The vast majority of work on CS has involved native bilinguals who acquire their languages naturalistically, typically in their families and communities. These are the same individuals defined as "heritage speakers" in other research. Explorations of the CS behavior of native bilinguals suggest that CS behavior is linked to proficiency in both languages. Poplack (1980) found a clear correlation between reported and observed bilingual ability and CS type: Bilinguals produced more intrasentential switches than speakers who were Spanish dominant (1980:255). McClure (1981) and Zentella (1997), too, found that children with stronger Spanish codeswitched differently than those with weak Spanish.

The fact that proficiency in the two languages has been linked with different CS production

exercise agency, or simply accesses one word more quickly than another? This problem plagues analyses of CS among L2 speakers as well as native bilinguals (Zentella 1997) and makes it difficult to compare naturalistic CS behavior reliably. Stronger support for Liebscher & Dailey-O'Cain's (2004) claim that L2 adults CS in similar ways to native bilingual adults would consist of comparisons of larger corpora in a variety of naturalistic contexts evidencing similar lexical, semantic, and syntactic traits of CS as that found among native bilinguals.

A similar question is whether HS and L2 children CS in comparable ways. Some studies suggest that children's code-switching patterns change over time, with early code-switching consisting mainly of lexical items and later code-switching consisting of longer constituents (McClure 1981; Meisel

points of infelicitous CS. Note that Anderson (2006) uses the terms "(un)grammatical" and "(in)felicitous" synonymously. We prefer the terms "(in)felicitous" because all grammatical constraints that have been proposed for CS have encountered counterexamples (Thomason 2001). Thus, certain switches may be infelicitous (uncommon, often avoided) but not necessarily ungrammatical.

2.3. Research questions and hypotheses

Our research questions and hypotheses were as follows.

Research question 1: Do heritage speakers of Spanish show different reactions to oral CS narratives compared to L2 learners? We hypothesize that HS will accept felicitous CS at a higher rate and reject infelicitous CS at a higher rate, while L2 learners will show ratings more in the middle for both kinds of CS.

Research question 2: Does familiarity with a story have an effect on CS ratings, and if so, is the effect similar for HS & L2 learners? Based on Anderson (2006), we hypothesize that familiar stories will elicit higher acceptability ratings regardless of their felicitousness. We have no reason to expect that HS and L2 will exhibit different behavior on this variable.

Research question 3: Do HS & L2 learners respond in the same ways to particular CS switch points? No research to date has examined reactions to different switch points, so we tentatively offer a similar hypothesis as in research question 1: HS will react to particular switch points differently than L2 learners.

3. Methodology
3.1. Participants & materials

The participants were students at a large public urban Midwest university. A total of 606 responses were received, of which 439 were complete. Due to the linguistic diversity of the student body, a total of 123 of the L2 Spanish participants fell into the category of speakers of Languages Other Than English (LOTE). These participants, as native bilinguals of another language in addition to English, might have been code switchers themselves (albeit not in Spanish) and therefore may have different reactions to CS than the participants who grew up in monolingual households. For this reason, the LOTE participants were analyzed separately. Table 1 displays general characteristics of the participants.

Table 1. Participants

Group	n
HS	123
L2	193
LOTE	123

A total of 123 heritage speakers of Spanish (enrolled in a 3rd or 4th semester Spanish for HS course), 193 L2 learners of Spanish, and 123 LOTE speakers completed our survey. All were enrolled in 4

2 provides a sample of each switch type, felicitous and infelicitous, from the different stories (taken from Anderson 2006).

Table 2. Examples of codeswitches

Type of story	Type of switch	
	Felicitous	**Infelicitous**
Cinderella (familiar)	"With all of the suffering, él también murió."	"Her father had vuelto a casarse con una viuda que tenía dos hijas."
Mouse (unfamiliar)	"Ya que hemos hecho un viaje tan largo, voy a ofrecerte something delicious to eat."	"La ardilla no had anything else to offer his friend besides beans, nuts and bread."

