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The Effect of the Use of the Students' First Language in Grammar Instruction: A Report on Student Preferences and Performance in the Target Language

Katherine Mickel

Louisiana State University and Agricultural and Mechanical College

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THE EFFECT OF THE USE OF THE STUDENTS' FIRST LANGUAGE IN GRAMMAR
INSTRUCTION: A REPORT ON STUDENT PREFERENCES AND PERFORMANCE IN
THE TARGET LANGUAGE

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
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Master of Arts

in

The Department of Foreign Languages and Literatures

by
Katherine K. Mickel
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ABSTRACT

This study explores the effect of the use of the target language (TL) and the first language (L1) during grammar instruction in the foreign language classroom. There is limited evidence regarding the effect of language of instruction on TL acquisition (Tian & Macaro, 2012; Viakinnou-Brinson, Herron, Cole, & Haight, 2012; Antón & DiCamilla, 1999). However, this area warrants further research. As such, the present study investigates teacher language use (Spanish-only, English-only, or no restriction) during the explicit instruction of Spanish object pronouns (direct, indirect, and both combined) to measure the effect of each language condition on students' object pronoun performance. In addition, through the use of student questionnaires and class observations, this investigation sheds light on students' preferences and attitudes about instructor TL and L1 use.

The participants came from three separate classes of an intensive beginning Spanish course. Each class was randomly assigned one of three instructional language conditions: one group of students received instruction in English (L1), another in Spanish (L2) and the third group received instruction with no language restriction. All groups completed three separate immediate posttests—one for each of the targeted pronominal forms—followed by a delayed posttest covering all three forms. This data was then analyzed in SPSS using a One-way ANOVA. Three main results emanated from this study: (a) No statistically significant results at immediate testing. (b) No statistically significant results at the delayed posttest. (c) General preference for instruction using both the L1 and L2. However, the descriptive results suggest an advantage for L1 instruction due to the higher percentages at testing time with the groups that received instruction in English. Using both quantitative and qualitative data gathering techniques, this investigation enabled a better understanding of the impact of language of instruction for both immediate gains and retention of the targeted grammar structure, thereby expanding the lack of empirical research on this topic.

CHAPTER 1 INTRODUCTION

For most foreign language students, the time spent inside their language classroom is often the only exposure they have to that foreign language. Due in part to this reality, the avoidance of the first language (L1) in the second language (L2) classroom was “a mainstream element in 20th century language teaching methodology” (Cook, 2001). As a consequence of the then-prevailing anti-L1 attitude, the priority of using the target language (TL) in the classroom has become fixed in the minds of foreign language instructors (Cook, 2001). In support of this notion, the American Council on the Teaching of Foreign Languages (ACTFL) currently recommends that language educators and their students use the target language as exclusively as possible (90% plus) in all levels of instruction, beginner through intermediate, during instructional time. This input, or the speech that learners hear in meaningful contexts (Carroll, 2001) is considered to play a pivotal role in language learning, and has thus been a widely discussed topic in the field of second language acquisition (SLA).

Some would argue that a focus on input should be of no surprise, given that “no matter the framework, there is absolute agreement that input is essential for acquisition to take place” (Sanz, 2005, p. 11). However, as Sanz (2005) continues, “it is when we consider what is necessary, what is sufficient, and what kind of input is relevant for language acquisition that disagreement ensues” (p. 11). Indeed, one aspect of the discussion on input includes the language through which input should be received. Not only does current pedagogy affirm the near exclusive use of the TL, proposed in Turnbull & Dailey O’Cain (2009), but several researchers also concur that near exclusive L2 use in the classroom is crucial for successful language learning (Duff & Polio, 1994, 1991; MacDonald, 1993; Chambers, 1991). This notion could also be supported in theory where, according to Krashen’s Input Hypothesis (see Chapter 2), one

necessary element for acquiring language is receiving comprehensible input in that language (Krashen, 1982). However, recently various researchers have argued that the L1 can actually be an important tool in second language learning (Macaro, 2005, 2001; Storch & Wigglesworth, 2003; Nation, 2003; Turnbull, 2001). Even the ACTFL 90%+ recommendation allows room for some L1 use in the classroom. Perhaps if that other 10% were used wisely to clarify metalinguistic information, information about language itself (Gass, Behney, & Plonsky, 2013, p. 482), students would be able to learn the TL more effectively.

Aside from the language used, there is still much dispute over how best to use input in the classroom, including how much learners need to be explicitly directed to TL forms in order to put such forms to use effectively (see Form-focused Instruction, introduced in section 1.1). It is precisely in this discussion of manipulated input (see section 1.1) that we can see a more concrete role for the L1 in foreign language learning. That is, by using the L1 to focus learner attention, it could facilitate their learning of the target linguistic form and thus help them better receive the input. As such, an area that has been largely ignored—and which this study aims to address—is the impact of language (i.e. the L1 or TL) on grammar learning during form-focused instruction.

As put forth by Turnbull & Dailey-O'Cain (2009), throughout the literature on this topic two positions are usually taken by researchers with respect to L1 in second and foreign language teaching: the virtual position promoting a TL-only classroom and the maximal position advocating judicious use of L1 in the classroom. More detail regarding the arguments for these perspectives on classroom L1 use will be presented in the upcoming chapter. However, the next section will continue by addressing one major factor that affects views on classroom L1 use: the ascendancy of various language teaching and learning methods.

1.1 Brief overview of L1 and input in FL classrooms

Perhaps the first instance of L1 use as a tool for language learning was seen in the traditional Grammar-Translation method, popular from about the mid-1800s to mid-1900s. According to this method, the L1 was the means for language transfer by which learners learned about the target language instead of learning to communicate in the language (Rivers, 1981). Therefore, L1 played an essential role in the language classroom. However later methods that superseded Grammar Translation began to emphasize the importance of actually *using* language, and thus the mindset about L1 inclusion shifted. Indeed these later methods (i.e. the Direct Method, the Natural Approach, Content Based Instruction) stressed the need for input to be provided exclusively in the TL. As a result, in the classrooms using these methods the L1 hardly had any place. In fact, like the name suggests, Krashen & Terrell's (1983) Natural Approach to language learning mimics first language acquisition to the extent that learners need only be exposed to simplified input in the TL to acquire language. This has often been seen as the application of Krashen's input hypothesis to language teaching (explained further in Chapter 2).

Stemming from this ideology was the creation of immersion programs and communicative language teaching (CLT), where the use of the L1 is almost nonexistent in teacher-learner interaction. The CLT approach has enjoyed widespread approval and acceptance in a majority of language programs today, including the one where the data for the present study is drawn from. According to CLT, using the target language to interpret and express real life messages is fundamental, thus the L1 is often considered interference and is banned in the classroom (Lee & VanPatten, 2003). Indeed, in communicative language classrooms interaction in the TL is both a means and an end to language learning, and therefore L1 use is seen as depriving learners of authentic language. With communicative language teaching widely

supported in present-day language classrooms, the popular view of avoiding the L1 has stuck with pedagogues, making it hard for many language teachers to accept the idea that the mother tongue might belong in the classroom in some capacity.

As communicative teaching strategies were developed, however, it was determined that a communicative classroom did not necessarily mean there should be no attention to TL forms during instructional time. Specifically, the value of explicit grammar instruction within the communicative approach began to be recognized and Form-focused Instruction (FFI) was introduced. This method of language learning essentially draws learner attention towards not only communication and fluency, but also TL linguistic forms such as grammar, spelling, pronunciation and punctuation (Long, 1991; discussed further in Chapter 2). Savignon (2005) highlights the value of attention to form in language pedagogy and suggests that “[...] communicative language teaching does not exclude a focus on metalinguistic awareness or knowledge of the rules of syntax” (p. 645, as cited in García Mayo, 2011, p. 16). Indeed, despite the fact that TL input according to Krashen (1985, 1982) is devoid of any explicit attention to form, “there is now widespread acceptance that [language] acquisition requires learners to attend to form” (Ellis, 2008b, p. 2).

With newfound attention to form in learner input, researchers became interested in finding ways of structuring such input to facilitate learning. As previously mentioned, this is one area where the role of the L1 has been thought to be useful. One type of input, manipulated input, refers to the various ways of making the target linguistic forms more salient to learners to promote language learning. Manipulated input has varying degrees of explicitness, ranging from the more implicit typographical enhancement of target forms to the more explicit increase in target form frequency (Sanz, 2005). The most explicit type of manipulated input, though, is

known as structured input, which has four levels of manipulation as follows:

- (a) only one form is presented at a time;
- (b) the key form appears at the beginning of the sentence, increasing its saliency;
- (c) the frequency of the form is increased; and
- (d) the input is presented through task essential activities (Sanz, 2005, p. 236).

Understanding that input manipulation is useful in the classroom, Shrum & Glisan (2010) suggest, “teachers can provide varying degrees of explicitness in the input as yet another means to draw learners’ attention to targeted forms” (p. 415). While these authors do not offer an explanation for what “varying degrees of explicitness” refers to, it could be argued that the selective use of the L1 by the teacher might qualify as such. In fact, among the noticing-boosting techniques promoted in the foreign language classroom, use of the L1 is recommended as a “cognitive tool” to promote noticing (Ferrer, 2005a, 2005b; Swain & Lapkin, 2000). As previously suggested, it would seem, then, that the L1 could be considered another type of input enhancement in the L2 classroom that could facilitate form-focused grammar learning. Therefore despite being largely ignored in pedagogical methodologies for most of the 20th century, due to the growing interest in manipulated input and attention to form, the L1 is increasingly becoming a more recognized resource in the language classroom (Cook, 2001).

With respect to other work about teacher language choice, there is already evidence regarding how much instructors use the L1 in the classroom (Thompson, 2009; Suby & Asención-Delaney, 2009; Macaro, 2001; Duff & Polio, 1994, 1991), when they use it (Cook, 2001; Polio & Duff, 1994, among others), and in a limited way, some effects that its use has on TL acquisition (Joyce, 2015; Tian & Macaro, 2012; Viakinnou-Brinson, Herron, Cole, & Haight, 2012; Rell, 2005; Antón & DiCamilla, 1999). However, this last area has been little explored in

previous research. Due to the scarcity of research demonstrating the effectiveness of either a TL or L1 approach on linguistic development, the purpose of the present study is to assess empirically the effect of the use of the L1 (English) during grammar instruction on grammar performance in the L2 (Spanish). In particular, the present study investigates teacher language use during the explicit instruction of one grammar point, Spanish object pronouns (DOs, IOs, and both combined), to measure the effect of each language condition on student object pronoun performance. Further, through the use of student questionnaires and class observations, the present investigation aims to shed more light on students' language preferences and attitudes about instructor TL and L1 use, another area with scant research.

While this study is one of performance, an explanation of performance would not be complete without mentioning competence as the two ideas are very closely related. It is even argued that only through performance are we able to know anything about the nature and structure of competence (Fulcher, 1995). However, they are fundamentally two distinct ideas. In order to better understand the concept of performance in SLA research, as well as how it relates to the current study, a brief description of performance and competence is provided in the following section.

1.2 Performance vs. competence

Chomsky (1965) was the first to distinguish these concepts with the creation of his competence-performance distinction. According to Chomsky, competence is the intuitive knowledge of language—a mental property—while the use of this knowledge is performance, or “the actual use of language in concrete situations” (Chomsky, 1965, p. 4). This view of performance includes the individual's ability to produce language from a learned set of linguistic rules (Shrum & Glisan, 2010). Since the students in this study are using such rules about object

pronouns to produce language in a concrete situation, they seem to demonstrate language performance as defined by Chomsky (1965). Stemming from this idea of performance as language use, the definition of grammar performance used for this study can be understood as the written production of taught grammar structures, operationalized by a series of posttests. While most SLA literature accepts the notion that the use of language falls under the realm of performance, the definition of competence has received disparate interpretations, discussed below.

Chomsky's (1965) definition of competence refers to innate knowledge originating with a first language that does not change over time or with a second or third language. However, some have opposed this static definition of competence (Gregg, 1989; Wiemann & Blacklund, 1980; Bruner, 1973; Corder, 1973). For example, Bruner (1973) argues against the innateness of competence by stating that it can be learned as any other skill. Gregg's (1989) definition of competence includes not only the linguistic knowledge of the first language, but also proposes that competence is the term generally used for linguistic knowledge itself, both innate and acquired. In addition, rather than excluding ability from knowledge, as in Chomsky's (1965) definition, Hymes (1972) offers a sociolinguistic view of competence, including in his definition the ability to use the language appropriately according to the particular situation. Similarly, competence has recently been expanded to a broader notion of "communicative competence," or the ability to function in a communicative setting (see Celce-Murcia Dörnyei, & Thurrell, 1995). Even in this expanded view of competence, though, it remains a largely intuitive entity, which makes it difficult to access unless through performance. As such, Fulcher (1995) contends that if performance is the only factor to which we have access, then there is no reason not to abandon the idea of competence altogether.

Despite the varying definitions, however, there is no doubt that competence and performance are interrelated. Therefore both terms are relevant to this study, as determining student performance could also imply something about their linguistic competence. One significant area of SLA that often makes use of both competence and performance is that of explicit and implicit knowledge. A discussion of these two types of knowledge (presented below) will help to further validate classifying the present study as a study of performance.

1.2.1 Explicit and implicit knowledge

There is extensive literature about explicit and implicit knowledge and how each informs the language learning process (R. Ellis, 2006, 2004, 1994; N. Ellis, 2005; DeKeyser, 1998; Krashen, 1982, 1981; Sharwood-Smith, 1981; Bialystok, 1981, 1979). For this study, we are only interested in classifying each type of knowledge within the performance-competence distinction, thus it is necessary only to provide a definition of these knowledge types. DeKeyser (1998) posits that explicit knowledge is the kind of knowledge that language learners are consciously aware of and can express. Likewise, Ellis (2006, 2004) concurs that explicit knowledge can be learned and verbalized, similar to the use of knowledge demonstrated in performance. It has also been understood as the knowledge of “rules and items” in an L2 that enables learners “to report what they know” (Ellis, 1994, p. 702). Ellis (2004) presents a comprehensive definition of explicit knowledge:

“Explicit L2 knowledge is the declarative and often anomalous knowledge of the phonological, lexical, grammatical, pragmatic and sociocritical features of the L2 together with the metalanguage for labelling this knowledge” (p. 244).

While explicit knowledge is something of which one is conscious, implicit knowledge refers to something that one possesses unconsciously, drawing primarily on competence (Ellis,

2006, 1994; Bialystok, 1981). As in the knowledge that most speakers have of their L1, implicit knowledge has been described as knowing things intuitively, without being aware of the formal properties of that knowledge (Bialystok, 1981). Given that the participants in this study are all beginner students, with limited prior exposure to Spanish and very little, if any, knowledge of object pronouns other than the explanation given by their instructor, it is unlikely that they should be able to rely on their intuition to deduce the correctness of an utterance. Indeed the present study, which requires participants to call on the rules of object pronouns to successfully complete the assessments, would seem to measure explicit knowledge.

Like the competence-performance distinction, it should be noted that there is some debate as to whether the distinction between implicit and explicit knowledge should be seen as a continuum or a dichotomy (Ellis, 2008). However, based on the explicit-implicit definitions outlined above, students in the present study are required to use their explicit knowledge, and in so doing, demonstrate performance. As such, the researcher concluded this to be a study that primarily aims to discover the effect of the L1 in the performance of L2 students of Spanish.

