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DOES CHILD CODE-SWITCHING DEMONSTRATE COMMUNICATIVE COMPETENCE?: A COMPARISON OF SIMULTANEOUS AND SEQUENTIAL BILINGUALS

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Over the past four decades, code-switching (CS) has been established as a mark of high linguistic competence among adult simultaneous (2L1) bilinguals, those who acquired two 'first' languages before age three. The status of CS among second language (L2) learners, who learned one language after age three, is much less clear; children represent an especially understudied population in this line of inquiry. This study aims to address this research gap and presents a comparison of child 2L1 bilinguals and child L2 learners in kindergarten, first and second grade of a Spanish immersion program. Twelve hours of recorded spontaneous classroom speech were analyzed for grammatical categories, switch points, and conversational strategies of CS. The results of this study show that the grammatical patterns and conversational strategies of child L2 learner CS strongly parallel those of 2L1 child bilinguals, pointing toward a high level of linguistic competence. Based on these findings, it is suggested that proficiency rather than language background may be a greater factor in CS patterns. Furthermore, evidence of the strategic use of CS by 2L1 and L2 learners alike suggests the potential benefit of an alternative bilingual pedagogy, which normalizes the use of CS as a linguistic resource instead of the more commonly evoked 'deficit perspective' on L2 learner CS.

INTRODUCTION

Since the mid-20th century a great deal of research has been devoted to the linguistic practice of code-switching (CS), "an individual's use of two or more language varieties within the same speech event or exchange" (Woolard, 2004, p. 73-74). In a review of the CS literature, Boztepe (2003) explains that research has proceeded in two directions since its onset: structural and sociolinguistic. The structurally oriented research focuses on grammatical patterns and constraints while the sociolinguistic research approaches CS as discourse-related and seeks to identify "how social meaning is created in code-switching and what specific discourse functions it serves" (Boztepe, 2003, p. 3). The present paper is an attempt to integrate both perspectives and, more specifically, to explore the relationship between grammatical and functional patterns of child CS and whether these patterns reveal evidence of communicative competence.

Communicative competence was a term coined by Hymes (1972) in reaction to Noam Chomsky's (1965) conception of linguistic 'competence' as idealized language inside the mind, which he argued should be regarded as more important than and entirely separate from 'performance', or actual spoken language. Instead, Hymes (1972) posited the alternative view of communicative competence as including the individual's grammatical knowledge of a language as well as the rules for appropriate use, or "communicative form and function in integral relation to each other" (Hymes, 1994, p. 12). Based on this understanding of language, the present study analyzes external aspects (shared knowledge of how to manage conversations, respect social values based on setting and other observables) and internal aspects (within the heads of the

speakers, dependent upon the internalized knowledge and the structure of language itself) of child CS, following Zentella (1997).

Since the emergence of CS as a research topic, researchers have shown great interest in the connection between CS and language ability (whether 'linguistic competence' or 'communicative competence'). Early popular assumptions depicted CS as a random, disorganized, deviant combination of two or more languages, which characterized individuals with low language ability. Decades of research have revealed that CS is in fact based on shared rules of appropriateness, patterned grammatical switch points, and strategic conversational functions (Lipski, 1985; Pfaff, 1975; Poplack, 1980; Timm, 1975; Zentella, 1981a 1982, among others). Linguists now understand CS as a mark of metalinguistic awareness among highly competent adult native bilinguals, who acquired both languages early on. However, this line of inquiry has focused almost entirely on adult native bilinguals, while only a small minority of this research has explored other bilingual, multilingual populations, such as L2 learners (for example, Ogane, 1997) and children (for example, Reyes, 2001, 2004; Zentella, 1997).

Language immersion is generally defined as a program where the instructor teaches a variety of subjects (such as literacy, math, science) in the target language, but there are a wide spectrum of language immersion programs which differ in a number of ways. Just a few of the many variables of school-based language immersion programs include the ages of the students (elementary, kindergarten, secondary, higher education), the duration of the program (one year, one semester), or the amount of time of language instruction (full day, half day or hours). Additionally, language immersion programs are commonly identified as either one-way and two-way, or dual, immersion programs. One-way immersion programs are programs where the target language is an L2 or foreign language for all of the students. Most research has focused on one-way instruction (for a review, see Mackey, 2007 and Swain et. al., 2002). Two-way immersion programs, on the other hand, are characterized by a linguistically diverse student population including native heritage speakers, who have learned the language of instruction as a home language as well as L2 learners of the target language.

In two-way immersion programs, L1/L2 labels are especially problematic on several levels. First, students often begin these programs at very young ages, so it is an important theoretical question whether the L2 label, so often used for adult language learners, accurately depicts these students. Secondly, for students who speak the target language as a home language, or heritage language speakers, it is important to recognize that these students often simultaneously acquire the societal majority language and the heritage/home language (also the target language within the immersion program) in a process referred to as "bilingual first language acquisition" (DeHouwer, 1996). Thus, in this context, it is more appropriate to evoke McLaughlin's (1984) distinction between simultaneous (2L1) bilingualism, when two first languages are acquired before age three, and sequential (L2)[1] bilingualism, where a second language is acquired after three years of age.

