A Comparison of the Code Switching Behavior and Knowledge of Adults and Children

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Abstract

The practice of code switching is often viewed negatively by monolingual and bilingual speakers alike. It is often considered a low prestige form, incorrect, poor language, or a result of incomplete mastery of the two languages. In spite of the negative perceptions of code switching, it is a common feature of bilingual speech, and Fernández reports that bilinguals who practice code switching may also express negative attitudes about it. The current study examines the the varying degrees of linguistic knowledge that adults and nine-year-old children possess about code switching, and explores possible relationships between attitudes about code switching, knowledge, and behavior.

Genishi, Genesee, Grosjean, and others have studied the different motivations that younger children have for code switching. Their code switching behavior seems to reflect simple adaptation to the linguistic abilities of their conversational partners (Grosjean's "person-language bond") or the use of the more readily available lexical item, rather than intent to emphasize a point, to demonstrate ethnic identity or group solidarity, or to exclude individuals from the conversation. These latter uses of code switching develop gradually in older children. McClure has noted that the linguistic structure of code switched utterances also varied according to age, with children under the age of nine favoring single-item switches (usually nouns and adjectives) while older children began to switch more at the phrase or clause level.

Code switching as a competency has also been explored in adults. Poplack found that the complexity of intrasentential code switching required that the speaker have a sophisticated knowledge of the grammars of both languages, as well as knowledge of how those grammars map onto one another. Less proficient bilinguals favored single-word and tag switches, while more proficient bilinguals code switched at the phrase and clause level as well.

The current study examined the responses of a group of 21 adults and 32 fourth-grade students to a survey about code switching attitudes, and a test of grammaticality judgments based on the linguistic constraints on code switching observed by Poplack, Timm, and Gumperz. As a whole, the sample group had ambivalent-to-positive attitudes about the practice of code switching. The test of grammaticality judgments revealed that the adults recognized ungrammatical code switched constructions more readily than did the children, and respondents who reported that they sometimes code switched recognized ungrammatical code switched constructions with more accuracy than those who denied code switching, or who were unsure about their use of code switching. Differences emerged between the group of children being educated in English, and the group of children who were in a class where both English and Spanish were the languages of instruction. Correlations between code switching practice, knowledge, and attitudes also differed widely between adults and both groups of children, as well as between respondents who used one language at home, and those who used two. The adult group, however, showed higher positive correlations between the factors than did the children.

The study results demonstrate the developmental nature of code switching, and suggest that intrasentential code switching proficiency requires an adult command of both languages. Language proficiency may also be the factor that would explain the difference between the two groups of students, and this aspect warrants further investigation.

1. Introduction

The practice of code switching is often viewed negatively by monolingual and bilingual speakers alike. It is often considered a low prestige form, incorrect, poor language, or a result of incomplete mastery of the two languages. In spite of the negative perceptions of code switching, it is a common feature of bilingual speech.

Children as well as adults demonstrate code switching behavior from a very early age. The motivations and attitudes that younger bilinguals possess for code switching appear to be rooted in their psychosocial developmental level, and reflect the immediate circumstances of the child, rather than to mark the more abstract concepts of ethnic identity or group cohesion.

This study compares adult and child knowledge and attitudes about code switching, and explores possible relationships between attitudes about code switching, knowledge, and behavior.

2. Current Research Into Code Switching

2.1 Types of code switching

Borrowing- is the use of a word from another language, which demonstrates morphological/phonological adaptation to the matrix language. Often it represents the appropriation of a term not available in the matrix language.

*1.) Va a **imeilear** a su vecino.*

*(She's going to **e-mail** her neighbor.)*

Calque- a literal translation of an expression from another language.

*2.) Le voy a **llamar para trás.***

*(I'm going to **call** him **back**)*

Syntax, rather than vocabulary, may be the second language's contribution to the construction, although calques may also demonstrate the use of a matrix language cognate with an alteration of meaning.

*3.) El **lote** de parquear*

*(The parking **lot**)*

Standard Spanish for the term would be *"**campo** de estacionamiento."*

Intersentential- switching at the sentence level. Intersentential code switching may serve to emphasize a point made in the other language, signal a switch in the conversation participants, indicate to whom the statement is addressed; or to provide a direct quote from, or reference to, from another conversation:

*4a.) Y luego me dijo "**don't worry about it**."*

*(And then he told me "**don't worry about it**.")*

4b.) Le dije que no quería comprar el carro. **He got really mad.**

(I told him I didn't want to buy the car….)

Intrasentential- switching at the clause, phrase level, or at word level if no morphophonological adaptation occurs.