3.2. Procedure

Participants were first asked a series of background questions about course level, experience with Spanish (either spoken in the home or learned in school) and parents' country of origin. These and other questions sought to confirm the HS, L2, or LOTE background of each student. They were then asked a series of questions about the act of CS itself, such as whether they had ever heard people CS and whether CS bothered them, and asked to select from a list of responses including "Totally disagree," "Sort of disagree," "S

The present study focuses on the ratings of actual codeswitched language and does not report this data. After listening to the first story and answering the 3 questions about the narrator, participants were asked to read[8] and evaluate specific items from the story they had just heard. Nineteen different CS items were presented to Group 1, and fourteen items to Group 2. These items were evaluated on the following scale:

> 1= Definitely sounds bad. No one would say this.
> 2=Sounds a bit odd. Probably not common to hear this.
> 3=Mostly OK. Maybe someone would say this.
> 4=Definitely OK. Sounds like something a person would say.

We decided to present the reading of samples from story 1 immediately after hearing story 1 so that the narrators' voice producing the CS might be fresher in participants' minds. Although reading CS samples from story 1 prior to listening to story 2 may have

Table 5. Means of acceptability for each language group

	Familiar: Cinderella		Unfamiliar: Mouse	
	Felicitous	Infelicitous	Felicitous	Infelicitous
Heritage	2.64	2.27	2.36	2.22
L2	2.63	2.20	2.50	2.30
LOTE	2.67	2.11	2.25	2.43
Overall	2.65	2.20	2.41	2.31

Descriptively, the overall highest rate of acceptance was given to the felicitously switched familiar story, and the lowest rating was given to infelicitously switched familiar story. That is, the familiar story received both the highest and the lowest overall ratings. On the unfamiliar story as well, the felicitous switches received higher ratings of acceptability than infelicitous switches.

A MANOVA analysis was conducted in order to compare felicitous and infelicitous switches across language groups and story types (familiar vs. unfamiliar). Our first hypothesis, that HS will accept felicitous CS at a higher rate than L2 and reject infelicitous CS at a higher rate than L2, would entail differential acceptance rates between heritage speakers and L2 learners of Spanish. Results of statistical analysis, however, revealed no main effect for language group.

Regarding our second hypothesis, that familiar stories will elicit higher acceptability ratings regardless of their felicitousness, we find an interaction between familiarity of the story and felicity, partially confirming our hypothesis. Significant main effects were found for story type on both the infelicitous ($F = 4.005$, $p < .05$) and felicitous ($F = 14.273$, $p < .05$) ratings. Follow-up pairwise comparisons revealed that for infelicitous switches, the unfamiliar story received significantly higher acceptance rates than did the familiar story ($p < .05$). Conversely, for felicitous switches, the familiar story received significantly higher acceptance rates than the unfamiliar story ($p < .05$).

Our third research question asked whether heritage speakers and L2 learners respond in similar ways to particular types of switches. Mean acceptability for infelicitous and felicitous switches are presented in Tables 6 and 7.

Table 6. Mean acceptability ratings, infelicitous switch points

Aux + VP	NPPro + VP	Neg + VP	Det + NP

effects for language background groups or story type. Thus, our third hypothesis that HS will react to particular switch points differently than L2 learners was not supported.

A significant interaction, however, was found between language group and story type for the Det + NP switches (F (2, 439) = 3.726, p < .05), indicating that the language groups responded differently to this type of switch depending on whether the story was familiar or unfamiliar. Whereas the HS and L2 language groups accepted more infelicitous Det + NP switches in the familiar story, the LOTE language group accepted more of these switches in the unfamiliar story.

Table 7. Mean acceptability ratings, felicitous switch points

	V + DP	DP + VP	AdvP + S

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6.4. The city mouse and the country squirrel ("Mouse"), Infelicitous CS

Había una vez un ratón de ciudad que fue a visitar a un **old friend, a squirrel, who lived in the country**. La ardilla de campo era sencilla y bondadosa, y recibió con emoción la llegada del ratón de ciudad. La ardilla no **had anything else to offer his friend besides**

Potowski, Kim, Jill Jegerski & Kara Morgan-Short. (2009). The effects of instruction on subjunctive development among Spanish heritage language speakers. *Language Learning 59* (3): 537-579.

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2012.   ( ).

Selected Proceedings of the 14th Hispanic Linguistics Symposium,

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