



## Influences on Language Code-switching Induced in a Social Setting

Lily Halsted<sup>1\*</sup>, Kristina Murphy<sup>1</sup> and Aimee Nieuwenhuizen<sup>2</sup>

<sup>1</sup>Queens University of Charlotte, Charlotte, NC, USA.

<sup>2</sup>University of Denver, Denver, CO, USA.

### **Authors' contributions**

Author LH planned and designed the experimental protocols and survey questions, secured IRB approval, performed the statistical analysis, and wrote the manuscript. Author KM recruited subjects, supervised the other lab assistants, and served as the monolingual researcher during the subject sessions. Author AN translated the interview questions from English to Spanish, conducted all of the Spanish language interviews and recorded subject behavior. All authors were involved in the literature searches.

### **Article Information**

DOI: 10.9734/BJESBS/2015/20135

Editor(s):

(1) Sagini Keengwe, Department of Teaching and Learning, University of North Dakota, USA.

Reviewers:

(1) Anonymous, University of New Mexico-Gallup, USA.

(2) Anonymous, Ozarks Technical Community College, USA.

(3) Meenakshi Raman, Birla Institute of Technology and Science,  
India.

Complete Peer review History: <http://sciencedomain.org/review-history/11251>

**Original Research Article**

**Received 13<sup>th</sup> July 2015**  
**Accepted 20<sup>th</sup> August 2015**  
**Published 4<sup>th</sup> September 2015**

### **ABSTRACT**

**Aims:** To examine the phenomenon of bilingual code-switching in an experimental setting and identify language heritage influences related to any observed code-switching.

**Study Design:** Conversational code-switching has not been examined in an experimental setting before. In this study bilingual (Spanish/English) subjects were interviewed in Spanish. During the interview a non-Spanish-speaking researcher interrupted the proceedings and remained in the room. The interviewer continued the interview in Spanish and noted whether the subject switched from Spanish to English during the remainder of the session.

**Place and Duration of Study:** Department of Psychology, Queens University of Charlotte, January 2015 to April 2015.

**Methodology:** We included 24 subjects (4 men, 20 women; age range 17-82 years) fluent in both

\*Corresponding author: E-mail: [halstedl@queens.edu](mailto:halstedl@queens.edu);

Spanish and English. Subjects conversed with a researcher in Spanish while answering a large number of questions about themselves and their families. After the second researcher entered the interview room speaking English to the interviewer, the interview continued in Spanish and it was noted whether the subject spoke Spanish or code-switched and started using English. At the conclusion of the interview the subjects completed an extensive online survey (in English) about their language and cultural background.

**Results:** Despite specific instructions to speak only in Spanish, 33% of the 24 subjects were observed code-switching during this study. The code-switchers were found to be significantly older than the non-code switchers (38 years versus 24 years,  $P = .03$ ). There was a trend that code-switchers were more likely to be community members ( $P = .05$ ) and to have mothers who were born in the in the United States ( $P = .05$ ).

**Conclusion:** Conversational code-switching can be induced under a laboratory setting. This makes it possible to look at social and familial influences related to language and culture to try to predict who is most likely to code-switch.

*Keywords: Code-switching; social pressure; bilinguality; heritage language.*

## 1. INTRODUCTION

Code-switching is defined as changing back and forth between two languages in a single conversation and can involve phrases, clauses or even complete sentences [1,2]. Code-switching is a common practice among bilinguals. It is different from *code-mixing* which has been described as changes only at the individual word level, as well as *language borrowing*, which deals with loaning words from a different language to convey a message [3]. Bilinguals tend to move between languages for many different reasons. Some semantic reasons include 1) ease of communication, such as when they simply do not know a proper term in a language and have to switch to another language in order to get their point across, 2) when there is a need to paraphrase, or 3) when a concept has no exact equivalent in a language and the switch is necessary to convey the message. Other causes of code-switching are social in nature, including wanting to exclude others from a conversation, or to ease tension or to communicate friendship [3].

Primarily, code-switching is not a result of lack of knowledge or ability in one or both languages; based on the current understanding of this phenomenon, it requires at least some level of grammatical competence as monolinguals [4]. Interestingly, code-switching has been reported when bilinguals are dealing with a topic that causes anxiety or is too embarrassing to discuss in their first language such as sexual attitudes or embarrassing experiences [5,6]. Even children with specific language impairment and with language difficulties still tend to code-switch [7]. Frequent code-switching has also been

associated with a minority language losing ground to a majority language [8].