Due to the traditional belief that L1 should not be used in the classroom, it was of paramount importance to carefully select a grammar structure for this study that could validate L1 use. That is, investigating L1 use with a grammar structure that is typically hard for learners to acquire—one where they might benefit more from clarification in the L1—seemed the most practical and beneficial. To this end the present study examines direct and indirect object pronouns, which have been observed to present obstacles for English (L1) learners of Spanish (L2), especially at the beginner level (Rell, 2005; Parodi, 2002). To better understand the features of the grammar topic under investigation, the next section will describe Spanish direct and indirect object pronoun structures.

1.3 Direct object pronouns (DOs) and indirect object pronouns (IOs)

While there are many pronominal forms in Spanish that could have been considered for the present study (i.e. possessive pronouns, oblique pronouns, subject pronouns, among others), the current investigation focuses solely on the use of object pronouns. Object pronouns in Spanish are also categorized as pronominal clitics. Said clitics can be defined as syntactically independent but phonologically dependent constituents (Zagona, 2002). This dependence refers to the way that the clitic “undergoes phonological word-formation” by joining another constituent, similar to English auxiliary contractions (i.e. She’ll leave, Zagona, 2002, p. 15). Pronominal clitics are considered “bounded dependencies” (Pineda & Meza-Ruiz, 2005) that cannot occur in isolation. In Spanish, direct and indirect object pronouns are cliticized to the verb. This dependency on a phonological “host” is illustrated in the following example from (López, 2008):

¿A quién viste, a él o a ella? [Whom did you see, him or her?]

**Lo/ Lo vi a él.* [Him/ I saw him.] (p. 19)

In this example, we see that in Spanish the direct object “*lo*” cannot be used on its own to answer the question; it needs the verb or host, “*vi*,” to be said with it. This bounded dependency differs from English, where to use the above example, it is not necessary to include the verb “I saw” in the response. Rather, to answer the question simply using “him” is an acceptable response on its own. Further, while this study focuses on object pronouns exclusively, it is important to highlight here the role that oblique pronouns (i.e. *mi*, *ti*, *él/ella/ello*) play in understanding object pronouns. Oblique pronouns are introduced by a prepositional phrase (*a/para* + *pronombre oblicuo*) [to/for + oblique pronoun], as in *a él o a ella* in the above example. Therefore, although the present study does not directly assess the use of oblique pronouns, they were necessary to

include in the sentences on the assessment materials because they indicate the recipient of an action (i.e. the indirect object). By including them the students were able to contextualize the sentence and thus identify the object. The standard use of Spanish (1) direct object pronouns, (2) indirect object pronouns, and (3) both object pronouns together is demonstrated below:

(1) *Los estudiantes tienen el libro.* [The students have the book.]

Los estudiantes lo tienen. [The students have it.]

(2) *Le doy un abrazo a mi papá.* [I give a hug to my dad.]

Le doy un abrazo. [I give him a hug.]

(3) *Mi madre me mandó un paquete a mí.* [My mother sent a package to me.]

Mi madre me lo mandó. [My mother sent it to me.]

In a review of various Spanish language textbooks,¹ it can be concluded that in general direct and indirect object pronouns are presented as three separate lessons: one lesson for direct objects, another for indirect objects, and one joint DO-IO lesson. The three lessons on the above object pronouns are typically taught separately because each pronoun type has a different function and is represented by different pronominal forms. For example, in their attempt to explain the function of direct object pronouns, Malovrh & Lee (2013) describe that “the grammatical role of DOs corresponds with the semantic role of patient,” where patient is defined as “an argument that undergoes a process or that is targeted by some action of an agent” (p. 18). Illustrating this description, in (1) above, the book is the direct object (and semantic patient) of the verb, which undergoes the process of being had by the students (agent). Due to the different roles that object pronouns play within a given sentence, “L2 learners are confronted with a variety of challenges when mapping function with forms” (Malovrh & Lee, 2013, p. 22). This

¹ Paso a Paso (Prentice Hall), Dicho y Hecho (Wiley), ¡Ven Conmigo! (Holt Spanish), Conéctate

would make them a topic that often requires separate attention for many L2 Spanish students, as demonstrated in most textbook materials.

The order in which object pronouns are presented generally corresponds with their perceived difficulty. It could be that direct object pronouns are normally taught before indirect object pronouns in US Spanish textbooks because L2 Spanish learners can more easily relate direct object pronouns to the English “it.” That is, DO pronouns are explained as replacing the direct object, similar to English. However, the function of indirect object pronouns is not always as directly compared. This could be due to the phenomenon known as “clitic doubling.” Such clitic doubling constructions are those in which a pronoun, cliticized to the verb, co-occurs in the clause with a nominal phrase rather than replacing it (Belloro, 2007). This refers to both naming the indirect object directly and using the pronoun in the same sentence, as illustrated in (2) above where both *le* (pronominal clitic) and *a mi papá* (nominal phrase) are present in the same sentence. This concept does not exist in English, where either the pronoun is used or the indirect object is named, but not both. Some posit that this clitic doubling stems from the fact that pronominal clitics in Spanish are specified as morphological agreement markers (Parodi, 2002; Franco, 1993; García-Miguel, 1991; Suñer, 1988). Validating this approach, Belloro (2007) explains: “The analysis of Spanish clitics as agreement markers is, of course, crucially supported by their possible co-occurrence with lexical arguments, which is interpreted as analogous to the co-occurrence of lexical subjects and the obligatory subject-agreement suffix on verbs” (p. 13). This view likens pronominal clitic processes to the same mechanisms that account for agreement phenomena in general (Belloro, 2007). English, on the other hand, lacks such agreement markers (Parodi, 2002). While there are some allowances for clitic doubling with DOs (mainly dialectal), it is generally much more constrained than IO doubling, which occurs to some extent

in every Spanish dialect (Belloro, 2007). Thus, presenting DOs before IOs is perhaps a way of approaching object pronouns in the simplest way first and progressively becoming more involved. Once both types of pronouns have been presented, it seems logical, then, that the combined object pronoun lesson would follow and be taught third, as is typically the case. As shown, the complex nature of object pronouns in Spanish made them a fitting choice for the present study (described further in Chapter 3).

In the textbook used in the Spanish classes for the present study, *Conéctate*, the three lessons on object pronouns are written in English and generally follow the same pattern as in other beginner Spanish textbooks. First, there is an explanation for what the object pronoun is and how it functions in the sentence. For example, in the lesson on direct objects, the explanation given describes that “they are used to avoid repetition and replace the full name of a person or thing” (p. 178). The lesson on IO pronouns explains that they may be used on their own, rather than only to replace the indirect object, when the context makes it clear to whom the pronoun refers to (i.e. *Mis amigos me dan un abrazo*, p. 206). The DO lesson continues stating that a DO “is the person or thing upon which the action of the verb is performed” (p. 178). Likewise in the IO lesson, the function of indirect object pronouns is described as “the person or thing that receives something from the action of the verb” (p. 206). The specific object pronoun forms (*la, los, le, me, se etc.*) are also introduced in the initial explanation. Then, the forms are highlighted through example sentences in Spanish. The lesson(s) conclude with details regarding the placement of the specific object pronoun(s) within the sentence, where it indicates that they are usually in a preverbal position unless the verb is left not conjugated. In order to encompass all aspects of object pronouns that students encountered during the semester, for the present study

all three designated lessons (DOs, IOs, and both combined) were used in the data collection. This chapter concludes with a description of how the present thesis is arranged, as described below.

The organization for this thesis is as follows. The Introduction chapter presented the topic and offered an initial account of L1 use in foreign language pedagogy. It also explained the value that this study provides to the research of L1 use, not only for promoting linguistic development but also for understanding the function of L1 for input manipulation. Also, a number of fundamental concepts for this study, such as input, FFI, and performance were briefly described. Chapter 2 serves several purposes. First, it presents the prominent theories in SLA research over the last several decades as they relate to input. Building on this discussion, recent teaching methods that emphasize the role of input will be described. These accounts attempt to offer a theoretical framework for investigating instructor L1 use. Next, the views both from those who encourage L1 use in the classroom and those who urge against it will be synthesized. Lastly, an analysis of the previous literature regarding the use of the L1 in the L2 classroom will be discussed, highlighting results from empirical studies both on the effect of L1 on linguistic development as well as on student attitudes. Then, in Chapter 3, the research questions guiding this investigation will be presented and the methodology will be explained. Within the methodology is a description of the instruments used to carry out the present study and the methods for analyzing the data. Chapter 4 presents the results and discussion for both the quantitative and qualitative findings. Finally, in Chapter 5 conclusions will be made, including a summary of the highlights of the current study and the limitations of this research as well as its contributions to the field of SLA and foreign language teaching.

CHAPTER 2 REVIEW OF LITERATURE

While the previous chapter introduced the topic being explored in this study, the present chapter will situate the study in a theoretical framework by reviewing trends in SLA theory in recent years. Then, different perspectives regarding L1 and TL use in the classroom will be presented, as well as relevant findings from empirical studies. Lastly, it is important to review a brief description of some individual differences found in students, as they play a crucial role in any study of performance in the classroom.

2.1 Theoretical background

Finding support for L1 use in SLA theory is a difficult undertaking since, useful as it may be to employ the L1 sparingly in the classroom, “this tenet has no straightforward theoretical rationale” (Cook, 2001, p. 410). However, there is no blatant dismissal of the utility of the L1 in theory either, with most theories making no mention of it at all. While contributions from early theories such as Behaviorism (see Skinner, 1957) are not to be ignored, it is beyond the scope of this thesis to provide an exhaustive account of all SLA theory since the 20th century. Thus, the following sections aim to provide a basic understanding of some important theoretical trends that have taken place over the past several decades, demonstrating a psychological shift towards a consideration of input as a vital part of acquisition, and concluding with notions of Focus on Form (FonF), which are most relevant to the present study.

One of the first major theories proposed about language learning processes, which later incited a larger discussion about input, is Nativism. Popular in the 1960s, Nativism posits that language is an innate, universal skill that all humans, regardless of their native language, experience the same way (Brown, 2007). One of the most influential contributors to the nativist camp and SLA theory as a whole, Noam Chomsky, observed that children are able to produce

grammatical utterances even when such structures have not been heard in their environment. That is, they use elements of language they know to say something they have never heard before (Shrum & Glisan, 2010). He began to postulate that innate linguistic properties thus must fill in where the input fails. Therefore, to explain this observation about how language is learned, he proposed the theory of Universal Grammar (Chomsky, 1965).

Central to this theory is the idea that all humans are born with a language acquisition device (LAD) that enables them to process language (Shrum & Glisan, 2010). The LAD is “exclusively devoted to language,” and “consists of an innate grammar (the UG) that grows in contact with input” and that “sets limits on learners’ predictions” (Sanz, 2005, p. 6). The theory underlying UG assumes that language consists of a set of abstract principles that characterize core grammars of all natural languages. In other words, children are born with an understanding of the rules of language (i.e. question formation, creating negatives, past tense formation and so forth); they simply need to acquire the vocabulary. In UG theory input is necessary, but only for triggering the LAD. Through the LAD, often conceptualized as a “little black box” in the brain, a child begins to develop intuitions about what is grammatically correct or not in the language (Koike & Klee, 2003). Even though the theoretical basis for the present study is not drawn directly from Nativism, Chomsky’s (1965) ideas incited further research into how languages are learned. Particularly, with the idea proposed in Nativism that input interacts with processes in the brain, more thought began to be directed at the role of input, especially for learning a second language. Such input-based approaches, which relate more directly to the present study, will be presented in the following section.

2.1.1 Input-based approaches

2.1.1.1 Krashen's input hypothesis

In the 1980s, aforementioned Krashen popularized one such input-based approach to language acquisition that became highly influential throughout the field of SLA. Indeed, he proposed his Monitor Model (Krashen, 1982) to explain language acquisition. Within Krashen's Monitor Model "the driving force behind any kind of acquisition is the comprehension of meaningful messages and the interaction of the linguistic information in those message with the innate language acquisition faculty" (VanPatten & Williams, 2007, p. 25). While this might initially suggest a primary role for external factors (i.e. the linguistic environment and input), with mention of the innate language acquisition faculty there is also underlying support for the idea that unconscious, universal processes are partly responsible for language acquisition, relating Krashen's model to the previously discussed Nativist approach. His Monitor Model consists of five separate hypotheses, which will be presented here.

The first of these hypotheses is the Acquisition-Learning Distinction, which explains the two ways of developing competence in a second language. Krashen (1982) explains acquisition as a "subconscious process" where learners are not aware of the fact that they are acquiring language or the rules they have acquired but "have a 'feel' for correctness" (pp. 13-14). He further describes acquisition as implicit learning. The second way to develop competence—learning—can be understood as "conscious knowledge of a second language" including "knowing the rules, being aware of them, and being able to talk about them" (Krashen, 1982, p. 14). He relates this to formal knowledge of a language and explicit learning.

The Natural Order Hypothesis is the second hypothesis of the Monitor Model. This hypothesis proposes that "the acquisition of grammatical structures proceeds in a predictable

order” with certain grammatical structures acquired early and others later (Krashen, 1982, p. 15). While not directly pertinent to the present study, the natural order hypothesis has contributed greatly to understanding the process of second language acquisition, thus it would have been remiss not to mention it in a discussion of Krashen and his Monitor Model.

The third hypothesis of the Monitor Model is the Monitor Hypothesis, which explains how learning and acquisition are used in performance (Krashen, 1982). According to this hypothesis “acquisition initiates our utterances in a second language” while the role of learning is to “make changes in the form of our utterance after it has been ‘produced’ by the acquired system” (Krashen, 1982, p. 18). That is, learning acts as the editor, or Monitor (Krashen, 1982). This would then suggest that the present study reflects both what students have acquired and what they have learned regarding object pronouns. After all, it measures the ability of students to recall their knowledge of object pronouns on a written assessment, offering the Monitor the chance to make adjustments to form.

The fourth hypothesis of Krashen’s model and perhaps the “single most important concept in second language theory,” is the Input Hypothesis (Krashen, 1982, p. 13). It remains critical to any SLA discussion because it “attempts to answer the theoretical question of how we acquire language” (Krashen, 1982, p. 13). The Input Hypothesis, one of the central components of the Monitor Model, asserts that in order for humans to acquire language they must be presented with comprehensible input, and this input alone accounts for successful language acquisition (Krashen, 1985). Thus, understanding messages in the L2 is the first necessary ingredient for language acquisition to take place. A discussion of the type of input students should receive for acquisition to take place is certainly relevant to the present investigation. In order for learners to understand those incoming messages in the TL, Krashen’s Input Hypothesis

proposes that input should be received at the $i + 1$ level, where i is the learners' current language ability and " $i + 1$ " is just slightly beyond that level (Krashen, 1982). However, Krashen (1982) continues that $i + 1$ is not necessarily something that should be deliberate. Rather, "when communication is successful, when the input is understood and there is enough of it, $i + 1$ will be provided automatically" (Krashen, 1982, p. 23). As this hypothesis is based strictly on receiving comprehensible input, learning a second language could occur unconsciously without any awareness of the learning situation or any attention to the new target forms. The input hypothesis, then, implies that learners would not need explicit instruction, but rather by understanding the messages they receive in the TL, they would acquire the language and structures naturally (Krashen, 1985). However even as input is central to language acquisition in the Input Hypothesis, Krashen's (1982) idea of comprehensible input is rather unspecific. Since there is little detail about what constitutes "comprehensible," it could be argued that the L1 might be used as a way of making the input more comprehensible. The basis for the present investigation thus borrows from this notion, proposing that using the L1 to facilitate language acquisition and learning could then lead to input becoming more "comprehensible" within an input driven classroom.

