. Examples: GO/ING, RUN/ING
The gerund use of the verb form is not slashed. Example: WENT SWIMMING
- /N'T, /T Negative contractions. Examples: CAN'T, DOES/N'T
Irregular forms are not slashed. Examples: DON'T, WON'T. Do not slash AIN'T.
- /S, /RE, /M, /LL, /D, /VE Contractible verb forms IS, ARE, AM, WILL, WOULD, and HAVE.
Examples: HE/S, WE'RE, I'M, I'LL, I'D, WE'VE
Non-standard contracted verb forms (not used in the SALT database samples)
- /H'S, /D'S, /D'D, /US Non-standard contractions HAS, DOES, DID, and US.
Examples: HE/H'S been sick. WHAT/D'S he do for a living? Why/D'D the boy look for the frog?
LET/US go. For the SALT database samples, LET'S was not slashed and the other non-standard contractions were transcribed as two words, e.g., HE HAS, WHAT DOES

Spanish

- /S Plural. Examples: RANA/S, FELIZ/S, FLOR/S

6. **Bound Pronominal Clitics** (Spanish). Pronominal clitics may be either bound or unbound. When bound, they are preceded by a plus sign. Examples: gritando+le, deja+lo, dá+me+lo

7. **Mazes.** Filled pauses, false starts, repetitions, reformulations, and interjections.

- () Surrounds the words/part-words that fall into these categories. Example: C And (then um) then (h*) he left.

8. **Omissions.** Partial words, omitted words, omitted bound morphemes, and omitted pronominal clitics are denoted by an asterisk (*).

- * Following one or more letters this indicates that a word was started but left unfinished. Example: C I (w* w*) want it.
- * Preceding a word indicates that an obligatory word was omitted. Example: C Give it *to me.
- /* Following a slash the * is then followed by the bound morpheme which was omitted, indicating the omission of an obligatory bound morpheme. Example: C The car go/*3s fast.
- +* Following a plus sign the * is then followed by the Spanish clitic which was omitted, indicating the omission of an obligatory pronominal clitic. Example: C Él está gritando+*le a la rana.

- 9. Overlapping Speech.** When both speakers are speaking at the same time, the words or silences that occur at the same time are surrounded by angle brackets < >.
- Example 1: C I want you to do it < > for me. Example 2: C Can I have that <one>?
E <Ok>. E <Uhhuh>.
- 10. Linked words.** The underscore "_" is used to link multiple words so they are treated as a single word. Examples include titles of movies and books, compound words, proper names, and words or phrases repeated multiple times.
- 11. Root identification.** The vertical bar "|" is used to identify the root word.
- English uses:** The root words of irregular verb forms such as "went" or "flew" are not identified.
Linked words repeated for emphasis. Examples: C The boy ran very very_very|very fast.
Non-words used in error. C He goed|go[EO:went] by hisself|himsel|[EW:himsel].
Shortened words. C He was sad cuz|because they left.
- Spanish uses:**
Inflected word forms. Examples: C Había|haber una vez un niño que tenía|tener una rana.
Diminutives. C El perrito|perro tumbó|tumar las abeja/s.
Linked words repeated for emphasis. C Dijeron rana_rana|rana dónde estás.
Non-words used in error.
- 12. Sound Effects and Idiosyncratic Forms %.** The percent sign is used to identify sound effects which are essential to the meaning or structure of the utterance. Non-essential sound effects are entered as comments. Strings of the same sound are linked together.
- Example 1: C The dog went %woof_woof. Example 2: C The dog barked {woof woof}.
- The percent sign is also used to identify idiosyncratic forms: not adult-like production of very young children which are consistent in reference to an object, person, or situation.
- Example 1: C See %vroom {car}. Example 2: C My %coopa {cookie}.
- 13. Spelling Conventions.**
- Filled pause words: AH, EH, ER, HM, UH, UM, and any word with the code [FP]
 - Yes words: OK, AHA, MHM, UHHUH (*English & Spanish*)
YEAH, YEP, YES (*English only*)
SÍ (*Spanish only*)
 - No words: NO, AHAH, MHMH, UHUH (*English & Spanish*)
NAH, NOPE (*English only*)
 - I don't know (*intoned*): IDK
 - Concatenatives: BETCHA, GONNA, GOTTA, HAFTA, LIKETA, OUGHTA, SPOSTA, TRYNTA,
USETA, WANNA, WHATCHA
 - Numbers (*examples*): 21 or TWENTYONE, 17 or DIECISIETE
 - Reflexive vs Non-reflexive pronouns (*Spanish only*)
The following pronouns can be used both reflexively and non-reflexively: ME, TE, SE, OS, NOS. Attach the code [X] when used reflexively. Examples: C El niño se[X] fue con el perro.
C El perro me ayudó a conseguir la rana.
 - Other English spellings:

AIN'T	HMM	NOONE	OH, OOH
ALOT	HUH	NOPE	UHOH
ATTA	LOOKIT	OOP, OOPS, OOPSY	LET'S (see part 5)
- 14. [] Codes.** Codes are used to mark words or utterances. Codes are placed in brackets [] and cannot contain blank spaces. Codes used to mark words are inserted at the end of a word with no intervening spaces between the code and the word.
- a) Codes used to mark errors in the reference database samples:
- | | |
|--|---|
| [EO:___] used to mark overgeneralization errors. | C He failed fa l [EO:fe l]. |
| [EW:___] used to mark other word-level errors. | C He wera [EW:was] look/ing. |
| [EW] used to mark extraneous words. | C And then the boy is a [EW] sleep/ing. |
| [EU] used to mark utterance-level errors. | C And they came to stop ed [EU]. |
- b) Other codes used in the reference database samples:
- | | |
|---|--|
| [F] used to mark fragments due to utterance segmentation based on modified communication units. | C The gopher look/ed out of the hole. |
| [CS] used to mark code-switched words. | C and bit the boy [F]. |
| [WO] used to mark utterances with non-standard word order. | C The dog fell from is [CS] ventana [CS]. |
| [I] used to mark vocabulary provided by the examiner. | C And then fell down the dog and the boy [WO]. |
| | C And then the :05 <> owl [I] scare/ed him. |
| | E <Owl>. |
| [FP] used to mark non-standard filled pause words. | C The dog (um like [FP]) fell down. |
| [X] used to mark Spanish reflexive pronouns. | C El niño se [X] fue con el perro. |

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