*5.) Abelardo tiene los **movie tickets.***

*(Abelardo has the **movie tickets.**)*

Intrasentential code switching is the type which will be examined in this study. Poplack states that it is the most complex type of code switching, requiring as it does that the speaker be able to control two linguistic systems simultaneously. In her study of New York Puerto Rican speakers, intrasentential code switching was practiced by only the most balanced bilinguals. Speakers who

were dominant in one language tended to use less sophisticated code switching forms, such as single word borrowings, tags, and intersentential switches because these forms require less control of two grammars, and are less likely to result in ungrammatical constructions. Intrasentential switching, with its high potential for creating ungrammatical constructions, is therefore the logical type to test for grammatical violations.

2.2 Linguistic constraints on intrasentential code switching

Poplack has established two constraints on intrasentential code switching which seem to be parts of the mental grammar of the bilingual speakers in her study. These constraints were derived from Poplack's and others' observations of code switching behavior, and are therefore descriptive, not prescriptive. They serve to predict points where intrasentential code switching might occur, rather than to prohibit bilingual speakers from switching languages at a particular part of the sentence. And, particularly in the case of the free-morpheme constraint, they do not predict accurately all of the time; they may be violated occasionally even by the most proficient bilingual speakers.

Equivalence constraint: word order immediately before and after a switch point must be grammatically possible in both languages.

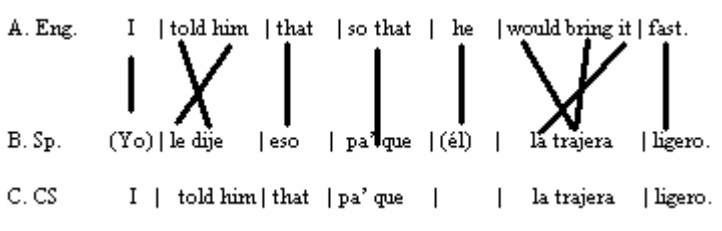

Table 1. Allowable switch points, according to the equivalence constraint. (Poplack)

According to Poplack, Spanish/English bilinguals favor switches:

before/after tag,

6a.) You're almost done with school, ***verdad****?*

(You're almost done with school, ***right?****)*

before predicate adjective

6b.) Es muy ***cute,***

(It's really ***cute****.)*

and between clauses,

6c.) That's the lady ***que tiene cuatro hijos,***

(That's the lady ***who has four children.****)*

because none of these violate the equivalence constraint.

For the same reason, Spanish/English bilinguals do not tend to:

switch between clitic and verb,

*6d.) *El niño le* ***hit,***

(The boy ***hit*** *him.)*

or between negative and verb.

*6e.) *El jefe no* ***want to pay us.***

(The boss does not ***want to pay us.****)*

Timm also found that a switch within negative verb formations creates "pidgin-like utterances, which strike bilingual informants as nothing less than bizarre." MacSwan (2000) asserts that the Spanish "no" cliticizes with the verb, making the two utterances immediately above equivalent.

Both of the examples above are constructions that violate a rule in the grammar of one of the languages. In the first sentence, English pronoun

placement does not allow the direct object pronoun to precede the verb, as a clitic pronoun may do in Spanish. In this respect, the two grammars do not coincide, and the sentence is judged ungrammatical. Poplack found that the violations of the equivalence constraint produced by her respondents usually involved adjective placement, and were uncommon.

Free morpheme constraint: no switches are allowed between stem and affix, and few within idiomatic expressions and set phrases.

*7a.) *Estaba **run**eando **in the library**.*

(She was **run**ning **in the library**.)

and

*7b.) *No hay mal que por* **good** *no venga.*

(There is no bad that some **good** does not come of it.)

Poplack observes that, while idiomatic expressions are often considered to behave like bound morphemes, and therefore tend not to be switched, a small number of switches within idiomatic expressions occurred in the speech of her respondents.

Switching between the clitic and the verb, as in sentence 6d, may also be considered as a violation of the free morpheme constraint, although not classified as such in this study, if we consider that Spanish clitics behave as bound morphemes, in that they are "phonologically bound" to another constituent and are not isolatable (Elson and Pickett).

Grosjean mentions other constraints developed by other researchers, which are not encompassed by Poplack's constraints:

Subject pronoun + verb constraint, Gumperz and Timm: no switches are

allowed between subject pronoun and verb.

*8.) *Yo **went to the store.***

*(I **went to the store.**)*

MacSwan (2000) hypothesizes that switches between a pronoun and the verb is permissible where the two languages in use have compatible gender systems. Spanish, with two gender classes, and English with one, are obviously not such a pair. MacSwan offers evidence of Spanish/Catalan switches between the subject pronoun and the verb, which occur naturally and are deemed grammatical by bilingual speakers. However, for the purposes of the present study such a construction will be considered ungrammatical. The responses of the participants, examined in section 5.4, bear this out.

Verb + infinitive complement constraint, Timm: no switches are allowed between a verb and its infinitive complement.

