# Code Choice in the Spanish as a Foreign Language Classroom 

by

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# A Thesis Presented in Partial Fulfillment of the Requirements for the Degree Master of Arts 

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## ARIZONA STATE UNIVERSITY

May 2012


#### Abstract

This semester-long study examined the functions for which English (L1) and Spanish (L2) were used in two intact hybrid Spanish as a foreign language (FL) university classes at the 202 (fourth semester) level. Five 75-minutes classes of two instructors were observed by the researcher, video- and audio-recorded, and transcribed. A survey was also used to determine the functions for which the instructors and students believed that Spanish and English were used in the classroom, and the functions for which both believed that the two languages should be used. Talking about a test and teaching grammar were the functions for which both instructors used the most English and the most Spanish. The questionnaire results indicated that the students who heard more Spanish in the classroom would have preferred that their instructor had used less Spanish for the functions of checking how well students understand a reading in class as well as when giving instructions or explaining how to do group activities. The Minnesota Language Proficiency Assessment for listening at the Intermediate-High level was administered to the students of both instructors at the beginning and at the end of the semester. The classroom observations indicated that although both instructors used more than 50\% words in English during their classes, one instructor used twice as many words in Spanish as did the other. However, the results of the study revealed no significant relationship between the amount of Spanish used by the instructors in the classroom and the students' progress on listening proficiency from the beginning to the end of the semester.


## DEDICATION

To my husband, Jim Govern.

## ACKNOWLEDGMENTS

I would like to thank all the Graduate Teaching Assistants who have been my colleagues and collaborators for the past three years, especially Holly Riley, my partner for practically every important step on the road to this thesis. I am also indebted to the two anonymous TAs who allowed me to observe their classes during the fall, 2011, semester so that this study could be accomplished. Clearly, without their support and forbearance, this study would not have been possible.

Special thanks to ASU's TA Coordinator, Carmen Scales, for ensuring that the study classes were scheduled appropriately; and to David Parks and everyone else in SILC Learning Support Services who helped to administer the listening assessments used as part of this study.

The three professors who served as members of my committee have all had a significant role in supporting my graduate studies: Dr. Barbara Lafford and Dr. Carmen García, the co-chairs of my committee, and Dr. Jabier Elorrieta. Each of them has helped me expand my knowledge of linguistics in general, and specifically of pragmatics and second language acquisition. Dr. Elorrieta occupies a special place in my learning journey. His introductory course for Spanish linguistics served as my initiation into the always fascinating study of linguistics. Subsequently, I took every course that he taught, undergraduate and graduate, and was continually impressed by his enthusiasm and good humor along with his complete knowledge of whatever aspect of linguistics that he was teaching at the time, and his endless patience with those of us who did now always understand the first explanation of a concept.

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## Chapter 1

## INTRODUCTION

The assumption in many academic foreign language (FL--a language not native to the learner) programs that the only legitimate classroom language is the target language (TL or second language [L2]--the language being acquired by the learner) has led to a frustrating situation for some language instructors. Instructors of beginning language learners are sometimes torn between the ideal world of such policies and assumptions and their own experiences in the classroom, where they find themselves resorting to English for various functions, while admitting to feeling "guilty" when they do so (Edstrom, 2006, p. 280). According to Rodríguez Juárez \& Osbrow (2008), the use of the native language (L1-the first language of the students) in the classroom has been characterized both as the "skeleton in the closet" and as a "bone of contention" for those involved in language instruction (p. 94). Adherence to a target language exclusivity policy can, at least in certain instances, result in frustrated students and instructors who feel that they are falling short for not providing consistent "comprehensible input" in the target language (Krashen, 1985, p. 2).

## Target language only policies

Omaggio Hadley (2001) summarized the communicative approach of language teaching, which has as its goal to develop communicative competence, saying that contextualization is a basic principle, that the language is learned through the interaction with others, that activities and strategies should vary
according to the needs and preferences of the students, and that some use of the native language and translation is permitted. Although the communicative approach is the one most used in language teaching programs today, and although this approach does not proscribe the use of the native language in the classroom, the "target language only" policy is also proposed as an underlying assumption in many programs. The ubiquity of such policies is often attributed to the influence that "the Natural Approach" has enjoyed since its introduction in the 1980s, and the American Council of the Teachers of Foreign Languages "recommends that language educators and their students use the target language as exclusively as possible ( $90 \%$ plus) at all levels of instruction during instructional time" (ACTFL Position Statements, updated 2011, http://www.actfl.org/i4a/pages/index.cfm?pageid=4368\#targetlang).

## The Natural Approach

The Natural Approach (Krashen \& Terrell, 1983/2000) recommended a return to the "traditional" method of learning foreign languages, which, according to the authors, was to immerse oneself in the communities where these languages were spoken, without recourse to the formal study of the languages themselves and their grammars: "We will refer to this method of acquiring the ability to communicate in another language directly without instruction in its grammar as the traditional approach because the evidence seems clear that in fact this is how most people have traditionally acquired languages" (Krashen \& Terrell, 1983/2000, p. 7).

Krashen and Terrell (1983/2000) related the history of language-teaching beginning with the grammar-based approaches to language teaching that began in the $16^{\text {th }}$ century, and were practically universal in the western world by the nineteenth century. There was no significant change to this method until after the Second World War, when the Audiolingual Method incorporated some of the methods used by the Army to teach languages quickly to the troops. The method as perfected by the United States Army included many oral drills and memorized dialogs, followed by conversation sessions with native speakers. It was these very important follow-up conversation sessions that the Audiolingual Method failed to include when it became popular after the launch of the Soviet Union's Sputnik, the first earth satellite, in 1957, whose success spurred the study of foreign languages for security purposes in the United States (Krashen \& Terrell, 1983/2000).

According to Krashen and Terrell (1983/2000), the problem with all the newer approaches to language teaching/learning was the misapprehension that a conscious understanding of the grammar of a language is a prerequisite to learning it. They suggested that Asher's Total Physical Response, Lozanov's Suggestopedia and Curran's Community Language Learning were more communication- than grammar-based and therefore produced better results than grammar-based approaches. However, Krashen and Terrell maintained that better still was their "natural, direct method rediscovered" (Krashen \& Terrell, 1983/2000, p. 17). The Natural Approach was to be flexible, incorporating a variety of teaching techniques in the classroom, "without depending exclusively
on any of them" (Krashen \& Terrell, 1983/2000, p. 17). The authors posited the Monitor Model, which distinguished between the acquisition of a language ("picking it up," or learning a language in a natural, communicative setting) and language learning (knowing the rules). The "monitor" of the Monitor Model was the "editor" function that knowing the rules can bring to the language acquisition process when it is necessary to make changes or corrections (Krashen \& Terrell, 1983/2000). In addition, beyond the mechanics of learning a new language are the "affective prerequisites," which include a positive orientation toward learning the language, a "low-anxiety situation" in which to acquire it, and some degree of self-confidence on the part of the learner (Krashen \& Terrell, 1983/2000).

The first general principle of the Natural Approach was that comprehension precedes production, and some of the implications of that principle were explained by the authors as follows:
(1) The instructor always uses the target language;
(2) The focus of the communication will be on a topic of interest for the student,
(3) The instructor will strive at all times to help the student understand (Krashen \& Terrell, 1983/2000 p. 20).

The second general principle was that production emerges in stages (sometimes including an initial silent stage), and speech errors that do not interfere with communication not be corrected, because "while the correction of errors may help learning, acquired competence comes from comprehensible input" (Krashen \& Terrell, $1983 / 2000$ p. 20). The third general principle was that the course syllabus should consist of communicative goals, so that each lesson would be organized by topic, not by grammatical structure. The final principle was that activities done in
the classroom must foster a lowering of the affective filter of the students, including activities
which are of interest to the students and which encourage them to express their own ideas, desires, emotions and feelings. An environment which is conducive to acquisition must be created by the instructor-low anxiety level, good rapport with the teacher, friendly relationship with other students; otherwise acquisition will be impossible. Such an atmosphere is not a luxury but a necessity (Krashen \& Terrell, 1983/2000 p. 21).

The Input Hypothesis (Krashen \& Terrell, 1983/2000) maintained that language is acquired by understanding input that is a little beyond the student's current level of acquired competence. For that reason, listening and reading comprehension were considered to be of primary importance in a language program, and the ability to speak and write of secondary importance. Speaking ability was thought to emerge as competence was achieved through the process of comprehending input. The authors' emphasis on comprehensible input provided by the instructor, always in the target language, is well-known, but the authors' almost equal emphasis on lowering the affective filter has been given less attention in the field: "Classrooms that encourage low filters are those that promote low anxiety among students, that keep students off the defensive" (Krashen \& Terrell, 1983/2000, pp. 38-39). The authors further maintained that attitudinal factors are more important in second language acquisition than is aptitude, and that the affective filter increases in strength around puberty. Indeed, according to the authors, the affective filter in adolescents is so high that "it takes a very talented instructor to create an atmosphere favorable for acquisition among a group of young teenagers," (Krashen \& Terrell, 1983/2000, p. 179); yet the
authors gave no suggestions as to what this special instructor must do to achieve such a favorable atmosphere for this challenging group. Further, the authors specifically addressed the goals of various types of language courses, but neglected to mention the special issues involved in teaching foreign languages to university level students who are taking the courses as a requirement for their degrees. The authors assumed that their approach would be used with students who had their own personal reasons for learning a language and devoted very little discussion to the teaching of languages in an academic setting.

Although they emphasized that the instructor should always use the target language in the classroom, they suggested that the student be allowed to respond in either their native or the target language until the student felt comfortable using the target language. In addition, Krashen and Terrell (1983/2000) recommended that speaking errors not be corrected, because it would be detrimental to lowering the affective filter. Here again, the authors suggested that adolescents often need considerable exposure to a new language before they feel comfortable trying to use it in conversation. Indeed, "the most important goal of the early stages of the Natural Approach is to lower the affective filter" (Krashen \& Terrell, 1983/2000, p. 91). Indeed, throughout this important work in the teaching of foreign languages, the source of the late-twentieth-century popularization of the principle that foreign language instruction must always be in the language being taught, the emphasis on lowering the affective filter was almost as prominent as that of the target language only approach; and nowhere in the book was it suggested that the students be prohibited from using their first language in the classroom.

However common it is, the target language only approach has not gone unquestioned. Cook (2001) supported a re-examination of this view, suggesting that the L1 can be effectively used in classroom instruction, instead of being "something to be shunned at all costs" (p. 402). Turnbull (2001) countered Cook by returning to the maximum use of the TL argument while admitting that "maximizing the TL does not and should not mean that it is harmful for the teacher to use the L1" (p. 535). Chavez (2002) acknowledged the reality of the dual language classroom, which she calls "diglossic" (p. 164), asserting that the L1 and L2 exist to perform different functions in the classroom, and that learners have a role in creating their own speech community. Antón and DiCamilla (2003) went so far as to contend "Given that, from our theoretical perspective, language functions not merely as a means for expressing prefabricated thoughts but as a cognitive tool that organizes and guides our mental life, pedagogies that proscribe the use of the L1 in the classroom risk interfering with the learning process" (p. 278).

Echoing Krashen and Terrell (2000, 1983), VanPatten (1996) asserted that "input is the basic building block for the construction of a mental representation of the second language grammar" (p. 6), helping to reinforce the rationale for target language only policies in language learning classrooms in recent years. However, the goal of maximizing use of the target language in the classroom would seem to be a more attainable goal than that of exclusive use of the target language, but this begs the question of how the construct "maximizing" is
defined, and leaves open the question regarding the functions for which it might be acceptable, even on occasion, preferable, to use the first language of the students to maximize learning in the foreign language classroom.

## Purpose of the study

The purpose of this study is to go directly to the language learners and their instructors to identify their perceptions of and attitudes toward the use of their native language, English, in the Spanish as a foreign language classroom. A questionnaire was administered to the students as well as to their instructors to ascertain perceptions regarding the level of use and level of desired use of the two languages for specific functions in the classroom. The attitudes and perceptions of the two groups, students and instructors, were then compared quantitatively to determine whether areas of agreement or disagreement point to potential pedagogical implications. Further, data gathered from classroom observations and video- and audiotaping of classroom interactions was compared to the results of the perceptions questionnaire to analyze agreement and/or disagreement between classroom observations and perceptions of the two groups, students and instructors. In addition, the students were administered the Minnesota Language Proficiency Assessment (MLPA) intermediate/high for listening at the beginning and at the end of the semester and the results were analyzed to determine if there was a relationship between the ratio of the use of Spanish and English in the classroom and changes in the students' listening comprehension over the course of the semester. Left open for future study is the issue of the effectiveness for
second language acquisition of the use of English for specific functions in the Spanish language classroom.

## Chapter 2

## REVIEW OF LITERATURE

## Theoretical Framework

In recent years, theoretical discussion surrounding the study of second language acquisition (SLA) can be characterized by two primary approaches: the cognitive, which sees acquisition as an individual intellectual process, in opposition to the sociocultural, based largely on the work of Russian psychologist L.S. Vygotsky, which conceptualizes language learning as a social process involving first the interaction of language speakers, followed by the mental process of acquisition: "...everything that is internal to higher mental functions was at one time external...we could say that the relations among higher mental functions were at some earlier time actual relations among people. I shall relate to myself as people relate to me" (Vygotsky, 1981, p. 158). If one accepts Vygotsky's assertion that learning occurs on two different levels, first the interpersonal, followed by its cognitive incorporation at the individual level, then the context of that initial social stage becomes critically important to the learning process. The university foreign language classroom is populated by students from varied backgrounds. They also come to the classroom with a range of motivations, from the student taking a course for the joy of learning a foreign language to the student whose sometimes grudging motivation is based solely on the need to fulfill a degree requirement. Together these students represent a complex social context in which learning relations must be developed among the students, and between the students and the instructor. Understanding that milieu in order to
fashion the best possible environment for learning for the widest range of students is the challenge of every foreign language instructor in a similar situation. Therefore a Vygotskian theoretical framework informs this study (Vygotsky 1978, 1981). Van Lier (2004) added the ecological perspective to the sociocultural, suggesting that "language is always a meaning-making activity that takes place in a complex network of complex systems..." (p. 53) and that "We need to see language as a system of relations, not just as a collection of objects." (p. 5).

If it is believed that language learning begins as social interaction, then the context of learning is supremely important, and the reasoning behind the "affective filter" has more resonance, if no more specificity. The university foreign language classroom has characteristics that make it unique in the study of language learning and teaching, especially at the lower levels where many of the students are taking the course only because it is required for their majors, and not from any innate desire to learn the language.