Some of the studies that measured the reaction time of bilinguals during code switching have come up with the concept of "switching costs," which indicates that bilinguals respond slower in naming tasks when they move from one language to another rather than when they respond in the same language [9]. However, this type of delay is seen primarily in involuntary switches. When bilinguals choose to switch from one language to another, it has been shown to not have a switching cost and, in fact, facilitates the conversation [10]. Another cognitive aspect of code-switching deals with the relative dominance of a first language versus second language. Based on one of the more recent studies on language switching, Spanish-English bilinguals were slower to switch from their second language, which is presumably weaker, to the first language, than from first language to the second language in naming tasks [11].

It is important to point out that most cognitive studies in code-switching are based on naming tasks involving isolated words so that reaction times can be measured more accurately. This is very different from code-switching during a conversation where a bilingual chooses to move from one language to another. Such laboratory techniques are very different from voluntary and natural code-switching as the subject is forced under time pressure to respond in one language versus another.

Social pressure and situations can also play a role in code-switching. Language is a tool of communication and sometimes bilinguals have to

move from one language to another in order to communicate more efficiently or accommodate the needs of a situation. This situational aspect of code-switching is evidenced by the finding that bilingual speakers are less likely to code-switch during an interview (twice per hour) than when they narrate a story (27 times an hour) [12]. This is reasonable as narration is more linguistically challenging and requires more sophisticated linguistic operations such as paraphrasing, circumlocution, and intentional manipulations among others [13].

Code-switching can be influenced by not only the listener but also by others who are within the hearing range of a conversation. After all, the use of a heritage language may depend on the comfort of bilinguals to use it in the presence of others. If a bilingual's heritage language has been ridiculed in the past or they were somehow too embarrassed to use their first language, then they may choose to code-switch in the presence of monolingual speakers to avoid discomfort. Not surprisingly, heritage speakers with strong cultural ties and family support tend to feel more secure in using their first language in public and are far less concerned about the judgment of others about their language [14]. Therefore, it is expected that code-switching should occur less frequently among heritage speakers.

In order to test these assertions, an experiment was designed to see if subjects would code-switch at the first possible opportunity, despite specific instructions to speak only in the heritage language. Additionally, based on an interview and an extensive written survey, the linguistic background of the code-switching and non-code-switching subjects and their attitudes about their first language were investigated.

Although at the start of the interview all the subjects were asked to speak only in Spanish and the interviewer also only spoke in Spanish during the entire experiment, it was predicted that a significant portion of the subjects would still end up code-switching to English in the presence of a second monolingual (English) investigator. It was expected that the individuals who would code switch would be the subjects who were less fluent in Spanish and had learned their Spanish later during childhood or adulthood. This hypothesis was based on the presumed Spanish language competence of the subjects and the expectation that code-switching would provide a relief to subjects perhaps pushed to the edge of their limited Spanish language mastery.

It was also expected that the subjects who code-switched would be more likely to come from families where Spanish was not the heritage language and that they and their parents would be more likely to have been born in the United States. This expectation relates to presumed social influences and expectations among language speakers. Subjects with a stronger sense of connection to their heritage and language would be less prone to code-switch out of a heritage language when in the presence of a tangential non-heritage speaker.

Finally, code-switchers were also expected to report a greater degree of past social embarrassment associated with speaking Spanish in public. Such embarrassment could occur with both fluent as well as less fluent Spanish speakers based on particular real-world situations the subjects may have experienced throughout their lives. This prior sense of social embarrassment was expected to be a factor in leading to more code-switching in the present situation.

## 2. MATERIALS AND METHODS

### 2.1 Participants

The subjects of this experiment were recruited from among the student population and community members of Queens University of Charlotte, in Charlotte, North Carolina, United States. The participants included 24 students and community members. Out of the 24 subjects, 20 were females and four were males. This is consistent with the average student population of Queens University of Charlotte which has a much larger population of female students.

The participants ranged in age from 17 to 82 years, with an average age of 29 years, and a median age of 21 years. All of the participants were Spanish-English bilinguals. The level of mastery of each of the two languages naturally varied among subjects; nevertheless, all subjects were expected to be able to converse in both languages and be able to respond to an extensive series of verbal questions in Spanish. Table 1 presents a summary of key subject demographic characteristics. In appreciation of their participation the subjects who were students received extra credit for their classes and the community members were compensated with a \$5 Starbucks gift card.

## 2.2 Procedures and Measures

This study included two different methods. The first part of the study was an extensive verbal interview with the subjects conducted in Spanish which included a pre-planned opportunity for the subjects to potentially code-switch. The second part of the study was an extensive online survey (in English) which the subjects were required to complete at the end of their interview.