The last component of the Monitor Model is the Affective Filter Hypothesis. This hypothesis explains the way affective variables, such as motivation, anxiety, and self-confidence relate to second language acquisition. These affective variables act to "impede or facilitate the delivery of input to the LAD" passing the input through an Affective Filter (Krashen, 1982, p. 30). Creating a situation that encourages a low or weak filter, such as a low anxiety environment, is conducive to successful language acquisition, as this allows the input "in" (Krashen, 1982). In contrast, "those whose attitudes are not optimal for second language acquisition will have a high

or strong Affective Filter” (Krashen, 1982, p. 30). Drawing causative variables from his Monitor Model, Krashen (1982) posits, “comprehensible input and the strength of the filter are the true causes of second language acquisition” (p. 31). That is, according to Krashen (1982) presenting comprehensible input in a low-pressure environment, where the filter is open to receiving the input, is the formula for acquiring a second language. Regarding L1 use in the classroom and thus directly pertinent to the present study, Levine (2003) asserts that a “common reason for using the L1 . . . is that it helps lower learners’ affective filter” (p. 346). This could suggest another potential benefit of L1 use for learning an L2.

Krashen’s Input Hypothesis, while compelling and highly influential, was met with much criticism. Firstly, comprehensible input is not clearly defined or testable, making it difficult to operationalize. Further, skepticism for the claim that acquisition could be the effect of entirely unconscious processes began to grow. The next section provides more detail regarding this shift toward considering language learning as a conscious process.

2.1.1.2 Schmidt’s noticing hypothesis

As a result of such criticism, other researchers began re-shaping input-based approaches to language learning. Krashen’s input hypothesis became extended to discover how learners actually process input and make connections between form and meaning, thus converting input to intake. Intake can be defined as language that is comprehended and used by learners to develop a linguistic system that they then use to produce output in the language (Shrum & Glisan, 2010, p. 17). One result of this interest in input processing was the emergence of the idea of “noticing” in SLA literature. Schmidt (1990) introduced the “Noticing Hypothesis” which proclaims that “SLA is largely driven by what learners pay attention to and notice in target language input . . .” (Schmidt, 2001, p. 2). In contrast to the input hypothesis, noticing is a

conscious process. According to Schmidt's (1990) hypothesis, "noticing is the necessary and sufficient condition for the conversion of input to intake for learning" (Schmidt, 1994, p. 17). However, like Krashen, the noticing hypothesis was not exempt from critique. It presents a great amount of variability in that some forms might require more focused attention than others. Also, there could be concerns as to the learners' ability to notice the forms, as Schmidt (2010) points out "a considerable amount of learning has to take place before learners can successfully segment the stream of speech into words that can be noticed" (p. 11). That is, the student might simply hear the speech, but not have the language ability to notice any particular forms or words within that speech. Many raised doubts about the credibility of noticing due to the difficulty in measuring it. Further, Schmidt acknowledges the feat of demonstrating a complete lack of awareness, which may render his model un-falsifiable (Schmidt, 2001 as cited in Sanz, p. 182). However, despite the concerns, the concept of noticing has persisted and even forms the basis for other SLA philosophies, such as input enhancement and focus-on-form (FonF). Focus on form means drawing learners' attention to form within a context of meaning (Gass, Behney & Plonsky, 2013, p. 524). These two philosophies will be discussed below.

2.1.1.3 Focus on form (FonF) approach

Initiated by Schmidt's noticing hypothesis, pedagogues began to see the benefit of drawing learners' attention to forms rather than solely having them receive an input flood to acquire the TL. The view that attention to form can and should be utilized was evidenced most clearly from studies conducted on French language immersion programs in Canada. From these studies, it was found that even students who have received years of meaning-focused communicative lessons filled with rich TL input were still unable to speak with native-like grammatical proficiency (Swain, 1985). Due to this increased recognition of the importance of

linguistic forms in the language classroom, the Focus on Form (FonF) approach to language teaching began to take shape.

Focus on Form (FonF) has been a pedagogical approach for the last two decades, and has attracted a considerable amount of research (e.g. Loewen, 2005; Panova & Lyster, 2002; Ellis, Basturkmen, & Loewen, 2002, 2001b; Long & Robinson, 1998; Lyster & Ranta, 1997; Long 1991). The original definition of FonF by Long (1991, 1988) and revised by Long and Robinson (1998) presents FonF as a broad-based teaching approach which is positioned in the middle of a continuum with, focus on formS (FonFS), and focus on meaning as the two extremes. While focus on meaning refers to a more natural approach, rich in TL exposure with no attention paid to form, FonFS refers to language learning where the linguistic structures are the feature of instruction (Long & Robinson, 1998), similar to the traditional deliberate teaching of grammar points in separate lessons. Thus, in FonFS, language is learned through the accumulation of individual language entities. Situated in the middle of these two ends of the spectrum is FonF. This teaching approach refers to meaning-focused instruction in which communication is prioritized and attention is drawn to forms only as necessary for successful task completion (Long, 1991). While the distinction between FonFS and FonF has often been confused, a focus on form means that grammatical concepts may be taught, but they exist within a framework of communicative aims. Long (1991) argues that these embedded form-focused episodes are optimal for leading learners to notice new linguistic forms, which allegedly promotes language acquisition. This notion has been supported by research where the results of several studies comparing FoM to FoF have shown that L2 learners receiving FoF instruction significantly improved in the structure being acquired more than FoM learners (Grim, 2008; Spada, Lightbown, & White, 2005; Lyster, 2004; Doughty & Varela, 1998; Lightbown & Spada, 1990).

One important element of FonF that has developed since the term's creation is the distinction between the type of FonF: implicit and explicit. Since the definition of FonF does not specify which type to use, the degree of explicitness of FonF is a pedagogical choice that teachers need to make (Doughty & Williams, 1998). According to Doughty & Williams (1998) implicit FonF is unobtrusive and attempts to attract learner attention, while explicit FonF is metalinguistic, overt and thus directs learner attention. A type of implicit FonF could be the use of recasts² by the teacher and explicit FonF would involve metalinguistic explanations. Both types of FonF have been utilized in the language classroom.

Some researchers have attempted to test whether one type of FonF is more effective than another. In their meta-analysis of 49 empirical studies comparing differential effects of instruction, Norris & Ortega (2000) found that explicit instruction is more effective for L2 acquisition than an implicit focus and that a focus on form is more effective than a focus on formS. Fuente (2006) compared the effects of three types of vocabulary lessons (one traditional and two task-based) on the acquisition of morphological aspects, forms, and meaning of Spanish words. The results from this study indicate that a task-based lesson with an explicit focus-on-form was the most successful for promoting vocabulary acquisition. These findings were later echoed in Spada & Tomita (2010) where an advantage for explicit instruction was revealed, especially in the case of more complex target features.

Based on evidence from these FonF studies, it would certainly seem that explicit FonF leads to greater student learning than implicit FonF. Hence, these discoveries could provide support for the present study in that using L1 in the classroom to draw attention to form—an explicit technique—could benefit learners. The notion of FonF has widened in scope to

² Recast refers to a type of error correction in which the teacher reformulates all or part of a student's utterance minus the error (Shrum & Glisan, 2010, p. 284).

encompass similar concepts such as corrective feedback (Lyster and Ranta, 1997) and form-focused instruction (Ellis, 2001; Lightbown & Spada, 1990). The latter will be presented in the following section.

2.1.1.4 Form-focused instruction and input enhancement

As previously mentioned, research throughout the 1990s and the beginning of the 21st century has expanded Long's definition of FonF. Thus, Ellis (2001) defined form-focused instruction (FFI) as “[...] any planned or incidental activity that is intended to induce language learners to pay attention to linguistic form” (pp. 1-2). While earlier theories might not have mentioned, or might not have considered L1 use to be beneficial for language learning, it was with the emergence of studies on the role of form focused instruction that more positive attitudes towards the pedagogic use of the mother tongue started to appear (Ferrer, 2005b). During this input-based instruction, the input is manipulated in a way that directs learners' attention to the target form. This practice is also referred to as input enhancement.

Input enhancement, a technique used in form-focused instruction, was coined and advanced by Sharwood-Smith (1993, 1991) who introduced this idea as a way of developing grammar instruction in the language classroom. The concept of input enhancement refers to the variety of ways in which input is made salient to learners by drawing attention to form (Gass, Behney & Plonsky, 2013). Some of these attention-grabbing techniques include, but are not limited to, coloring, italicizing, underlining and boldfacing in written input. Moreover, salience as advanced by Sharwood-Smith (1991) is not just externally created, but could also come about from the learners' own internal devices. To be considered input enhancement, though, the salience must be externally created through “elaboration (i.e. repetition) and explicitness (i.e. metalinguistic information)” (Gass, Behney & Plonsky, 2013, p. 416). As mentioned in Chapter

1, the L1 has been recommended as a noticing-boosting technique, however further empirical research on noticing is needed to investigate both its effect on acquisition and how it should be manipulated (Minh, 2010). To this end, the present study, which uses the first language to draw learners' attention to indirect and direct object pronouns during form-focused instruction, could offer more empirical evidence for L1 use as an effective input enhancement and noticing technique. In doing so, this investigation provides a new outlook on form-focused instruction, one that measures which language (the L1 or TL) during explicit FonF promotes greater student learning. Input enhancement measures had such a significant impact on language pedagogy that they gave rise to a special teaching technique known as Processing Instruction (PI), which will be presented in the next section.

2.1.1.5 Processing instruction

In line with research on how learners process input, and related to input enhancement measures, is the instructional approach known as Processing Instruction (PI), popularized in VanPatten & Cadierno (1993). Processing instruction differs from traditional instruction (TI) because while TI attempts to change a learner's processing strategies by focusing on output (production-based drills), PI attempts to change a learner's processing strategies in the input. This approach not only determines what is a problem form or structure for learners, but why it is a problem structure (Sanz, 2005). Once this "why" has been established, the PI technique works to direct learners away from the potentially problematic processing strategy they would typically experience if they did not have the assistance of processing instruction (Sanz, 2005), thus enhancing grammatical intake. Although PI has been researched with different grammar structures, clitic object pronouns have been the target structure for several PI studies (Leeser & DeMil, 2013; VanPatten & Fernández, 2004; VanPatten & Sanz, 1995; VanPatten & Cadierno,

1993). This is due to the (potentially) problematic tendency of English (L1) language learners to rely on word order as their processing strategy for a L2 (further described in Chapter 3). The fact that PI studies have researched clitic pronouns confirms that they are typically considered a structure that would benefit from explicit attention and input manipulation, making them a fitting choice for the present study.

According to this pedagogical intervention, learners process form through activities that contain structured input, or input that is manipulated in particular ways to push learners to become dependent on form and structure to get to meaning (Lee & VanPatten, 2003). Processing instruction assists the learners in making form-meaning connections, but does so unlike other explicit, focus-on-form approaches, with research rendering it clearly better than traditional techniques of grammar instruction (Sanz, 2005; VanPatten & Fernández, 2004; Benati, 2004; Cadierno, 1995; VanPatten & Sanz, 1995). This method provides support for the claim that explicit instruction benefits language learners. With evidence in favor of the effectiveness of explicit instruction and FonF for language acquisition, rather than mere exposure to input, the question arose as to whether or not explicit instruction has the same effects for learners of all ages. This will be addressed in the following section.

2.2 Age and explicit instruction

The issue of age in SLA was first addressed with the Critical Period Hypothesis (Lenneberg, 1967). A full discussion of the idea of a critical period is outside the scope of this thesis, but briefly, this hypothesis states that there is a certain period after which it becomes increasingly harder, if not impossible, to successfully attain native-like ability in another language. This inability to fully acquire language is understood by Lenneberg (1967) to occur after puberty. Such a hypothesis does not seem farfetched given the generally accepted notion

that adult learners rarely achieve the native-like fluency that children display. This can be attributed to the fact that adult L2 acquisition, unlike for younger learners, takes place after cognitive development is complete. Therefore, adults may use different learning mechanisms than children to learn their second language, such as problem-solving strategies, analytical abilities, and metalinguistic reflection of L2 structures (Sanz, 2005). These more “cognitively sophisticated” techniques often make adults more unsuccessful than children at ultimately acquiring a second language (Lichtman, 2012, p. 1).

There has also been research measuring the effects of age on acquiring specific elements of language (i.e., pronunciation, syntax/grammar, proficiency, etc.) rather than language acquisition as a whole (DeKeyser, 2000; Scovel, 1999; Schacter, 1996; Thompson, 1991; Long, 1990; Newport, 1990; Cummins, 1981). The so-called Window of Opportunity Hypothesis proposed by Schacter (1996) explains that there are multiple critical periods for different aspects of language. Evidence of a critical period for pronunciation has been confirmed by several research studies that have found that language learners who begin as children are able to achieve a more native-like accent than those who begin as adolescents or adults (Scovel, 1999; Thompson, 1991; Long, 1990). The age of 6 has been proposed as the age after which achieving native-like pronunciation is not as successful, although it could even be possible until the age of 12 (Long, 1990). On the other hand, the critical age for syntactical/grammatical accuracy is likely to be later than for pronunciation—around age 15 (Patkowski, 1990). Newport (1990) offers an interesting rationale for which children might have a cognitive advantage for acquiring morphology, positing that “children perceive and store only component parts of the complex linguistic stimuli to which they are exposed, while adults more readily perceive and remember the whole complex stimulus” (p. 24). Holding onto shorter segments of language allows children

to focus on the grammatical features that might go unnoticed by adults, making them better equipped to acquire a higher level of grammatical competence (Shrum & Glisan, 2010). The fact that adult learners (like those in the present study) allegedly might not notice the grammatical features in the input would validate the use of noticing techniques, such as use of the L1, for helping them to focus on such features.

Given the difficulty for adults to pick up languages through mere exposure as children do, it is thought that after puberty “foreign languages have to be taught and learned through a conscious and labored effort” (Lenneberg, 1967, p. 176, as cited in Sanz, 2005, p. 107). This would suggest that adults benefit from more explicit instruction, whereas children can, and do, learn language—a 2nd, 3rd, or other—implicitly. This belief has widely been accepted as the foundation for linguistic theory on age differences. Some would even declare that this shift from implicit to explicit learning is inevitable (DeKeyser, 2000). While it has already been established that an explicit type of instruction benefits adult learners, understanding if the L1 or the L2 is more helpful during FFI has not been determined. For this reason, a study investigating the use of the L1 during grammar instruction—an explicit learning technique—seemed appropriate for the adult population of the present study as it could offer valuable insight to the research of FFI for adult second language acquisition.

With a clear description of the theoretical changes that have occurred in the field of SLA towards a more inclusive position for the role of input and attention to form in language learning, discovering the effects of instructor language choice in the classroom remains a highly fruitful area of research. The role of the L1 in this study is especially useful as it sheds more light on the effects of FonF for adult learners. The rest of this chapter will present the previous body of literature surrounding the role of the L1 and the TL in the FL classroom, including the positions

that instructors and researchers hold on both sides of the argument. These views will be followed up both by information regarding student preferences of instructor TL use, as well prominent findings from the limited empirical studies regarding this topic.

2.3 The native language vs. the target language

There are a growing number of researchers that have begun to question the exclusion of the L1 from the L2 classroom (Turnbull, 2001; Macaro, 2001; Van Lier, 1995). However, many teachers are still resistant to use the L1 in foreign language learning. According to Cook (2001) & Van Lier (1995), one reason for this teacher skepticism could be that the idea of maximizing the TL in the classroom has been interpreted by various language teachers to mean that the L1 should be completely excluded in class. Indeed, since there is no consensus about how to use the L1 effectively, various opinions still exist which maintain that the TL should be used exclusively in the L2 classroom. However, aside from the apparent resistance to use the L1 among some language teachers, and the blind acceptance that the L1 should be avoided, there are researchers that support the use of the L1 and defend its inclusion in the classroom for various reasons (Ferrer, 2005; Cook, 2001). The next section will expose those opinions in favor of the use of the students' native language by instructors in foreign language classrooms.