Scholarship on the CS patterns of young L2 learners has increased in recent years, although most of this research emphasizes the functions, pedagogical implications and communicative strategies (Liebscher & Dailey-O'Cain, 2005; Moore, 2002; Ustenel & Seedhouse, 2005) of L2 learner CS, while very few studies attend to the grammatical patterns of CS (except Ogane, 1997; Toribio, 2001). To my knowledge, there are no existing studies on the

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[1] The notation of L2 will be used for sequential bilingualism throughout this paper following research which draws this comparison (see for example Paradis, 2008).

grammatical patterns of L2 CS among children, nor studies that explore both functional and grammatical patterns of 2L1 and L2 bilingual children. This gap in the literature means that the CS practices of child L2 learners, and the pedagogical implications thereof, continue to remain underresearched and undertheorized.

In order to fill this void in the literature, the present paper presents a portion of an ethnographic study, which forms part of a larger-scale, ongoing investigation comparing grammatical and functional patterns of child L2 learners of Spanish and child 2L1 Spanish/English bilinguals. The CS practices analyzed in the present paper consist of 12 hours of spontaneous classroom speech from 30 students, twenty-four L2 learners of Spanish and six 2L1 Spanish/English bilinguals, from the kindergarten, first, and second grade classrooms of a Spanish immersion program in the Southwestern United States.

LITERATURE REVIEW

L2 Learner Code-Switching

In spite of significant scholarly interest in the topic of CS since the mid-20th century, investigations into the patterns of L2 learner CS began several decades later (Jake & Myers-Scotton, 1997; Myers-Scotton, 1993; Poulisse & Bongaerts, 1994). This may be due in part to the negative view of L2 learner CS as a flawed, detrimental linguistic behavior (see for instance Weinreich, 1953). Furthermore, it is commonly believed that the sole reason L2 learners code-switch is to compensate for a lexical, linguistic, or conceptual gap in their L2 knowledge (see, for instance, Arnberg and Arnberg, 1985; Boeschoten and Verhoeven, 1987; Lindholm and Padilla, 1978). Based on this deficit perspective, it is not surprising that most of the initial studies on L2 learner CS involved experiments, which were meant to compare the grammatical properties and switch-points of L2 learner and native bilingual CS. One common example of a CS experiment is where participants are asked to judge the acceptability of CS tokens. These studies report a strong correlation between the 'grammaticality' of CS and L2 learner proficiency level (Jake, 1997; Toribio, 2001, among others). In other words, proficient L2 learners more often maintained the grammar of both languages while switching. Very few naturalistic studies using spontaneous speech from L2 learner contexts explore the grammatical patterns of L2 learner CS. A few noteworthy exceptions include studies by Legenhausen (1991) and Ogane (1997) of German students in a French classroom and Japanese students in an English classroom, respectively. Legenhausen (1991) observes that while some L2 learner CS is triggered by a lack of L2 proficiency, it is not primarily so. Furthermore, Ogane (1997) reports that L2 learners favor tag switches (e.g., It's like that, ¿**no**?) and noun, single-item switches (e.g., Yo tenia este **seat**.). These patterns are similar to those common to L1 dominant bilinguals (Poplack, 1980), 2L1 adult bilinguals (Lipski, 1985), and 2L1 child bilinguals (Zentella, 1997), which may serve to elevate the predominantly deficit perspective of L2 learner CS. Further research, especially investigations involving naturalistic observations and spontaneous speech, is crucial for complementing and validating previous experimental designs in order to determine the role of proficiency in the grammatical patterns of L2 learner CS.

Research has since moved towards a more sociolinguistic approach, with a focus on CS as social interaction. This alternative perspective has done much to ameliorate pejorative and stigmatized status formerly connected with CS. Sociolinguistic studies tend to envision CS more positively, as a communicative strategy (Reershemius, 2001) with significant discourse-related functions (Liebscher & Dailey-O'Cain, 2004; Nzwanga, 2000;) and as a pedagogical tool in the classroom (Evans, 2009; Majer, 2009; Ustunel & Seedhouse, 2005).

In an exceptional critical literature review of classroom CS, Martin-Jones (1995) documents three phases of research starting in the 1970's. The first phase, from roughly 1970-1980, consisted of research that responded to educational concerns about the role of Spanish and English in the classroom and drew its data from the Spanish-speaking immigrant population in the United States. During the second phase, from 1980-1990, teacher CS and the discourse functions of each language took on a more prominent role. In the third phase, from 1990-1995, researchers began to use a more ethnographic approach to research on CS in the classroom, including detailed analyses of teaching and linguistic/cultural backgrounds. More recently, research on classroom CS has witnessed a broadening of scope, as it extends to a greater variety of multilingual contexts. Nevertheless, classroom CS research has focused mainly on teachers, high school students, college learners, and adult learners).