According to Levine (2011) learners typically talk a very small percentage of the time in the foreign language classroom and what brings about language learning cannot be reduced to a narrow set of variables. Code choice is always driven by local needs of each exchange, such as social conventions and classroom power dynamics. Levine (2011) suggested that involving learners in constructing code choice norms, including allowing them to use their L1, would result in students speaking more in the L2, because they would be speaking more overall.

## Literature review

Polio \& Duff (1990) conducted the first large-scale research on the quantity and type of the use of the L1 (English) in the university foreign language classroom, studying instruction of 13 different foreign languages at the second quarter level. Their research design was synthetic and analytic, examining the ratio of English use to L2 use by teachers who were native speakers (NSs) in the FL classroom and the factors related to that use, as well as the teachers' and students' perceptions and attitudes toward the use of English in the FL classroom. The study's methodology included audio recordings of two separate classes per language, combined with researcher observations. Follow-up questionnaires were administered to the students at the end of the second observation to ascertain their motivation for taking the class and their attitudes toward the use of the target language as well as their level of understanding of the L2. The amount of use of the students' first language (L1) in the classroom was quantified by noting at 15 second intervals whether the L1 or L2 was being used by the instructor or by the students. To ensure inter-rater reliability and validity, the two researchers trained together and engaged in a trial of the data-gathering techniques before the beginning of the study.

Polio \& Duff (1990) referred to their study as qualitative, but described their results statistically, focusing on the distribution of English/L2 classroom discourse among the 13 instructors. The researchers focused on distribution rather than the mean or the median due to the wide range in the amount of target language use in these FL classes-from 100 per cent to 10 per cent. Follow-up
interviews were conducted with all the instructors, but for their article the researchers reported the results of only three "critical cases," including the instructor who used the most English in the classroom, the one who used the least, and the one who demonstrated the most "mixture" of the L1 and the L2.

In the follow-up student questionnaire, the researchers found that students' perception of the amount of use of the L1 did not necessarily coincide with the actual amount of use, and that most students (more than 70\%) claimed to understand "most" or "all" of the teacher's L2 use, regardless of the amount of that use as determined by the researchers. The researchers did not question whether the perceptions of the students might have been correct about the amount of use of the L1 on a regular basis, as opposed to that used in the sample of classes observed by the researchers. For example, the instructor who used the L1 least often worked in a department with a policy of no-English in the classroom, backed up by "well-organized guidelines, and a well-informed lecturer who was in charge of all the teaching assistants (TAs)" (Polio \& Duff, 1990, p. 160). Those who used more English in the classroom came from departments without such clear guidelines. It is possible that an instructor from a department with clear guidelines limiting the use of the L1 in the classroom would, when under observation, use as little of the L1 in the classroom as possible, whether or not this were the normal routine. The study concluded with some pedagogical implications-a list of techniques designed to maximize the effectiveness of L1 use in the L2 classroom.

The generalizability of this study is limited in that it focused on classes of instructors who were native speakers of the L2, so it cannot be considered generalizable to instructors who are not native speakers of the second language that they are teaching. It is also questionable whether observations of only two classes of an instructor can give an accurate estimate of the instructors' overall use of the L1 in the classroom. Finally, as the researchers state, "the effect of teachers' L1/L2 behavior on language acquisition now needs to be examined" (Polio \& Duff, 1990, p. 163).

Edstrom's (2006) conducted an analytic and synthetic self-evaluation of her use of the L1 (English) in the L2 (Spanish) classroom to compare her perceptions with her actual use, and to compare the perceptions of her students to her own. She also sought to identify the motivations for her L1 use. The subject of the study is the researcher herself, as well as the students $(\mathrm{n}=15)$ who participated in her class and provided feedback about her teaching methods. Data came from four sources: questionnaires, 24 audio-recorded classroom sessions, a reflective journal and written notes of her observations. The recordings of the class were transcribed, then the transcriptions were analyzed, along with the journals and questionnaires, both quantitatively and qualitatively. Edstrom followed the methodology established by Polio and Duff (1990) of recording the use of the L1 or the L2 at 15 second intervals, and also used their categories of L1 use as part of the qualitative analysis. The researcher then compared the students' perceptions with her own and the results of the analysis of the recordings, which were used to demonstrate what actually occurred in the classroom. The students
participated in the class and commented on their perceptions by filling out a questionnaire at the end of the study period. There was no demographic information given to describe the subject population.

Edstrom (2006) found that her students' estimates of her use of English in the Spanish language classroom as "moderate" were roughly the same as her own estimate that she used English approximately 10\% of the time. However, the analysis of her recorded data indicated that she used English $23 \%$ of the time. Based on her analysis of her daily reflections on her classes, "My belief in maximizing the use of Spanish never weakened; however, rather than restraining me from speaking English, it simply fed my sense of guilt...when I did" (p. 280). She further stated that the functions for which she used English most frequently, grammar instruction, class management and to clarify comprehension, are similar to functions enumerated in previous research on the topic (Duff \& Polio, 1990; Macaro, 2001; Polio \& Duff, 1994; Rolin Ianziti \& Brownlie, 2002).

Edstrom (2006) was a self-conducted case study centered on one instructor. Therefore, it is open to question as to its reliability given that there is no check on the observations of the instructor by, for example, concurrent observations by a different researcher. There is also no demographic data given about the students, so it is not known if any demographic anomalies exist in the population. Since this is a case study of and by one individual, it serves as a rich example of one person's experiences, although it is not generalizable to the larger population of language instructors and language learners.

Starting from the fundamental nature of the context of language instruction, Rolin-Ianziti \& Varshney (2008) investigated student perceptions of the use of the L1 or target language (TL) in French as a foreign language classroom environment strongly supportive of L2 use. This environment had been created through analysis of classroom data followed by workshops that presented to the instructors recommendations for effective approaches that could be used to minimize use of the L 1 in the classroom.

Study participants were 52 students enrolled in three first semester French classes. After six weeks of instruction, the students were asked to complete a two-part questionnaire of 21 closed questions using a Likert scale ranging from "strongly agree" to "strongly disagree," followed by two open-ended questions asking students to list advantages or disadvantages for use of English in the classroom. The closed questions addressed TL exclusivity, teacher use of L1/TL in teaching vocabulary and grammar, and L1/TL use for classroom organization and assessment activities.

Rolin-Ianziti \& Varshney (2008) analyzed the results of the closed questions quantitatively, using descriptive statistics to calculate the frequency of responses to the questions. They followed with both an inductive and deductive approach to the data analysis of the open-ended questions. Selected results from the quantitative analysis were then related to the interpretation of the qualitative data.

The results of Rolin-Ianziti \& Varshney (2008) focused on students’ views on four categories that emerged from the data: L1 use for medium-oriented
and for framework-oriented goals, as well as their views on "perceived dangers" of L1 use and their views on the affective role of the L1. A majority of the students indicated that the L1 helps to access meaning of vocabulary and explain the grammar of the target language, although a minority of students preferred the use of the target language for these functions. However, some students viewed the lack of the use of the TL as a drawback to learning since they see it as an impediment to learning including, in particular, pronunciation. The students also supported the view that the use of the L1 may alleviate anxiety in the classroom and foster positive student-instructor relationships, while some students also saw a danger in the "demotivating" effect of too much use of the L1 in the classroom.

The major drawback to this study is the lack of demographic information about the subject population. The subjects were described only as first semester students of French in a specific university in Australia. There was no breakdown by age, gender or language learning aptitude, or by whether the students were taking the course as a requirement or as an elective. The authors indicated that the instructional context was very supportive of L1 use, but did not mention if there were characteristics of the subject population that might also have been expected to support that use.

Based on the results of their study of the use of the L1 and translation in a university setting in Spain, Rodríguez Juárez \& Osbrow (2008) suggested that the "mother tongue" (p. 93) or L1 could, in some instances, be an effective teaching resource in the English as a foreign language learning context. The authors acknowledged the controversy surrounding the use of the native language in the

ESL classroom, and they asserted that the Direct Method policy of banning the mother tongue from the classroom had been the guiding force in EFL classrooms since the end of the nineteenth century, and therefore that the learner's first language appeared periodically as a pedagogical resource onlywith a certain amount of "anxiety" (p. 94). The authors justified their research by stating that a "more open-minded approach to using the mother tongue" could be used in the EFL classroom as an effective pedagogical resource and that their study would fill a "hole" by giving empirical support to the effectiveness of the use of the L1 in the ESL classroom (p. 95).

Rodríguez Juárez \& Osbrow (2008) used a synthetic and analytic approach to gather and analyze empirical data related to learners' perceptions of the value of translation activities and the use of the mother tongue as a language learning strategy. The methodology of the study involved the administration of a questionnaire to first-year ESL university students ( $\mathrm{n}=25$ ) in Spain whose mother tongue was Spanish, except for one Italian speaker, to obtain empirical data to support their belief that a broader approach to using the "mother tongue" in the classroom would benefit learners by encouraging comparisons between the L1 and L2 as part of the acquisition process. The subjects were students in the classrooms of the researchers, and there was no indication that they had the opportunity to decline to participate. There was also no further demographic data given about the study population sample. The majority were determined to be in the "late elementary or low intermediate ability" level on a computer based placement test (p. 96).

The results of Rodríguez Juárez \& Osbrow's (2008) study indicated that the students employed translation as a learning strategy in many contexts, and $84 \%$ specifically stated that such activities supported their learning. Many found translation useful for understanding English vocabulary, and a smaller percentage found it helpful in understanding grammar. The researchers did not find strong support for the use of the mother tongue (Spanish) for classroom management, such as giving instructions, which contradicted previous findings that the L1 was considered by students to be useful for this function. Although $72 \%$ supported an L2-only policy in the classroom, only $40 \%$ of the students said that they themselves tried not to use Spanish during class.

Rodríguez Juárez \& Osbrow (2008) concluded by stating that they believed that their results indicated that the use of the L1 and translation enhanced second language acquisition. However, the generalizability of their results is questionable. The major drawback of this study is that the researchers used their own students, responding to their own teaching techniques, to investigate a subject which they approached from a particular point of view. Their bias is evident when they noted that their students "do not seem to perceive the value of cross-linguistic comparisons" and therefore stated that "we intend to readdress this matter in further research, so that our students appreciate the rationale behind this particular technique" (p. 100). Planning to assure that students appreciated the instructors' rationale for using a particular teaching technique before the students were then asked to participate in research by giving their perceptions of its usefulness is a clear indication of researcher bias. In qualitative research, the
integrity of the "researcher as instrument" must be unquestionable. In this case, it clearly is not, to the point that the research validity of this entire study must be questioned.

Chavez (2002) used a synthetic and analytic approach to study language use in the foreign language classroom (German) that she characterizes as "diglossic," a socio-cultural designation of language use in groups comparable to bilingualism in individuals; in a diglossic foreign language learning situation, students and teachers use the two languages, the L1 and the L2, for different and specific functions in the foreign language classroom. Therefore, the researcher started with the assumption that "learners associate certain language functions with either the L1 or the L2" (p. 164). She was also interested in whether there were differences in perception of the use of the L1 and the L2 that related to year of study, and whether there were gaps between desired and observed language use by both students and teachers.

Chavez (2002) employed a questionnaire of 158 items using a Likert scale to determine language use for certain functions, and the corresponding desired level of that use. The questionnaire was distributed to instructors of foreign language (German) classes at the first-, second- and third-year levels at the University of Wisconsin-Madison. The instructors could decide whether their classes would participate, and the students in the classrooms chosen to participate were then free to choose individually whether to fill out the questionnaire. The response rate ( $n-330$ ) was approximately $65 \%$ for each year under study. The author described characteristics of the student population under study, including
their homogeneity (primarily native English speakers of European descent, having had German classes in high school), the almost equal representation of males and females, and the fact that few students in the study were language majors.

Items were selected based on uses identified in previous research, and the items were grouped into four clusters based on these uses. The researcher computed reliability (Cronbach) coefficients for the questionnaire in total as well as separately for each cluster. Factor analysis with Kaiser normalization was also used to explore the association between functions and the preference for the L1 or L2 for the three different years of study.

The results of Chavez (2002) indicated that although students consistently reported that their instructors used the L2 more than the students desired, the students also indicated that they themselves used the L1 more than they would have preferred. The researcher also found that the students "clearly viewed their speech community, the classroom, as diglossic" (p. 193). That is, although the students did prefer more use of the L2 as their years of study increased, they maintained a preference for the L1 for specific uses, such as discussing evaluative procedures and explaining about tests, even into year three of instruction.

Chavez (2002) was aware of the "inherent shortcomings of self-reported data" (p. 191) and also pointed out other environmental factors that could have affected the outcome, such as the students' decision about when and where to take the questionnaire, and therefore the time devoted to its completion. She also mentioned that the large number of test items could have caused "test fatigue" (p. 191) in the subjects. Due to the use of a specific sample in a departmental context
without an explicit policy prohibiting the use of the L1 in the classroom, Chavez claimed neither "universality" nor "unambiguous conclusions" for her study (p. 193). Nevertheless, the results indicating a state of "diglossia" in foreign language classrooms lasting into the third year of instruction presented opportunities for further research to determine whether these findings would apply to other language learning settings; and if so, whether the policy of the exclusive use of the L2 in the foreign language classroom should be reconsidered in this new context.

The qualitative study of Antón \& DiCamilla (1999) employed discourse analysis of the collaborative talk of five dyads of adult learners ( $\mathrm{n}=10$ ) of Spanish at the beginner level engaged in a writing task in a foreign language classroom in order to examine L1 use within the theoretical framework of Vygotskian psycholinguistics. The researchers transcribed the students' audio taped conversations, and then analyzed the use of the L1 (English) as the students worked through the assigned task of describing a hypothetical trip to Mexico. The authors designed their study to build on previous studies of the functions of the native language of learners in the classroom, but decided to address specifically "the use of the L1 in student collaboration within the zone of proximal development as a critical psychological tool" (p. 236) focusing on three specific functions: scaffolding, building intersubjectivity and the use of private speech. The authors concluded that the L1 played an important cognitive role in both scaffolding and fostering intersubjectivity among students, and that
externalizing their inner speech as private speech during these interactions was necessary to reach higher levels of development.

Antón \& Camilla (1999) study was limited to only five interactions among 10 adult students, and discourse analysis may be susceptible to the concern that researchers examining discourse data from different personal and/or theoretical perspectives may come to different conclusions about the meaning of such data. Nevertheless, the conversations reported in the study clearly indicated productive use of the L1 in the learning processes of the students involving scaffolding, development of intersubjectivity and use of private speech to facilitate one specific task designed to facilitate their learning/acquisition of Spanish as a foreign language.