*9.) *El perro no quiere **eat his food**.*

*(The dog doesn't want **to eat his food.**)*

MacSwan (2000) claims that switches between pronoun and verb are permissible, where the gender systems of the two languages are compatible. Spanish, with two gender classes, and English, with one, are obviously not compatible in this respect, but a pairing like Spanish and Catalan would allow switching between the subject pronoun and verb.

2.3 Attitudes toward code switching

Sánchez observes that code switching is often an intermediate step in an ethnic group's shift away from its subordinate language in favor of the dominant

language of the community, and for that reason code switching may be discouraged in the effort to avoid assimilation. It may be feared, as Aitchison has noted, that code switching will influence one or both of the languages and lead to language decay. However code switching is also a linguistic feature of stable bilingual communities, noticed as long ago as 1917 by Espinosa, and described by Huerta in her case study of two bilingual El Paso families. Additionally, Timm hypothesizes that the existence of linguistic restraints on code switching indicates that "S[panish] and E[nglish] are not undergoing a process of pidginization in the American Southwest." She believes that the fact that verb phrases and bound morphemes remain intact in code switching precludes the types of changes typical of pidginization.

Monolingual speakers tend to have a more negative view of code switching, and in Hidalgo's study of the attitudes of Ciudad Juárez residents toward the code switching practices of their El Paso neighbors, code switching was rated low for understandability, attractiveness, and correctness. The research of Rosa Fernández with bilingual speakers in New Mexico reveals that in spite of the low prestige of the form, the use of code switching continues, often by the very speakers who hold low attitudes about the practice. This lack of correlation between practices and attitudes has been noted among others, by Labov, in his study of low prestige language forms, and the negative attitudes which users of the forms expressed toward the forms themselves. The use of low prestige forms is a conscious act, says Labov, used intentionally to establish membership in or loyalty to a particular social group.

2.4 Uses of code switching by children and adults

Sánchez notes that, despite the general denigration of the practice of code switching, there are specific contexts in which code switching is the predominant mode of expression for Chicano bilinguals, as well as the style perceived as most appropriate. She notes that an English-dominant Chicano may "feel himself pressured by his peers to code-switch… In these cases a speaker may simulate Spanish discourse through the introduction of Spanish connectors and adverbials…." A similar observation was made by Poplack, who noted that Spanish-dominant speakers preferred to employ tags and single-word switches in order to participate in the code switching style of discourse.

Genishi, in her study of bilingual kindergartners' code switching and code choice, noted that the language choice of young children is mainly determined by the language ability of their conversational partners. These six-year-old bilinguals were able to sustain a conversation in either language, or to switch between the two as the conversation participants required. Code switching, then, for young children is motivated by a desire to accommodate, not to emphasize a point or to mark ethnic identity. McLaughlin reviews the research and reports that "[y]ounger children mix languages to resolve ambiguities and clarify statements, but older children and adults typically switch codes (or languages) to convey social meanings." Benjamin, in her observations of the social uses of Spanish by bilingual fifth-graders, noted that the students did sometimes use code switching for rhetorical purposes, as in relating a quote or adding comedic impact to an anecdote.

Genesee observed that younger children may recognize the psychological

and social purposes of code switching, even though they may not use code switching for those purposes themselves. The recognition of the use of code switching to mark ingroup / outgroup and sociocultural status was evident in adolescents (11 years and older) but less so in younger children, who reacted to more immediate aspects of the social interaction, such as the language actually being spoken.

3. Research Questions

This study investigates the knowledge and attitudes about code switching which adults and children possess. The responses of children and adults to a survey about their attitudes toward code switching, their reports of their own code switching behavior, and their evaluations of grammatical and ungrammatical intrasentential code switched constructions are compared.

Given what researchers such as Genesee and Genishi have discovered about the simpler motivations and code switching practices demonstrated by preadolescents, I predict that the adults in this study will demonstrate a higher level of linguistic knowledge about intrasentential code switching, as well as more explicit attitudes, possibly negative, about the practice.

Labov and Fernández have demonstrated that a subject may hold negative attitudes about a speech variety she uses; therefore I predict that the attitudes which the respondents have about code switching will not correlate with their reported practice of code switching.

Finally, as Poplack has established that intrasentential code switching is a sophisticated ability which requires strong knowledge about the two grammars

being switched, and that this type of switching is avoided by those without the requisite level of proficiency, I predict that those respondents who claim to practice intrasentential code switching will also have more advanced knowledge about the linguistic constraints at work in code switching.

4. Methodology

4.1 Study participants

The elementary school where this research took place is located in a growing rural area in east El Paso County, Texas. 1053 students attend the school, 95.5 % of whom are Hispanic. 74.6% of the students are classified as being limited English proficient, and 63.6% of all students are enrolled in a bilingual education program. 93.1% of the student body is classified as economically disadvantaged.