Child L2 Learner Code-Switching

Similar to adult CS, early research on child CS concentrated on 2L1 child bilinguals and their grammatical patterns, in order to test theories such as the lexical gap hypothesis (Quay, 1995), the 'critical mass theory' (David & Wei, 2004; Locke, 1997), and developmental approaches (Jisa, 2000). Even when researchers expanded the scope of their studies to include the functions and conversational strategies of CS in such diverse situations as the family (Nicoladis & Secco, 2000), ethnic communities (Zentella, 1997), peer groups (Paugh, 2005; Kyratzis, 2010), and classrooms (Martínez, 2010), these linguists still sought out 2L1 bilingual children. Consequently, much less is understood with regard to child L2 learner CS.

Child L2 learner CS can be found in several related yet distinct educational settings. First, classrooms where the classroom language and the child's L2 is that of the surrounding community's majority language, such as English language learners in the United States. Significant formative research has been done on these child L2 learners (for example, Martínez, 2010; Reyes, 2001, 2004). Another slightly different educational setting, and the context of the present study, is a classroom where the target language differs from the society's majority language; this includes foreign language education but not exclusively. In two-way immersion classrooms, for example, the target language often differs from the societal majority language, yet this target language is a foreign language for only some of the students, e.g., the L2 learners of the target language but not the 2L1 bilinguals. Research on these 'foreign' language classrooms have outlined several patterns of child L2 learner CS. In a comparative analysis of elementary level students in a French immersion school in Spain and a bilingual French/Italian program in Italy, Moore (2002) reports that CS in both situations promotes the process of language learning, suggesting that this may be especially true of contexts where the L2 is the medium of instruction for the learning of academic content. Similarly, Martin-Beltran (2010) provides examples of how L2 learners code-switch during an interactive storytelling and writing project in a 5th grade dual immersion Spanish/English classroom. In her analysis, language learning affordances were exhibited through repaired lexicon and syntax from language gaps that turned into learning opportunities, refined academic language skills, heightened metalinguistic awareness, crosslinguistic word analysis, creativity, analysis of multiple meanings, and interpretation of word choice. Martin-Beltrán recounts one example of how repaired lexicon provided a learning opportunity in a paired writing task, where Iliana transcribed Heather's story in a letter. When Heather reached a "lexical dilemma", Heather inserted the word in English (nontarget language) with a rising intonation to signal questioning and request help from Iliana (p. 262). And, in Brunei Darussalem, Martin (1999) describes how students in a 4th year primary

classroom with English as an instructional medium use English/Malay CS in order to negotiate meaning surrounding monolingual English geography texts. While the previous studies all demonstrate the academic benefits of classroom CS, Potowski's (2004) case study from a two-way immersion program illustrates how students alternate languages according to sometimes competing L2 learner identity investments, such as being perceived as a "well-behaved student" or "popular and funny" (p. 95).

The aforementioned studies all deal with naturalistic data on child L2 learner CS, spontaneous speech in the classroom setting, but a single exception to this trend is found in Cheng's (2003) analysis of Malaysian pre-school children involving three elicitation tasks: 1) reciting a rhyme, 2) retelling a story, and 3) telling a favorite story. Cheng points out that children switch between Malay/Chinese particles for a variety of functions depending on the topic and context of the conversation, including: adding a sense of persuasion, adding a sense of emphasis, creating a sense of comradeship, softening the effect of a sentence, or closing one clause of an utterance (p. 69-70).

Since Cheng's (2003) study is one of very few existing elicitation task studies on L2 learner CS, further research along these lines would substantiate the findings from classroom data. Additionally, except for this sole study, the research focuses on older children in 4th or 5th grade and the discourse-related and identity-related functions of CS. Moreover, none of these studies has touched upon the grammatical patterns of CS so prevalent in studies on adult dual L1 bilinguals. The present study, then, addresses several of these existing gaps in the research literature by presenting an analysis of both functional and grammatical patterns of child L2 learner CS in a kindergarten Spanish immersion class.

METHODS

Setting and Participants

The context of the present study was the Spanish immersion program in a dual immersion school in Tucson, Arizona that offered Spanish, French and German immersion classes for children from preschool (age 3) through 5th grade at the time of the study. The school's language immersion program is designed so that the preschool and kindergarten classes (ages 3-5) receive instruction in the chosen target language (Spanish, French, or German) with the same teacher for the entire day except for lunch, recess, and activities which took students outside of the academic classroom setting, such as music or physical education. Once students enter 1st grade, they are taught in English for half the day, while the rest of the day's instruction is held in the chosen target language, with the aforementioned exceptions.

Participants in the study included 30 students from kindergarten (4 female, 4 male), 1st grade (7 female, 4 male), and 2nd grade (5 female, 6 male) Spanish immersion classes. Within these classes, there were twenty-four L2 learners of Spanish (12 female, 12 male) and six Spanish/English 2L1 bilingual (4 female, 2 male) students. Students were determined to be 2L1 bilinguals if they had acquired Spanish before the age of three; this was determined through interviews with parents on their children's patterns of language use and language background. Of the six 2L1 bilingual students, two were born in Mexico, three had a mother who was born in Columbia, and one was born in Ecuador. All of the six 2L1 bilingual students held Spanish as one of their home language, although the students varied in the amount of each language used. The two Mexican natives spoke almost only Spanish at home, while the other students reported speaking a mix of both languages.