Macaro (2001) used case study methodology to investigate codeswitching between the first language (L1) and the second language (L2) in 14 French as a foreign language classrooms. The students ranged between the ages of 11-14 who had studied the language for one or two years and were enrolled in public schools in the south of England. The study involved a 36-week training program for the teachers, during which they were exposed to theory and empirical studies on the use of the L1 and the L2 in the classroom. The results of the study revealed relatively low levels of L1 use by the student teachers, and little effect of their quantity of L1 use on the amount of L1/L2 use by the students. In addition to the quantity of the L1 used by the student teachers, the study also investigated whether theory and research or personal beliefs had the most influence on the teachers' decision to use the L1 or the L2.

Macaro (2001) included a detailed literature review and could find no study that demonstrated a causal relationship between the exclusion of the L1 in the classroom and improved learning. From this review, the researcher derived three theoretical positions on the issue:

1. The Virtual Position. The classroom is like the target country. Therefore we should aim at total exclusion of the L1. There is no pedagogical value in L1 use. The L1 can be excluded from the FL classroom as long as the teacher is skilled enough.
2. The Maximal Position. There is no pedagogical value in L 1 use. However, perfect teaching and learning conditions do not exist and therefore teachers have to resort to the L1.
3. The Optimal Position. There is some pedagogical value in L 1 use. Some aspects of learning may actually be enhanced by use of the L1. There should therefore be a constant exploration of pedagogical principles regarding whether and in what ways L1 is justified. (Macaro, 2001, p. 535)

The student teachers were informed of these three positions, and were also aware of the guidelines of England's Office for Standards in Education (OFSTED), which stated that teachers should use the target language in all aspects of teaching a foreign language. They were also exposed to the positions of other national agencies, such as that of the French government, which suggested that the student should be led gradually to the exclusive use of the target language, and that a certain amount of reflection in the native language contributed to the development of conceptual abilities (Macaro, 2001).

Macaro (2001) measured the ratio of L1 to L2 use by sampling language use at 5 seconds intervals. Although analysis of the statistics revealed no significant correlation between teacher and student use of the L1, it did reveal that students were more likely to use the L1 in longer lessons. The researcher
suggested that this could be related to the students' need to express themselves more in the L1 during longer periods of language learning. Another possible explanation for more L1 use during a longer lesson could also be student fatigue, and the tendency to resort to what is easiest, the use of the L1, when students are tired. (A long lesson in this study was around 50 minutes.) In addition, analysis of the data indicated that an utterance in the L1 can deliver more meaning in a shorter period of time than the more lengthy sequences in the L 2 , in which various different techniques must often be used to insure that the intended input is indeed comprehensible and comprehended by the students.

In addition to the results of the statistical analysis, Macaro (2001) included detailed interviews with the teachers to determine what information informed their decisions to use either the L 1 or the L 2 in the classroom. For this report, two teachers were chosen as representative of the six included in the study. One telling bit of information arose from the interview with one teacher who diligently tried to avoid the use of the L1 with her public school students based on the National Curriculum rules, but felt free to use it with her evening adult students, whose classes were not part of the study. She felt that shecould move her adult classes along more quickly by using the L1, but felt that based on the National Curriculum guidelines, she had no choice but to stick to the L 2 in her public school classes.

Macaro (2001) was a case study of 14 classes of 11-14-year-olds with six different instructors, so the researcher claims no generalizability for the study, but he does describe some implications worthy of future research. In particular, the
researcher concluded that if all other pedagogical considerations are subordinated to the principle of the exclusive use of the L2 in the classroom, other possibly effective pedagogical practices may be excluded. That is, if there is an activity that cannot be conducted entirely in the L2, then the activity must be excluded from the classroom. Thus, L2 exclusivity policies could potentially have a stifling effect on teacher creativity, and limit occasions for student learning. Macaro (2001) suggested that further research needed to consider the functions and consequences of L1 use in the classroom, and therefore principles for its use in the classroom:

As a teaching community we need to provide, especially for less experienced teachers, a framework that identifies when reference to the L1 can be a valuable tool and when it is simply used as an easy option. In this way we may work towards a theory of optimality for the use of codeswitching by the teacher. (Macaro, 2001, p. 545)

Worth (2006) used classroom observation, video recording and interviews to do a predominantly qualitative "ethnographic microanalysis" (p. ii) of a first semester Italian class at a large Midwestern United States university, and she triangulated her data by adding an attitude survey from which she extracted statistical data. With reference to theories of language learning resistance developed in post-colonial contexts of cultural domination in relation to formalized instruction in English as a Second or Other Language (ESOL), Worth identified four major types of resistance in this classroom of non-dominant foreign language (FL) classroom learning, starting with student resistance to the instructor's target-only language policy. Worth concluded that the students felt that conforming to the expectation that they use only Italian in the classroom
threatened their identities as competent, articulate students. Other forms of resistance included "playing dumb," and rejection of the discourse that the culture of Italy was superior and the implied goal of study abroad in Italy.

Worth (2006) identified as an important component of student resistance the difference between the goals of the instructor and the students. Worth (2006) discussed the influence that the communicative language teaching (CLT), "the almost universally employed approach to teaching in American FL instruction" (p. 130) has had on the approach to the teaching of foreign languages in the United States, citing the example of studies that indicate that students prefer grammar activities, dislike oral activities and devalue cultural focused learning, all central elements of CLT. Worth (2006) also asserted that the most commonly violated norm of CLT is the Target-Language-Only (TL only) policy, explaining that although authors such as Omaggio Hadley (2001) have indicated that judicious use of the native language is acceptable, that the influence of Krashen and Terrell's "natural approach" (Krashen \& Terrell, 2000, 1983) has meant that the use of the native language of the student has been stigmatized since the 1980s. Worth also indicated that CLT is predicated on a type of language use ("contextualized") that is difficult or impossible in many situations and implies a goal (eventual real-world use of the language) that may not be shared by many FL students, particularly those studying solely to satisfy a requirement. Worth (2006) also cited several studies indicating that Spanish "seems to attract the greatest number of students whose primary motivation is to fulfill the FL requirement" (p. 37) and who do not plan to continue studying it thereafter.

Worth (2006) found that one effect of the TL only policy in the classroom that she studied was the power to silence the students. She found that students otherwise reluctant to participate became "extraordinarily eager to participate" (p. 142) when English was allowed to be used. Worth (2006) concluded that these beginners lacked the linguistic tools necessary to be able to express themselves appropriately in the language that they were studying, but that this did not mean that they did not often have a desire to speak and be heard. She cited the expectation of the ACTFL Proficiency Guidelines (1983) that only at the higher levels of proficiency do language learners have the ability to discuss abstractions or even concrete but not personal topics, and therefore it was not surprising that the novice students that she studied were not able to discuss cultural topics in any depth using the language that they were attempting to acquire.

Since hers was an in-depth study limited to the students in one foreign language class, Worth (2006) did not claim generalizability for her findings. Her goal was to use this critical ethnographic microanalysis to describe the dynamics of power and resistance in this one section of a university foreign language classroom with the potential for offering insights into foreign language pedagogy. Worth (2006) suggested that a follow-up study could include an investigation of alternatives to the TL-only policy in the classroom, possibly including a systematic role for English in the FL classroom, for example, to foster critical thinking and expression about cultural issues.

Thompson (2006) studied more than 500 university students in first- and second-year Spanish classes by observation, videotaping and audio recording their
classroom interactions to determine what types of discourse in the target language and L1 were employed and the motivation for those uses. The study also investigated the relationship between student and teacher perceptions and beliefs regarding L1 and target language use; whether factors such as teaching experience, educational background, class level, etc., influenced the use of the L1 and the TL in the classroom; and whether native and non-native instructors of the TL differed in their language use. The study further compared student reading comprehension development based on testing done at the beginning and at the end of the semester.

Thompson's results (2006) showed a strong positive correlation between the instructors' use of the L1 and the students' use of the L1 in the classroom. However, the study found that more use of the L1 did not adversely affect gains in listening proficiency by the students over the course of the semester. There were also no significant differences in student gains between classes with native and non-native speaking instructors of the target language. In general, students felt that their instructors used about the right amount of English in the classroom, while the students thought that they themselves used too much. Interestingly, while the 200 level students used $40 \%$ more Spanish in the classroom than their counterparts in the 100 level, they also used $77 \%$ more English, perhaps indicating more involvement in the learning process in general in the 200 level. The study was limited in that although language use by the instructor and general language use in the classroom was videotaped and analyzed, the language use of the students in small group work was not. Also, since the study used the

Minnesota Language Proficiency Assessment (MLPA) at the Intermediate-Low level on the American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines scale, it gave some200 level students a limited range for measurable improvement.

Levine (2003) studied student and instructor beliefs and attitudes about target language use, first language use, and anxiety. In this anonymous, questionnaire-based study of the use of the target language (TL) and the first language (L1) in foreign language (FL) classes, the participants were 600 FL students and 163 FL instructors from throughout the United States and Canada who accessed the questionnaire through a gateway site on the Internet that was advertised through email and listserv announcements to FL instructors and language program directors in the United States and Canada. Of the student participants in first- and second-year language courses, most were in the 18 - to 21-year-old age range, most self-identified as native speakers of English, and 59\% were male. More than half were students of French, $24.3 \%$ of German, and $11.9 \%$ of Spanish. Of these students, $88.3 \%$ expected to receive an A in the course that they were taking at the time of completing the questionnaire. The questionnaire was designed to measure the students' and instructors estimations of the quantity of TL use in their university-level FL classes, their beliefs about the importance of TL use, and beliefs about the anxiety that they experienced through TL use.

The results from the surveys of students and instructors indicated that in $40 \%-60 \%$ of FL classes the instructor used the TL $80 \%$ to $100 \%$ of the time. On
the other hand, only $17 \%$ of the students and $15 \%$ of the instructors reported that the students used the TL $80 \%-100 \%$ of the time with their instructors, and even less when speaking with other students. The researcher concluded that the TL was used most for topic/theme based communication, less for communication about grammar, and still less for communication about tests, quizzes and assignments (Levine, 2003). The results of the questions regarding TL use anxiety indicated that TL use tended to be higher, and anxiety lower, in the second year of instruction, for students who expected a higher grade, for those who expressed higher motivation to learn the FL, and for those who had instructors who engaged in more frequent instruction about strategies for TL use. Instructors and students reported that higher TL use resulted in lower TL-use anxiety among the students.

From his findings in this study, Levine (2003) proposed three pedagogical tenets. The first, using Macaro's (2001) terminology, Optimal TL Use Tenet, suggests that instructors accept the idea that the L1 serves numerous functions in a FL class and that instructors should accept the FL class as a multilingual environment. The second tenet, the Marked L1 Tenet, suggested that it is possible that using the L1 simply for the sake of reducing anxiety is not tenable and that instructors should instead admit the use of the L1 in the classroom for certain pedagogical functions, retaining the TL as the unmarked code. And finally, Levine (2003) proposed a third tenet, the Collaborate Language Use Tenet, which suggested delegating to the students "an active role in managing TL and L1 use in the FL classroom" (Levine, 2003, p. 355).

Levine (2003) was limited by its use of a self-selected sample of students and instructors, and it is probably reasonable to assume that students who chose to fill out the questionnaire would be more motivated in their classes than those who did not, but the author felt that the ability to collect and analyze a large amount of data from students and instructors in dozens of universities in the United States and Canada provided fruitful data for this study. Levine further suggested that further areas for research included continuing to seek information that would help instructors create "guidelines that indicate which sorts of code-switching behaviors facilitate L2 acquisition and which behaviors undermine it" (Levine, 2003, p. 356).

Although some of the aforementioned studies examined functions for which the L1 and the L2 are used in the classroom, and some looked at student perceptions of that use (Chavez, 2002; Edstrom, 2006; Juárez \& Oxbrow, 2008; Varshney \& Rolin-Ianziti, 2006) only Thompson (2006) analyzed the functions for which the two languages were used, and simultaneously examined the perceptions of that use by the instructors and the students, along with changes in listening comprehension during the course of the study. Thompson (2006) revealed no relationship between changes in listening comprehension and the quantity of use of the L1 in the classroom; however, the listening assessment used in the Thompson (2006) study may not have given the students at the 200 level enough range to indicate whether significant improvement occurred in listening comprehension during the course of the study. The current study is similar to some of the described studies in that the quantity of the L1 and the L2 used in the
classroom was measured, the functions for the use of each language was described, and actual researcher-observed language use was compared to student and instructor perceptions of that use. However, in order to control as much as possible the context of the study, the two instructors were both female, in their twenties, and native speakers of English. They taught in the same classroom, in back-to-back classes of 75 minutes, on Tuesdays and Thursdays, from 10:3011:45 and 12:00-1:15.

Five class observations of each instructor allowed the researcher to analyze qualitatively classroom language use to determine if the vocabulary used in the L2 in the classroom is not only comprehensible, but also relevant to the type of vocabulary that students are expected to use during oral exams, for example. Listening proficiency was measured using the MPLA at the Intermediate/High level, giving the students more range for improvement than was available to the subjects in Thompson (2006).

## Research Questions

Therefore, the research questions to be investigated are:
Question 1. "Based on classroom observations, what are the functions for which the L1 (English) and the L2 (Spanish) are used by the instructor in the 200 level Spanish as a foreign language classroom?"

Question 2. A. "What are the functions for which the students and the instructor perceive that instructors use the L1 (English) and the L2 (Spanish) in the foreign language classroom."

Question 2. B. "What are the students' and the instructors' perceptions regarding the functions for which the L1 and the L2 should be used in the foreign language classroom?"

Question 3. A. "How do the perceptions of the students and the instructors of the functions for which the L1 and the L2 are used by the instructors in the classroom compare to the actual observed instructor use of English and Spanish in the classroom?"

Question 3. B. "How do the perceptions of the students and the instructors of the functions for which the L1 and the L2 should be used by the instructors in the classroom compare to the actual observed instructor use of English and Spanish

Question 4. A. "Is there a difference between students' perceptions of how their instructors use Spanish and English in the classroom and their perceptions of how their instructors should use Spanish and English in the classroom?"

Question 4. B. "Is there a difference between students' perceptions of how they themselves use Spanish and English in the classroom and their perceptions of how they think that students should use Spanish and English in the classroom?"

Question 5. "How does the quantity of English and Spanish used by the instructor in the classroom relate to student scores on the MLPA listening comprehension assessments at the Intermediate-High level?"