Of the teaching staff as a whole, 71.5% are Hispanic, and 87% are female. 56.9% of the school's teachers provide native-language instruction to their students for part of the school day. (Texas AEIS data, 1998-1999)

I surveyed 53 people in total; 21 adult staff members and 32 fourth-grade children. The adults were between the ages of 25-55, and predominantly female, and the students were 9 and 10 years old. 13 of the children were receiving instruction in both Spanish and English (the 'bilingual' group) and 19 were in an English-only classroom (the 'monolingual' group). These designations, used throughout this paper, *do not refer to the language proficiency of the students in the groups, but rather to the language(s) of instruction*. The intention of the school district is that only Spanish-dominant students be educated in a bilingual

classroom, but because of the nature of the process by which students are identified to receive bilingual education, there may be Spanish-dominant students as well as English dominant students and balanced bilinguals in the English-language class, and students in the bilingual class may have equal proficiency in both languages. So class placement cannot be used as a determiner of the language proficiency of the students in this study.

4.2 The questionnaire

The entire questionnaire (Appendices 1 and 2) consisted of twenty-one items, and was divided into four parts: the attitudinal survey, code switching behavior, home language use, and the test of grammaticality judgments. The home language and code switching behavior items and the attitudinal survey were presented in English to the adult group and the group of students being educated in English. These sections were presented in Spanish to the students being educated in Spanish and English. The grammaticality items were identical on both versions of the questionnaire.

The attitudinal survey consisted of four statements about code switching. Two of the statements stated a positive opinion of code switching, and two expressed negative opinions about the practice. The respondents could agree or disagree with each statement, or they could indicate that they were uncertain.

A separate item asked respondents to indicate their code switching behavior by agreeing or disagreeing with the statement “I sometimes use Spanish and English in the same sentence.” A “not sure” response was also available.

Respondents indicated the languages they used at home through a free-

response item.

The test of grammaticality judgments consisted of 15 items. 6 sentences that do not violate any of the linguistic constraints outlined above ("No-V" items), and 9 sentences that violate one of the constraints listed above. ("V" items). Respondents were requested to indicate if each sentence "sounded correct," "sounded incorrect," or if they were "not sure" about the grammaticality of the item.

5. Results

5.1 Attitude survey

The attitudes of the adults and the students were generally similar, with those of the student group being slightly more positive. The differences between groups on individual items varied, however, without a discernible pattern.

On the friendliness item (Table 2a) 69.23% of the bilingual students and 57.89 % of the monolingual students rated code switching as "friendly," while less than half of the adults did.

Positive Statements			
It sounds friendly when people mix Spanish and English.	**Agree**	**Unsure**	**Disagree**
Students-monolingual class (19)	11	2	6
	57.89%	10.53%	31.58%
Students- bilingual class (13)	9	3	1
	69.23%	23.08%	7.69%
All Students (32)	20	5	7
	62.50%	15.63%	21.88%
Adults (21)	10	8	3
	47.62%	38.10%	14.29%
All (53)	30	13	10
	56.60%	24.53%	18.87%
It is easy to understand a person who mixes Spanish and English	**Agree**	**Unsure**	**Disagree**
Students-monolingual class (19)	10	5	4
	52.63%	26.32%	21.05%
Students- bilingual class (13)	7	3	3
	53.85%	23.08%	23.08%
All Students (32)	17	8	7
	53.13%	25.00%	21.88%
Adults (21)	10	8	3
	47.62%	38.10%	14.29%
All (53)	27	16	10
	50.94%	30.19%	18.87%

Table 2a. Responses to positive attitude statements

The adults also were less likely to describe code switching as "easy to understand," and approximately one quarter of the respondents in each group reported being "not sure" about the statement.

Monolingual students were least likely to report that the code switching of others "bothered" them (Table 2b). Most adults and bilingual students also disagreed with the item, however.

Negative Statements			
It bothers me when people mix Spanish and English.	**Agree**	**Unsure**	**Disagree**
Students-monolingual class (19)	3	2	14
	15.79%	10.53%	73.68%
Students- bilingual class (13)	5	1	7
	38.46%	7.69%	53.85%
All Students (32)	8	3	21
	25.00%	9.38%	65.63%
Adults (21)	6	2	13
	28.57%	9.52%	61.90%
All (53)	14	5	34
	26.42%	9.43%	64.15%
People mix Spanish and English because they do not know either one well.	**Agree**	**Unsure**	**Disagree**
Students-monolingual class (19)	7	5	7
	36.84%	26.32%	36.84%
Students- bilingual class (13)	3	5	5
	23.08%	38.46%	38.46%
All Students (32)	10	10	12
	31.25%	31.25%	37.50%
Adults (21)	6	5	10
	28.57%	23.81%	47.62%
All (53)	16	15	22
	30.19%	28.30%	41.51%

Table 2b. Responses to negative attitude statements

The last negative item, which stated that code switching resulted from a lack of mastery of either English or Spanish, was the most controversial. All the groups were split, with no majority either agreeing or disagreeing with the statement. This item also had a large number of "not sure" responses. At 47.62% disagreement, the adult group had the clearest opinion on the item.