Data Collection

For the data collection of the present study, I engaged in over 150 hours of participant observation, attending students' classes, closely observing and taking notes on student linguistic behavior, and taking on the role of a teacher's aid when helpful. The core dataset analyzed in this paper includes a total of 12 hours of transcribed audio-recorded data from classroom observations in the kindergarten, 1st and 2nd grade Spanish immersion classes. Several microphones were placed at different 'centers' stationed around the rooms in order to pick up student speech. These recording were later combined and transcribed into a single transcription. Each recording represents an entire day of Spanish language instruction for the class. Notably, the kindergarten students were in their Spanish classroom for 6 hours while the 1st and 2nd graders were in their classrooms for 3 hours each, due to the daily schedule described above.

Data

The primary unit of analysis for the present study is a token of CS, a term which is highly debated within the field and defined diversely throughout the field. Some structurally-oriented linguistic analyses differentiate between *intrasentential* CS, switching below sentential boundaries, and *intersentential* CS, switching at sentential boundaries. This distinction is problematic due to the implication that spoken language is indeed separated into 'full' sentences followed by other 'full' sentences. Alternatively, CS has been identified as being either *intra-turn* (1), within an individual's conversational turn of speech, or *inter-turn* (2), across conversational turns by different speakers. 'Turns' and 'turn-taking' as a central aspect of the organization of conversation was taken up most thoroughly in conversation analysis (Sacks, 2004) and therein defined as the tendency for one party to speak at a time (p. 35). Terms vary across disciplines and include 'turn at talk' (also, turn-at-talk) employed commonly by those following conversation analysis (Sacks, 1992) and turn of speech in the area of pragmatics (Ellis, 1994; Levinson, 1983). The meaning of these terms is similar, and in this case, conversational turn is chosen for its more general reference to a turn which may or may not include verbal speech; after all, much can be communicated through gestures, glances, hand motions, etc. For this reason, discourse analysis work on communication through various forms of media and technology tend to prefer the term 'conversational turn' (Clarà & Mauri, 2009). In the present study, a conversational turn or 'turn' is identified by the (verbal or non-verbal) communication of a participant(s) before interrupted by (verbal or non-verbal) communication from another participant(s), a long pause, or another event.

(1) LILY: **Porque yo ir en el baño y** wash **mis manos.**
    Translation: Because I go in the bathroom and   my hands.
(2) JIM: What is number 5?

    MATTHEW: ¿Qué es numero dos? ¿Qué es numero dos?

    Translation: What is number two? What is number two?

Throughout the study, students did frequently participate in *inter-turn* switching (as in 2), where a student's Spanish turn was followed by another student's English turn; this is referred to as non-reciprocal CS (Zentella, 1997) or preference-related switching (Auer, 1995) in the literature. Yet, it differs so significantly from *intra-turn* CS that this type of language alternation is not always accepted as CS by scholars and is rather more often analyzed as language choice (see

Christoffersen, 2013, for example). Thus, within the realm of the present study, the intra-turn switch in (1) is an included token of CS but the inter-turn switch in (2) is not.

Many linguists further delimit the definition of CS to exclude single-word switches, since research has shown that single-word switches are most often lexical borrowings (Budzhak-Jones, 1998, Poplack & Meechan, 1995, Shin, 2002). The present study includes these tokens, following Reyes (2001) who demonstrates that from a developmental perspective, the one-word switches provide a site for analysis of the children's developing bilingual skills and bilingual competence. Independent of whether these switches are borrowings or code-switches, the analysis concentrates on how the children use these switches as a tool to transition from one language to another and develop bilingual competence. Incorporating the definition of CS as any intra-turn switch (single-word or multi-word), CS is infrequent in proportion of the entire corpus, comprising .2% of total turns, or 85 tokens out of 477 total turns. This is comparable with other similar research (3% in Shin, 2002 and 1% in Poplack et. al., 1988).

Theoretical Framework & Data Analysis

The theoretical underpinnings of the present study follow a mixed methods approach outlined by Zentella (1990) for the integration of qualitative and quantitative methods of analysis in order to provide a more complete view of child code-switching patterns. These mixed methods include the tabular representation and quantification of certain grammatical switch points and strategies, combined with ethnographic methods of data collection and conversation analysis.

Each individual code-switch was coded according to 1) whether the switch adhered to the equivalence constraint, 2) the grammatical category/categories of the code-switch, and 3) whether a code-switch could be distinguished as performing a particular conversational strategy. The framework for these analyses was based on the equivalence constraint as outlined by Poplack (1980), the 19 grammatical categories determined by Zentella (1997), and the 22 conversational strategies suggested by Zentella (1997).

Grammatical Patterns of Code-Switching

Description of the grammatical analysis. The grammatical patterns of CS by child L2 learners of Spanish and dual L1 bilinguals were analyzed according to three related frameworks: grammatical category of the code-switch, adherence to the equivalence constraint, and a comparison of the frequency of grammatical switch-points. An analysis of the five least frequent grammatical switch-points provides for comparison with data on other 2L1 bilingual children (Zentella, 1997).