**Table 1. Subject characteristics**

<b>Number of subjects</b>	24
<b>Sex</b>	
	Male 83%
	Female 17%
<b>Age range</b>	17 to 82
<b>Mean age</b>	29
<b>Median age</b>	21
<b>Students</b>	83%
<b>Community members</b>	17%
<b>Speak Spanish</b>	100%
<b>Learned Spanish before English</b>	71%
<b>Born in USA</b>	46%

### 2.2.1 The experiment

Initially, each individual participant was ushered into an interview room by a monolingual English-speaking investigator. There the subjects were introduced to a fluent bilingual interviewer at which point the monolingual investigator left the room. The interviewer greeted the subject in Spanish and only spoke in Spanish throughout the entire experiment. The interviewer explained to the subjects that they would be interviewed about their background, their family's background and their own usage of the Spanish language. The subjects were asked to only converse in Spanish during the interview and were alone in the room with the bilingual interviewer. The subjects were informed that the interview would be video-recorded with a hidden camera.

During the interview, depending on their linguistic background, subjects answered anywhere between 25 to 38 questions in Spanish over the course of up to 40 minutes. These questions ranged from simple demographic information including age, year in school and major (for students), to their linguistic background, their family structure and a listing of all the members of their family who spoke Spanish and where and how the subjects themselves learned Spanish. Other interview questions included the level of

mastery of the Spanish language and the frequency and occasions that they would use their Spanish (e.g., at home or with friends). The set of interview questions was constructed first in English then translated into Spanish by one of the researchers. The Spanish language version was then reviewed by a native Spanish speaker to assure the accuracy of the translation. Both the Spanish and English versions of the interview questions are presented in the Appendix (although only the Spanish language version was presented to the subjects).

At a particular point in the interview, when the researcher had gone through about three-fourths of the survey questions, she discreetly signaled the first investigator using a hidden cell phone to come back into the room. This return was staged to appear as unrelated to the subject or what was going on in the interview room. The first (English-speaking) investigator pretended that she had some work-related questions she needed to ask of the interviewer.

The interruption by the investigator and subsequent brief discussion was conducted in English by both researchers and lasted about 30 seconds. After the questions were answered the English-speaking investigator remained in the room pretending to do paperwork at a side table. Meanwhile, the interviewer resumed the interview in Spanish. At this point it was recorded if the subject code-switched given the interruption in English and the presence of a monolingual English speaker in the room. The interviewer completed the remainder of the interview and then had the subject complete the online portion of the survey. For the purpose of this study, code-switching was operationally defined as switching to English during the interview for at least two to three sentences or a number of utterances. Simply, borrowing a word or two from English was not considered code-switching.

### 2.2.2 The survey

The electronic survey portion of the interview was conducted in the same room at the conclusion of the interview, on a designated lab computer. An extensive survey was developed for this study. Each subject was asked to complete 87 questions. Some were the same types of questions that were asked during the verbal interview such as basic demographic questions, the level of use and mastery of Spanish and the linguistic background of the

family. However, the survey also contained many more questions about the cultural connection of the subject to the Spanish/Hispanic culture and whether or not the subjects had ever been made fun of or felt embarrassed when using their Spanish in the presence of non-Spanish speakers. Across the survey, to help assess the reliability of the instrument, multiple questions were used to ask about a given topic in two or more ways. For example, early on in the survey subjects were asked “growing up, which of your family members spoke Spanish” and then much later “growing up, were there other family members who lived in your home who regularly spoke Spanish and what is their relationship to you?” The complete set of written questionnaire items is included in the Appendix.

At the conclusion of the survey the subjects were debriefed and thanked for their participation.

### 3. RESULTS

#### 3.1 Code-switchers

The key focus of this study was to see whether subjects would code-switch from Spanish to English when interrupted by an English speaker during an interview conducted entirely in the heritage language (Spanish). Additionally, assuming code-switching did occur, an additional goal was to identify characteristics of the subjects' linguistic backgrounds that might vary between the code-switchers and the non-code-switchers.

In this experiment fully 33% of the subjects were found to code-switch during the interview in the presence of a monolingual English-speaking investigator. This cross-linguistic movement was not merely using a word or two in the dominant language but consisted of a stream of conversation lasting at least thirty seconds and including several utterances, all while the interviewer continued to ask the subjects questions in Spanish. Considering the strict instructions given to the subjects to only speak Spanish during the entire interview the 33% figure for observed code-switching was much higher than what had been expected at the outset of the study.