The four attitudinal items were given point values, according to the degree of positivity of each response, as in Table 3a.

Attitude scale	Agree	Unsure	Disagree
CS sounds friendly	+1	0	-1
CS bothers me	-1	0	+1
CS is lack of language proficiency	-1	0	+1
CS is easy to understand	+1	0	-1
Highest possible= +4			
Low est possible= -4			

Table 3a. Attitude Scale

Each respondent was thus given an attitudinal "score," which ranged from 4 to -4. A score of 2, 3 or 4 was considered to be positive, a score of 1, 0, or -1 ambivalent, and a score of -2, -3 or -4, negative. Table 3b shows the number of respondents at each level.

	Positive	Ambivalent	Negative
Adults	9	10	2
% of adults	42.86 %	47.62 %	9.52 %
Students-monolingual	12	3	4
% of M. students	63.16 %	15.79 %	21.05 %
Students- bilingual	7	4	2
% of B. students	53.85 %	30.77 %	15.38 %

Table 3b. Attitudes of Respondents Toward Code Switching

The monolingual students had the highest percentage of positive attitudes, and also the highest percentage of negative scores. The adult group and the bilingual student group both had most of their attitudinal scores in the positive/ambivalent range.

5.2 Code switching behavior

Adults reported the highest use (80.95%) of intrasentential code

switching, closely followed by the bilingual students, 76.92 % of whom reported that they sometimes used English and Spanish in the same sentence. A smaller majority of the monolingual students also reported that they code switched.

Code Switching Behavior			
I sometimes use Spanish and English in the same sentence.	**Agree**	**Unsure**	**Disagree**
Students-monolingual class (19)	13	1	5
	68.42%	5.26%	26.32%
Students- bilingual class (13)	10	0	3
	76.92%	0.00%	23.08%
All Students (32)	23	1	8
	71.88%	3.13%	25.00%
Adults (21)	17	2	2
	80.95%	9.52%	9.52%
All (53)	40	3	10
	75.47%	5.66%	18.87%

Table 4. Intrasentential code switching behavior reported by respondents

5.3 Home language use

Home language use	**Spanish**	**English/Spanish**	**English**
Adults	1 (4.8%)	**10 (47.6%)**	**10 (47.6%)**
Monolingual class	2 (10.5%)	**16 (84.2%)**	1 (5.3%)
Bilingual class	**7 (53.8%)**	6 (46.2%)	0 (0%)

Table 5. Language(s) used in the home

The population of the school is decidedly bilingual, as is demonstrated by Table 5. The monolingual students, in particular, predominantly reported that they used two languages at home. One student reported that four languages were used at home. The bilingual students were nearly split between all-Spanish and Spanish/English home language environments, and the adults between English and English/Spanish. One adult reported that Spanish was used exclusively at home, and one adult reported that sign language was used in addition to Spanish

and English.

5.4 Grammaticality judgments

Eight adults (38.1% of the adult group) and one student from the English-language class (5.3%of that group) rejected all the statements outright. Six of these respondents had an "ambivalent" attitude toward code switching, two had a positive attitude, and one negative, according to the scale in Table 3a. The grammaticality score of these respondents was always 9, which was the number of constraint-violations (V) items in the questionnaire. This had an effect on the results of the adult group especially, but these respondents were not removed from the survey group. I will note instances where this group has had an effect on the results.

Adults	Accept	Unsure	Reject
Free Morpheme Constraint			
Estaba runeando in the library.	14.29%	14.29%	71.43%
No hay mal que por good no venga.	9.52%	9.52%	80.95%
Le dije hasta tomorrow.	33.33%	9.52%	57.14%
Equivalence Constraint			
El jefe no want to pay us.	4.76%	9.52%	85.71%
Sacó una foto de la casa blue.	19.05%	14.29%	66.67%
El niño le hit.	0.00%	14.29%	85.71%
Mario doesn't lee revistas.	4.76%	14.29%	80.95%
Subject Pronoun + Verb Constraint			
Yo went to the store.	4.76%	9.52%	85.71%
Verb + Infinitive Complement Constraint			
El perro no quiere eat his food.	4.76%	14.29%	80.95%
	Accept	**Unsure**	**Reject**
No Constraint Violations			
I told you que no iba a jugar contigo.	42.86%	19.05%	38.10%
Quiero ir a la shoe store.	38.10%	14.29%	47.62%
That's the lady que tiene cuatro hijos.	42.86%	19.05%	38.10%
Luisa estaba reading the newspaper.	28.57%	14.29%	57.14%
Mi hermanito doesn't want to go to school.	47.62%	14.29%	38.10%
Vamos al soccer game.	52.38%	4.76%	42.86%