Analysis of the grammatical category of the individual code-switches followed Zentella's (1997) classification of 19 grammatical categories. Zentella's (1997) framework actually expands to 28 different categories including all subcategories. For instance, the noun/noun phrase category includes the subcategories: object nouns, object noun phrases, subject nouns, and subject noun phrases. While these subcategories were coded in the current study's data, a more general description was found to be preferable in describing and analyzing the results.

1- Full sentence	10- Imperative
2- Noun/noun phrase	11- Tag
3- Independent clauses	12- Conjunctions
4- Subordinate clauses	13- Relative clause
5- Adverb/adverbial phrases	14- Exclamation
6- Verb/verb phrases	15- Miscellaneous
7- Prepositional phrase	16- Personal pronoun
8- Filler/hesitation	17- Predicate adjective
9- Adjective/adjectival phrase	18- Determiner
	19- Preposition

Table 1. Grammatical Categories (Zentella, 1997, p. 118-119)

The second framework for the analysis of grammatical code-switches was based on Poplack's (1980) 'equivalence constraint'. This 'constraint', which Poplack refers to as a strong tendency, notes that the adult dual L1 bilingual speakers in her study tended to code-switch at points in the sentence that maintain the grammaticality of both languages.

Figure 1. Example of equivalence constraint (Poplack, 1980, p. 586)

Lastly, an analysis was done in order to tabulate all infrequent syntactic boundary switch points in the data. Zentella (1997) found that in her data, New York Puerto Rican children's code-switches occurred most infrequently at the boundary points: adjective phrase, pronoun, predicate adjective, determiner, and preposition. Zentella (1997) explained that in her data children code-switched at infrequent syntactic boundaries for two disparate reasons: 1) low proficiency and ignorance of grammaticality constraints, or 2) high proficiency and more experience managing code-switching in grammatically permissible ways. For this reason, it is useful to analyze whether infrequent syntactic boundary switch points by students in the Spanish immersion program coincide with adherence to the 'equivalence constraint'.

Results of grammatical analysis. The results for the grammatical category of individual code-switches are separated according to 2L1 Spanish/English bilinguals and L2 learners of Spanish. It is important to note that when code-switches fell over various grammatical categories, those switches were coded as both in order to ensure description of all grammatical categories represented. Due to this slight duplication, there are four more 'code-switches' than the actual number of code-switches in the dataset.

	2L1Spanish/English bilinguals		L2 learners of Spanish		All students	
	(%)	*(n)*	*(%)*	*(n)*	*(%)*	*(n)*
Full sentence	7.7	1	7.9	6	7.9	7
Noun/noun phrase	69.2	9	47.4	36	50.6	45
Subordinate clause	0.0	0	2.6	2	2.3	2
Adverb/adverbial clause	7.7	1	1.3	1	2.3	2
Verb/verb phrase	7.7	1	22.4	17	20.2	18
Prepositional phrase	0.0	0	1.3	1	1.1	1
Adjective/adjectival phrase	0.0	0	13.2	10	11.2	10
Imperative	7.7	1	2.6	2	3.4	3
Interrogatives	0.0	0	1.3	1	1.1	1
Total	14.6	13	85.4	76	100.0	89

Table 2. Percentages of individual code-switches *(n)* per grammatical category by speaker group

Table 2 makes it possible to compare the two groups; however, there are only 5 Spanish/English 2L1 bilinguals compared to 25 L2 learners of Spanish. So, while it is interesting and relevant to compare these groups, it is not possible nor advisable to do so statistically. Nevertheless, the majority of 2L1 bilingual CS occurs primarily in the noun/noun phrase grammatical category (69.5%). Although the majority of L2 learner code-switches similarly occur in the noun/noun phrase grammatical category (47.4%), L2 learner switches vary considerably more and occur across a wider variety of grammatical categories, including verb/verb phrase (22.4%), adjective/adjectival phrase (13.2%), and full sentence (7.9%). Overall, the top five grammatical categories where students in this Spanish immersion program code-switch are: noun/noun phrase, verb/verb phrase, adjective/adjectival phrase, full sentences, and imperatives.

Poplack 1980 *adult NYPRs* *(n = 1,835)*		*Lipski 1985* *adult Houston MAs* *(n = 2,319)*		*Zentella 1997* *NYPR children* *(n = 1,685)*		*Christoffersen 2014* *Spanish immersion students* *(n = 89)*	
Category	*(%)*	*Category*	*(%)*	*Category*	*(%)*	*Category*	*(%)*
Tag	22.5	Preposition	16.13	Sentence	23	Noun/noun phrase	50.6
Sentence	20.3	Sentence	15.67	Noun	14	Verb/verb phrase	20.2
Noun	9.5	And/or/but	11.19	Ind. Clause	12	Adjective/adj. phrase	11.2
Object NP	7.6	Tag	9.76	Object NP	6	Full sentence	7.9
Interjection	6.3	Noun	8.27	Ind. Clause & Conjuct.	6	Imperative	3.4

Table 3. A comparison of syntactic hierarchies across studies

Table 3 makes it possible to compare the top five grammatical categories of code-switches with syntactic hierarchies found in the large-scale corpus data of Poplack (1980), Lipski (1985), and Zentella (1997) to the current study. Although the data represent significant differences in terms of population, year, and data collection, two of the top five grammatical categories found by each researcher are comparable to the data from this study: noun/noun phrase and full sentence. Significantly, the remaining three grammatical categories in the current study's data are unique as compared to the other previous studies. This prompts the question whether code-switching in the grammatical categories of verb/verb phrase, adjective/adjectival phrase or imperative is characteristic of L2 learners, and furthermore whether these switches adhere to the equivalence constraint.