## Chapter 3

## METHODOLOGY

## Participants

The participants in this study ( $\mathrm{n}=52$ ) were second-year students of Spanish in a large public university in 2 different classrooms whose instructors selfidentified as nonnative speakers (NNS) of Spanish. The students were all native English speakers, and more than $90 \%$ of the students in each class were taking the course as a requirement for their degrees ( 24 of 26 for each instructor). The average age of the students of Instructor J was 23 ; for Instructor $\mathrm{P}, 21$. Of the 26 students who started the course with Instructor P, 9 were males; of the 26 students who started the course with Instructor J, 11 were males. None of the students had spent a significant amount of time studying in a Spanish-speaking country and none were Heritage learners of Spanish.

The instructors were both 23-year-old female master's students in Spanish with at least one year's experience as teaching assistants at the university level. Instructor J had also taught in a public school for one summer. Both had studied in Spain during their undergraduate education, Instructor $P$ for 8 weeks and Instructor J for a semester.

## Materials and Departmental Guidelines

The textbook used for the 200 level Spanish courses at this university is Interacciones, 6th edition by Emily Spinelli, Carmen García, and Carol Flood (2009), which "emphasizes an interactive, communicative approach to the
teaching of language and culture" (Spinelli, García, \& Flood 2009, AIE-11) and included activities that support listening, reading, writing and speaking skills. The textbook goal was that the students develop the ability to function within the Hispanic culture. In addition to classroom activities, the students were expected to do online homework that included listening exercises.

All teaching assistants (TAs) in the Spanish program at this university were required to take the Teaching Methods course, in which they were exposed to various approaches to foreign language learning, using as primary texts Omaggio Hadley (2001) and Lee and VanPatten (2003). Although there was no written policy regarding the use of the L1 in the classroom, its use was generally discouraged, although the TAs also learned that there are occasions when it is not only acceptable, but even recommended that the students' native language be used for pedagogical purposes in the classroom-for example, for pre-listening activities (Lee \& VanPatten, 2001), and testing reading comprehension (Omaggio Hadley, 2001). The course information for students in the Lower Division Spanish Program stated that Spanish would be used to communicate in class, and that the instructor would accommodate his/her language to the students' level of proficiency.

## Instruments and Procedures

The study's instruments consisted of a demographic survey and a fourpage language use questionnaire (Appendix D ) modeled on the much longer instrument used by Chavez (2003). The questionnaire used a 5 -point Likert scale
to ascertain uses of English and Spanish in the classroom with the following distinctions: $1=$ English is the most appropriate/commonly used language; $2=$ English is more appropriate/commonly used than Spanish; 3 = (the neutral score) $=$ English and Spanish are equally appropriate/commonly used; $4=$ Spanish is more appropriate/commonly used than English; $5=$ Spanish is the most appropriate/commonly used language. Thus, responses on the lower end of the scale indicated a preponderance of use or preference for the use of English, and responses at the upper end indicated a preponderance of use or preference for the use of Spanish.

The questionnaire items included functions such as vocabulary practice, grammar instruction, administrative tasks and instructor/student conversation during class activities. Questions included items such as "Which language does the instructor use when explaining grammar?" And, "Which language should the instructor use when explaining grammar?" After the pilot test, a final question was added to the questionnaire requesting information about the comprehensibility of the Spanish language input that the students received in the classroom (the entire questionnaire can be found in Appendix D).

The researcher created a packet of information for each student including the demographic and perceptions questionnaires and a letter describing the general objective of the study. Anonymity was assured for both students and instructors. The letter also informed the students that their responses would in no way affect their grades, nor the evaluations of their instructors. The students and the instructor signed an informed consent form (Appendix B, C). The researcher
administered the questionnaires to the students during a regular class period. The students and the instructors were aware of the researcher's general research interest, as stated on the informed consent forms, that "your participation will help add information to the field of the study of the teaching and learning of Spanish as a second language." The students took the listening proficiency pre-test online during the second week of classes, and the post-test during the $13^{\text {th }}$ week of classes.

The demographic information collected in the study questionnaire included age, gender, country of origin, native language, classroom experiences, language exposure outside the classroom (study or living abroad, for example; or working in an environment that includes Spanish speakers) and whether or not the student was taking the course as a requirement. Questions regarding the use of English and Spanish in the classroom were designed to address types of functions identified in prior research (Chavez, 2003; Duff \& Polio, 1990; Kraemer, 2006; Macaro, 2001; Rolin-Ianziti \& Brownlie, 2002). The instructors completed the same questionnaire as the students at the beginning and end of the semester. Following the study period, the instructors participated in recorded interviews to gain insight regarding their choices of functions for which English and Spanish were used in the classroom, and the functions for which they preferred that they and/or their students used the two languages. Both instructors kept notes on their teaching experiences during the semester and gave the researcher a summary of their insights at the end of the semester.

## Coding

To determine the functions for which the instructors used English and Spanish in their classrooms, the researcher observed 6 seventy-five minute classes of each instructor during the second, seventh and thirteenth weeks of the semester. Five of the classes of each instructor were successfully audio- and video-taped. The taped information was then transcribed and the amount of use of each language was determined by counting the actual number of words used in each language. Not included in the count were the proper names of the students. It was assumed that the functions observed by the researcher would be the same functions covered by the questionnaire on student/instructor perceptions of classroom language use. However, there were fewer observed functions than those included in the questionnaire, and some instances included so few words by one or both instructors that they were not included in the following functions of observed classroom language use: classroom management (mainly maintaining order with expressions such as "Silencio, por favor"), explaining about the course, explaining about tests/compositions, teaching grammar, grammar practice, vocabulary practice, listening comprehension, reading comprehension, and greeting students.

## Results and analysis

Data was analyzed separately for each research question as follows.

Question 1. "Based on classroom observations, what are the functions for which the L1 (English) and the L2 (Spanish) are used by the instructor in the 200 level Spanish as a foreign language classroom?"

Tables 1 and 2 show by instructor the amount of Spanish and English used in the five 75-minute classes recorded by the researcher based on the actual number of words used by the instructors in each language. In the 5 class sessions transcribed, both instructors used fewer than $50 \%$ of the spoken words in Spanish: Instructor J, 45\% words in Spanish and 55\% in English, while Instructor J used $26 \%$ Spanish as compared to $74 \%$ English. Overall, instructor J used twice as many words in Spanish as did instructor $\mathrm{P}(\mathrm{J}=8521$ to $\mathrm{P}=4054)$, and also more words overall when both languages are combined $(\mathrm{J}=18967, \mathrm{P}=15664)$. Both instructors primarily used English for explaining about tests, teaching and practicing grammar, and vocabulary practice. These were also the same functions for which they primarily used Spanish, with the addition of teaching vocabulary for Instructor J. In other words, most of the time that these instructors were speaking to their students in either language, they were teaching grammar or leading grammar practice, explaining about a test, or leading vocabulary practice. During the 5 classes of each instructor that were analyzed, there was one reading exercise, by Instructor J, and one listening exercise, by Instructor P .

Therefore, as illustrated in Tables 1 and 2, 68.8\% of the English that the students of Instructor J heard here speak was when she explained about tests and taught grammar, $(30.1 \%+38.7 \%=68.8 \%)$.

Table 1. Number of words used in English and Spanish by function for Instructor J

| Instructor J | English | \% Total <br> English | Spanish | \% Total <br> Spanish | Total <br> both <br> languages |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Explain test, etc. | 3975 | $38 \%$ | 919 | $10.8 \%$ | 4894 |
| Teaching grammar | 3207 | $30.7 \%$ | 1783 | $20.9 \%$ | 4990 |
| Grammar practice | 1073 | $10.3 \%$ | 1694 | $19.9 \%$ | 2767 |
| Teaching vocabulary | 500 | $4.8 \%$ | 1128 | $13.2 \%$ | 1628 |
| Vocabulary practice | 1189 | $11.4 \%$ | 2334 | $27 \%$ | 3523 |
| Reading comprehension | 431 | $4.1 \%$ | 66 | $0.8 \%$ | 497 |
| Greetings | 71 | $0.7 \%$ | 597 | $7 \%$ | 668 |
| Total | 10,446 | $100 \%$ | 8521 | $100 \%$ | 18,967 |

$76.4 \%$ of the time that the students of Instructor P heard English from their instructor, it was for these same two functions (test explanation and teaching grammar).

Table 2. Number of words used in English and Spanish by function for Instructor P

| Instructor J | English | \% Total <br> English | Spanish | \% Total <br> Spanish | Total <br> both <br> languages |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Teaching grammar | 6812 | $59.2 \%$ | 1094 | $27 \%$ | 7906 |
| Grammar practice | 1317 | $11.4 \%$ | 1677 | $41.4 \%$ | 2994 |
| Teaching vocabulary | 0 | 0 | 0 | 0 | 0 |
| Explain text, etc. | 1975 | $17.2 \%$ | 97 | $2.4 \%$ | 2072 |
| Vocabulary practice | 813 | $7.1 \%$ | 882 | $21.7 \%$ | 1695 |


| Listening exercises | 554 | $4.8 \%$ | 304 | $7.5 \%$ | 858 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Greetings | 39 | $0.3 \%$ | 0 | 0 | 39 |
| Total | 11,510 | $100 \%$ | 4054 | $100 \%$ | 15,564 |

These functions for English use are similar to those found in other studies of L1 use in the language classroom (Duff \& Polio, 1990; Edstrom, 2006; Macaro, 2001; Polio \& Duff, 1994, and Rolin Ianziti \& Brownlie, 2002).

Tables 3 and 4 indicate that Instructor J used English more than Spanish for explaining tests ( $81 \%$ to $19 \%$ ), teaching grammar ( $65 \%$ to $35 \%$ ) and reading comprehension (87\% to 13\%); she used Spanish more than English for grammar practice ( $61 \%$ to $31 \%$ ), teaching vocabulary ( $70 \%-30 \%$ ), vocabulary practice ( $66 \%-34 \%$ ) and greetings ( $90 \%-10 \%$ ).

Table 3. Relative use of English/Spanish per function - Instructor J
Mostly Spanish (5) to Mostly English (1)

| Instructor J | Total <br> Eng | \% <br> English | Total <br> SP | \% <br> Spanish | Total <br> Eng/Sp |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Explain test, etc. | 3975 | $81 \%$ | 919 | $19 \%$ | $4894 / 100 \%$ |
| Teaching grammar | 3207 | $65 \%$ | 1783 | $35 \%$ | $4990 / 100 \%$ |
| Grammar practice | 1073 | $39 \%$ | 1694 | $61 \%$ | $2267 / 100 \%$ |
| Teaching vocabulary | 500 | $30 \%$ | 1128 | $70 \%$ | $1628 / 100 \%$ |
| Vocabulary practice | 1189 | $34 \%$ | 2334 | $66 \%$ | $3523 / 100 \%$ |
| Reading comprehension | 431 | $87 \%$ | 66 | $13 \%$ | $497 / 100 \%$ |
| Greetings | 71 | $10 \%$ | 597 | $90 \%$ | $668 / 100 \%$ |
| Total | 10,446 <br> $(55 \%)$ |  | 8,521 <br> $(45 \%)$ |  | 18,967 <br> $(100 \%)$ |

As demonstrated in Table 4, Instructor P also used English more than Spanish for explaining tests ( $95 \%-5 \%$ ), for teaching grammar ( $87 \%-13 \%$ ), for listening exercises ( $65 \%-35 \%$ ) and for greetings ( $100 \%$ English); she used Spanish more than English for grammar practice ( $56 \%$ to $44 \%$ ) and vocabulary practice ( $52 \%$ to 48\%).

Table 4. Relative use of English/Spanish - Instructor P Mostly Spanish (5) to Mostly English (1)

| Instructor P | Total <br> Eng | \% <br> English | Total <br> SP | \% <br> Spanish | Total <br> Eng/Sp |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Explaining test, etc. | 1975 | $95 \%$ | 97 | $5 \%$ | $2072 / 100 \%$ |
| Teaching gramar | 6812 | $87 \%$ | 1094 | $13 \%$ | $7906 / 100 \%$ |
| Grammar practice | 1317 | $44 \%$ | 1677 | $56 \%$ | $2994 / 100 \%$ |
| Teaching vocabulary | 0 | 0 | 0 | 0 | 0 |
| Vocabulary practice | 813 | $48 \%$ | 882 | $52 \%$ | $1695 / 100 \%$ |
| Listening exercises | 554 | $65 \%$ | 304 | $35 \%$ | $858 / 100 \%$ |
| Greetings | 39 | $100 \%$ | 0 | 0 | $39 / 100 \%$ |
| Total | 11,510 <br> $(74 \%)$ |  | 4,054 <br> $(26 \%)$ |  | 15,564 <br> $(100 \%)$ |

Overall, 55\% of the words that Instructor J spoke were in English 55\% and 45\% in Spanish, while 74\% of the words that Instructor P used were in English compared to $26 \%$ words in Spanish. Therefore, for almost three-quarters of the
time that they heard their instructor speak during class, the students of Instructor P heard English. The students of Instructor J heard English 55\% of the time.

Question 2. A. "What are the functions for which the students and the instructor perceive that instructors use the L1 (English) and the L2 (Spanish) in the foreign language classroom." Data for this question was retrieved from the results of the questionnaire administered to both instructors and their students at the beginning and the end of the semester. As mentioned earlier, the scale for this questionnaire was as follows: $1=$ English is the most commonly used language; $2=$ English is more commonly used than Spanish; $3=($ the neutral score $)=$ English and Spanish are equally commonly used; $4=$ Spanish is more commonly used than English; 5 = Spanish is the most commonly used language. The following tables therefore start at the top with the functions for which Spanish was perceived as used most (closer to 5), to the functions for which English was used most (closer to 1).

Table 5 shows that the students of Instructor J reported hearing more Spanish than Instructor J thought she used for 8 functions, small talk (+0.29), talk during activities $(+1.86)$, teaching grammar $(+1.43)$, reading comprehension $(+2.33)$, talk outside class $(+2.29)$, talk in the office $(+2.15)$, explaining test $(+0.8)$, explaining course $(+1.76)$.

Table 5. Students' and instructor's perceptions - Functions for instructor's use of English and Spanish - Instructor J Spanish is used most (5) to English is used most (1)

| Function <br> Instructor J | StudentsJ | InstJ | Difference <br> Stu-InstJ |
| :---: | :---: | :---: | :---: |
| Greetings | 4.62 | 5 | -.38 |
| Vocabulary practice | 4.48 | 5 | -0.52 |


| Teaching vocabulary | 4.29 | 5 | -0.71 |
| :---: | :---: | :---: | :---: |
| Small talk | 4.29 | 4 | $\mathbf{+ 0 . 2 9}$ |
| Talk during activities | 3.86 | 2 | $\mathbf{+ 1 . 8 6}$ |
| Instructions | 3.71 | 5 | $\mathbf{- 1 . 2 9}$ |
| Teaching Grammar | 3.43 | 2 | $\mathbf{+ 1 . 4 3}$ |
| Reading comprehension | 3.33 | 1 | $\mathbf{+ 2 . 3 3}$ |
| Talk outside class | 3.29 | 1 | $\mathbf{+ 2 . 2 9}$ |
| Talk in the office | 3.15 | 1 | $\mathbf{+ 2 . 1 5}$ |
| Explaining test | 2.8 | 2 | $\mathbf{+ 0 . 8}$ |
| Explaining the course | 2.76 | 1 | $\mathbf{+ 1 . 7 6}$ |

Table 6 shows that the students of Instructor P reported hearing more
Spanish than Instructor $P$ thought she had used for every function except giving instructions.