Table 6a. Grammaticality judgments of adult respondents

The adult respondents (Table 6a) were most successful in identifying the V items, although their identification of the No-V items was less apparent, for the reasons explained above. Still, if 38.1 % of the rejections of No-V items are removed, it again becomes clear that the adult respondents were successful in identifying the No-V items as well.

The monolingual students (Table 6b) had rejection rates comparable to the adults on the all the V items except two of the equivalence constraint items; "*Sacó una foto de la casa* ***blue***," and "*Mario doesn't* ***lee revistas***," both items being rejected by only 26.32% of the respondents. "*Sacó una foto de la casa* ***blue***" was also not identified as a violation of the equivalence constraint by the bilingual students, most of who indicated that they were "unsure" about the item.

Monolingual Students	**Accept**	**Unsure**	**Reject**
Free Morpheme Constraint			
Estaba runeando in the library.	26.32%	15.79%	57.89%
No hay mal que por good no venga.	10.53%	26.32%	63.16%
Le dije hasta tomorrow.	36.84%	5.26%	57.89%
Equivalence Constraint			
El jefe no want to pay us.	0.00%	5.26%	94.74%
Sacó una foto de la casa blue.	52.63%	21.05%	26.32%
El niño le hit.	15.79%	10.53%	73.68%
Mario doesn't lee revistas.	42.11%	31.58%	26.32%
Subject Pronoun + Verb Constraint			
Yo went to the store.	10.53%	15.79%	73.68%
Verb + Infinitive Complement Constraint			
El perro no quiere eat his food.	15.79%	21.05%	63.16%
	Accept	Unsure	Reject
No Constraint Violations			
I told you que no iba a jugar contigo.	57.89%	15.79%	26.32%
Quiero ir a la shoe store.	47.37%	10.53%	42.11%
That's the lady que tiene cuatro hijos.	78.95%	10.53%	10.53%
Luisa estaba reading the newspaper.	21.05%	26.32%	52.63%
M hermanito doesn't want to go to school.	84.21%	10.53%	5.26%
Vamos al soccer game.	89.47%	0.00%	10.53%

Table 6b. Grammaticality judgments of students in English class

The bilingual group was more successful than the monolingual students at

identifying violations of the equivalence constraint, while monolingual students were more able to identify violations of the free morpheme constraint. However, neither group of students matched the success of the adults at identifying violations of any of the constraints. After removing the adult respondents who rejected all the items, the adults were also more successful at identifying items that did not violate linguistic constraints on code switching.

Table 6c. Grammaticality judgments of students in bilingual class

One item, included among the No-V items, and not violating any of the constraints identified in section 2.2 of this paper, was "*Luisa estaba* ***reading the newspaper***." (*Luisa was* ***reading the newspaper***.) Yet, this item was rejected by the majority of respondents of all groups. This fact seems to suggest that the item was perceived as ungrammatical in some sense. The answer can be found in Timm, who observed that "[v]erb phrases containing auxiliaries and

main verbs are normally found only in unilingual constructions." The respondents had thus identified an additional linguistic constraint on code switching which was not identified as such, at the time of the questionnaire development, by the author of this paper.

In the case of the item "*Sacó una foto de la casa **blue***" (*He took a picture of the **blue** house*), the explanation for the disparity of the responses is less clear. Adults rejected the item, bilingual students were predominantly unsure about the grammaticality of the item, and the majority of monolingual students accepted the item. On the surface, the item appears to be a violation of the equivalence constraint, as Spanish and English have different adjective placement rules. Poplack reports that there were very few constructions of this type in the data she had collected. Timm, interestingly, looks at code switching within noun phrases of the "determiner + noun + adjective" type in some depth, yet fails to consider the word order and switch points exemplified by "*la casa **blue***:" Spanish word order and a single switch before the last constituent. (Spanish/Spanish/English constituent language combination.) However, Timm reports that a construction like "*his favorite **lugar,***" essentially a mirror image of the construction described above, with English word order and English/English/Spanish constituent language combination was one of the few constructions of this kind which was judged "fully or marginally acceptable" by his informants.