#### 3.2 Correlates of Code-switching

What factors in the subject's linguistic backgrounds might make some bilinguals more

likely to code switch than others? Table 2 presents the breakdown of subject characteristics comparing code-switchers to non-code-switchers. Contrary to the initial hypotheses, neither the level of Spanish language fluency nor place of birth was a significant predictor of code-switching. Fully 75% of code-switchers as well as 75% of non-code-switchers rated themselves as completely fluent in Spanish. Similarly, 50% of code-switchers and 56% of non-code-switchers were born outside of the United States. There were also no significant differences for other factors like age of Spanish language acquisition or number of years speaking Spanish. The only subject characteristic that varied significantly between the two groups was age. The code-switchers were much more likely to be over 25 years of age compared to the non-code-switchers (63% versus 6%; chi-square (1) = 9.0,  $P = .006$ ). Directionally, the code-switchers were also more likely to be community members compared to the non-code-switchers (38% versus 6%), although this difference was not statistically significant.

There was a directional trend on the question of ever being embarrassed while speaking Spanish in public. Code-switchers reported a slightly higher level of ever being embarrassed (25%) compared to the non-code-switchers (19%), although this difference were not statistically significant. Similarly, although only 50% of the code-switchers reported being very comfortable speaking Spanish in public compared to 75% of the non-code-switchers, this difference was also not significant.

As for the family heritage of the code-switchers, directionally they were less likely to have mothers who were born outside of the United States (63%) compared to non-code-switchers (94%), although this difference was not statistically significant. The country of birth of the fathers indicated a similar pattern (75% versus 94%) but this difference was also not significant. Other factors such as where subjects had learned Spanish (parents, grandparents, school, etc.) did not differ significantly between the two groups of subjects. Table 3 presents the breakdown of family characteristics comparing code-switchers to non-code-switchers.

### 4. DISCUSSION

The central question of this study was whether situational aspects of a conversation (in this

**Table 2. Code-switching subject characteristics**

	<b>Code-switchers</b>	<b>Non-code-switchers</b>	<b>Significance</b>
Percent of subjects	33%	67%	
Percent female	88%	81%	$P = .70$
Percent community members	37%	6%	$P = .05$
Percent who speak Spanish fluently	75%	75%	$P = .99$
Percent who speak Spanish every day	50%	56%	$P = .77$
Percent who learned Spanish before English	63%	75%	$P = .53$
Percent of subjects born outside of US	50%	56%	$P = .53$
Average subject age	38 years	24 years	$P = .03$
Percent of subjects 25 years +	63%	6%	$P = .006$
Average age started to learn Spanish	4 years	2 years	$P = .21$
Average years speaking Spanish	33 years	21 years	$P = .06$
Very comfortable speaking Spanish in public	50%	75%	$P = .22$
Ever embarrassed speaking Spanish in front of non-Spanish speakers	25%	19%	$P = .72$

**Table 3. Code-switching family characteristics**

	<b>Code-switchers</b>	<b>Non-code-switchers</b>	<b>Significance</b>
Percent with mother born outside of US	63%	94%	$P = .05$
Percent with father born outside of US	75%	94%	$P = .19$
Percent learned to speak Spanish from parents	75%	87%	$P = .44$
Mother's first language was Spanish	75%	81%	$P = .72$
Father's first language was Spanish	62%	88%	$P = .16$

case, a verbal interview) could lead to code-switching among bilinguals. To this end, the results were clear. Even though the subjects were not directly addressed by the English speaker and despite clear instructions at the outset to speak only in Spanish, a sizable proportion of the subjects still code-switched. So the presence of a monolingual, especially someone speaking a dominant language like English, can influence Spanish-speaking bilinguals to shift to English.

But could the code-switching have been spontaneous and might it have occurred even without the presence of an English-speaking investigator? Although it is impossible to know for sure what each subject would have done if there had been no interruption by the second researcher, the design of the experiment does shed some light on the question of spontaneity. In this experiment the interruption occurred far into the interview. Depending on the talkativeness of the subjects, this could range from at least ten to over twenty-five minutes into the interview. Given that code-switching did not occur during this long period of initial conversation, then it is reasonable to conclude

that the proximal cause of the code-switching that was observed in this study was the presence of the English-speaking investigator.

As to why the investigator's presence caused 33% of the subjects to code-switch, there could be many possibilities, such as wishing to be respectful of her and include her in the conversation. Conversely, code-switchers may have been embarrassed about speaking Spanish in front of a non-Spanish speaker and code-switched because of lack of comfort and being self-conscious. However, a difference in level of embarrassment between the two groups was not found in this study.