2.3.1 Proponents of L1 use

Without a doubt, L1 use has become increasingly more prominent in the discussion of second language acquisition. This is largely due to the argument against the common belief that second language acquisition should be treated like first language acquisition. Indeed, Cook (2001) asserted that second language learners differ in that they are more mature and more able to make connections and analyze language use. Therefore, the techniques they use are different

from the techniques they used when learning their first language, which also includes applying their first language to help them learn the second language.

Among those that promote the effectiveness of the L1, Macaro (2001) argues that it is not practical to exclude the L1 from the language classroom because it deprives the students of using an important tool for learning another language. Others propose that it is not necessary to exclude the L1 because translation and transfer are natural phenomena and an inevitable part of acquiring a second language, independent from whether or not the teacher offers or allows translation (Harbord, 1992). Similarly, even if the teachers tried to keep the languages visibly separate, this would be contradicted by the invisible connections that learners make in their minds to their L1 (Cook, 2001). Echoing this sentiment, Orton (1975) observes that “the mother tongue is too dominant to be banished from the pupils’ consciousness in four or five isolated weekly lessons” (p. 141).

From an affective perspective, Cook (2001) states that it is more motivational to use the L1 so the students know the classroom is an open communicative environment, which relieves the anxiety of speaking exclusively in the TL. Collingham (1988) along with others such as Campbell (1997) and Piasecka (1988), argues that students feel more at ease through use of the L1 and this ease empowers students in the classroom and heightens their sense of confidence (p. 82). In these researchers’ opinions, sole application of the L2 may create a sense of feeling lost in the language classroom, which certainly does not foster confidence, decrease anxiety, or increase motivation for most language learners.

Further, there are implications for what the students really understand when the teacher speaks only in the TL, posing concerns about whether the students are able to connect form to meaning. That is, there is debate about the transfer of input to intake when only the L2 is used.

For example, Sharwood-Smith (1985) presents the notion that the exclusive use of the TL can expose the students to language that they are not capable of processing and assimilating to their linguistic system in the TL. To aid in this process, Turnbull (2001) suggests that input in the TL could more easily become intake if teachers judiciously use the L1 to catalyze the intake process. Echoing this idea, Van Lier (1995) claims that teacher use of the students' L1 helps to create more salient input that promotes intake. Use of the L1 allows the teacher to highlight certain points and makes those points more salient, promoting noticing and subsequent acquisition. In this way, the language they might not have been capable of processing suddenly becomes understood through the L1 and stored. As mentioned, this stored knowledge (intake) is what is later used to produce output (perform in the TL). Thus, by looking at the forms the students produce on the posttests, the present study could additionally provide some insight for speculations that the L1 facilitates the transfer of input to intake.

From a sociocultural perspective, there are a few studies that highlight the value of the L1 in a social context, such as for group activities (Wells, 1999; Antón & DiCamilla, 1998; Brooks & Donato, 1994). Antón and DiCamilla (1998) propose that when the instructor uses the L1 in the foreign language classroom the students can “scaffold”³ by using the L1 as a cognitive tool. Brooks and Donato (1994) also maintain that the students are often able to use the L1 to help in the “negotiation of meaning,”⁴ especially when they work in groups. These researchers observe that “verbal thinking [in the L1] mediates one’s relationship with the new language . . . and is quite necessary and natural” (p. 268). Wells (1999), in his review of the study by Antón and

³ Scaffolding is characterized by the interactions between an expert and a novice when they work in the resolution of tasks (Shrum & Glisan, 2010, p. 26).

⁴ Negotiation of meaning can be described as exchanges between learners and their interlocutors as they attempt to resolve communication breakdown and work toward mutual comprehension (Pica, Holliday, Lewis, & Morgenthaler, 1989, p. 65).

DiCamilla (1998), supports the use of the L1 in class by arguing that it illustrates the valuable role that interaction in the L1 can play in the collaborative performance of tasks in the L2. In effect, the L1 leads to the creation of opportunities to learn the L2 (Wells, 1999). Although these studies largely center on the use of the L1 by the students and not their teachers, they are still useful in expressing some advantages that the L1 has in foreign language acquisition.

In order to more concretely incorporate the L1, some claim that code switching (CS) also has a function in the second language classroom (Macaro, 2001; Coste, 1997). Although the present study will not be researching CS practices, CS is nonetheless significant to mention as it demonstrates another perspective on the use of L1 in the classroom. For some supporters of CS it is believed that the L1 can help in the acquisition of the L2 because the students can use the L1 as a point of reference (Coste, 1997). In support of using the two languages, Cook (2001) states that utilizing methods that require that the teachers use both the L1 and the L2 at the same time creates an authentic learning environment because the influence of the L1 on the TL is recognized. Further, Macaro (2005) concluded that the use of CS has no negative impact in the quality of L2 production by the students. Opinions such as those that have been proposed here contribute to the growing perception that code switching can be useful in the L2 classroom. Similar to the topic under investigation for this study, more empirical research as to the effects of CS practices on L2 acquisition would be a useful contribution to the body of literature on instructor language use.

The judicial use of the L1 in the foreign language classroom is unquestionably a topic of increasing interest in SLA. It should be noted that those in support of L1 use still recognize the importance of TL exposure in successfully comprehending and producing in the L2. However, these L1 advocates contend that the maximal provision of L2 input does not preclude using the

L1 in teaching and learning (Cook, 2001). They agree with critics that input in the L2 is a necessary condition for learning the L2, but L1 supporters argue that “it does not necessarily follow that [the L2] should therefore always be the *only* language used in every classroom” (Atkinson, 1987, p. 242, emphasis added). Nonetheless, in spite of the growing support of first language use in the classroom, the defense of exclusive TL use still remains. These perspectives will be addressed in the next section.

2.3.2 Opponents of L1 use

Not all researchers in the field of SLA are in agreement with respect to L1 use in the classroom. On the contrary, some believe that the exclusive use of the TL is what contributes most to L2 acquisition. This section will consequently provide a summation of justifications for which many researchers contend that use of the LI should not form a part of the classroom foreign language learning experience.

On this side, Carroll (1975) and Krashen (1982) have emphasized the importance of comprehensible input, which implicitly negates a place for the L1, as an essential mechanism for acquiring the grammar and vocabulary of the L2. This argument permeates the literature as can be seen by (Duff & Polio, 1994, 1990; Chambers, 1991; Atkinson, 1987, among others). As Chambers (1991) emphatically comments, “the natural use of the target language for virtually all communication is a sure sign of a good language course” (p. 27). Therefore, the long held notion that input in the TL forms the foundation for L2 acquisition remains central to the argument that the L1 should not be a part of the L2 classroom learning experience.

In addition, advocates of exclusive L2 use often worry that the TL is not considered the “real” language so long as the L1 is present in the classroom. Rather, the L2 becomes the “classroom” language. Demonstrating this notion, Duff & Polio (1994) observe “the problematic

but pervasive tendency in FL classes for English (the L1) to be the vehicle for meaningful communication, with the target language reserved for more mechanical, grammatical drills” (p. 322). Similarly, according to MacDonald (1993) the target language should be used all the time because if not, the students do not have the opportunity to see how the TL can be used to accomplish real communicative functions. Although Turnbull (2001) sees a place for limited L1 use in the classroom, he shares MacDonald’s (1993) opinion that the teacher should employ maximum use of the TL so that students see the immediate utility of the TL instead of at some distant moment in the future. Further, these researchers surmise that it is not necessary that the students understand everything that the teachers say, but changing to the L1 undermines the learning process (MacDonald, 1993; Chambers, 1991, among others). For these reasons, many researchers warn against use of the L1 arguing that without its use “learners are enabled to see that the language is not only the object of study but also an effective medium for conducting the normal business of the classroom” (Chambers, 1991, p. 27).

In contrast to the pro-L1 attitude regarding motivation and instructor language use (see section 2.3.1), MacDonald (1993) argues that the presence of the L1 can have negative consequences for student motivation in that students will use the L1 as a crutch. Indeed, MacDonald (1993) worries that if time is allotted for students to ask questions or obtain clarification in the L1, then time spent in the L2 may not be beneficial as students might not pay as much attention knowing they will shortly receive reinforcement of the same information in the L1. Swain (1986) affirms, students tend to “ignore the language they do not understand [and] if the same or related message is typically given in both languages, then there is no motivation to try to figure out what is being said” (p. 106). Thus, it is suggested that teachers should use the L2

so that the students feel accomplishment and enjoyment at seeing that they are capable of understanding and using the target language, which will help in language acquisition.

Another reason for which some instructors and researchers have remained steadfast in the L2-only dogma is due to the fact that L1 use is either largely ignored in methodology or such methodologies do not explicitly comment about its use. As a result, according to Atkinson (1987), “the implication, one assumes, is often that it has no role to play” (p. 241). Rolin-Ianziti and Brownlie (2002) expand on this notion with reference to the situation at their particular university (University of Queensland) where no written rule existed regarding use of the L1 in L2 classes. According to the authors, it was simply assumed that teachers were aware that use of the L1 was “strongly discouraged” in language courses (p. 405). Indeed many teacher training programs and university language departments do not specifically comment on the use of the L1. This fact has resulted in the assumption that the L1 should not form a part of L2 curriculum. In their study quantifying teacher TL use across different university classrooms Duff & Polio (1990) found a high variability of L2 use in the classroom. In clear support of maximum TL use, they conclude their discussion of this finding by suggesting ways teachers can increase the L2 component, rather than enhancing the L1 use that is already evidently employed. Related to this assumed notion that the L1 should be avoided is the accompanying instructor guilt associated with L1 use. Indeed it has been indicated that instructors often feel as though they are “making an admission of professional misconduct in ‘confessing’ to low levels of FL use” (Cook, 2001, p. 405). This guilt is yet another reason for which many teachers try to exclude the L1 from the language classroom.

Another recent branch of the L1 discussion that has received increasingly more attention is that of the perceptions and beliefs that students feel towards its use in the L2 classroom. Since

this study includes qualitative methods to explore student opinions about L1 and TL use, a description of findings from previous literature regarding this topic will be presented in the following section.

2.4 Student opinions regarding instructor language use in the classroom

Although it is largely the teacher's responsibility to determine the language use in the classroom and whether or not to allow any L1 use either by the students or themselves, it is nonetheless highly important to know the opinions that students have regarding the use of their native language in the foreign language classroom. After all, getting student feedback about L1 use could help to better engage them in the TL and allow for a more productive and comfortable environment that facilitates learning.

Inspired by this idea, Rodríguez and Oxbrow (2008) looked at the students' beliefs of whether the use of the L1 in English (L2) classrooms is a facilitator or a hindrance to language learning. Their study found that most of the students said that the use of L1 (Spanish) through translation in the EFL classroom actually helped them improve their L2. Further, most of the students (76%) agreed they preferred when the teachers explained the grammatical structures in their L1 and not in the L2, as this was more useful for their understanding. Similarly, the students also appreciated the teachers' translation of English vocabulary items and grammatical structures into Spanish, suggesting that this technique was helpful for language learning. However, unlike the opinion expressed in Atkinson (1993), the results from this study actually demonstrate that students do not prefer the use of the mother tongue for procedural functions, or those aspects that move class along, such as instruction giving and setting up and monitoring group work. Rodríguez and Oxbrow (2008) contend that this could be due to the fact that "the kind of language used in these procedural tasks is simple (mainly imperatives), brief, and repetitive

because the instructions are often the same, so students get used to this kind of language rapidly and can understand it without any problems” (p. 98).

Similarly, in their study of teacher language use in the classroom, Tang (2002) investigated L1 frequency, uses, and opinions. The results indicate that a high percentage of students and teachers think that the L2 should be used in the classroom. According to students, Chinese (L1) was most necessary to explain complex grammar points (72%) and to help define some new vocabulary items (69%). In the qualitative results from Viakinnou-Brinson, et al (2012) it was found that the students expressed a preference for learning French grammar with the support of English (L1), although they did see benefits to a TL approach. The results from these studies seem to indicate that L1 use is accepted by most students and preferred for linguistic or lexical content, which certainly begs the question of whether or not its exclusion from the language classroom is indeed beneficial for student learning.

Levine (2003) in his study on student anxiety found a negative relationship between the amount of TL use in class and TL anxiety. Indeed, students who reported higher TL use in their FL classes tended to report lower levels of anxiety about TL use. The important implication of this finding is that, contrary to popular belief, greater TL use does not signify greater anxiety among students. However, other answers further revealed that anxiety was lower for those students with a bilingual background, in the second year of instruction, and who expected a higher grade (p. 352). The results suggest that learner language level and other social variables might be more indicative of student anxiety from instructor TL use.

Suby and Asención-Delaney (2009) sought to understand not only the amount and variables that condition TL use in the classroom, but also the students’ attitudes and perceptions towards the teachers’ use of the TL. From the results on a student questionnaire, their study

reveals that a very low percentage of students feel frustrated when the teacher uses the L2 (Spanish) both in low and intermediate level classes. In fact, most students actually reported to feel as though they were learning a lot when the teacher spoke in Spanish. With respect to their language preferences, a majority of students indicated that they were content with the language behavior of their instructor. However, there was a considerable number (22%) who would like their instructors to use more Spanish. Most of the students that indicated this wish were from the highest language level of the three experimental groups, those with four semesters or more of Spanish instruction. In regards to how the teachers' language use would affect student learning, most students felt that if the teacher used more Spanish in class, they would learn the same amount or more. However, the beginner students were most represented among those who indicated that they would learn less if the teacher used more Spanish (L2). While there was no attempt to assess empirically student learning and teacher language choice, the fact that beginner students felt they might learn less with more TL use is certainly revealing. This would suggest that exclusive TL use might not be appropriate with this level, as they purportedly see value in limited use of the L1 to aid in understanding.

Perhaps due to the differing instructor and student beliefs of the role for TL and L1 use in the classroom, there is not yet a consensus about the exclusivity of one language or the other. As such, the discussion about the best uses of both the L1 and the L2 in the language classroom persists. Next, previous empirical studies about the amount and contexts in which instructors in the foreign language classroom use the L1 and the TL will be discussed.

2.5 The use of the L1 and the TL in the foreign language classroom

There are different findings regarding the amount of L1 and TL use in the foreign language classroom, but in general it has been determined that teachers use the TL more than the

L1. Through a review of class recordings from six university French teachers, Guthrie (1987) discovered that all but one of the instructors in his study used the TL between 83% and 98% of the time. Unlike that study, however, Duff & Polio (1990) reported a wider range in the use of the L2 and the L1, with evidence of TL percentages ranging from 10% up to 100%. Given the discrepancy in instructor language use, empirical studies continued. Later, Macaro (2001) coded teacher TL and L1 use in video recordings of the lessons and found that even in classes with students aged 11-14, teachers demonstrated very little use of the L1 (an average of 4.8%) throughout the observed lessons, echoing the findings from Guthrie (1987). However, the results of this study could be influenced by the fact that the six teachers were all student teachers being evaluated and the researcher himself was their supervisor. Despite this fact, though, findings from subsequent interviews with the teachers revealed that none of them reported being influenced in their language choices, restoring some reliability.

Levine (2003) recognized the size limitation that these empirical studies presented, as well as the fact that they were mostly limited to the TL behavior of instructors at one institution. Therefore, he attempted to increase the number of participants and included those from more language learning situations by way of a self-report questionnaire administered online. This questionnaire provided information regarding estimations of TL and L1 use in university classes as well as the level of anxiety regarding target language use in the classroom in different contexts (i.e. for discussing grammar). The questionnaire was shared through email, which allowed the researcher to reach instructors across the United States and Canada, eliciting responses from 163 instructors. These instructors were also asked to encourage their students to participate. Based on

the estimations indicated from student and instructor responses, Levine (2003) found that the instructors in his study used the TL “a great deal of the time overall” in class (p. 354).