Table 4. Percentages of equivalent/non-equivalent/transfer code-switches *(n)* by speaker group

	2L1Spanish/English *bilinguals*		*L2 learners* *of Spanish*		*All students*	
	(%)	*(n)*	*(%)*	*(n)*	*(%)*	*(n)*
+ Equivalent	100.0	12	74.1	64	89.4	76
- Equivalent	0.0	0	9.4	8	9.4	8
Transfer	0.0	0	1.2	1	1.2	1
Total	14.1	12	85.9	73	100.0	85

Table 4. Percentages of equivalent/non-equivalent/transfer code-switches *(n)* by speaker group

As Table 4 shows, overall students in the Spanish immersion program adhere to the equivalence constraint at a very high rate (89.4%). Spanish/English 2L1 bilinguals produce a surprising 100% equivalent code-switches; however this maybe be due in part to the small number of balanced bilingual participants (5) and the similarly small quantity of their individual

switches (12) which amount to only 14.1% of the total data. Below see an example of an equivalent CS by a 2L1 bilingual (3) and L2 learner (4) as well as a non-equivalent CS by an L2 learner (5) from the study's corpus.

<u>Examples of Equivalent CS</u>

(3) NATHAN: But in a swimming pool **puede**.
  Translation: *[you] can*

(4) LAURA: **Señora, ¿dónde está mi lunchera?** I can't find my lunch.
  Translation:Mrs., where is my lunch box?

<u>Examples of Non-equivalent CS</u>
(5) CARLA: **Yo está** coming.
  Translation: I am

However, it is still remarkable that 74.1% of L2 learner code-switches are equivalent, especially since the five NYPR children in Zentella's (1997) study adhere to the equivalence constraint from 74.5% to 95.6% of the time. In light of this comparison, it seems that L2 learners are adhering to the equivalence constraint overall at a rate comparable to other 2L1 bilinguals. Yet it does prompts the question of whether L2 learners create non-equivalent switches more often at infrequent syntactic boundaries.

	2L1 Spanish/English bilinguals		*L2 speakers of Spanish*	
	(%)	*(n)*	*(%)*	*(n)*
Pronoun	0.0	0	1.21	1
Adjective	0.0	0	2.35	2
Determiner	0.0	0	1.21	1

Table 5. Percentage of infrequent syntactic boundary switch points by speaker group

  Furthermore, Table 5 shows that while 2L1 bilinguals do not code-switch at infrequent syntactic boundaries, L2 learners switch only minimally at infrequent syntactic boundaries with a total of four instances of code-switches represented by all 25 students. Surprisingly, of these four infrequent syntactic boundary switch points, only one is non-equivalent, as can be seen in the examples below. Ben's statement is non-equivalent according to Poplack (1980), based on the fact that English and Spanish have different rules for adjective order, so '*real* tijeras' would necessarily be ungrammatical in one of the languages.

   <u>Equivalent Infrequent Syntactic Boundary Switch Points</u>
   (6) ETHAN: Sra., una placa es **a badge**?
   (7) JENNA: Este es como **it works**.

(8) KAYLA: Está **ready**.

Non-equivalent Infrequent Syntactic Boundary Switch Point
(9) BEN: Yo tengo **real** tijeras.

Nevertheless, this is the only instance of a non-equivalent switch resulting from an infrequent boundary switch point, out of a total of only 9.4% non-equivalent code-switches by L2 learners. The highly equivalent and patterned nature of 2L1 and L2 bilingual children contradicts theories which represent child and L2 learner CS as code-mixing (Muysken, 1995) or not adhering to grammatical properties of the languages. Instead, these young Spanish immersion students demonstrate the ability to code-switch while adhering to the grammatical rules of both languages.

Analysis of Conversational Strategies of Code-Switching

Description of the analysis of conversational strategies. The analysis of CS as a conversational strategy was also based on the framework devised by Zentella (1997) and altered based on my own understanding of the code-switching practices relevant to the current dataset to include 1) footing, 2) emphasis/clarification, 3) cross-linguistic circumlocution (CLC). The first of three broad categories of conversational strategies, "footing," is based on Goffman's (1979) notion that "a change in footing implies a change in the alignment we take up to ourselves and others present as expressed in the way we manage the production or reception of an utterance (p. 5). The second category, emphasis/clarification, describes an instance where an individual switches languages in order to clarify a given statement or to explain or accentuate their point.