Table 6. Students' and instructor's perceptions - Functions for instructor's use of English and Spanish - Instructor P
Spanish is used most (5) to English is used most (1)

| Function <br> Instructor P | StudentsP | InstP | Difference <br> Stu-InstP |
| :---: | :--- | :--- | :--- |
| Teaching vocabulary | 3.44 | 1 | $\mathbf{+ 2 . 4 4}$ |
| Vocabulary practice | 3.38 | 1 | $\mathbf{+ 2 . 3 8}$ |
| Instructions | 3 | 4 | -1 |
| Greetings | 3 | 1 | $\mathbf{+ 2}$ |
| Talk during activities | 2.56 | 1 | $\mathbf{+ 1 . 5 6}$ |
| Small talk | 2.44 | 1 | $\mathbf{+ 1 . 4 4}$ |
| Reading comprehension | 2.25 | 1 | $\mathbf{+ 1 . 2 5}$ |
| Teaching Grammar | 2.25 | 1 | $\mathbf{+ 1 . 2 5}$ |
| Explaining test | 2.25 | 1 | $\mathbf{+ 1 . 2 5}$ |
| Talk in the office | 1.69 | 1 | $\mathbf{+ 0 . 6 9}$ |
| Explaining the course | 1.57 | 1 | $\mathbf{+ 0 . 5 7}$ |
| Outside class | 1.44 | 1 | $\mathbf{+ 0 . 4 4}$ |

When comparing the responses of the two classes, the students of Instructor P reported hearing less Spanish used in the classroom than did the students of Instructor J for every function measured. As illustrated by Tables 1
and 2, Instructor P did use half as many words in Spanish as did Instructor J, so the perception of more Spanish use by the instructor in the classes of Instructor J would appear to accurately reflect the language use in the classes observed by the researcher.

Also according to Table 5, the students of Instructor J perceived that their instructor used English most for the following functions (5 - Spanish mostly used to 1 - English mostly used): Explaining the course (2.76), explaining a test (2.8), talk in the office (3.15), talk outside class (3.29), reading comprehension (3.33), and teaching grammar (3.43). Table 1 indicates that in the observed classes, the functions for which Instructor J used more English were explaining test, followed by teaching grammar. The only function for which the students perceived more Spanish use by Instructor J than was evidenced during the observed classes was reading comprehension. The students put the instructor's use of Spanish at well over half for this function (3.33), while in the observed classes, Instructor J used English $87 \%$ of the time for this function.

Comparing the language use recorded in the 5 observed classes to student perceptions of the use of the two languages in all their classes (mostly English-1 to mostly Spanish-5), the students of Instructor P perceived that the instructor used English most for the following functions: Talk outside class (1.44), explaining the course (1.57), talk in the office (1.69), explaining a test (2.25), teaching grammar (2.25) and reading comprehension (2.25). The students of Instructor P were also accurate in their estimates of the functions for which their instructor used the most English (or least Spanish) according to the top functions
for which Instructor P used English in the classes observed: Explaining test (95\%) and teaching grammar (87\%).

Question 2. B. "What are the students' and the instructors' perceptions regarding the functions for which the L1 and the L2 should be used in the foreign language classroom?" Descriptive data was again used to illustrate the mean of the ratings on the Likert scale for the perceptions of the students and of the instructors of the functions for which Spanish and English should be used in the classroom. Tables 7 and 8 list the functions in order of the students' preferred use of Spanish by their instructors, Spanish is best (5) to English is best (1).

Table 7. Students' and instructor's perceptions of functions for English and Spanish use by the instructors, in order of students' preferred use of Spanish Instructor J.
Spanish is best (5) to English is best (1)

| Function | Students <br> J | Inst J | Difference |
| :--- | :--- | :--- | :--- |
| Small talk | 4.29 | 4 | $\mathbf{+ 0 . 2 9}$ |
| Greetings | 4.19 | 5 | -0.81 |
| Vocabulary practice | 4 | 5 | -1 |
| Teaching vocabulary | 4. | 5 | -1 |
| Activities talk | 3.76 | 4 | -0.24 |
| Instructions | 3.19 | 4 | -0.81 |
| Teaching grammar | 3.19 | 2 | $\mathbf{+ 1 . 1 9}$ |
| Talk outside class | 3.14 | 3 | $\mathbf{+ 0 . 1 4}$ |
| Reading comprehension | 3.1 | 2 | $\mathbf{+ 1 . 1}$ |
| Office talk | 2.81 | 2 | $\mathbf{+ 0 . 8 1}$ |
| Explain test, etc. | 2.38 | 2 | $\mathbf{+ 0 . 3 8}$ |
| Explain course | 2.05 | 1 | $\mathbf{+ 1 . 0 5}$ |

Table 8. Students' and instructor's perceptions of functions for English and Spanish use by the instructors, in order of students' preferred use of Spanish Instructor P.

Spanish is best (5) to English is best (1).

| Function | StudntsP | InstP | Diff |
| :--- | :--- | :--- | :--- |
| Teaching vocabulary | 3.44 | 1 | $\mathbf{+ 2 . 4 4}$ |
| Vocabulary practice | 3.38 | 1 | $\mathbf{+ 2 . 3 8}$ |
| Instructions | 3 | 4 | -1 |
| Greetings | 3 | 1 | $\mathbf{+ 2}$ |
| Activities talk | 2.56 | 1 | $\mathbf{+ 1 . 5 6}$ |
| Small talk | 2.44 | 1 | $\mathbf{+ 1 . 4 4}$ |
| Reading comprehension | 2.25 | 1 | $\mathbf{+ 1 . 2 5}$ |
| Teaching grammar | 2.25 | 1 | $\mathbf{+ 1 . 2 5}$ |
| Explain test | 2.25 | 1 | $\mathbf{+ 1 . 2 5}$ |
| Office talk | 1.69 | 1 | $\mathbf{+ 0 . 6 9}$ |
| Explain course | 1.57 | 1 | $\mathbf{+ 0 . 5 7}$ |
| Talk outside class | 1.44 | 1 | $\mathbf{+ 0 . 4 4}$ |

Overall, the students of Instructor P, who heard less Spanish during their classes than did the students of Instructor J, also expressed a preference for less Spanish for every function than did the students of Instructor P according to the results reported in Table 9.

Table 9. Comparison of preferences for instructor classroom language use by the students of Instructor P and Instructor J. Spanish is best (5) to English is best (1).

| Function | Students P | Students J | Difference |
| :--- | :--- | :--- | :--- |
| Teaching vocabulary | 3.44 | 4 | -0.56 |
| Vocabulary Practice | 3.38 | 4 | -0.62 |
| Instructions | 3 | 3.19 | -0.19 |
| Greetings | 3 | 4.19 | -1.19 |
| Small talk | 2.44 | 4.29 | -1.85 |
| Reading <br> comprehension | 2.25 | 3.1 | -0.85 |
| Teaching Grammar | 2.25 | 3.19 | -0.94 |
| Explain Test | 2.25 | 2.38 | -0.13 |
| Office Talk | 1.69 | 2.81 | -1.12 |
| Explain Course | 1.57 | 2.05 | -0.48 |
| Talk outside class | 1.44 | 3.14 | -1.7 |
| Average | 2.44 | 3.34 | -0.90 |

The range of the preference for the students of Instructor J was 4.29-2.05 (Spanish is best -5 , English is best -1 ); for Instructor P , the range was 3.44 to 1.44 . The average difference in the level of preference for the two classes was almost a full point (0.90)

Question 3. A. "How do the perceptions of the students and the instructors of the functions for which the L1 and the L2 are used by the instructors in the classroom compare to the actual observed instructor use of English and Spanish in the classroom?"

This question is included in the discussion of Question 2A above.

Question 3. B. "How do the perceptions of the students and the instructors of the functions for which the L1 and the L2 should be used by the instructors in the classroom compare to the actual observed instructor use of English and Spanish."

The data for these questions involved two different types of data, nominal and ordinal, and therefore direct comparative statistical analysis was not be possible. As a result, the data will be described qualitatively. Data from the questionnaires was compared to the data from the researcher's class observations to determine whether the students' and instructor's perceived use of the two languages in the classroom conformed to the use observed by the researcher from class observations supplemented by audio- and video recordings

To analyze these questions, information was taken from Tables 1 and 2 for the functions for which the instructors were observed to use English or Spanish, and from Tables 7 and 8 for the students' preferences for the use of Spanish and

English by their instructors, English is best -1 , Spanish is best -5 . The two functions for which the students preferred the most English use by their instructors were also the two functions for which both instructors chose to use more than 50\% English, explaining about the course (2.05) and explaining about a test (2.38), for which Instructor J used English 81\% of the time to $19 \%$ for Spanish, 3975 words in English compared to 919 in Spanish about a test (since there was very little use of either language for explaining about the course in the observed courses, these two functions were combined in the observed categories under explaining a test). The students of Instructor J rated explain course at 1.51 and explain test at 2.25. Instructor J used English 95\% and Spanish 5\% of the time for explaining about a test (1975 words in English compared to 97 in Spanish). However, for teaching grammar, the students of both instructors placed their preference for the use on Spanish at somewhere between $50 \%-60 \%, 3.19$ out of 5 for the students of Instructor J, 2.94 for the students of Instructor P (a score of 3 indicated "English and Spanish are equally good to use"), whereas both instructors used predominantly English for this function, 65\% for Instructor J and $95 \%$ for Instructor P. Thus the students of both instructors expressed a preference for hearing more Spanish use by their instructors in the teaching of grammar than is revealed by the amount of Spanish that either instructor chose to use for this function during the classes observed. Students also indicated a preference for the use of Spanish for vocabulary practice (students of Instructor J, 4; students of Instructor P, 4.06), and both instructors did use more Spanish than English for this function, Instructor J using 66\% Spanish (2334 words to 1189 in English) and

Instructor P using slightly more Spanish, 52\% to 48\% (882 words in Spanish compared to 813 in English).

Question 4. A. "Is there a difference between students' perceptions of how their instructors use Spanish and English in the classroom and their perceptions of how their instructors should use Spanish and English in the classroom?"

Question 4. B. "Is there a difference between students' perceptions of how they themselves use Spanish and English in the classroom and their perceptions of how they think that they themselves should use Spanish and English in the classroom?"

## Instructor P-Comparison of student using vs. student should use

To assess whether there is a statistical difference between the perceptions of the students of Instructor $P$ of the when the students themselves did use and should have used the two languages, English and Spanish, the ratings for questions 13-27 were compared to those for 40-54 using a dependent t-test (see Table 10)

Table 10. Students' perceived use of Spanish/English compared to preferred use - Instructor P

| Number of <br> students | Mean of the <br> difference | Standard <br> Deviation of <br> the difference | Minimum <br> value of the <br> difference | Maximum <br> value of <br> the <br> difference | $l$ <br> 95\% Confidence <br> Limits for Mean of <br> the difference <br> Upper <br> Lower |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 16 | -2.25 | 11.4047 | -18 | 16 | -8.3271 |

The dependent t -test p -value of 0.4423 , indicates that the results were not significant. There is no statistical difference in the amount of both languages that
the students say they use in the classroom, and the amount that they think that they should use.

## Instructor P-Comparison of instructor using vs. instructor should use

To assess whether there is a statistical difference between the students' perceptions of the when Instructor P used and should have used the two languages, English and Spanish, the ratings for questions 1-12 were compared to those for 28-39 using a dependent t-test (see Table 11).

Table 11. Students' perceived instructor use of Spanish/English compared to preferred use - Instructor $P$

| Number <br> of <br> students | Mean of <br> the <br> difference | Standard <br> Deviation of <br> the <br> difference | Minimum <br> value of the <br> difference | Maximum <br> value of <br> the <br> difference | 95\% Confidence <br> Limits for Mean <br> of the difference <br> Upper <br> Lower |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| 16 | -0.8750 | 6.7119 | -15 | 11 | -4.4515 |  |

The dependent t -test p -value of 0.6097 , indicates that the results were not significant. There is no statistical difference in the amount of both languages that the students perceived that Instructor P used in the classroom, and the amount that they think that the instructor should have used.

## Instructor J - Comparison of student using vs. student should use

To assess whether there is a statistical difference between the students' perceptions of when Instructor P used and should have used the two languages, English and Spanish, the ratings for questions 13-27 were compared to those for 40-54 using a dependent t-test.

Table 12. Comparison of students' use of Spanish compared to their preferred use - Instructor J

| Number of <br> students | Mean of <br> the <br> difference | Standard <br> Deviation of <br> the <br> difference | Minimum <br> value of the <br> difference | Maximum <br> value of <br> the <br> difference | 95\% Confidence <br> Limits for Mean <br> of the difference <br> Upper <br> Lower <br> 21 |
| :--- | :--- | :--- | :--- | :--- | :--- |

The dependent $t$-test p -value of 0.7027 indicates that the results were not significant. There is no statistical difference in the amount of both languages that the students perceived that they used in the classroom, and the amount that they think that they should have used.

## Instructor J - Comparison of instructor using vs. instructor should use

To assess whether there is a statistical difference between the students'
perceptions of when Instructor P used and should have used the two languages, English and Spanish, the ratings for questions 1-12 were compared to those for 28-39 using a dependent t-test.

Table 13. Students' perceived instructor use of Spanish/English compared to preferred use - Instructor J

| Number of <br> students | Mean of the <br> difference | Standard <br> Deviation of <br> the difference | Minimum <br> value of the <br> difference | Maximum <br> value of <br> the <br> difference | 95\% Confidence <br> Limits for Mean of <br> the difference <br> Upper <br> Lower |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 21 | -3.4762 | 7.9914 | -24 | 16 | -7.1138 |

Here, the dependent t -test p -value is 0.0600 , which is significant. In general, a pvalue of under 0.05 is considered significant, but when dealing with a small
sample size, 0.06 to 0.07 is also considered significant. Therefore there is a significant difference in the amount of the languages that the students perceive that Instructor J used in the classroom, and the amount that they think that the instructor should have used (their perceptions of the amount of Spanish language that their instructor used was higher than their preferences for its use). When analyzing the questionnaire data regarding the students' perceptions of when they and their instructors used and should have used English and Spanish, the significant data referred to the amount of Spanish that Instructor J should have used compared to what she did use. Further analysis of the questions included in this part of the questionnaire revealed that the responses for two questions had the most effect on the statistical significance of this data:

- Question 8 compared to Question 35, checking how well students understand a reading in class, the students thought that less Spanish should have been used for this function than they perceived had been used.
- For question 8 compared to Question 29, when giving instructions or explaining how to do group activities in class, the students' perceived that less Spanish should have been used than they perceived that the instructor had used.