Continuing to measure amounts of TL and L1 use in the classroom, Suby & Asención-Delaney (2009) also found a majority of L2 use by the instructors with a percentage between 68% and 99%, but it was in the intermediate level Spanish classes instead of the beginner level where more L1 was used. However, the difference in L2 use among the levels was subtle (4%). Thompson (2009) found more variety among rates of TL use in his study, but his results still demonstrate that the instructors used the L2 somewhat consistently (from 45% to almost 100%). It is evident, then, that among the studies that have attempted to quantify TL and L1 use, differences do exist among the rates of TL use by the instructors. However, in general it is shown that the TL is used more than the L1. Further, Duff & Polio (1990) reveal that there seems to be a lack of awareness on the part of the teachers in terms of how, when, and to what extent they are really using the L1 in the classroom. As a suggestion for future studies, Duff & Polio (1990) emphasize the importance of creating teacher awareness as to how language is used in the classroom.

With regards to when the L1 is used in the classroom, there have been various studies carried out for the purpose of observing tendencies in instructor language choice (Nakatsukasa & Loewen, 2014; Suby & Asención-Delaney, 2009; Kim & Elder, 2005; Tang, 2002; Cook, 2001; Polio & Duff, 1994; Atkinson, 1993; among others). For reasons such as a lack of empirical evidence about when the L1 of the students was used inside the foreign language classroom, Polio and Duff (1994) tried to understand more about this absence in L1 use research. By further analysis of the data gathered from their previous work in 1990, findings from Polio and Duff (1994) show that teachers used the L1 (English) for various reasons, including a lack of

vocabulary or understanding in the TL, to talk about administrative vocabulary, to show empathy and solidarity towards the students, to save time and to explain grammar, among other reasons. The authors called attention to some of these variables in particular, noting that the most common use of English (L1) was for words related to the academic context (i.e. quiz, homework, test). They claim that such use of English by the instructor seems paradoxical because academic expressions tend to appear frequently and are very predictable, thus, it should be very easy for the students to learn such words in the TL. With respect to the use of the L1 to save time, the authors also provide their own opinions, suggesting that expediency is not an appropriate use of the L1 due to the fact that repetition can facilitate the acquisition of the TL.

Although not an empirical study, Cook (2001) supports the use of the L1 in the classroom and provides various instances in which its use is appropriate, among them to explain difficult grammar points, clarify vocabulary, and for classroom management—actual instances that appeared in the classes observed in Polio and Duff (1994) and Tang (2002). Similar to Cook, Atkinson (1993, 1987) states that the L1 deserves a place in the classroom and adds that obtaining the translation for a term in the L1 can promote faster understanding of it. The use of the L1 can also be considered beneficial when providing instructions (Atkinson, 1993). Since it had been found that instructors often use the L1 to explain grammar, Nakatsukasa & Loewen (2014) aimed to identify exactly how the L1 is used in grammar and other focus on form activities, like vocabulary. Their study revealed that teachers used the L1 when the students asked them about a specific grammar structure or when the students committed an error in the target grammar structure for that particular lesson. However, when the students committed a less salient error or one that did not relate to the target structure for that day's lesson, the instructors simply used a brief recast in the L2 and moved on. That is, they immediately repeated the

student's utterance with the error corrected, but without drawing explicit attention to or explaining the nature of the error. The teachers did not give any explanation or translation in the L1 for these errors. The authors speculate that from a cognitive perspective, additional explanations in the L1 could help the students to notice problematic structures, which could have a positive impact for L2 development (Nakatsukasa & Loewen, 2014).

With many studies about the amount of TL and L1 use, as well as when each is used, there appeared to be an interest in finding out if the actual classroom use corresponded with teacher perceptions of their language use, and how their beliefs towards such use affected language choice. To this end, there have been some studies that have attempted to discover the perceptions and beliefs surrounding teacher language choice inside the classroom (Suby & Asención-Delaney, 2009; Thompson, 2009; Levine, 2003; Polio & Duff, 1990, among others). Polio & Duff (1994) deduced that departmental policies affected the use of the L1 by teachers, as they were advised not to use English (L1) in class. This had an impact on their beliefs about its use in the classroom, leading some to believe it should not be used. Other teachers in their investigation had studied applied linguistics and had thus adopted their own beliefs about the use of the L1. Further, there has been evidence of students and instructors reporting differing perceptions of TL use in the same classroom (Levine, 2003). Indeed, the results from the questionnaire study reveal that 60% of the students reported that their instructors used the TL 80%-100% of the time, while only 44% of instructors reported to share this estimate (Levine, 2003). The researcher does not speculate about the reason for this disparity, but it could be that students, hyper aware of the TL, overestimate its use, while instructors who even use a limited amount of the students' L1 might feel that it is too much, given most departmental policies for TL immersion.

In Thompson's (2009) study of university-level Spanish students, the relationship between student beliefs and perceptions versus real TL and L1 use in the classroom was investigated. The results demonstrate statistically significant correlations between students' and instructors' perceptions of Spanish and English use and actual observed use of both languages in the classroom. Because observed language use matched student perceptions, the findings from this study validate using self-reports of students and teachers to determine the quantity of teacher TL and L1 use in the classroom. Further, the results support the idea that when the students perceive greater use of Spanish by the instructor, they are less likely to use English (Thompson, 2009).

Empirical evidence exists in support of the argument that teachers should aim to use the TL as much as possible (Turnbull, 1999a, 1999b, 1998; Wolf, 1977; Carroll, 1975). From these studies, a link could be drawn between the use of the TL and the proficiency obtained by the students. In a study of students of French as a second language, Wolf (1977) found that the frequency of English (L1) spoken in class had a negative influence on student proficiency. However, regarding the findings from these empirical studies, Turnbull (2001) maintains that it does not mean that there is a linear relationship between the use of the TL by the instructor and the proficiency of the students. Moreover, this would be very difficult to prove. Instead, he claims that it is not detrimental to use the L1 in the classroom, but rather it is efficient to change to the L1 in order to be sure that students understand a difficult grammar topic or an unknown word. However, he continues by mentioning that teachers should not depend too much on the L1 even if its use is allowed because that could lead to an insufficient amount of input in the TL.

Affirming this claim that no linear relationship exists between TL use and proficiency gains, Thompson (2006) found evidence that the teacher who used Spanish the highest

percentage of the time (99.64%), had a class that did not significantly improve from the listening pretest to posttest (p. 231). This finding would suggest that perhaps students did not understand the meaning of the TL input they received well enough to perform on the posttest. Thus, comprehension checks in the L1 could have been useful to assist in TL listening comprehension. The results from this study also support the view that providing the students with TL input alone is insufficient for listening comprehension.

With respect to the effect that L1 use has on the acquisition of another language, there have not been many studies or much evidence indicating what occurs in the language classroom. Although their study refers to the use of the L1 by students, from a sociocultural perspective Antón and DiCamilla (1999) provide evidence of the positive effect the L1 has in learning an L2, particularly in collaborative tasks. The sociocultural perspective is based in sociocultural theory, which considers language learning to be a social process rather than one that occurs within the individual (Shrum & Glisan, 2010, p. 24). The researchers in this study analyzed qualitatively the collaborative talk of five separate pairs of L2 Spanish students completing a writing task in Spanish. Through transcriptions of the recorded sessions, they observed that through the use of the L1, learners were able to interact verbally and thus provide each other and themselves with help throughout the task. This refers to help not only in understanding the goals of the task, but also understanding the content and linguistic forms it requires for successful completion. According to these researchers, the use of the L1 is beneficial for language learning since it serves as a “critical psychological tool that allows the learners to construct effective collaborative dialogue” (Antón & Dicamilla, 1991, p. 245). Through this collaborative dialogue, they posit, an opportunity is provided for L2 acquisition to take place.

With respect to vocabulary, there has been some evidence that the L1 can help in the acquisition of new words in the TL (Joyce, 2015; Tian & Macaro, 2012; Bouangeune, 2009). Tian and Macaro (2012) compared the results on both a posttest and delayed test from three randomized groups of English L2 learners that received different instructional treatments on a listening comprehension task. One of the experimental groups only received information or explanation of vocabulary in L2, while in the other experimental group, the teacher briefly switched to Chinese (L1) in relation to the target lexical item. The third, control group, did not receive any vocabulary-related explanation or information. First, it was found that lexical focus on form is beneficial for vocabulary acquisition, as the two treatment groups made significant gains over the control group. As far as language, the results between the two experimental groups reveal that in focus on form activities, the students who received the L1 equivalents of the vocabulary words obtained better results on the immediate posttest than the group of students that did not receive the L1 translation of the words. It is important to mention that for the same experimental groups, in the delayed posttest there did not seem to be an advantage from one group to another. Nevertheless, Tian & Macaro (2012) is one of the first studies to suggest that the L1 can have a beneficial effect on, at the very least, the short-term acquisition of vocabulary in a L2.

This finding was echoed in Joyce (2015) where for L2 vocabulary test scores, results indicate that the students' recognition of L2 vocabulary was significantly higher when asked to match the target vocabulary to L1 translations rather than to L2 definitions. However, the results from Joyce (2015) reveal differing advantages for L1 translation or L2 definitions for knowing the meaning of the target language. About these results the researcher asserts, "when the goal is primarily vocabulary expansion, the L1 method is preferable. On the other hand, for the purposes

of general language development, learning through an L2 definition is favored” (p. 10). Tian & Macaro (2012) mentioned that their study could launch further research of L1 use in other focus on form activities, like grammar. Indeed, although it is known that many instructors already use the L1 to teach difficult grammar, there are very few studies about the link between the use of the L1 for grammar instruction and the effect that it has on the acquisition of that grammar.

To my knowledge, Viakinnou-Brinson, et al (2012) is one of the only studies addressing this topic. This study grew out of the work done first as part of a dissertation, Viakinnou-Brinson (2006). In their study of the use of English (L1) in university French classes, the authors in Viakinnou-Brinson, et al (2012) investigated the long-term effects of instructional condition on the grammatical performance of students taught either in a French-only condition or a French/English condition over the course of one semester. There were 10 targeted teaching days covering 10 different grammar structures, which were selected in the order in which they were presented in the textbook. The same visiting instructor taught each class on the targeted lesson days. The only difference between the grammar lessons for each group was that one group received the rule presentation in French/English while the other group received the rule presentation in French only. To assess grammar performance, students answered a 12-question multiple choice grammar test prior to instruction and again at the end of the semester. By comparing results on a grammar pre and posttest, the findings from this study indicate that grammar test score increases were significantly higher for the French-only condition. This study would suggest that using the L1 does not have a demonstrated long-term benefit for grammar performance in the language classroom.

Since there is such a scarcity of empirical studies on the effect of TL and L1 on grammar performance, the work by Rell (2005) also proved very useful to the present study. By

comparing scores from a pretest, immediate posttest and delayed posttest, Rell (2005) explored the grammar gains of university Spanish (L2) students who underwent grammar instruction either in their first language (English) or the foreign language (Spanish). In her study of the effect of L1 use on two specific grammar structures in Spanish (combined object pronouns and the *hace + [time] + que* construction), the results reveal that language use had different effects depending on the grammar structure in question. Indeed, for the *hace + que* construction, students that received L2 instruction outperformed their L1 counterparts both at immediate testing and delayed testing, but with combined object pronouns there proved to be an advantage for L1 instruction both at immediate posttest and delayed posttest. The findings from Rell (2005) are insightful in that they suggest not only that L1 use can be beneficial for grammar acquisition, but also that such acquisition might have more to do with the combination of L1 use and specific grammar topics rather than L1 use in and of itself. As concluded in Rell (2005), it would seem that “using the L1 or the L2 during foreign language grammar instruction depends on the grammar point in question” (p. 144).

Although the results found in the studies highlighted throughout this chapter provide insight into the way students learn, it should be reiterated that there are many factors unique to the students themselves that contribute to the outcomes found in these studies, including those in the present investigation. A discussion of such individual differences will be presented in the next section.

2.6 Individual differences

It is generally understood that there is variation among language learners in terms of ultimate success in mastering a second language and rate of acquisition. What is not clear, however, is how to explain such differences. From the decades of research in SLA, it has been

concluded that both internal and external factors influence the language acquisition process. Internal processes, which encompass individual differences (IDs), refer to those qualities that the learner inherently brings to the learning situation—such as personality traits, anxiety, aptitude, and motivation—and external factors are those elements of language learning that are outside of the learner himself, such as the type of input or instruction. The study of IDs is particularly compelling for SLA in that “the outcome of the acquisition of a L2 is significantly more diverse than that of a L1 . . . and a great deal of this outcome is attributable to the impact of IDs” (Dörnyei, 2005, p. 2).

Individual differences, a subset of internal factors, can be defined as “dimensions of enduring personal characteristics that are assumed to apply to everybody and on which people differ by degree” (Dörnyei, 2005, p. 4). These learner characteristics can be divided into two general categories: affective variables and cognitive variables. In a larger sense, “affect can generally be described as aspects of feeling, emotion, mood, or attitude that have an impact on our behavior” (Kebłowska, 2012, p. 158). Thus, in terms of language acquisition these affective variables would include qualities like attitude, anxiety, motivation and self-esteem. Cognitive factors typically refer to qualities that do not change and/or are not altered by one’s environment, such as age, aptitude, intelligence, personality, and learning styles. Even as there has been considerable evidence of the important contribution that many IDs have had on language learning, not all are equally effective. For example, research on personality traits has resulted minimally influential to language success, and has thus dwindled in recent years. Other characteristics, however, have proven to have a significant impact on language learning and have thus yielded much more research. Indeed, aptitude and motivation are the two IDs that “have generated the most consistent predictors of second language learning success” (Dörnyei &

Skehan, 2003, p. 589). Even though “not enough is known about how and to what degree these factors affect different components of L2 development” (Sanz, 2005, p. 15) individual differences are increasingly more accepted as vital players in the ultimate success of language acquisition. Further, individual differences are present in everyone and thus must be considered in any study of student behavior.

As has been observed throughout the previous several pages, there are various factors related to instructor use of the students’ L1 in the classroom. In terms of student beliefs, most students were in favor of limited use of the L1 in certain situations (see section 2.4). However, among teachers there are still differing opinions as to the role that the L1 plays in the language acquisition process. In general, as some studies have deduced, more research that allows instructors to understand the effects that using the L1 and the TL have on the acquisition of the L2 would surely be beneficial and even necessary (Levine, 2003; Turnbull & Arnett, 2002; Macaro, 2001; Turnbull, 2001, among others). As such, the following chapter will provide more detail as to the design of the present study and its aim to demonstrate the effectiveness of either a L1 or TL approach to learners’ grammar performance, an overall little explored but highly contributive area of SLA.

CHAPTER 3 METHODOLOGY

The previous review of the literature indicates that further empirical research on L1 use in the foreign language classroom is desirable both for understanding its effect on grammar performance as well as student preferences. As such, this experimental study explores issues related to the first language (L1) and target language (TL) in the L2 classroom using a mixed methods approach (both quantitative and qualitative measures). The present chapter addresses the methods used in the current study and describes the research context, participants, research design, research instruments, data collection and analysis procedures. First, the research questions guiding this investigation are presented below.