Interestingly, the constraint violations described in Timm had the highest rates of recognition of any in the survey. "*El niño le **hit,**"* classified by Timm as a specific type of violation of the equivalence constraint which prohibits switches between the clitic pronoun and the verb, was rejected as ungrammatical by 77.36

% of all respondents. Likewise, "*El jefe no **want to pay us**,*" as a violation of his constraint against switches between the negative and the verb, was rejected by 90.57 % of the respondents, *"El perro no quiere **eat his food**,"* which switches between the verb and its infinitive complement, was rejected by 71.7% of the respondents, and the construction which switched between the subject pronoun and the verb, *"Yo **went to the store**,"* was rejected by 75.47% of the respondents. MacSwan (1997), in his summary of the linguistic constraints on code switching proposed by researchers working with diverse language pairs, notes that the constraints reported in Timm were the least often disproved by counterexample.

If we consider MacSwan's (2000) observation that the Spanish "no" behaves as a clitic, it is possible to distinguish what Timm describes as the "tight link" between subject and object pronouns and the constituents of the verb phrase. That the constructions which violated this link: subject pronoun + verb, clitic + verb, negative + verb, verb + infinitive complement, and aux + verb, are those most recognized and rejected by all respondents, suggests that the verb system is, as Timm has alleged, inviolable.

5.5 Correlations

Relationships between the factors of knowledge, as demonstrated by responses to the grammaticality, code switching behavior, as reported in the survey, and attitudes toward code switching, varied greatly among the groups. Adults showed higher correlations than the children between all combinations of factors (Table 7), but especially between their attitudes toward code switching

and their practice of it (.70721). The bilingual and monolingual student groups did not show such high correlations among any of the factors. Bilingual students showed a moderate correspondence between all sets of factors, and monolingual students showed only low correspondences between factors. The difference between the two student groups in levels of correlation indicated that another approach to grouping the students might be more revealing.

Correlation of:	**CS behavior to Knowledge**	**Knowledge to Attitudes**	**Attitudes to CS behavior**
Adults	.56008	.53889	**.70721**
Students-bilingual	**.50007**	.45410	.45391
Students-English	.20401	**.27738**	.07759

Table 7. Correlations of factors related to code switching

In table 8 the students and adults are divided into groups according to the number of languages they reported speaking at home, and a clearer pattern emerges.

Correlation of:	**CS behavior to Knowledge**	**Knowledge to Attitudes**	**Attitudes to CS behavior**
Adults-One home language	**.74092**	.64803	.58705
Adults- Two home languages	.33842	.43679	**.83727**
Children- One home language	**.66609**	.57942	.14119
Children- Two home languages	.13337	.24431	**.34158**

Table 8. Correlations of factors related to code switching, by home language use.

The adult groups still demonstrated the strongest correlations, but the student home language groups corresponded with their adult counterparts, suggesting that a similar dynamic is at work in both of the groups. Among adults and children who report using one language at home, the strongest correlation is

between code switching behavior and knowledge, with correlation coefficients of .74092 for the adults and .66609 for the students. Among respondents who reported using two languages at home, the highest correlations were between attitudes about code switching and behavior. Adults who used two languages at home showed a correlation of .83727 between the two factors, and the corresponding group of children had a more moderate correlation coefficient of .34158.

In summary, it can be said that, among the respondents who report speaking one language at home, those respondents who practiced code switching also had a higher level of linguistic knowledge about the practice. For respondents who reported using two languages at home, linguistic knowledge of code switching did not correlate strongly with practice of code switching, a discrepancy which may be explainable if we consider that respondents from two-language home environments are more likely as a group to be balanced bilinguals than those from monolingual home environments. This difference can be demonstrated graphically, as in table 9:

One-language home: **Practice of CS <=> Linguistic Knowledge of CS**
Two-language home: **Practice of CS <=> Attitudes toward CS**

Table 9. Factors which affect code switching behavior.

Although correlation cannot be considered causation, Table 9 demonstrates that different factors are more accurate predictors of code switching behavior, depending on home language use.

	Do code switch	Unsure	Do not code switch
One home language (21)	**15 (71.4%)**	1 (4.8%)	5 (23.8%)

Two home languages (32)	**25 (78.1%)**	2 (6.3%)	5 (15.6%)

Table 10. Code switching behavior, by home language use.

Table 10 demonstrates that respondents from two-language home environments tended to code switch more than those from one-language home environments, possibly because those from a one-language home environment are either English or Spanish dominant, and thus less comfortable with the more complex intrasentential code switching being examined in this study. Among respondents from a one-language home environment, those who had a higher level of linguistic knowledge about code switching were those who reported that they code switched. Language proficiency, then, as demonstrated by either home language use or linguistic knowledge of code switching, appears to be the factor, which, after age, most determines code switching behavior. Attitude toward code switching correlates to code switching behavior only in the group, which, by virtue of its bilingual home language environment, may be considered the most proficient in both languages.