Question 5. "How does the quantity of English and Spanish used by the instructor in the classroom relate to student scores on the Minnesota Language Proficiency Assessment listening comprehension assessments at the IntermediateHigh level?" For this question, an independent t -test was use to analyze the data to determine whether there existed a significant difference between the amount of

L1/L2 use in the classroom and student progress on the MLPA proficiency assessment. To accomplish this, data of the students' progress on the MPLA was compared from the beginning and end of the semester for each instructor. This data then was compared to determine whether there was a significant difference in listening comprehension improvement in the two groups from the beginning to the end of the semester.

Table 14. Change in listening comprehension from beginning to end of semester, all students.

|  | Number <br> of <br> students | Mean of <br> the <br> difference | Standard <br> Deviation of <br> the difference | Minimum <br> value of <br> the <br> difference | Maximu <br> m value <br> of the <br> differenc <br> e | 95\% Confidence <br> Limits for Mean <br> of the difference <br> Upper <br> Lower |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Instructor <br> J | 21 | 2.0952 | 4.5597 | -5 | 12 | 0.0197 | 4.1708 |
| Instructor <br> P | 18 | 2.5556 | 4.4751 | -8 | 10 | 0.3302 | 4.7809 |
| Difference <br> between <br> students of <br> P and J |  | -0.4603 | 4.5210 |  |  | -3.4027 | 2.4821 |

Independent t-test $\mathbf{p}$-value $=\mathbf{0 . 7 5 3 0}$
The independent t-test p -value at 0.7530 indicates that there was no significant difference in the listening comprehension improvement of the two groups from the beginning to the end of the semester. Therefore, although the students in one class heard twice as much Spanish in the classes observed as part of the study than did the students in the second class, there is no evidence that this led to increased improvement in listening proficiency during the course of the semester based on the students' scores on the Minnesota Listening Proficiency Assessment.

## The choices of the instructors

At the beginning of the study, the researcher met with the instructors together to talk in general about the study and their part in it, and to ask them to think about their use of English and Spanish during the semester, and the reasoning behind the decision to use one language for one function or another. At the end of the study, the instructors were asked to summarize their thoughts about their language choices in the classroom. The researcher then met with the instructors individually to have a general conversation about their use of English and Spanish in the classroom during the semester.

## Instructor P

According to Instructor P, "I used English to explain grammar. At the beginning of the semester I gave my students a survey (in English) and everyone wrote that grammar was the hardest part in learning Spanish. While we reviewed grammar in class, it was evident that most of the students lacked basic knowledge of English grammar (for example, not knowing what a direct object or a direct object pronoun was). I had to teach them English grammar before I could teach Spanish grammar." Instructor P continued that she felt that half of her students did not have the appropriate proficiency level for a Spanish 202 course, and as a result, she always used very basic Spanish when giving instructions for in-class activities and spoke slower than she thought she should have been able to speak for a 202 level class, yet some of the students still did not understand the instructions. The instructor continued, "I think that I should only use Spanish in a

202 level course. However, in my situation, half of the students were not at the adequate proficiency level for this course. If I taught this class entirely in Spanish, half of the students would not understand me." She further stated that since university level Spanish courses include so much information to be covered in a class that met only twice a week, if she used Spanish all the time, repeating instructions, for example, as slowly as possible and as often as possible until everyone understood, there simply would not be enough time to cover all the material that the class was required to cover during the semester. In other words, in some cases she felt that she had to use English to make the most efficient use of her time with the students. This instructor said that she met privately with two of her students who were having particular trouble and suggested that they take advantage of the university's tutoring service. One of them did so and she felt the student showed noticeable improvement during the rest of the semester. This instructor's use of English while believing that she should have been able to use Spanish is similar to the often cited issue with foreign language instructors, that they feel "guilty" when using English (Edstrom, 2006), but use it anyway because they feel they must in certain situations to be able to communicate appropriately with their students.

## Instructor J

Instructor J expressed her "guilt" (Edstrom, 2006) explicitly:"I believe that there is a place for English in the Spanish language classroom. Unfortunately, I have been programmed like just about everyone else in my department that

English is forbidden in the classroom and that we must use $100 \%$ Spanish at all times, even in the 100 levels. Therefore, part of me feels guilty whenever I speak English to my students, so I have to make an effort to remind myself that it's not a cop-out, but rather a conscious and sensible choice based on what works or doesn't work based on my own experience and from what I have learned about pedagogy." This instructor also related that she had students who complained that previous instructors had used only Spanish in the classroom with the result that time was sometimes wasted in the effort to make students understand and that the instructor even abandoned material rather than switch to English to explain it so that all the students could understand. Instructor J further related that in high school, she had a teacher who only used Spanish in the classroom, and that although she felt that she flourished in that environment, she knew that many students not as motivated as she had struggled. She added that in these classes where all Spanish was used, the instructor did not have to try to teach advanced grammar topics such as those covered in a Spanish 202 course in this university.

Instructor J said that she used English principally for two purposes:"to create a comfortable and non-threatening learning environment, and to facilitate comprehension of grammar topics." She stated that particularly at the beginning of the semester, she tried to use English to help connect with the students and lower their anxieties about speaking Spanish. She also believes that grammar is difficult for the students to understand, and that adding the element of trying to teach it in Spanish only frustrates students and can cause some to shut down completely. However, this instructor tries to make it clear that although it is
appropriate to use English for learning vocabulary and grammar, that only Spanish is to be used for practicing it, and that drawing that line for students is not always easy. This instructor is careful always to give and to write instructions in Spanish. She also thinks it would be very helpful for the students, as well as the instructor, to have very clear parameters of when English is allowed and forbidden in the classroom, and she is considering ways to do this for future classes. It might be assumed that as the semester went on, that these instructors would have been able to use more Spanish, but they found that the reverse was true for SPA202. These instructors discovered that they had to use more English later in the semester, when the grammar became even more difficult for the students.

## Class observations

The researcher observed 675 -minute classes of each instructor, 5 of which were successfully taped and transcribed word-for-word. The organization of the classes of the two instructors was similar, in that grammar instruction was usually followed by activities from the textbook, sometimes as a class and sometimes by the students in groups. To explain Spanish grammar, both instructors primarily used English, and made comparisons to English grammar. Both instructors also created exercises of their own to supplement those from the textbook. Perhaps the biggest observed difference in these two classes was the way each class started. Generally, Instructor J opened the class with a class conversation using the vocabulary of the chapter. Instructor P opened every class with the admonition,
"La clase ha empezado. Turn off all electronic devices...etc." The phrase in Spanish that this instructor used most often was "Silencio, por favor" and despite her requirement that no electronic devices be used during the class, students regularly were observed using their phones during class. Instructor J, on the other hand, seemed to enjoy her classes more, smiling and laughing frequently with the students. If the researcher's subjective observations can be accepted, the "affective filter" (Krashen, 1983) of the two classes would fall at opposite ends of the scale, although it was clear that both instructors put a good deal of thought and organization into their daily teaching plans.

## Discussion

This study accumulated data concerning a number of different aspects of the teaching of English and Spanish in two 202 (fourth semester) Spanish as a foreign language university classrooms: (1) the amount of each language used and the function for which each was used by the two instructors; (2) the perceptions of the instructors and their students regarding which languages were most appropriate to be used for each language, and their perceptions of which languages were used for each function; and (3) the level of improvement in listening proficiency of the students of both instructors over the course of the semester.

The results of the class observations indicated that the functions for which these two instructors chose to use more English than Spanish are the same functions noted in previous studies, for grammar instruction and for talking about
tests and assignments. The amount of English varied from 55\% for Instructor J to $75 \%$ for Instructor P , putting the amount of use of the L1 for both instructors within the range of $10 \%-80 \%$ noted by Duff and Polio (1990), but at a higher use of the L1 than reported in other studies (Duff \& Polio, 1990; Polio \& Duff, 1994; Macaro, 2001; Rolin Ianziti \& Brownlie, 2002, and Edstrom, 2006). The amount of English used by both instructors was also far different from what both instructors reported having been given as the goal during their orientations as graduate teaching assistants that only Spanish was to be used in the classroom. However, the instructors knew that the purpose of the study was to compare the instructors' choices for their language use in the classroom, and that for study purposes there was no assumption that if the TL were used, it would indicate some sort of "failure" on the part of the instructor. It is therefore possible that the instructors felt freer to use the languages in whatever way they deemed most productive, rather than trying to adhere to specific policies about their use. On the other hand, it is also possible that since they were aware that they were being observed as part of this study, that they used more Spanish than they would have used in their classes that were not observed.

The questionnaire results indicated that the instructors generally perceived that they used less Spanish than their students thought they heard them use. If we use an average of 3 on the 1-5 Likert scale as a rough indication of a $50-50$ split in the use of the two languages, the students perceived an overall use of Spanish at close to $80 \%$ for Instructor J, and almost $50 \%$ for Instructor P, much higher than the quantity actually used by either instructor ( $45 \%$ and $25 \%$ ). The instructors
had a more realistic view of their language use, with an average of 2.83 , or close to $50 \%$ for Instructor J , and for Instructor P , a little over $25 \%$, very close to the amount of use during the classes observed by the researcher.

The only statistical difference in the questionnaire data occurred with the perceived use and desired use of Spanish and English by Instructor J for some of the functions. Even though this instructor used more than 50\% English during her classes, her students would have preferred even more English for the functions of checking how well they understood a reading (a function for which she used $87 \%$ English during the observed classes), and when giving instructions or explaining an activity (this function was not tabulated from the class observations).

In the classes observed by the researcher, the students of one instructor heard twice as much Spanish used in the classroom as did the students of the second instructor, when measured in actual number of words used in each language. However, there was no significant difference in the improvement in listening proficiency between the two groups of students in these two classes. Therefore, based on the results of this limited study, hearing twice the number of words in Spanish in one classroom compared to the other did not significantly affect the students' gains in listening proficiency over the course of the semester. These findings are in line with the results of the much larger study of Thompson (2006), in which the amount of Spanish heard by students in the classroom was not directly related to their rate of improvement in listening proficiency from the beginning to the end of the semester. Thompson cited as a limitation of his study that he used the MLPA assessment at the intermediate level, and that perhaps this
did not give enough room for improvement for some of the students in the study. For that reason, in this study, the MLPA assessment at the high/intermediate level was used, allowing sufficient room for improvement for all the students.

However, there was still no significant relationship between the amount of Spanish that the students heard from their instructors in the classroom, and their improvement in listening comprehension from the beginning to the end of the semester.

## Chapter 4

## CONCLUSION

The objective of this study was to add to the corpus of data about the foreign language classroom in order to contribute to the discovery of "a framework that identifies when reference to the L1 can be a valuable tool" in the classroom and contribute information to help formulate a "theory of optimality for the use of codeswitching by the teacher" (Macaro, 2001, p. 545). The study was designed to describe the use of the L1 (English) and the target language (Spanish) by instructors in the foreign language classroom, by analyzing the functions for which the instructors chose to use the two languages, why the instructors said that they chose to use the languages as they did, the students' perceptions of the level of use of the languages versus their preferred level of use, and whether there was a relationship between the amount of the target language that the students heard used in the classroom by their instructors and the students' progress on a listening proficiency assessment from the beginning to the end of the semester.

As part of the study, both instructors were asked to think about when and why they chose to use English and not Spanish for certain functions in the classroom, since both stated that in their orientations as teaching assistants, they had been instructed to use the target language (Spanish) as exclusively as possible. Both instructors stated that they chose to use English to teach grammar, and both expressed the belief that they should have been able to use Spanish for this function. One instructor stated that her students did not understand the grammar of their own language, English, well enough to be able to understand

Spanish grammar taught in Spanish. The second instructor explicitly stated her feeling of "guilt" when using English to teach grammar, although she was certain that it was necessary, particularly toward the end of the semester, when the grammar topics became more difficult. It would seem to be a reasonable assumption that the instructor could use more of the target language as the students learned more Spanish during the semester, but in this particular course, the grammar became progressively more difficult as the semester goes along, and the instructors found that they were using more English, not less, to teach grammar as the semester advanced.

Although this study included instructors with very similar demographic characteristics teaching students with very similar demographic characteristics and similar language backgrounds, from the classroom observations it is still obvious that there is a range of confounding variables in classrooms that cannot be controlled for any one study. Although each instructor gave her students the same number of listening exercises during their classes, and the same types of online homework assignments, every student brought his or her own learning style and personal motivations to each class. More than $90 \%$ of the students in each of these classes were taking the course as a degree requirement. As a result, it is possible that they brought lower levels of motivation to the course for that reason. However, based on observation, one of these classes, which included $90 \%+$ requirement students, consistently showed a higher level of engagement and energy during their classes than did the other class with the same $90 \%+$ requirement students, perhaps indicating that the "affective filter" was lower.

This same class also heard twice as much Spanish from the instructor than did the second class. Still, there was no significant difference in the improvement in listening proficiency of the two classes from the beginning to the end of the semester.

## Limitations

The study was limited to students in classes of two female non-native speakers of Spanish at the 202 (fourth semester) level in the university Spanish as a foreign language classroom. The focus on NNS instructors limited the generalizability of the study to other groups of instructors teaching other languages. Also, since the study participants were students at the 202 level, left open for future research is whether the expected diglossia (Chavez, 2006) continues at more advanced levels or beginning levels of study. The small sample size ( $\mathrm{n}=39$ ) also limited its applicability to 202 Spanish students generally. Finally, it cannot be assumed that improvement in listening proficiency was due solely to the amount of Spanish used by the instructor in the classroom, since the students were also expected to do a number of listening exercises as part of their online homework assignments.

## Future Research

Since there have not yet been any empirical studies supporting a positive relationship between policies of target language exclusion from the classroom and learning enhancement (Macaro, 2001), it may be that there are so many
confounding variables in any language classroom that these sorts of studies are ultimately doomed to failure. However, for this particular study, it could also be that the listening assessment chosen, the Minnesota Language Proficiency Assessment for listening at the intermediate/high level, did not test the functions (narrating, describing, comparing, etc.) that were directly addressed in the classroom. Therefore, future studies comparing the communicative functions used in the classroom to those measured by the assessment instrument would also seem to be in order.