3.1 Research questions

The main objective of this investigation was to determine the effect of the native language (L1) during grammar instruction on students' object pronoun performance in university level Spanish classes. By comparing the immediate and delayed gains of students who underwent grammar instruction either in their L1 (English) or the TL (Spanish), it could be possible to determine which condition results in greater learning of the targeted grammar structures. The findings from this investigation will help to better account for the role of the first language in the second language classroom. Therefore, the following research questions formed the basis for the design and completion of this study:

1. What effect does language of instruction (Spanish-only, English-only, or no language restriction) have on the object pronoun (DOs, IOs, both combined) performance of L2 learners of Spanish when tested immediately after instruction?
 - a. Which instructional language condition—Spanish-only, English-only, or no language restriction—yields higher results on the DO immediate posttest?

- b. Which instructional language condition yields higher results on the IO immediate posttest?
 - c. Which instructional language condition yields higher results on the combined DO-IO immediate posttest?
2. What effect does language of instruction (Spanish-only, English-only, or no language restriction) have on L2 Spanish learners' retention of object pronoun forms when tested two weeks after instruction is over?
- a. Which instructional language condition yields higher results on the delayed posttest?
3. What are the students' overall instructional language preferences regarding the use of the L1 and the TL in the classroom?
- a. How do instructor language preferences compare to the students' reported language preferences?

As there have been very few empirical studies that have attempted to find out the relationship between grammar performance and language of instruction, it was not possible to make sound predictions for the present study. However, for this reason the present study is certainly opportune, and the results yielded here will aid in filling this void for future studies.

3.2 Setting

All data for the present study were gathered from intensive beginning Spanish classes at a large southern university. The classes met four days a week for 50 minutes and class size did not exceed 28 students. The beginning textbook used with the Spanish students at this level boasts a "focused approach," first on meaning and then on form. While it emphasizes communicative goals and "active learning," the textbook also leaves room for explicit presentation. The use of

the L1 in all levels of Spanish is strongly discouraged, and all instructors are expected to comply with the departmental language policy of 95% target language use. However for the sake of conducting this research, departmental policy for teaching mainly in Spanish was temporarily suspended for the English-only experimental section.

The majority of undergraduate degree programs at this university require at least two semesters of a foreign language in order to graduate, though some degree programs require four. Some students elect to continue their study of Spanish after the fourth semester, but the majority of students take the classes to fulfill the university's requirement. Indeed, the student population for this study consists primarily of students who are taking Spanish in order to meet the university's foreign language requirement (84.6%). This certainly has implications for the students' level of motivation in class, which could have an impact on the results of this study. The present chapter continues with an overview of the study design, outlining its distinct phases.

3.3 Overview of the study

The data for the present study was gathered during the Fall 2015 semester and collected in four main phases. In phase 1, the pretest was administered to the three beginner Spanish classes participating in this research. Next, phase 2 consisted of all immediate testing and classroom observations. That is, over the course of several weeks, the DO, IO, and joint DO-IO lessons were observed and the corresponding immediate posttests were administered, respectively. The date of instruction for each lesson was pre-determined based on the already existing syllabus provided for all Spanish instructors by the Department. The instructor used identical lesson plans amongst the three classes to alleviate teaching differences and to ensure comparability of the quality of instruction. In phase 3, two weeks after the conclusion of the third and final lesson, a delayed posttest was administered. Lastly, one week after the delayed posttest,

both the instructor and the students completed a questionnaire assessing their language preferences and perceptions of L1 and TL use in the classroom. Then, the collected data from all posttests was analyzed using the Statistical Package for Social Sciences (henceforth, SPSS).

3.3.1 Rationale for grammar topic

IOs and DOs were chosen for the present study because it is one of the grammar topics that gives learners the most trouble at the beginner level (Parodi, 2002; Rell, 2005). In addition to the reasons outlined in Section 1.2, this could be due to the fact that English does not have gender agreement for nouns, while Spanish is a language that requires it. Thus, the learner has to understand the context of the sentence and remember that the pronoun has to agree both in gender and number with the noun. In addition, Spanish does not always follow the English Subject-Verb-Object word order, and object pronouns in particular are normally expressed in the Object-Verb-Subject word order. This can be seen in the following example where “it” (the ball/*la pelota*) appears before the verb in Spanish:

- a) English S-V-O order: John threw it (the ball).
- b) Spanish O-V-S order: La (*la pelota*) tiró Juan.

This is particularly problematic for English speakers who rely strongly on word order as a processing cue in their L2 (Sasaki, 1991; Harrington, 1987; MacWhinney, Bates & Kliegl, 1984). In Spanish, though, other cues such as verb agreement or pronoun agreement are much stronger cues than word order for determining who performs the action in the sentence. This discrepancy in processing strategy could further explain why the use and acquisition of object pronouns are a feat for many learners. Suby & Asención-Delaney (2009) pointed out that it is more difficult to teach without using English (L1) when complicated aspects of grammar have to be explained. This suggests, then, that L1 use could be more beneficial for explaining difficult grammar concepts, particularly those that contrast with the learners’ L1. In support of this view,

and recognizing that IOs and DOs are difficult for many learners, object pronouns seemed an appropriate topic for measuring the effect of instructor L1 use on grammar performance in a classroom setting.

3.3.2 Rationale for language level

The chosen level for this investigation is the intensive beginner Spanish class. Unlike the other beginner option for students with no previous study of Spanish, the students who are able to enroll in this level have had at least two years of prior exposure to Spanish. This allows the class to be taught at an accelerated rate, covering the material for two semesters of beginning Spanish in one semester. The intensive nature of the course proved ideal for this study for several reasons. First, due to the large amount of material covered in this course, instruction of all three lessons regarding DOs and IOs can be taught in the same semester. This greatly facilitated the data collection procedure. Further, since they have had at least two years of experience with Spanish, it is reasonable to believe that these students might feel more at ease with TL use in class. Another important reason for choosing intensive beginning Spanish is that the curriculum at this level introduces DOs and IOs for the first time. At any other—higher—level the students will have already been taught DOs and IOs in the college setting, bringing their prior knowledge to the learning process and thus complicating the possibility of attributing DO and IO learning to teacher TL or L1 use. Therefore, the intensive beginner level seemed the most appropriate and effective for this study.

Since the participants had been previously exposed to Spanish, the researcher is aware that prior knowledge could still have impacted the results. However, prior exposure to Spanish does not definitely mean that students had learned object pronoun structures. Further, the fact that no student included in the analysis scored above a 70% on the pretest (all but 5 students

received an F, according to the university grading scale) indicates that, at the start of the study, the participating students did not demonstrate prior knowledge of object pronouns and thus would be (re) learning the forms. Nonetheless, the pronominal form that the researcher believes could be most impacted by prior knowledge would be that of DOs, since it is the form that is typically encountered first in Spanish textbooks (see section 1.3). Specific information regarding the participants will be discussed in the following section.

3.4 Participants

The participants for this study include three groups of L2 Spanish students. One of the classes received instruction in English-only, another group in Spanish-only, and for the purpose of understanding the natural, unaltered language behavior of the instructor without guidance from the investigator, a third group was included which received instruction with no language restrictions. All of the students completed a demographic background questionnaire (see Appendix E) to assess the social variables among the classes, such as determining their L1, their reason for taking Spanish, and gathering information about their formal Spanish language classroom instruction history as well as contact with the Spanish language outside the classroom setting. Details regarding this specific information are provided in the subsequent section.

3.4.1. The students

The student population for this study consisted of approximately fifty-five students. All three sections had the same instructor. Of the students who completed the demographic questionnaire, 29% were male and 71% were female. The participant ages ranged from 18 to 24; two students did not state their age. As often the case in beginning level classes, the majority of participants were between the ages of 18 and 20 (84%). The remaining reported to be in the 21-

24 year old range (16%). Regarding native language, all students except for one (98%)⁵ reported to have grown up primarily in an English-speaking environment and claimed English as their native language.

To further assess contact with the Spanish language outside the classroom, students were asked about time spent in a Spanish-speaking country. Their responses indicated limited contact with Spanish, as all students who had traveled reported to have spent two weeks or less in a Spanish-speaking place, except for one student who spent “about a month.” The limited contact with Spanish outside of class for the student population of the present study would confirm the accepted notion that the classroom is the primary place where students learn a foreign language, thus minimizing the possibility that contact with Spanish outside of class affected the results. Most participants reported beginning formal Spanish instruction between the ages of 14-18 (60%), after puberty. The ages at which other students began formal instruction are as follows: 5 or younger (4%), 6-9 (12%), 10-13 (23%), older than 18 (1%). Although not the aim of this research, the researcher was interested in considering if age of acquisition had any effect on performance. Looking at trends in the students’ posttest scores revealed that there was no straightforward connection. In other words, in some cases those who began learning Spanish before the age of 15 (the cut-off age for more easily acquiring grammar, see section 2.2) performed well on the posttests, but so did students who began formal instruction between the ages of 14-18. Therefore, in this study, having formal Spanish instruction at an earlier age did not seem to give students any advantage for learning grammar as it did not correlate positively with improved grammar performance.

⁵ One student reported Korean to be their native language and to have grown up in a Korean-speaking environment.

Students indicated that they took Spanish because it was: a requirement (84.6%), part of a major (51.9%), an interest (28.8%), or other (5.8%)⁶. It is important to make a clarification regarding the “part of a major” response. This was meant to cater to students majoring in something directly related to foreign language (i.e. Spanish, Foreign Language Education, International Affairs, among others). However, all students who chose this response also reported to take Spanish because it was a requirement, suggesting that “part of a major” was understood by students to apply to any major that required a foreign language, such as biology, and not just majors directly related to foreign language. The instructor profile will be presented in the next section.

3.4.2 The instructor

In order to control for the experimental confounds associated with multiple instructors, such as different teaching styles, personalities, experience, backgrounds (among other variables), here we used the same instructor for all three sections of intensive beginning Spanish included in the data. It could potentially be interesting, however, for future studies to include more than one instructor in order to consider the effects of the various teaching styles employed when approaching the same topic. The experienced instructor chosen for this study is a native English speaker with a Master’s degree in Spanish. In compliance with the departmental TL use requirement, the Spanish proficiency level for this instructor is considered advanced. Further, this instructor has taught the intensive beginning Spanish class for many years and is thus accustomed to the fast-paced nature of the course. Answers from the instructor questionnaire

⁶ The three students who reported “other” specified the following reasons: “humanities course,” (which also indicates a requirement) “would like to minor in it,” and “it’s very useful for communication in my home state of Texas.”

regarding L1 and TL preferences will be used in the qualitative analysis. The next section of this chapter will explain in detail the various instruments to be used for the data collection.

3.5 Instruments

The data gathered in this experimental study is derived from both quantitative and qualitative research techniques. The quantitative data collection will be carried out using a pretest, three immediate posttests, and a delayed posttest. As mentioned, the results gathered from the posttests will be analyzed using SPSS to determine any statistical significance in the scores between the classes. The pretest was not included in the statistical analysis as it was merely used as a “screener” to determine baselines amongst the classes. The qualitative data consists of the information gathered from both a student and teacher questionnaire as well as classroom observations. In addition, students’ ability to successfully translate pronominal forms was also assessed on the posttests. Detail as to the design of the testing materials will be addressed in the subsequent section.

3.5.1 Test design

The investigator designed all quantitative assessment materials according to the specific grammar concepts under study. Further, in order to ensure level-appropriate questions, the investigator consulted the vocabulary found in the students’ textbook to create the sentences for all quantitative assessment materials. In this way it was also possible to guarantee that the students had seen all the words in the sentences prior to testing.

Another aspect of the tests that was carefully designed to ensure the most effective testing materials was in removing all definite articles from the sentences. Especially for the questions about direct object pronouns, the investigator determined that the definite article made the pronominal form evident. As a result, the correct answer could easily be recognized, even

without understanding the underlying structure. For example, the definite article *las* in the sentence *Miguel tiene las manzanas en su mochila* could have led the students to the appropriate pronominal form—*las*—or at least given them a better chance of getting the pronoun correct. Therefore, to minimize the students' likelihood for guessing correctly, the investigator created sentences that either eliminated the definite article altogether or replaced it with a possessive adjective, indefinite article, or demonstrative adjective. Hence, to use the previous example, the article *las* would be removed from the sentence altogether, as in *Miguel tiene manzanas en su mochila*. This offers another reason for carefully structuring the sentences with only the vocabulary covered up to the point of each test, namely that students would likely know the gender of the noun even without seeing the definite article.

Both the pretest and the delayed posttest consisted of exactly the same 30 questions. The three immediate posttests contained 12 questions each and included just one targeted form at a time (i.e. a separate immediate posttest for DOs, IOs and DO-IOs combined). To ensure consistency, the immediate posttests differed from the pretest/delayed posttest only in number of items and word choice, not format. For example, the production sentences *Yo mandé una invitación para la fiesta a mis primos* (from the pretest) and *Él no trajo el café a mis amigos* (from immediate posttest 2) are designed in identical fashion. This demonstrates that the format and structure of the sentences from pretest to immediate posttest (and delayed posttest) are the same, with the only change being the lexical items, or wording. Since the present investigation aimed to find out not only that the targeted grammar forms were identified by learners but that they were used appropriately, all testing materials for this study were comprised of both a multiple-choice recognition task as well as a written production task. These two types of tasks were divided evenly among all tests and defined below.

Recognition task:

A recognition task measures learners' ability to recall a certain form, usually from a series of response options, and does not require the learner to generate any spontaneous written or verbal language. As such, the present study utilizes a multiple-choice format for the recognition task, which elicits no more than an identification of the proper target form. While multiple choice tasks can demonstrate student knowledge, merely assessing the learners' ability to notice the target form appropriately might not signify that he or she has understood the structure in question, hence all quantitative testing materials used in this analysis also included a production task, as described below.

Production task:

Unlike the recognition task, a production task requires the learner to use language, be it verbally or written, to produce a response based on his or her cognitive capacities. It is important to include this type of task in addition to the recognition task given that the latter demands a smaller processing load and is therefore considered easier to complete (Bruhn de Garavito, 2003). Adapted from Rell (2005) about L1 use for L2 grammar acquisition, the tests in the present investigation contained a written production task in which the students were required to rewrite each sentence using the appropriate Spanish pronoun and then translate each rewritten sentence (including pronouns) to English. Another reason for customizing each test with level appropriate vocabulary was so that students would not be hindered from properly translating a sentence because they did not know the vocabulary. By minimizing some of these interferences, learners' could focus on demonstrating their ability to use the target form.

The translations were intended to more thoroughly reveal learners' control or lack of control over the lexical meaning of the structure in question, which is particularly useful given

the observation that students can often replace the noun with a pronoun but fail to correctly translate the lexical meaning of the pronominal form (Rell, 2005). The findings from the translation analysis will be presented with the qualitative results. Further, as noted in Rell (2005), the production tasks were designed so that subjects did not have to answer questions and therefore did not have to manipulate verb forms. Such a question/answer format would hamper the ability to isolate what is being tested, direct and indirect object pronouns. Now that the overall design of the tests has been explained, the next few sections will describe each test individually, beginning with the pretest below.

3.5.2 Pretest

The pretest was administered one week prior to any experimental instruction. The primary purpose of the pretest was to establish comparability between the subjects and classes and thus exclude any students who demonstrated an advanced knowledge of object pronouns (or who received a 70% or higher). The pretest covered all three grammar points to be analyzed during the study and was divided into three sections based on the target form and in order of when each was taught (see Appendix A). There were 15 total questions for the recognition task (five with each target form) and 15 total questions for the production portion (five with each target form). The subjects were allotted 20 minutes to complete the pretest and were advised to complete the test to the best of their ability, despite the possibility of not having encountered these topics before or not remembering them well.

3.5.3 Immediate posttests

After approximately 10 minutes of grammar instruction for each experimental lesson, subjects were allotted 10 minutes to complete the respective immediate posttests. The three immediate posttests were administered directly after the grammar explanation for each of the

three lessons: on DOs, IOs and both combined. They were purposefully administered before the students engaged in any subsequent in-class activities with the target structure (further explained in section 3.6.1). There are 12 questions total on each immediate posttest, six of which belong to the recognition task and the other six to the production task (see Appendix B, C, and D).