Yet another possibility is that the linguistic capability of the subjects in Spanish were limited and the subjects who code-switched seized the first opportunity to move to their more dominant language; in this case, English. However, the limited fluency explanation is also not supported by the results of this study. The two groups exhibited comparable levels of Spanish language mastery, whether judged by the evaluation of the interviewer who rated the level of fluency at the end of each interview or by the subjects' own

self-ratings of Spanish language fluency. Indeed, a minimum level of fluency may be a necessary (but not sufficient) condition to enable code-switching. Previous research has concluded that code-switching requires a level of mastery of the language and is not merely an escape for those with limited knowledge of a language [4,15].

A key significant finding of this study was that code-switchers were much more likely to be older than non-code-switchers. One possible explanation for this finding is that level of language mastery naturally increases with age (assuming the language is used on a regular basis), so the older code-switchers had a better mastery of the language. A different possibility is that a significant portion of the code-switchers consisted of members of the community and these individuals might be less used to following precise instructions compared to the students. Apart from age, the code-switchers may have been more sociable and felt more compelled to include the English-speaking investigator in the conversation. Based on the present results one can only guess at the precise cause of the code-switching observed among the older subjects. Indeed, it is conceivable that the cause of this code-switching for older subjects could be a combination of some or all of these factors. In future studies using this experimental design, the code switchers could be asked at the end of the interview, if they were aware that they had code-switched and if they could articulate a reason or motivation for their observed code-switching behavior.

Based on our findings, the place of birth of the subjects did not make a difference in code-switching; however, there was a strong but non-significant trend seen in the place of birth of subjects' parents and the likelihood of the subjects code-switching. Based on this trend the subjects who did not code-switch were somewhat more likely to have parents who were born outside of the United States.

The participants whose parents were born outside of the United States could be considered heritage speakers coming from families with a strong cultural and linguistic background brought from their birth countries to the United States. As is the case with many heritage speakers, they tend to have a better mastery of language [16] and come from families with more bilingual members [17,18]. If continuing to speak a heritage language in the presence of other non-

speakers is an indicator of cultural pride in a language, then having parents who are born outside of the US is an integral factor that can lay the foundation for this mastery. As such, we would not expect such individuals to code-switch.

Finally, as to the question of comfort versus embarrassment in using Spanish in front of non-speakers, all the questions related to these topics came from the survey and were based on subject self-report. In hindsight, to try to get a better measure of these dimensions, questions about comfort and embarrassment could have been included in the verbal interview itself or the interviewer could have been asked to rate the level of perceived embarrassment or comfort level of the subjects. Currently, we are working on another study that will include these measures and design improvements. We are also now conducting follow-up studies with Arabic and German bilingual speakers to see if the results observed in the present study are somehow unique to Spanish speakers or can be applied to bilinguals more generally.

## 5. CONCLUSION

In this study, the phenomenon of code-switching was examined through two methods: An experiment and an extensive survey. Fully one-third of the subjects were found to code-switch in the presence of a monolingual investigator. The code-switching subjects were more likely to be 25 years or older. The possible causes and influences of code-switching, in addition to the linguistic heritage of code-switchers and non-code-switchers was examined and discussed. This study contributes to our current understanding of code-switching and possible influences on this linguistic phenomenon. Additionally, it provides a new experimental paradigm for conducting future research which will help further our understanding of the phenomenon of conversational code-switching among bilinguals.

## ETHICAL APPROVAL

This research project was reviewed and approved by the Queens University Institutional Review Board on December 10, 2014, file # 11-14-CAS-01115.

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical

standards laid down in the 1964 Declaration of Helsinki.