Levine (2011) suggests that involving students in developing the norms for language use in the classroom would result in more overall language use, and therefore more target language use by the students. Developing studies to test his hypotheses would seem to be a fruitful pursuit for future researchers. Also, particularly in hybrid courses but also in online courses, studies geared toward measuring the effect of online listening exercises on listening proficiency might also prove enlightening. Finally, it would be helpful to examine in depth the way that we teach language courses for those student taking them only as a requirement to determine if there are techniques that could be used to stimulate their interest sufficiently so that they retain a lifelong interest in learning about other cultures, even if they do not become lifelong language learners.

## Pedagogical implications

Based on this study, and many that have preceded it, it is clear that the value of the use of the L1 and the L2 in the classroom cannot be reduced to
simplistic rules that seek to ban the use of the L1 in the classroom. Not only "quantity" but also "quality" must be part of the equation, and quality can only be based on what is designed to enhance the learning of the students in a particular class. However, determining how much and for what functions a particular group of students needs their instructor to use the L1 vs. the target language cannot easily be established. Levine $(2003,2011)$ suggests that this can be accomplished by allowing the students themselves an active role in deciding how the TL and the foreign language are best used in the foreign language classroom, in order to create "bilingual norms" in the classroom that tend to develop organically in multilingual environments outside the classroom, but must be consciously created in the classroom environment.

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## APPENDIX A

HUMAN SUBJECTS IRB APPLICATION

| Arizona State University |  | For Office Use |
| :---: | :---: | :--- |
| Office of Research Integrity |  | Only: |
| and Assurance |  | Date Received: |
| 660 S. Mill Avenue Suite 315 |  | HS Number: |
| Arizona State University |  |  |
| Tempe AZ 85287-6111 |  |  |
| (Mail Code 6111) |  |  |
| Phone: 480-965-6788 |  |  |
| Fax: (480)965-7772 |  |  |

SOCIAL BEHAVIORAL APPLICATION HUMAN SUBJECTS

## PROTOCOL INFORMATION

Protocol Title: STUDENT PERCEPTIONS OF THE USE OF ENGLISH AND SPANISH BY NON-NATIVE SPEAKING INSTRUCTORS IN THE SPANISH AS A FOREIGN LANGUAGE CLASSROOM

Date: 22 June 2011

## PRINCIPAL INVESTIGATOR (PI)

Please note that the PI's CV and human subject's protection training certification must be attached with this application.

Name and Degree(s): Professor Barbara A. Lafford, PhD
Department/Center:
School of International Letters and Cultures - Spanish
Mailing Address:
Mail Code 0320
Arizona State University
411 N. Central Ave., Ste 325
Phoenix, AZ 85004-069

Email:
Phone:
Fax:
blafford@asu.edu
480.703.1461
480.907.2109

University Affiliation:
x Professor
Associate Professor
Assistant Professor
Instructor
Other: Please specify. ("Other" categories may require prior approval.
Students cannot serve as the PI)

## CO-INVESTIGATORS (CO-I)

- A Co-I is anyone who has responsibility for the project's design, implementation, data collection, data analysis, or who has contact with study participants.
- If the project involves medical procedures or patient care that the PI is not certified or licensed to conduct, a responsible physician or other certified or licensed professional must be included as a Co-I. The application must include a copy of supporting documentation for this individual (CV, license, board certification etc).

Name Study Role Affiliation Department Email/Tel/Fax
Patsy Hansel Co-investigator Graduate Student Spanish
patsy.hansel@asu.edu yes

## PROJECT FUNDING

1a)How is the research project funded? (A copy of the grant application must be provided prior to IRB approval)
x Research is not funded (Go to question 2)
Funding decision is pending
Research is funded
b) What is the source of funding or potential funding? (Check all that apply)

| $\square$ Federal | $\square$ Private Foundation | $\square$ Department Funds |
| :--- | :--- | :--- |
| $\square$ Subcontract | $\square$ Fellowship | $\square$ Other |

c) Please list the name(s) of the sponsor(s):
d) What is the grant number and title?
e) What is the ASU account number/project number?
f) Identify the institution(s) administering the grant(s):

## PROJECT SUMMARY

2. Provide a brief description of the background, purpose, and design of your research. Avoid using technical terms and jargon. Describe all interactions with potential study participants (e.g., how identified, how recruited) including all of the means you will use to collect data (e.g. instruments, measures, tests, questionnaires, surveys, interview schedules, focus group questions, observations). Provide a short description of the tests, instruments, or measures.
(If you need more than a few paragraphs, please attach additional sheets.) Attach copies of all instruments and questionnaires. FOR ALL OF THE
QUESTIONS, WRITE YOUR ANSWERS ON THE APPLICATION
RATHER THAN SAYING "SEE ATTACHED".

This study will investigate students' perceptions of the use of Spanish and English in the Spanish as a foreign language classroom, as well as their progress on listening comprehension over the course of the semester. Students in classes of two different native English-speaking instructors of Spanish at the 200 level at ASU will be invited to participate. Data will be collected through the administration of a written Language Use Questionnaire to all the students and instructors. Prior to the administration of this questionnaire, six class periods of each classroom in the study will be observed and video- and audio-recorded by the co-investigator and the results used for comparative purposes with the results of the language use questionnaire. The demographic information from the questionnaire will be used to study the effects of the independent variables of sex, age, and the language background of participants on their attitudes toward the use of English and Spanish in the classroom. Finally, the Minnesota Language Proficiency Assessment (MPLA) for listening at the Intermediate/High level will be administered to the students in the classes twice, at the beginning and end of the semester, during a regular class period. All students will be required to take the assessment, but only the scores of those who agree to participate will be used as part of the study. The results of the students who agree to participate will be used to determine whether gains in listening comprehension are related to the amount of Spanish/English used in the classroom. Copies of the Language Use Questionnaire are attached, along with the consent form and verbal script that will be used to recruit students to participate in the project. Information about the Minnesota Language Proficiency Assessment can be found at http://www.carla.umn.edu/assessment/MPLA.html.

## STUDY DURATION

3. What is the expected duration of the study through data analysis? (Include a timeline, if applicable). August, 2011-December, 2011. Data will be collected during the fall semester, 2011.
a. When is the expected date that you wish to begin research? (MM/DD/YY) 08/15/2011(must be after submission date) Note: Protocols are approved for a maximum of 1 year. If a project is intended to last beyond the approval period, continuing review and reapproval are necessary. Research cannot begin until you have received an approval letter.

## IRB APPROVAL

4. Has this project been reviewed by another IRB? $\square$ Yes x No (If yes, please complete the information below and attach a copy of the IRB approval materials). a) What is the name of the institution?
b) What is the current IRB approval date/status of IRB application?

## STUDY SITES

5. Where will the study be conducted? (Check all that apply)
x On campus (Please indicate building(s) and room number (s) when known) Language and Literatures Building, classrooms and lab, ASU Tempe campus.
$\square$ Off campus (Please provide location and letter of permission, where applicable)

## SAMPLE SIZE/DURATION

6a) What is the expected number of individuals to be screened for enrollment? 120
b)What is the MAXIMUM number of subjects that you plan to enroll in the study? 120
c) What is the approximate number of: 60 Males 60 Females
d) Indicate the age range of the participants that you plan to enroll in your study. 18 to 99
e) What is the expected duration of participation for each subject? (at each contact session and total) 55 minutes per session; 10 hours total for the classroom videorecordings, administration of the language use questionnaire, and two administrations of the listening assessment.

## SUBJECTS

7. Will the study involve any of the following participants? (Please check
all that apply if your study specifically targets these populations)

| $\square$ Children (under 18) | $\square$ Pregnant women |
| :--- | :--- |
| $\square$ Prisoners or detainees | $\square$ Persons at high risk of becoming |
| detained or imprisoned | $\square$ Patients- what is the status of |
| $\square$ Decisionally impaired | $\square$ Native Americans |
| their health? |  |
| $\square$ Fetuses |  |
| Non-English speakers (Include copy of all materials in language of |  |
| participants and certification of the translation and back-translation: |  |
| http://researchintegrity.asu.edu/humans/forms ) |  |

a) If any of the above categories have been checked, please state how you will protect the rights and privacy of these individuals.
b) Please provide the rationale for the choice of the subjects including any inclusion criteria. Subjects will be chosen based on their being students in the
classes being studied. The selection of the instructors was based on their years of experience as Graduate Teaching Assistants (at least one), and their agreement to participate.
c) Will any ethnic/racial or gender groups be excluded from this study? If so, provide the rationale for the exclusion criteria. No

## RECRUITMENT

8. Describe the process(es) you will use to recruit participants and inform them about their role in the study. (Attach copies of any recruitment materials.) Students will be recruited during an in-class recruitment presentation by the coinvestigator including the cover letter of invitation attached.
a) Will any of the following be used? (Check all that apply and attach copies) Internet/Email
Newspapers/radio/television advertising
x Posters/brochures/letters
x Other Class recruitment presentation
b) Does any member of the research team have a relationship (i.e., teacher, coach, physician, therapist, service provider, etc) with individuals who will be recruited for this study or with institutions that will be used to recruit for this study? If yes, describe this relationship in detail and explain how the research process will avoid any potential problems (e .g, coercion or appearance of possible coercion in recruiting) or conflicts of interest arising from this investigator's dual roles.

The co-investigator knows the instructors only as peers in the Spanish Graduate Teaching Assistant program.

## DECEPTION

9. Does the proposed research require that you deceive participants in any way?
```
    Yes x No
```

a) If your response is "yes," describe the type of deception you will use, indicate why it is necessary for this study, and provide a copy of the debriefing script.

## COMPENSATION

10. Will any type of compensation be used? (e.g. money, gift, raffle, extra credit, etc)
a) $\square$ Yes (Please describe what the compensation is) $\quad \mathrm{x}$ No (go to question 11)
b) Explain why the compensation is reasonable in relation to the experiences of and burden on participants.
c) Is compensation for participation in a study or completion of the study? (Note: participants must be free to quit at any time without penalty including loss of benefits).
$\square$ Participation

## $\square$ Completion

d) If any of the participants are economically disadvantaged, describe the manner of compensation and explain why it is fair and not coercive.

## INFORMED CONSENT

11. Describe the procedures you will use to obtain and document informed
consent and assent. Attach copies of the forms that you will use. In the case of secondary data, please attach original informed consent or describe below why it has not been included. Fully justify a request for a waiver of written consent or parental consent for minors.
(The ASU IRB website has additional information and sample consent and assent forms.)
Students will be recruited during a regular class period during the first three weeks of classes during the fall, 2011, semester. A copy of the letter of introduction and the consent form are attached.

## RISKS

12. What are the potential risks of the research? (Check all that apply)
$\square$ Physical harm
Psychological harm
Release of confidential information
Other
There are no perceived potential risks to the human subjects of this research.
13. Describe any potential risks to human subjects and the steps that will be taken to reduce the risks. Include any risks to the subject's well-being, privacy, emotions, employability, criminal, and legal status.
14. 

There are no perceived potential risks to the human subjects of this research

## BENEFITS

13a) What are the potential benefits to the individual subject, if any, as a result of being in the study?
b) What are the potential benefits, if any, to others from the study? The goal of the study is to provide benefits are to instruction of Spanish in general, which will then benefit students and instructors of Spanish in general. The students could potentially benefit from giving thought to the process they go through in learning a foreign language.

## DATA USE

14. How will the data be used? (Check all that apply)
$\square$ Dissertation
article
x ThesisResults released to participants/parents school

## x Publication/journal

$\square$ Undergraduate honors project Results released to employer or

Results released to agency or organization x Conferences/presentations $\square$ Other (please describe):

## PROTECTION OF CONFIDENTIALITY

15. Describe the steps you will take to ensure the confidentiality of the participants and data. Students will receive unique identification numbers at the beginning of the survey so that comparisons can be made between their responses to the surveys and the results of their reading comprehension assessments. The identification numbers will be kept on a Master List that will be kept separate from the data during the course of the investigation. Neither students nor instructors will be identified in any of the research reports or publications.
a) Indicate how you will safeguard data that includes identifying or potentially identifying information (e.g. coding).
After the conclusion of the study, the coding materials will be kept on the hard disk of the computer of the Principal Investigator.
b) Indicate when identifiers will be separated or removed from the data. Identifiers will be removed as soon as the initial coding is completed.
c) Will the study have a master list linking participants’ identifying information with study ID codes, and thereby, their data? If so, provide a justification for having a master list. (Note: In many cases, the existence of a master list is the only part of a study that raises it above minimal risk, that is, places participants at risk.) Yes, there will be a master list of participants with identifiers so that data from the survey and the listening assessment can be linked for comparative purposes.
d)If you have a master list and/or data with identifiers, where on campus will the list and/or data be kept? (Data sets with identifiers and master lists, whether electronic or in hard copy, should be securely stored on an ASU campus except in unusual circumstances (e.g., research conducted out of the state or country).)
The master list will be stored in an encrypted file on Dr. Lafford's hard drive at the Downtown ASU campus, 411 N. Central Avenue, Suite 325, Phoenix, AZ 85004.
e) If you have a master list, when will it be destroyed? The master list will be destroyed as soon as data collection and entry are complete.
f) How long do you plan to retain the data? Five years.
g) How will you dispose of the data? The data will be erased from Dr. Lafford's hard drive.
h) Where on campus will you store the signed consent, assent, and parental permission forms (If applicable)? (Consent, assent, and parent permission forms should be securely stored on an ASU campus) The forms will be stored in the office of the Principal Investigator at 411 N. Central Avenue, Suite 325, Phoenix, AZ 85004.

## INVESTIGATOR INTERESTS

16Have all investigator filed a current annual conflict of interest questionnaire with the ASU Office of Research Integrity and Assurance? It is the COEUS module at: http://researchintegrity.asu.edu/coi x Yes $\square$ No
a) Do any of the researchers or their family members, have a financial interest in a business which owns a technology to be studied and/or is sponsoring the research? $\square$ Yes $\quad x$ No (If yes, please describe and disclose in the consent form.)
b) Are there any plans for commercial development related to the findings of this study?
$\square$ Yes (If yes, please describe.) x No
c) Will the investigator or a member of the investigator's family financially benefit if the findings are commercialized?
$\square$ Yes (If yes, please describe.) x No
d) Will participants financially benefit if the findings are commercialized?
$\square$ Yes (If yes, please describe.) x No

## BIOLOGICAL MATERIALS

17a) Will biological materials be collected from subjects or given to subjects? $\square$ Yes x No (If no, please skip to question 18)
b) Provide a description of the material (blood, tissue, vectors, antibodies, etc.) that will be used:
c) If the study involves human blood, do you have the required ASU Biosafety disclosure on file? $\square$ Yes $\square$ No(If yes, what is the Biosafety Disclosure number.)
d) Will any of the material being used in the study come from a third party? $\square$ Yes $\quad \square$ No (If yes, attach copy of the Material Transfer Agreement if required.)
e) Does this study involve transfer of genetic material of animal tissue into humans? $\square$ Yes $\square$ No (If yes, please cite the ASU Institutional Biosafety Disclosure number).