3.5.4 Delayed posttest

Like the pretest, the students were allotted no more than 20 minutes to complete the delayed posttest (Appendix A). To accommodate the schedule of the participating instructor, the delayed posttest was given two weeks after the third and final lesson about object pronouns. A delayed posttest was included in this investigation in order to determine if the retention of the grammar topics relates to the language of instruction. The following two sections will offer information about the qualitative assessment instruments, beginning with questionnaires.

3.5.5 Questionnaires

Numerous studies have found questionnaires to be a useful method for knowing about language choice in the classroom (Suby & Asención-Delaney, 2009; Thompson, 2009, 2006; Levine, 2003; Duff & Polio, 1990, among others). As previously mentioned, the results from Thompson (2006) support the validity of using student and teacher questionnaires for determining the quality of TL and L1 use in the classroom. Therefore in the present study, two types of questionnaires will be used: one for the students and one for their instructor (see Appendix E and F). The questionnaires are adapted from Suby & Asención-Delaney (2009), Thompson (2009) and Levine (2003) with some modifications to fit the goals and population of this study. The questionnaire contains both survey questions and open-ended questions.

The rationale for the teacher questionnaire was to gauge the instructor's opinions about TL and L1 use in the classroom, including the language used for teaching grammar, and to gather

some insight about students' reactions when teaching in each language (Spanish and English). The students also completed a questionnaire about their instructor's classroom language use approximately one week after taking the delayed posttest. In an effort to minimize the amount of borrowed class time, the questionnaire was not administered with the posttest. Rather, the date for the questionnaire was chosen according to the participating instructor's schedule. The student questionnaire contained questions regarding, for example, (a) how much Spanish their instructor uses (b) how much Spanish they understand and (c) the students' preferences in terms of language use by their instructor. Like the posttests, the student questionnaire was anonymous and solicited the same identifier from each student as the one they used for the posttests. The questionnaires provided valuable insight into the effects of the use of the L1 and TL by the instructor. In order to have further evidence of what took place in the classroom, classroom observations were also incorporated. These will be discussed in the next section.

3.5.6 Classroom observations

Incorporating classroom observations into the data gathering techniques served two main purposes. The primary objective of the observations was to ensure that the instructor properly adhered to the language restrictions for both the Spanish-only and English-only conditions. As the principal investigator, I was present at all three targeted lesson days for each class and determined that the instructor adequately maintained appropriate language use for these conditions. That is, all English was used with the L1-only group and all Spanish for the L2-only group. With the no language restriction group, observations determined that the instructor conducted class in Spanish, switching to English only to clarify instructions, express humor/solidarity with the students, and most notably, to explain grammar concepts. As such, the L1 was used with this group to help avoid confusion and make sure students understood the

taught grammar structures. The instructor would use English for explaining all the rules associated with using object pronouns correctly and to reinforce their meaning and function, likening the grammar lessons with this group to the lessons in the L1-only group.

The second aim of the observations was to examine students' overall observable responses (laughter, frowning, focus) to the grammar explanations and language use. For this, field notes were collected in which brief comments were made about teaching presentations and classroom atmosphere. The targeted lesson days were also audio-recorded to allow for repeated listening, in order to supplement notes and verify instructor language compliance. During each of the class meetings, the investigator sat in the back of the room and took notes while recording the instructors' and students' discourse with a handheld audio-recorder. To minimize potential consequences of the "observer's paradox"⁷ I told students at the time of the pretest that I would be "popping in at various times throughout the semester," so that my presence would not come as a surprise or a distraction. Further, the students were uninformed of the nature of the research and unaware that their behaviors were also being analyzed. Now that the tools used for data collection have been thoroughly described, the following section will discuss the classroom and data analysis procedures.

3.6 Procedures

3.6.1 Teaching procedure

All instruction and testing took place during regular class hours. In addition, each of the three groups received the targeted grammar instruction on the same day of the week, as delineated in the syllabus. For this study to be carried out successfully, the instructor had to

⁷ The observer's paradox states that the more aware respondents are that their speech is being observed, the less natural their performances will be (Labov, 1972 as cited in Richie & Bhatia, 2009).

comply with certain instructions. Firstly, the proper language needed to be used with the different sections of Spanish. That is, with one section, on the designated DO and IO lesson days, the entire class session was conducted exclusively in Spanish (L2), which included grammar instruction. With another section the instructor used English (L1) for the duration of class, as well as for the grammar lessons. With the third group, the instructor did not receive any specific language instructions and thus conducted class as normal, without manipulating their language choice. For the three experimental groups, the instructor had to remain in the designated language condition for the entire class session. This was designed as such so that the students would have enough time to create opinions and attitudes about the use of one language over the other. To obtain the most accurate results, the teacher could not change from the designated language condition—under any circumstance—during their instruction of IOs and DOs. For each instructional treatment the instructor prepared her own identical lessons, except for the language used, in order to isolate the variable in question. Further, each lesson had the same duration to ensure that no group received more or less explanation of IOs and DOs.

As mentioned before, another requirement was that the immediate posttests had to be administered directly after the instructor's grammar explanation. In order to isolate language of instruction as the potential reason for the results, these tests were strictly meant to assess the students' understanding of the target structures after explanation from their instructor. If the immediate posttest had occurred at the end of class, the students would have had time to work independently and/or with others to complete in-class supporting activities related to object pronouns. This would have had serious consequences for the validity of the results, not only because the Spanish-only group could have read an English grammar explanation from the book, but also because the posttest results would no longer reflect just the grammar explanation from

the teacher—and thus the language of instruction—but also the collaboration of others and reinforcement of the material through practice. Therefore, in order to prevent them from developing further understanding of the forms through consulting their peers and/or the textbook, both of which would have been in English, they completed all immediate posttests directly after the grammar explanation.

The most important element for this study was that the instructor remained in the appropriate language with each group of participants. It is, however, important to note the difficulty of changing the techniques that an instructor is accustomed to in their classroom, including language choice. Nonetheless, with the use of classroom observations on the targeted lesson days and audio recordings, maintaining and evidencing appropriate language use in the respective classes was controlled in the best way possible. The following paragraph details the way the targeted grammar lessons were organized.

Each class session started with a brief review of the material from the previous day. Immediately following the review, the instructor began the lesson on object pronouns using the projector and a Word document she created. The order in which the instructor presented the material was similar to the grammar explanation in the students' textbook. First, the instructor defined the specific type of object pronoun. That is, the function of the object pronoun in the sentence. The instructor provided example sentences in both Spanish and English with each language condition, but she still spoke in English-only for the L1-only group and Spanish-only for the L2-only group (regardless of the language that the example was written in), thereby complying with the requirement of explaining the grammar in the appropriate language condition. Then, the instructor would show all the possible pronominal forms for that type of object pronoun. Next, the instructor explained where the object pronoun is placed in the Spanish

sentence. Lastly, the instructor presented a few model sentences that she read aloud and then asked the students to verbally identify the object pronoun as a group. For the remainder of class, students completed follow-up activities from the textbook and/or that the instructor created. The scoring techniques for the assessment materials will be provided in the subsequent section.

3.6.2 Quantitative assessment procedures

3.6.2.1 Scoring procedure

A great deal of emphasis, discussed below in subsections 3.6.2.2 and 3.6.2.3, was placed on scoring procedures for each test to ensure consistency throughout all testing phases and allow for viable inter-class analysis. Furthermore, one rater (the researcher) scored all tests thereby decreasing the possibility of tests being graded inconsistently and thus increasing test reliability.

Both the pretest and all posttests (immediate and delayed) were graded according to a standard 100-point scale. For example, immediate posttest 1 and 2 were both worth 18 total points. Receiving 6 points, or a 6/18, on the test is equivalent to a 33%, thus that student would receive a score of 33 for that test. Since the assessment materials were not all worth the same total number of points (explained further in section 3.6.2.2), using a percentage system made it possible to obtain averages that were comparable across all assessment materials, making it the most appropriate grading technique.

3.6.2.2 Point distribution

As previously discussed, there were four different tests administered over the course of the data collection for the present investigation, differing only in number of questions and lexical items. However, uniformity among these distinct tests was of paramount importance. Therefore, all three immediate posttests consisted of the same number of total items. The immediate posttest for the combined object pronouns consisted of a slightly higher total point value than the other

immediate posttests due to the fact that the production questions elicited more than one pronoun, and therefore each had to be considered accurate to receive full credit. However, although the total point value might be higher, the point distribution for all three immediate posttests was weighted the same. The same method is true for the delayed posttest. The general point distribution for each test, detailed in section 3.6.2.3, is as follows:

Table 3.1: Immediate Posttest 1 (DO) and Immediate Posttest 2 (IO) Total Point Allowance

Number of Items	Points Per Item	Total Points
12	Question #1-6: 1pt each	6
	Question #6-12: 2pts each	12
		18 total points

Table 3.2: Immediate Posttest 3 (Combined Object Pronoun) Total Point Allowance

Number of Items	Points Per Item	Total Points
12	Question #1-6: 1pt each	6
	Question #6-12: 4pts each	24
		30 total points

Table 3.3: Pre/Delayed Posttest Total Point Allowance

Number of Items	Points Per Item	Total Points
30	Question #1-5: 1pt each	5
	Question #6-10: 2pts each	10
	Question #11-15: 1pt each	5
	Question #16-20: 2pts each	10
	Question #21-25: 1pt each	5
	Question #26-30: 4pts each	20
		55 total points

3.6.2.3 Direct and indirect object pronoun scoring

As shown in Tables 3.1-3.3 above, the multiple-choice questions for all assessments were worth one point each, as there was only one correct response. The production part of the assessments had a different point distribution. The six production sentences on immediate

posttest 1 and 2, which required only one pronoun, were worth a total of two points each (1 point for selecting the proper pronoun and 1 point for placing it correctly in the sentence; see table 3.4). Since the six production sentences for immediate posttest 3 required two pronouns, there were four possible total points for each sentence (2 points for correctly selecting both pronouns and 2 points for their correct placement; see table 3.5). The same distribution was true for the delayed posttest, with individual DO and IO production sentences worth 2 points each and combined pronoun sentences worth 4 points each (see table 3.6). The point distribution for the production sections of each test can be seen as follows:

Table 3.4: DO and IO Immediate Posttest Point Distribution for Production Sentences

Points available for each item	Source of Points	Total Items
1pt	Pronoun Selection	6
1pt	Pronoun Placement	6
		12 Total Points Possible

Table 3.5: Joint DO-IO Immediate Posttest Point Distribution for Production Sentences

Points available for each item	Source of Points	Total Items
2pts	Pronoun Selection	6
2pts	Pronoun Placement	6
		24 Total Points Possible

Table 3.6: Delayed Posttest Point Distribution for Production Sentences

Points available for each item	Source of Points	Total Items
1pt	DO Pronoun Selection	5
1pt	DO Pronoun Placement	5
1pt	IO Pronoun Selection	5
1pt	IO Pronoun Placement	5
2pts	Combined Pronoun Selection	5
2pts	Combined Pronoun Placement	5
		40 Total Points Possible

Pronoun selection for immediate posttests 1 and 2 entailed determining the appropriate direct or indirect object pronoun, respectively. Selection of the correct pronoun received full credit. On immediate posttest 3, pronoun selection entailed appropriately determining both the direct and indirect object pronoun. Table 3.7 illustrates the point possibilities for pronoun selection on the direct object test, indirect object test, and the test for both combined.

Table 3.7: Points Awarded for Pronoun Selection⁸

Form	Example	Points associated with example
Direct Object	(a) Miguel las tiene en su mochila.	1/1
	(a) Miguel los tiene en su mochila.	0/1
	(a) Miguel la tiene en su mochila.	0/1
	(a) Miguel lo tiene en su mochila.	0/1
Indirect Object	(b) Le mandaste los chocolates.	1/1
	(b) Mandaste le los chocolates.*	1/1
	(b) Se mandaste los chocolates.	0/1
	(b) Lo mandaste los chocolates.	0/1
Combined	(c) Ella se la escribió.	2/2
	(c) Ella le la escribió.	1/2
	(c) Ella se lo escribió.	1/2
	(c) Ella le lo escribió.	0/2

*Note: Even though *le* is erroneously placed in the sentence, the correct pronoun was selected, so the student would receive full credit for pronoun selection. However, they would have received 0/1 points for pronoun placement.

Since the researcher carefully selected level-appropriate vocabulary items that students had seen in their textbook, no partial credit was given if the students selected the appropriate type of pronoun but had morphological errors with agreement of gender or number. For example, if a student wrote *se lo dio* when it should have been *se la dio*, he/she would not receive credit for direct object pronoun selection, as they selected the wrong DO pronoun according to the gender of the noun. In addition, for immediate posttest 3, no partial credit was given if students selected

⁸ The examples written are associated with immediate posttests 1, 2 and 3, respectively, which offer the following sentences as a foundation:

- Miguel tiene manzanas en su mochila.
- Mandaste los chocolates a tu esposa.
- Ella escribió una carta a su amigo.

the appropriate indirect object but did not convert it to *se*, as their instructor explicitly presented this rule in the lesson. The researcher reasoned that these types of errors could indicate a lack of understanding from the lesson, which was valuable to the results, thus no partial credit was awarded. Lastly, like pronoun selection, pronoun placement had a value of one point per item for the DO and IO tests and a value of two points per item for the combined DO and IO test. A pronoun placed appropriately received full credit while a pronoun placed in an invalid position received no credit. Table 3.8 assesses the variety of point distribution options for pronoun placement.

Table 3.8: Points Awarded for Pronoun Placement

Form	Example	Points associated with example
Direct Object	(a) Miguel las tiene en su mochila.	1/1
	(a) Miguel tiene las en su mochila.	0/1
Indirect Object	(b) Le mandaste los chocolates.	1/1
	(b) Mandaste le los chocolates.	0/1
	(b) Mandaste los chocolates le .	0/1
Combined	(c) Ella se la escribió.	2/2
	(c) Ella le la escribió.*	2/2
	(c) Ella escribió se la .	0/2
	(c) Ella la se escribió.	0/2

*Note: While the pronoun *le* in this example is not correct, the student did place the pronoun correctly in the sentence, so they would receive full credit for pronoun placement. However, they would have received 1/2 points for pronoun selection.

The basis of the point distribution was not only to maintain consistency throughout all grading, but also to evaluate comprehension of the topics in question rather than limiting credit to solely the mechanical forms associated with that topic. After grading all the tests, the grade distribution for each section's averages per test type was analyzed in order to see the preliminary effects that instructor language use had on student performance (see Chapter 4). Then, in order to determine whether or not instructor language choice was statistically significant for grammar

performance, data from the immediate and delayed posttests were analyzed using the statistical program SPSS, which will be briefly explained in the following section.

3.6.2.4 Data analysis procedure

To determine which tests to run in SPSS with the gathered data, the first step was to consider whether the study is one of group differences or relationships. Since the present investigation is one that seeks to discover the effect of an independent variable (language use) on a dependent variable (grammar performance, i.e. scores on posttests) rather than discover a relationship between variables, it falls under the group differences category (Larson-Hall, 2010). SPSS has various possible tests for measuring group differences, however. Given that “a one-way analysis of variance (ANOVA) is used when you want to test whether the scores of three or more groups differ statistically,” and there are three groups participating in this research, it was the most appropriate test for the present study (Larson-Hall, 2010, p. 139). Consequently, four separate one-way ANOVAs were conducted—one for each of the three immediate posttests and one with the mean scores from the delayed posttest (see Chapter 4). The participants included in the analyses are described in the following subsection.