## ACKNOWLEDGEMENTS

The authors would like to acknowledge Dr. Marc Halsted for his many contributions throughout this research project. We would also like to thank Rebecca Hankla and Jamie Nigg for their invaluable assistance in recruiting subjects and managing the data collection. Finally, special thanks goes to Lyla Halsted who assisted in manuscript preparation and proofing.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Marian V, Kaushanskaya M. Cross-linguistic transfer and borrowing in bilinguals. *Applied Psycholinguistics*. 2007; 28:269-390.
2. Trask R. *Key concepts in language and linguistics*. London: Routledge; 1999.
3. Baker C. *Foundations of bilingual education and bilingualism* (3<sup>rd</sup> ed.). Buffalo: Multilingual Matters Ltd; 2001.
4. MacSwan J. *A minimalist approach to code-switching*. NY: Garland; 1999.
5. Bond M, Lai T. Embarrassment and code-switching into a second language. *The Journal of Social Psychology*. 2001;126: 179-186.
6. Javier R, Marcos L. The role of stress on the language-independence and code-switching phenomena. *Journal of Psycholinguistic Research*. 1989;18:449-472.
7. Gutierrez-Clellen V, Simon-Cereijidi G, Erickson-Leone A. Code-switching in bilingual children with specific language impairment. *International Journal of Bilingualism*. 2009;13:91-109.
8. Hickey T. Code-switching and borrowing in Irish Journal of Sociolinguistics. 2009; 13:670-688.
9. Meuter R, Allport A. Bilingual language switching in naming: Asymmetrical costs of language selection. *Journal of Memory and Language*. 1999;40:25-40.
10. Gollan T, Silverberg N. Tip-of-the-tongue states in Hebrew-English bilingualism. *Bilingualism: Language and Cognition*. 2001;4:63-83.
11. Macizo P, Bajo T, Paolieri D. Language switching and language competition. *Second Language Research*. 2012;28: 131-149.
12. Zentella A. Integrating qualitative and quantitative methods in the study of bilingual code-switching. Bendiz E (Ed.). *The Use of Linguistics*, 583. New York: New York Academy of Sciences. 1999:75-92.
13. Pavlenko A. Narrative competence in a second language. In Byrnes H, Weager-Guntharp H, Sprang K, editors. *Educating for advanced foreign language capacities: Constructs, curriculum, instruction, assessment*. Georgetown University Roundtable on Languages and Linguistics. Washington, DC: Georgetown University Press; 2005.
14. Halsted L. Social aspects of bilinguality. *International Review of Social Sciences and Humanities*. 2014;8:38-49.
15. Meisel J. Code-switching in young bilingual children. *Studies in Second Language Acquisition*. 1994;16,413-439.
16. Rothman J. Understanding the nature and outcomes of early bilingualism: Romans languages as heritage languages. *International Journal of Bilingualism*. 2009;13(2):155-163.
17. Halsted L. The effects of family structure on the development of bilinguality. *Psychology*. 2014;4(9):688-694.
18. De Houwer A. Parental language input patterns and children's bilingual use. *Applied Psycholinguistics*. 2007;28:411-424.



## APPENDIX

### Spanish-language Interview Questions

#### PREGUNTAS GENERALES:

- 1) ¿Cómo te llamas?
- 2) ¿Cuántos años tienes?
- 3) ¿En qué año de la universidad estás?
- 4) ¿Cuál es el título de tu carrera? ¿Tienes una concentración o subconcentración?

#### ORIGINES DEL IDIOMA:

- Dígame de tu familia.
  - 1) ¿Dónde naciste?
  - 2) ¿Quién vivía con tú durante tu niñez?
- Dígame de tus padres.
  - 1) ¿Dónde nacieron tus padres?
  - 2) (si no nacieron en los EEUU...) ¿Han inmigrado a los EEUU?
  - 3) (si no nacieron en los EEUU...) ¿Cuántos años tenían cuando emigraron a los EEUU?
  - 4) ¿Cuáles son los idiomas que hablaban en sus casas durante sus niñeces?
- Dígame de tus abuelos.
  - 1) ¿Vivían con usted?
  - 2) (si no)... ¿Visitabas mucho con tus abuelos?
  - 3) ¿Dónde nacieron tus abuelos?
  - 4) (si no nacieron en los EEUU)... ¿Han inmigrado a los EEUU?
  - 5) (si no nacieron en los EEUU)... ¿Cuántos años tenían cuando emigraron a los EEUU?
  - 6) ¿Cuáles son los idiomas que halaban en sus casas durante sus niñeces?
  - 7) niñeces?
- Dígame de tus hermanos.
  - 1) ¿Tienes hermanos?
  - 2) (si sí)... ¿Son mayores o menores? ¿Cuántos años tienen?
  - 3) En la casa, ¿qué idioma hablaban durante sus niñeces? ¿Hablaban el mismo idioma en la escuela o en el trabajo?
- Otras preguntas
  - 1) ¿Tú. u otro miembro familiar habláis otro idioma que no sea inglés o español?
  - 2) (si sí)... ¿Cuáles son? ¿Hablaís con fluidez?
  - 3) Vale... ahora que sé esta información, ¿estoy en lo correcto en decir que has aprendido a hablar español en la escuela / la casa?