The correlation between code switching behavior and attitudes was higher than might be predicted, given the research findings of Labov and Fernández, discussed in section 2.3. It may be noted that attitudes about code switching were less of a predictor for code switching behavior among those respondents who are, arguably, less balanced bilinguals, in as much as home language use can be construed to be an indicator of bilingual proficiency. This may indicate that less balanced bilinguals are also less resolute in their attitudes about code switching, or, as Poplack has observed, that they are less likely to engage in intrasentential switching. No definite conclusions can be drawn about the

reasons for the disparities between groups without a measure of bilingual language proficiency of the respondents as part of the data.

6. Conclusions

This study supports the developmental view of code switching proposed by Genishi, Genesee and McLaughlin. The adults were able to identify ungrammatical code-switched utterances with greater accuracy and confidence than the children. Students at this age recognize some of the social uses of CS, as well as some of the biases against it, and hold some general opinions about the practice, but their linguistic knowledge about CS is incomplete.

The degree to which an individual is proficient in both languages may be a secondary variable in code switching knowledge and behavior, as Poplack has suggested. No measure of language proficiency was included in the data; therefore no conclusions can be drawn about the reasons for the different level of code switching knowledge among the groups of same-age students. Future investigations into the code switching knowledge and behavior of children and adults must include a specific measure of language proficiency, which I am convinced will serve to explain many of the differences between respondents. Home language use, in this study, served as a rough approximation of language proficiency, but obviously it is an imperfect substitution.

The "grammaticality judgment" approach to determining linguistic knowledge has received wide criticism for being artificial and contrived. A more thorough and authentic assessment of an individual's linguistic knowledge about

code switching, as well as her code switching habits, must include observations of code switching behavior in naturalistic environments. These environments must include both formal and informal settings, in order to accurately reflect the full extent of an individual's knowledge about code switching.

That code switching occurs in the classroom where bilingual students are present is empirically undeniable. Phillips and Martin-Jones have documented the nature of bilingual and code switched discourse in the classroom, and report that code switching as practiced by educators often serves to enforce the power structure in the classroom. Seventy percent of teacher code switching from Spanish to English is for what Phillips describes as "disciplinary-manipulative" purposes, and serves to reinforce the dominant language and to further marginalize the subordinate language, the native language of the students. This, and the pervasive belief even among bilingual educators that code switching reflects "semilingualism," and lower academic proficiency, has led to tacit tracking of students who code switch, MacSwan (1997) alleges, and affects their self-perceptions, and ultimately their academic achievement.

Pham reports that children's attitudes toward code switching are greatly affected by the attitudes of their caregivers. A recognition on the part of teachers of the expressive power of code switched discourse, and the sophisticated linguistic knowledge required to effectively employ the mode, should serve to alter the prejudicial opinions they have about the practice. MacSwan (1997) maintains that code switching significantly enhances the expressive capacity of an individual; McLaughlin, and McLaughlin, Blanchard and Osanai also urge educators to recognize the communicative and metaphorical values of code

switching. Code switching, according to the researchers is a device of "great semantic power." Children who code switch are expanding their code switching strategies from the merely communicative to the rhetorical, and the well-informed educator can assist in this development, just as she assists the development of other communicative capacities of her students.

7. References

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8. Appendices

8.1 Test of Grammaticality

Mark ☺ if the sentence sounds **correct**,
mark ☹ if the sentence **does not sound correct**,
or mark 😐 if you are **not sure.**

☺😐☹ *El jefe no* want to pay us.
☺😐☹ I told you *que no iba a jugar contigo*.
☺😐☹ *Quiero ir a la* shoe store.
☺😐☹ *Estaba runeando* in the library.
☺😐☹ That's the lady *que tiene cuatro hijos*.
☺😐☹ *Luisa estaba* reading the newspaper.
☺😐☹ *Le dije, hasta* tomorrow.
☺😐☹ *No hay mal que por* good *no venga*.
☺😐☹ *Yo* went to the store.
☺😐☹ *Mi hermanito* doesn't want to go to school.
☺😐☹ *Sacó una foto de la casa* blue.
☺😐☹ *Vamos al* soccer game.
☺😐☹ *El perro no quiere* eat his food.
☺😐☹ *El niño le* hit.
☺😐☹ Mario doesn't *lee revistas*.

8.2 Attitude Survey, Home Language Use, and Code Switching Behavior

Mark ☺ if you **agree** with the statement,
mark ☹ if you **do not agree**,
or mark 😐 if you are **not sure**.

☺😐☹ It sounds friendly when people mix Spanish and English.

☺😐☹ It bothers me when people mix Spanish and English.

☺😐☹ People mix Spanish and English because they do not know either one well.

☺😐☹ It is easy to understand a person who mixes Spanish and English.

☺😐☹ I sometimes use Spanish and English in the same sentence.

What languages does your family speak at home?

_____