The third category is a reconceptualization of what Zentella (1997) defines as "crutch-like code-switching." Zentella (1997) uses this term to refer to individuals who switch to compensate for a lexical gap of knowledge or a momentary memory lapse. While the concept itself is comprehensible, I disagree with the label of a 'crutch' which insinuates and indeed perpetuates a negative, deficit perspective of this code-switching practice. After all, every speaker (L1 or L2) has memory lapses, and there is no one who has an infinite vocabulary. Instead, I argue that students are actually using their knowledge of two languages in a skillful way to circumnavigate words that they may have forgotten or not yet learned. Additionally, this terminology associates "crutch" with a disability in a way that disability studies researchers would find problematic. For this reason, the present analysis defines these types of code-switches as "cross-linguistic circumlocution" (CLC). The analysis of the data to this point is not capable of detailing which switches are CLCs unless students are specifically inquiring about a certain word; however, further transcription of the dataset will provide clarity and more insight into CLCs and whether they are skillful or purposeful in the classroom context.

Below are a series of examples of code-switches from the present study's corpus, divided according to these three categories of conversational strategies.

I. Footing
   1. Declarative/question shift
   (10) STEPHEN: **¿Qué es esposas?** Oh yeah, so they can't move their hands.
      Translation: *What are handcuffs?*
   2. Role shift
   (12) BEN: The eyeball call! **Este sí,** Brian.
      Translation: *That one, yes,*
   3. Quotations

(13) KAYLA: Issac said **que** [laugh] **Isaac dice que es mi tarea.**
    Translation: *that [laugh] Isaac said that it is my homework*
3. Aggravating requests
(14) STEPHEN: Can we do it again? Aw. **¿Por qué?**
    Translation: *Why?*
4. Attention attraction
(15) STEPHEN: Look at, Alison, **esta**.
    Translation: *this*

II. Clarification and/or Emphasis
  1. Translation
(16) KAYLA: Issac said **que** [laugh] **Isaac dice que es mi tarea.**
    Translation: *that [laugh] Isaac said that it is my homework.*
(17) INES: **Sra., ¿dónde está mi lunchera?** I can't find my lunch.
    Translation: *Mrs., where is my lunchbox?*
  2. Parallelism
(18) BRIAN: Stephen, are you going to be **ladrón**? Who's going to be **ladrón**?
    Translation: *robber/theif*   *robber/theif*
  ETHAN: Sorry, Stephen. [after Stephen falls, accidentally pushed by Ethan] How about I be **ladrón**?
    Translation: *robber/theif*

III. Cross-Linguistic Circumlocution (CLC)
  1. General Cross-Linguistic Circumlocution (CLC)
(19) ETHAN: **Sra., ¿una placa es** a badge?
    Translation: *Mrs., is a badge*
(20) STEPHEN: **¿Qué es esposas?** Oh yeah, so they can't move their hands.
    Translation: *What are handcuffs?*

Results of the analysis of conversational strategies. As previously mentioned, not all code-switches were assigned to a conversational strategy; rather this was determined based on their resemblance to examples from the existing scholarly literature on the functions of CS (Reyes, 2001, 2004; Zentella, 1997). The following table shows that only 16 total switches or 18.8% of code-switches were assigned a conversational category. This rate is lower than the 48% of switches coded by strategy by Zentella (1997, p. 93). This is due to the smaller corpus, 24 hours compared to 103 hours (Zentella), which necessitates a conservative coding of CLC switches in particular. Future studies including an expanded corpus of child 2L1 and L2 learner CS would enable a higher percentage of coded conversationally strategic switches. The remaining 69 code-switches are included in the qualitative analysis in the section entitled "Classroom Code-Switching as a Linguistic Resource".

	+ Strategy		- Strategy	
	(%)	*(n)*	*(%)*	*(n)*
2L1 bilinguals	33.3	4	66.7	8
L2 learners of Spanish	16.6	12	83.6	61
All students	18.8	16	81.2	69

Table 7. Percentages of individual switches *(n)* per conversational strategy by speaker group

	2L1 Spanish/English bilinguals		L2 learners of Spanish		All students	
	(%)	*(n)*	*(%)*	*(n)*	*(%)*	*(n)*
Footing	0.0	0	50.0	6	37.5	6
Clarification/Emphasis	50.0	2	16.7	2	25.0	4
CLC	50.0	2	25.0	4	37.5	6

Table 6. Percentage of individual switches (n) assigned to a conversational strategy (strategic switches)

These 16 code-switches, which were determined to be strategic switches, covered a variety of conversational strategies. Although it is commonly thought that L2 learners switch only to fill a gap in language knowledge, Table 7 shows, utilizing the previously described cross-linguistic circumlocution (CLC), that L2 learners switch strategically for footing and clarification/emphasis as well as for CLC. It is probable that CLC account for a larger proportion of the data, since the present data were coded conservatively. Due to the size of the corpus, and thus the limited knowledge of the extent of student vocabulary, a CLC was only coded if students explicitly asked for a word (19, 20). Zentella (1997) in comparison was able to delegate more single-word switches to this category, since her extensive corpus allowed for a higher degree of certainty on which words were unknown and unused in individual languages. Still, these findings do clearly show that at least 11.8% of all code-switches, and 62.5% of strategic code-switches, exhibit strategies beyond that of CLC. In fact, 2L1 bilinguals participate in CLC, which suggests that it is one of several linguistic resources available to 2L1 and L2 bilinguals.