#### SI APRENDE EN LA ESCUELA:

- 1) ¿Cuándo empezaste aprender español? ¿En qué grado?
- 2) ¿Recuerdas cuántos veces cada semana asistías la clase de español?
- 3) ¿Las clases eran de inmersión lingüística?
- 4) ¿Había un aspecto muy difícil sobre el idioma que habías sido difícil de aprender?
- 5) ¿Todavía hablas, lees, o escribes en español? ¿En qué contexto?

**SI CASA:**

- 1) ¿Qué idioma aprendiste a hablar primer, español o inglés?
- 2) ¿Es tu familia bilingüe (habla y alterna entre dos idiomas o estrictamente habla un idioma)?
- 3) En la escuela, ¿alguna vez te molestaron por hablar en otro idioma?

**Cassidy interrumpe.**

**PREGUNTAS FINALES**

- 1) ¿Has estudiado en otro país con JBIP? O, ¿vas a estudiar en otro país con JBIP?
- 2) ¿Qué clases estás tomando este semestre?
- 3) ¿Estás parte de un fraternidad o hermandad de mujeres?
- 4) (si sí)... Dígame del proceso de iniciación.
- 5) ¿Tienes una parte favorita de ser parte de tu fraternidad / hermandad?
- 6) (si sí)... ¿Sabes lo que quieres hacer después de graduarte?

*La persona completa las preguntas en la computadora.*

**Interview questions (in English)**

**GENERAL QUESTIONS:**

- 1) Tell me your name.
- 2) How old are you?
- 3) What year are you?
- 4) What is your major? What is your minor or concentration?

**ORIGINS OF LANGUAGE:**

- Tell me about your family.
  - 1) Where were you born?
  - 2) Who lived with you growing up?
- Tell me about your parents.
  - 1) Where were they born?
  - 2) (If not born in US)... Have they immigrated?
  - 3) (If not born in US)... How old were they when they immigrated to the US?
  - 4) What languages did they grow up speaking at home?
- Tell me about your grandparents.
  - 1) Did they live with you?
  - 2) (If not)... did you get to see them a lot?
  - 3) Where were they born?
  - 4) (If not born in US)... Have they immigrated?
  - 5) (If not born in US)... How old were they when they immigrated to the US?
  - 6) What language did they grow up speaking at home?
- Tell me about your siblings.
  - 1) Do you have any siblings?
  - 2) (If yes)... Are they older or younger? How old are they?
  - 3) What language did they grow up speaking in the home? At school / work?
- Other questions:
  - 1) Do you or anyone else in your family speak another language besides English and Spanish?

- 2) (If yes)... What language(s)? Are they fluent in those additional languages?
- 3) So based on this, am I correct in saying that you learned to speak Spanish at school / home?

**IF LEARNED AT SCHOOL:**

- 1) When did you start learning Spanish? What grade?
- 2) Do you remember how often you had Spanish classes?
- 3) Were they immersion?
- 4) Did you find anything particularly difficult about learning the language?
- 5) Do you still use your Spanish in some context? If so, what context?

**IF HOME:**

- 1) Did you learn to speak Spanish or English first?
- 2) Was your house fully bilingual (as in you went back and forth between the two languages) or was it a strict "one language" household?
- 3) Were you ever teased for speaking another language at school?

*Cassidy interrupts.*

**LAST SET OF QUESTIONS:**

- 1) Have you gone on a JBIP trip, or are you planning to go?
- 2) What classes are you taking this semester?
- 3) Are you part of a fraternity or sorority?
- 4) Tell me about the rush process.
- 5) What is your favorite part about being in a sorority?
- 6) Do you know what you'd like to do after graduation?

*Interviewee completes survey.*

**Written questionnaire items**

1. Age
2. Sex
3. Place of birth (city, state, country)
4. What year are you in school?
5. Do you speak any languages other than English?
6. Do you speak Spanish?
7. Did you learn to speak Spanish BEFORE you learned to speak English?
8. How old were you when you started to learn Spanish?
9. How old were you when you started to learn English?
10. Approximately how many total years have you spoken Spanish?
11. Do you speak a third language? If so, what is that language?
12. Where did you learn to speak Spanish? Check all that apply.
  - From parents
  - From grandparents
  - From other family members
  - From friends
  - In school
  - While traveling
  - In language classes outside of school
  - Other
13. Growing up, who else in your family spoke Spanish? Check all that apply.
  - Mother
  - Father