## TRAINING

18. The research team must document completion of human subjects training from within the past 3 years.
(For more information see: http://researchintegrity.asu.edu/training/humans )

Please provide the date that the PI and co-investigators completed the training and attach the certificate. Certificates for the Principal and Coinvestigator are on file in the IRB office.

## PRINCIPAL INVESTIGATOR

In making this application, I certify that I have read and understand the ASU Procedures for the Review of Human Subjects Research and that I intend to comply with the letter and spirit of the University Policy. Changes in to the study will be submitted to the IRB for written approval prior to these changes being put into practice. I also agree and understand that informed consent/assent records of the participants will be kept for at least three (3) years after the completion of the research. Attach a copy of the PI's CV unless one is already on file with the Office of Research Integrity and Assurance. Dr. Lafford's CV is on file in the IRB office. Name (first, middle initial, last):

Barbara A. Lafford

Signature:
Date: June 15, 2011
\(\left.$$
\begin{array}{|l|l|}\hline \begin{array}{l}\text { FOR OFFICE } \\
\text { USE: }\end{array} & \begin{array}{l}\text { This application has been reviewed by the Arizona State } \\
\text { University IRB: } \\
\square \text { Full Board Review } \\
\square \text { Expedite Categories: } \\
\square \text { Exempt Categories: }\end{array}
$$ <br>
\square Approved \square Deferred \square Disapproved <br>
\square Project requires review more often than annual <br>

Evenths\end{array}\right]\)| Signature of IRB Chair/Member: <br> Date: |
| :--- |

## APPENDIX B

## LETTER TO INSTRUCTORS

# Acquisition of Spanish as a Second Language Study - Cover Letter Arizona State University <br> Hansel - Fall, 2011 

Dear Spanish 202 Instructors:
I am a graduate student under the direction of Professor Barbara Lafford in the Department of Spanish, School of International Literatures and Cultures at Arizona State University. This semester I will be conducting a research study to try to determine some of the best techniques for teaching and learning Spanish. As part of the study, I am asking to be able to video- and audio-record your classroom six times during this semester. This recording will focus on the teaching techniques of the instructor, not on the activities of the students.

The study will involve no more than 30 minutes of your time to fill out a survey regarding your opinions about some of the techniques used in the teaching/learning of Spanish. I would also like your permission to use two of your class periods for the students to take an online listening comprehension assessment, once early in the semester and once toward the end of the semester.

Your responses will be confidential. The results of this study may be used in reports, presentations or publications, but your name will in no way be associated with any of the data. You must be at least 18 years old to participate. There are no foreseeable risks or discomforts to your participation.

Your participation in this study is voluntary. You may skip questions if you prefer not to answer them. If you choose not to participate or to withdraw from the study at any time, there will be no penalty.

If you have any questions concerning the research study, please contact me at patsy.hansel@asu.edu. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Thank you in advance for your participation.
Sincerely,
Patsy Hansel
patsy.hansel@asu.edu

Please sign below to indicate your willingness to participate in various parts of this study:

By signing below, I agree for my classes to spend two class periods to participate in the two listening comprehension assessments:

NAME $\qquad$ Date $\qquad$

By signing below, I agree to be video- and audio-taped during the classroom part of the study:

NAME
Date $\qquad$

## APPENDIX C

LETTER TO PARTICIPANTS

# Acquisition of Spanish as a Second Language Study - Cover Letter Arizona State University <br> Hansel - Fall, 2011 

Dear Spanish 202 students and instructors:
I am a graduate student under the direction of Professor Barbara Lafford in the Department of Spanish, School of International Literatures and Cultures at Arizona State University. This semester I will be conducting a research study to try to determine some of the best techniques for teaching and learning Spanish. As part of the study, I will video- and audio-record your classroom six times during this semester. This recording will focus on the teaching techniques of the instructor, not on the activities of the students.

I am asking the students to participate directly in two parts of the study. The study will involve no more than 30 minutes of your time to fill out a survey regarding your opinions about some of the techniques used in the teaching/learning of Spanish. It will also require two class periods to take an online listening comprehension assessment, once early in the semester and once toward the end of the semester.

Your responses will be confidential. The results of this study may be used in reports, presentations or publications, but your name will in no way be associated with any of the data. You must be at least 18 years old to participate. There are no foreseeable risks or discomforts to your participation.

Your participation in this study is voluntary. You may skip questions if you prefer not to answer them. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. It will not reflect on your grade in any way, neither will it be reflected in any evaluation of the work of your instructor.

If you have any questions concerning the research study, please contact me at patsy.hansel@asu.edu. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Thank you in advance for your participation.
Sincerely,
Patsy Hansel
patsy.hansel@asu.edu

Please sign below to indicate your willingness to participate in various parts of this study:

By signing below, I agree to participate in the attitude survey:
$\qquad$
NAME

## Date

By signing below, I agree to participate in the two listening comprehension assessments:
NAME
Date $\qquad$

## APPENDIX D

## LANGUAGE USE QUESTIONNAIRE

## LANGUAGE USE QUESTIONNAIRE

## PART 1: DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire
Name
ASU-Hansel

## Participant

Fall, 2011

## Acquisition of Spanish as a Second Language Demographic Questionnaire

## Background Information about you

1. Gender:


F $\qquad$ 2. Age $\qquad$
3. Native language: English $\qquad$ Spanish $\qquad$ Other (indicate language) $\qquad$
4. Has any language other than English been spoken in your home from your early years until now? If so, please indicate what the language is and who speaks it:
4.a. If you speak a language other than English with anyone in your home, please indicate with whom, for how many years you have spoken with them, and in what language:
5. In what language did you receive the majority of your pre-college (elementary, junior high, high school) education: English $\qquad$ Spanish $\qquad$ Other (indicate language) $\qquad$
6. How many years of formal classroom Spanish study have you had to this point?
a. Elementary school $\qquad$ Number of years
a. Junior high (middle) school $\qquad$ Number of years
b. High school $\qquad$ Number of years
c. College/university $\qquad$ Number of years $\qquad$
7. Please indicate any other formal classroom study that you have had of other languages:
a. Elementary school: Language $\qquad$ Number of years
b. Junior high (middle) school: Language $\qquad$ Number of years
c. High school: Language $\qquad$ Number of years
d. College/university: Language $\qquad$ Number of years $\qquad$
8. Have you ever been to a Spanish-speaking country for the purpose of studying Spanish?
Yes $\qquad$ No $\qquad$ 8.a. If yes, indicate when, where, and for how long, and describe your living arrangements (with a host family, with other English speakers, etc.)
9. If you have had other experiences living and/or working in a Spanishspeaking country, or in a community where Spanish was the primary language spoken, please indicate when, where, and for how long, and describe your living arrangements (with a host family, with other English speakers, etc.)
$\qquad$
$\qquad$
$\qquad$
10. If you have had other experiences living and/or working in a non-Spanish-speaking country, orin a community where English was not the primary language spoken, please indicate when, where, and for how long, and describe your living arrangements (with a host family, with other English speakers, etc.)
$\qquad$
11. Are you taking your current Spanish class because it is a requirement for your degree? $\qquad$ yes $\qquad$ no

## PART 2: ATTITUDE SURVEY

| Language Use Questionnaire - Section 2 | Participant |
| :--- | :--- |
| Number_- | Fall, 2011 |
| ASU-Hansel |  |

The following questions refer to your use of Spanish
Please respond to the following questions using this scale:

| $1=\underline{\text { Never }}$ | $2=\underline{\text { a few times a year }}$ |
| :--- | :--- | :--- |
| weekly | $5=\underline{\text { daily }}$ |$\quad 3=\underline{\text { monthly }} \quad 4=$

12. Normally, I try to speak Spanish to
a. ___my Spanish instructors outside of class.
b. ___ friends who are native or fluent speakers of Spanish.
c. ___classmates who are not fluent speakers of Spanish.
d. ___ strangers who I thought could speak Spanish.
e. ___ a host family, if living in a Spanish-speaking area.
f. __ service personnel (bank tellers, waiters, etc.).
g. __ Spanish speaking co-workers.
13. Still using the same scale from the questions above, estimate how often you do the following:
a. $\qquad$ watch Spanish language TV.
b. $\qquad$ read Spanish newspapers or magazines.
c. $\qquad$ read short stories or novels in Spanish.
d. $\qquad$ listen programs in Spanish on the radio.
e. $\qquad$ listen to songs in Spanish on the radio, the Internet, etc.
f.
g. __ write emails or chat in Spanish.
h. post on Facebook or blog in Spanish.
14. List any other activities that you commonly do in Spanish: $\qquad$
15. If you are taking any other language courses this semester, please list them below:
Course name $\qquad$ Course number

Course name $\qquad$ Course number

Please respond to the survey questions using this scale to describe how the instructor uses English and Spanish in your classroom:

1 = English is the most commonly used language
$2=$ English is used more than Spanish
3 = English and Spanish are used equally
4 = Spanish is used more than English
5 = Spanish is the most commonly used

1. ___When explaining the syllabus or course information
2. __ When giving instructions or explaining how to do group activities in class.
3. 
4. When explaining about an upcoming test.
5. When conducting vocabulary practice.
6. ___ When teaching vocabulary.
7. ___ When teaching grammar.
8. $\qquad$ When making small talk with the class.
9. When checking how well students understand a reading in class.
10. $\qquad$ When talking to students as they do pair/group work.
11. $\qquad$ When talking to a student informally outside of class.
12. __ When performing routines such as greeting students, etc.
13. $\qquad$ When working with students during office hours.

Now, please answer some similar questions about your use of Spanish and English in the classroom, using the same scale:

1 = English is the most commonly used language
$2=$ English is used more than Spanish
3 = English and Spanish are used equally
4 = Spanish is used more than English
5 = Spanish is the most commonly used
13. $\qquad$ When you practice grammar.
14. $\qquad$ When you perform routines such as greeting the teacher.
15. $\qquad$ When you do activities in groups with other students.
16. $\qquad$ When you ask the teacher about grammar
17. $\qquad$ When you ask the teacher about vocabulary.
18. $\qquad$ When you perform routines such as greeting the teacher
19. $\qquad$ When you do role plays with other students.
20. $\qquad$ When you practice vocabulary.
21. $\qquad$ When asking the teacher about the syllabus or general course information.
22. When talking with your teacher informally outside of class.
23. $\qquad$ When talking to your teacher during office hours.
24. $\qquad$ When asking the teacher about an upcoming test.
25. $\qquad$ When asking the teacher to explain a group class activity.
26. $\qquad$ When responding to small talk from the teacher during class.
27. $\qquad$ When talking to the teacher about a reading in class.

Language Use Questionnaire - Section 2
Participant
Number $\qquad$
ASU-Hansel
November,
2011

Please use this scale to how indicate you think your instructor should use English and Spanish when teaching Spanish.

1 = English is the best language to use
2 = English is better to use than Spanish
3 = English and Spanish are equally good to use
4 = Spanish is better to use than English
$5=$ Spanish is the best language to use
28. $\qquad$ When explaining the syllabus or course information
29. $\qquad$ When giving instructions or explaining how to do group activities in class.
30. $\qquad$ When explaining about an upcoming test.
31. $\qquad$ When conducting vocabulary practice.
32. ___When teaching vocabulary.
33. $\qquad$ When teaching grammar.
34. $\qquad$ When making small talk with the class.
35. $\qquad$ When checking how well students understand a reading in class.
36. ___ When talking to students as they do pair/group work.
37. $\qquad$ When talking to a student informally outside of class.
38. $\qquad$ When performing routines such as greeting students, etc.
39. $\qquad$ When working with students during office hours.

Now, please answer some similar questions about how you think you should use Spanish and English in the classroom, using the same scale:

> 1= English is the best language to use
> $2=$ English is better to use than Spanish
> $3=$ English and Spanish are equally good to use
> $4=$ Spanish is better to use than English
> $5=$ Spanish is the best language to use
40. $\qquad$ When you practice grammar.
41. $\qquad$ When you perform routines such as greeting the teacher. 42. $\qquad$ When you do activities in groups with other students.
43. $\qquad$ When you ask the teacher about grammar
44. $\qquad$ When you ask the teacher about vocabulary.
45. $\qquad$ When you perform routines such as greeting the teacher
46. $\qquad$ When you do role plays with other students.
47. $\qquad$ When you practice vocabulary.
48. $\qquad$ When asking the teacher about the syllabus or general course information.
49. $\qquad$ When talking with your teacher informally outside of class.
50. $\qquad$ When talking to your teacher during office hours.
51. $\qquad$ When asking the teacher about an upcoming test.
52. $\qquad$ When asking the teacher to explain a group class activity.
53. $\qquad$ When responding to small talk from the teacher during class.
54. $\qquad$ When talking to the teacher about a reading in class.

The final section of the survey has to do with how much you understand of the Spanish that your instructor incorporates during and outside class.

Please use the scale below to refer to how much you understand of the Spanish that your instructor uses.
$1=$ Never $2=\underline{\text { Occasionally }} \mathbf{3}=\underline{\text { About half the time }}$
$4=$ Usually
$5=$ Always
(1\%-33\%) (34\%-66\%)
(67\%-
99\%) (100\%)

I understand what the instructor is saying when she uses Spanish to
55. $\qquad$ Explain the syllabus or course information
56. $\qquad$ Give instructions or explaining how to do group activities in class.
57. $\qquad$ Explain about an upcoming test.
58. $\qquad$ Conduct vocabulary practice.
59. $\qquad$ Teach vocabulary.
60. $\qquad$ Teach grammar.
61. Make small talk with the class.
62. $\qquad$ Check how well students understand a reading in class.
63. $\qquad$ Talk to students as they do pair/group work.
64. $\qquad$ Talk to a student informally outside of class.
65. _ Perform routines such as greeting students, etc.
66. $\qquad$ Work with students during office hours.

Thank you for taking the time to participate in this study. I hope that your participation will help identify techniques to help improve Spanish instruction at the university level.

Patsy Hansel, MA student