CONCLUSIONS & DISCUSSION

The findings of the data from this research endeavor have provided a very promising basis for continued investigation into this line of inquiry regarding grammatical and functional patterns of child CS. Based on the analysis of grammatical categories, L2 learners' switch-points were more varied than 2L1 bilinguals, including adjective/adjectival phrases, verb phrases and imperatives as common switch points. An analysis of the equivalence constraint showed that even though L2 learners violated the equivalence constraint more often than 2L1 bilinguals, the L2 learners violated the equivalence constraint at a rate comparable to NYPR (2L1 bilingual)

children (Zentella, 1997). Similarly, although L2 learners switched more often at infrequent syntactic boundaries, this was minimal and usually grammatical (75%). (See summary of results in Table 8.)

An analysis of the discursive functions of CS demonstrated that at least 18.8% of individual code-switches could be assigned to conversational strategies beyond that of 'crutching' (Zentella, 1997) or CLC. Interestingly, both L2 learners and 2L1 bilinguals used code-switching for a variety of purposes beyond cross-linguistic circumlocution (CLC), including footing (for realignment and appeal) and clarification and/or emphasis. This is significant given the fact that it is commonly believed that L2 learners use CS only as a 'crutch' to fill in for a gap in knowledge. (See summary of results in Table 8.)

Although L2 learner code-switches occur at more varied switch points and at infrequent syntactic boundaries, L2 learners adhere to the equivalence constraint at a high rate (74.1%). This may suggest that the young L2 learners in this early Spanish immersion program have a high level of metalinguistic awareness evidenced by their competency at producing grammatically code-switched sentences. Furthermore, although it is probable that L2 learners use mostly cross-linguistic circumlocution, these data show that L2 learners also use code-switching for footing (realignment/appeal) and clarification and/or emphasis. This shows that young L2 learners in this school use code-switching for more varied purposes than is commonly thought of students in immersion programs. This contrasts with the dominant opinion that L2 learners often code-switch ungrammatically and for the sole purpose of filling a gap in their language knowledge. From a functional perspective, there is simply no need to differentiate between CLC and other strategic uses of CS.

Altogether, these data present a strong case for the re-evaluation of CS within the second language/foreign language classroom as a strategic conversational tool used by L2 and 2L1 bilinguals. This is particularly relevant for dual immersion programs which are often characterized by a strong separation of languages (by such factors as time, setting, teacher, etc.) as well as language policies that advocate such linguistic partitioning. In fact, recent studies have critiqued such programs for "parallel monolingualism" instead of bilingualism (Fitts, 2006; Hayes, 2005; Lee, Bonnet-Hill, & Gillespie, 2008). A flexible bilingual pedagogy as presented by Creese & Blackledge (2010) allows for CS as a site for language learning and teaching as well as a site for identity work. In fact, it would seem that in forcing a parallel monolingualism on bilingual students, we are "squandering our bilingual resources" (Cummins, 2005, p. 585).

Crosslinguistic circumlocution (CLC), in particular, holds important implications for the language learning classroom, and its use in a flexible bilingual pedagogy would produce powerful reminders of students' developing bilingual competencies. For instance, students could be encouraged to use the teacher and each other as a resource for learning other languages. Instructors could also encourage students to draw connections between language in translating and multilingual projects. Exposing students to code-switching in music, art, and theatre as a beautiful and acceptable pattern of speech in multilingual communities is another way to counter powerful monolingual ideologies. Additionally, students are no longer limited to their individual communities or classroom settings. Even young students are familiar with technology which is a powerful tool to break down the barriers between other-language speaking communities, fostering an ability for students to teach one another about culture as well as their languages.

Ruiz (2010) details how many dominating discourses relate to language as a problem, especially those which relate to non-English-dominant students in the U.S. As an alternative, Ruiz proposes a reconceptualization of language-as-resource orientation, which validates,

recognizes and appreciates students' various linguistic resources. Fostering CLC as one of several types of strategic classroom CS is a powerful and practical way to reframe classroom code-switching as a resource.

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APPENDIX

Summary chart comparing grammatical patterns per framework by speaker group

	2L1 Spanish/English bilinguals		L2 learners of Spanish		All students	
	(%)	*(n)*	*(%)*	*(n)*	*(%)*	*(n)*
Top 5 Grammatical Categories						
Noun/noun phrase	69.2	9	47.4	36	50.6	45
Verb/verb phrase	7.7	1	22.4	17	20.2	18
Adjective/adjectival phrase	0.0	0	13.2	10	11.2	10
Full sentence	7.7	1	7.9	6	7.9	7
Imperative	7.7	1	2.6	2	3.4	3
Equivalence/Non-equivalent/Transfer						
+ Equivalent	100.0	12	74.1	64	89.4	76
- Equivalent	0.0	0	9.4	8	9.4	8
Transfer	0.0	0	1.2	1	1.2	1
Infrequent Syntactic Boundary Switch Points						
Pronoun	0.0	0	1.21	1		
Adjective	0.0	0	2.35	2		
Determiner	0.0	0	1.21	1		
Conversational Strategies						
Realignment	0.0	0	50.0	6	37.5	6
Clarification/Emphasis	50.0	2	16.7	2	25.0	4
Crutch-like Code-mixing	50.0	2	25.0	4	37.5	6