Grandparent(s)  
Brother(s)  
Sister(s)  
Cousin(s)  
Aunt(s)/Uncle(s)  
No one else  
Other

14. In what situations do you currently use Spanish? Check all that apply.

At school  
At work  
At home  
With parents  
With friends  
With grandparents  
With brothers/sisters  
With college roommates  
When traveling in another country  
At language school/class  
Other

15. Currently, how much of the time do you speak Spanish?
16. How much do you like speaking Spanish?
17. How well can you speak Spanish?
18. Are you able to READ in Spanish?
19. Are you able to WRITE in Spanish?
20. Do you ever read books or magazines in Spanish for pleasure?
21. Do you ever watch TV shows or listen to radio programs in Spanish?
22. Do you feel proud to be able to speak a second language (Spanish)?
23. Why or why not?
24. How comfortable are you speaking Spanish in public?
25. Why or why not?
26. Do you consider yourself part of a cultural or ethnic group? If so, what is the group?
27. Do you feel proud to be a member of that cultural or ethnic group?
28. Do you feel supported and valued by other members of your cultural or ethnic group?
29. Do you regularly socialize with members of your cultural or ethnic group?
30. Do you participate in the celebrations or special events of your cultural or ethnic group?
31. Do your family members consider themselves part of a cultural or ethnic group? If so, what is that group?
32. Do your family members feel proud to belong to this cultural or ethnic group?
33. Do your family members feel supported and valued by other members of this cultural or ethnic group?
34. Do your family members socialize with other members of your cultural or ethnic group?
35. Do your family members participate in the celebrations or events of this cultural or ethnic group?
36. Has anyone ever made fun of you speaking Spanish?
37. Has anyone ever made fun of your ethnic or cultural group directly to you?
38. To your knowledge, has anyone ever made fun of your family members who speak Spanish?
39. Do you ever feel embarrassed speaking Spanish in front of non-Spanish speakers?
40. To your knowledge, do your family members ever feel embarrassed speaking Spanish in front of non-Spanish speakers?
41. Have you ever attended Spanish language schools or classes?
42. If yes, how old were you when you started those classes?
43. For how many years did you attend those classes?
44. Do you plan to continue to learn/improve/maintain your Spanish language skills?
45. Why or why not?
46. Did your parents encourage/require you to learn your second language?

47. Did your parents require you to go to second language classes?
48. Do you plan to continue to learn/improve/maintain your second language skills?
49. Why or why not?
50. Do you ever feel embarrassed to speak your second language in public?
51. Why or why not?
52. Growing up, were there other family members who lived in your home who regularly spoke Spanish?
53. What is their relationship to you? (check all that apply)  
Mother/Father/Step-mother/Step-father/Brother/sister/Aunt/Uncle/  
Grandmother/Grandfather/Cousin/Other
54. Where was your MOTHER born (city, state, country)?
55. If your mother was not born in the United States, how long has she lived in the US?
56. What is the first language your mother learned to speak?
57. How often does she still speak that first language?
58. What other languages, if any, does/did she speak well?
59. What language(s) does/did she usually speak at home?
60. What is the highest level of education attained by your mother?
61. Where was your FATHER born (city, state, country)?
62. If your father was not born in the United States, how long has he lived in the US?
63. What is the first language your father learned to speak?
64. How often does he still speak that first language?
65. What other languages, if any, does/did he speak well?
66. What language(s) does/did he usually speak at home?
67. What is the highest level of education attained by your father?
68. How many sisters do you have?
69. How many of your sisters are OLDER than you?
70. Does your sister (or sisters) speak Spanish?
71. How often does your sister (or sisters) speak Spanish?
72. How many brothers do you have?
73. How many of your brothers are OLDER than you?
74. Does your brother (or brothers) speak Spanish?
75. How often does your brother (or brothers) speak Spanish?
76. Do you have any step-sisters?
77. Does your step-sister (or step-sisters) speak Spanish?
78. How often does your step-sister (or step-sisters) speak Spanish?
79. Do you have any step-brothers?
80. Does your step-brother (or step-brothers) speak Spanish?
81. How often does your step-brother (or step-brothers) speak Spanish?
82. In what language do you normally communicate with your sibling(s)?
83. In what language do you normally communicate with your step-siblings?
84. Growing up, which if any of your grandparents lived with you?
85. Which, if any, of your grandparents speak/spoke Spanish?
86. In what language do/did your grandparents usually communicate with you?
87. What year were you born in?

© 2015 Halsted et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*  
*The peer review history for this paper can be accessed here:*  
<http://sciencedomain.org/review-history/11251>