3.6.2.5 Subjects included

For the study in question, only those who were present for the pretest and also scored below a 70% on the pretest were included in the analysis. This number totaled 55. This criterion ensured that those participating in the study did not have advanced pre-existing knowledge of the grammar topic in question. With respect to the number of participants per test, the researcher determined that not all 55 qualifying students needed to be present for each of the three targeted lessons for their immediate test scores to be included in the data analysis. Rather, if a student was in class for any of the three object pronoun lessons the researcher concluded that his/her results

for that day were valid, because he/she still experienced the instructional language treatment. For example, a student could miss immediate posttest 1 and 2 but still be included in the analysis for immediate posttest 3 if they were present for the lesson on combined object pronouns. As a result, the total number of participants included in the statistical analysis varies for each test. One advantage to including these data was that it allowed for larger sample sizes per test. This was of great import given that larger sample sizes better represent the population in question and augment the precision of the statistical data. Table 3.9 summarizes the number of participants included for each analysis:

Table 3.9: Number of Participants Included in Each Analysis

Immediate Posttest 1	$n = 51$
Immediate Posttest 2	$n = 52$
Immediate Posttest 3	$n = 46$
Delayed Posttest	$n = 41$

It is worth noting that the delayed posttest contains the lowest total number of participants because only the data for those students present at all three lessons were included in the delayed posttest analysis. The researcher concluded that if a participant was absent on the date of instruction for the topic(s) in question, then it would not be possible to draw a relationship between their answers on the delayed posttest and language of instruction for that topic. Thus, those students were omitted from the delayed test data set. The following section will outline the qualitative data gathering techniques.

3.6.3 Qualitative assessment procedures

With respect to the questionnaires, the student responses were read by the researcher to obtain valuable information about student preferences towards instructor language use. The survey questions were analyzed numerically, since these types of questions required learners to choose a response along a certain numerical scale. The researcher took the average of the student's selections, and used that number to report the data. For example, if the possible response to a question were on a scale of 1 to 5, and one student answered with 2 and another with 3, their responses would produce an average of 2.5. The information gathered on the student questionnaire was used to supplement test scores as another way of offering further insight about the effects of TL and L1 use in the classroom. These responses were also compared to the language preferences expressed on the instructor questionnaire. Further, the written data collected by the researcher from the classroom observations was used to comment on any relevant student behaviors witnessed during instruction that pertained to their preferences or opinions about TL and L1 use.

The translation data came from the production sentences on the posttests. The researcher analyzed the translation data by determining a percentage. That is, the number of correctly translated sentences was added up and divided by the total number of production sentences to produce a percent correct. For a response to be considered correctly translated, the student only had to demonstrate accurate use of the pronoun. Translation errors that dealt with vocabulary, but not the student's ability to use the pronoun, were not considered translation errors. For instance, the following translation indicates a vocabulary related error rather than a pronominal one:

Subject's response: *Yo les mandé una invitación para la fiesta.*

Subject's translation: I gave them an invitation for the party.

Expected translation: I *sent* them an invitation for the party.

As the above example demonstrates, the student did not successfully translate the verb *mandar*, but still displayed accurate translation of the pronoun, thus full credit was awarded for this translation.

3.7 Conclusion

This chapter detailed the research design of an empirical study on instructor language choice during form-focused grammar instruction. The posttests allowed a way to measure student grammar performance, and by looking more carefully at the results from these tests, together with the responses from the student questionnaire, it was possible to see the implications that instructor language use had in the classroom. Likewise, the class observations allowed for more exactitude regarding instructor language use. Lastly, the analysis with SPSS allowed us to find out which language condition might result statistically significant with respect to grammar performance of object pronouns. As discussed throughout the chapter, every effort has been made to isolate the experimental variable in question, that of language choice, to ensure the validity of the results. The following chapter offers the quantitative and qualitative results, respectively.

CHAPTER 4 RESULTS AND DISCUSSION

Discussion of first language use in the second language classroom tends to evoke strong responses from instructors and students alike. Given the dearth of empirical studies on this topic, these responses are often based on opinion rather than quantitative data. Certainly, opinion is not to be neglected, especially in the teaching profession where teachers will often act consistently with their beliefs in spite of possible research and training to the contrary (Thompson, 2006). However, when judgments are supported by corroborative data we can truly quantify, even justify, such opinions (Rell, 2005). Therefore, the quantitative results presented in this chapter attempt to substantiate “what so many involved in language pedagogy feel strongly about but have yet to see corroborated with quantitative data” (Rell, 2005, p. 107). Following the quantitative results, the second half of the chapter will describe the qualitative findings.

4.1 Quantitative results

This section is divided into two distinct analyses. First, a descriptive analysis highlighting the trends in posttest scores is presented. This is followed up with the statistical data analyses. In analyzing the statistical results, it is important to note that we used the standard alpha level of .05 for all statistical tests. Further, we use the term “marginally” significant, often used to refer to *p*-values between .05 and .10, to comment on any values close to the standard *a*-level (Hayes, 2005). In other words, a value of .053 would not be considered statistically significant (as it exceeds .05) but we would consider this result marginally significant. The distribution of means across the three groups for each test will be presented in the subsequent section.

4.2 Descriptive results

Before carrying out the statistical analyses, the class averages for each test were compared across the three language groups to establish general trends in performance. First, the

averages for all tests together are presented in one graph to assess overall results (see Figure 4.1). Then, the descriptive results for each posttest (Immediate 1, 2, 3 and Delayed) will be displayed separately. Figure 4.1 shows the mean scores of all tests together:

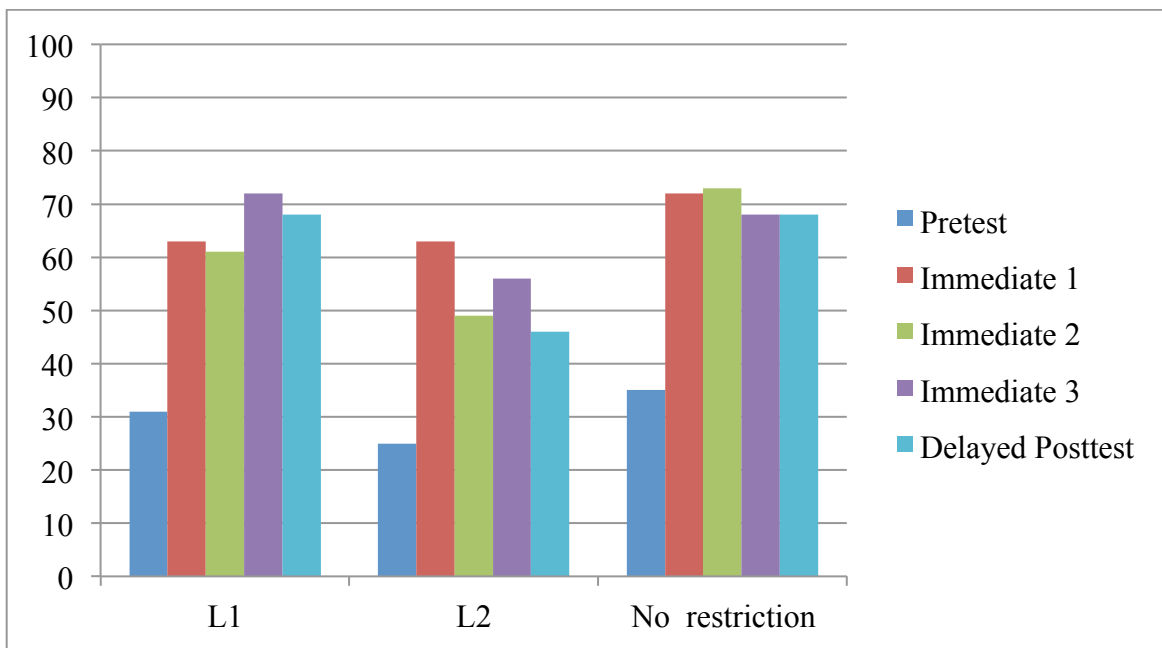


Figure 4.1: Distribution of Average Scores for All Tests by Language Group

The above graph shows, overall, that the no language restriction group (henceforth, NLR) and the L1 group, which both received grammar instruction in English, consistently performed better than the L2-only group. To understand more about how students' performance differed from test to test between the groups, the following graphs (Figures 4.2 - 4.5) show the mean scores (M) associated with each individual test included in data analysis: immediate posttest 1 (DOs), immediate posttest 2 (IOs), immediate posttest 3 (DO-IOs combined), and the delayed posttest (all three pronominal forms), respectively.

Figure 4.2 below shows that the mean scores for the L1-only group and the L2-only group were the same ($M = 63$) for immediate posttest 1. This initially suggests that language of instruction does not greatly impact DO performance. In other words, it would seem that the

lesson on DOs could be taught in either language, and the students' performance would not be hindered. However, an advantage for English instruction might still be evident when we consider

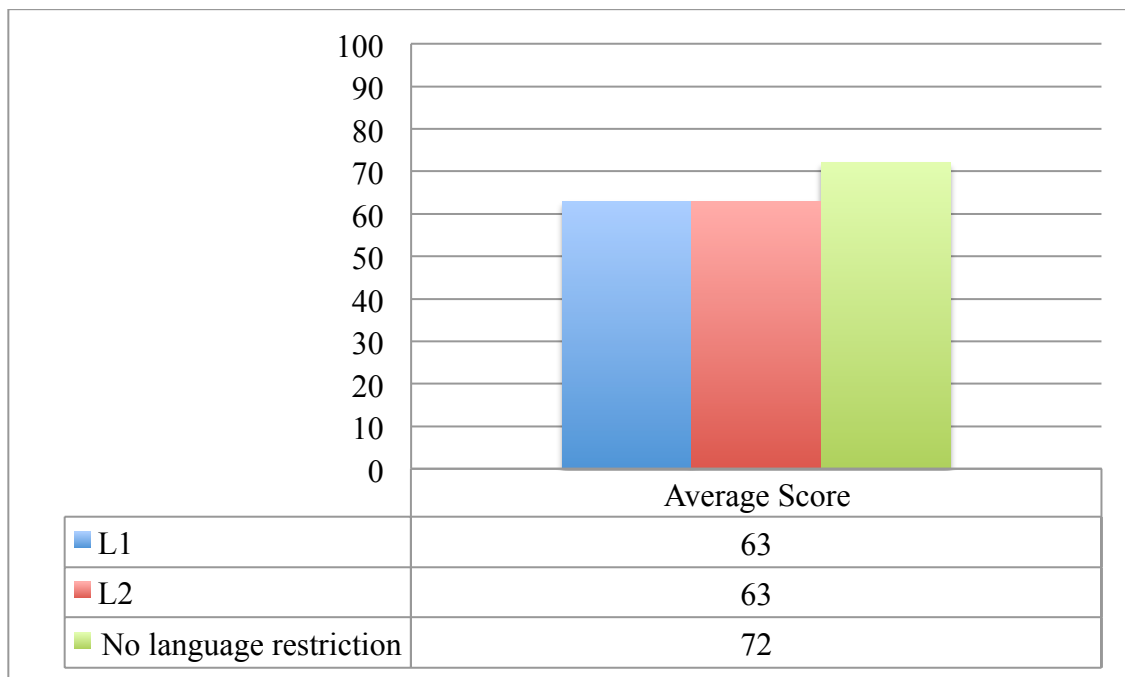


Figure 4.2: Immediate Posttest 1 Averages

the NLR group. This group was associated with the numerically highest mean ($M = 72$). Therefore, because of this group's better performance with DOs, it is reasonable to argue that English instruction might have a slight advantage when learning direct object pronouns.

To explain why the L2 group might have performed well on this first posttest, the researcher considered pronoun type. That is, due to the fact that the Spanish-only group was the lowest performing group on every other assessment (see Figure 4.1), the researcher concluded that the high performance on immediate posttest 1 was likely due to the topic in question (DOs) rather than the language of instruction. Since these students had taken Spanish before, and DOs are typically the first type of object pronouns students will encounter in their Spanish classes (see section 1.3), it is possible that many of the students had prior knowledge of DOs and that this

knowledge contributed to their high scores. In other words, the L2 instruction they received might have had little effect on their ability to still correctly answer questions on the DO posttest.

For the next test, immediate posttest 2 (regarding indirect object pronouns), the NLR and L1 groups received very similar scores to those from immediate posttest 1. Again, the NLR group was associated with the numerically highest mean ($M = 73$). However, the mean score for the L2 group dropped considerably between the two tests, from $M = 63$ on immediate 1 to $M = 49$ on immediate 2. Indeed, for immediate posttest 2 the Spanish-only group was associated with the numerically smallest mean of posttest scores. The immediate gains from posttest 2 are illustrated as follows:

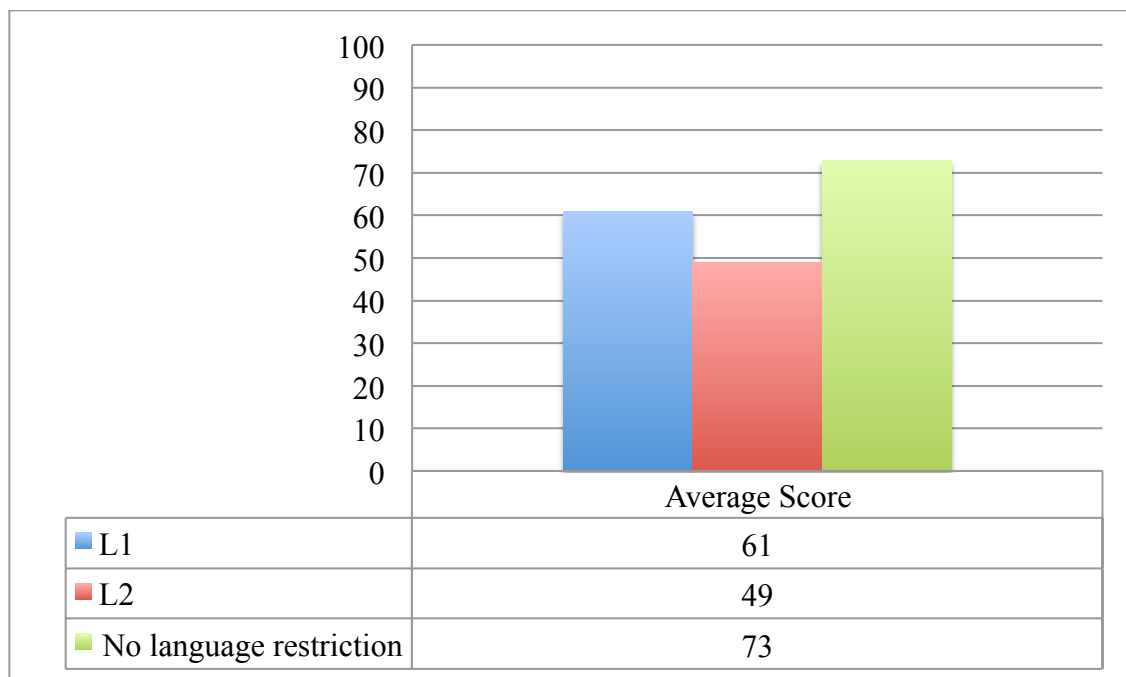


Figure 4.3: Immediate Posttest 2 Averages

This decline in performance for the L2 group could be explained in a few ways. First, it could suggest that these students did not have as much prior knowledge of IOs as they did with DOs and thus relied more on the L2 instruction they received when testing. Second, it might lend credence to the notion that IOs are considered a more complex structure than DOs, and thus are

not as easily understood by English (L1) learners of Spanish, particularly when taught in the TL. The fact that those who received instruction in their L1 outperformed the L2 group suggests that it might be more beneficial to teach indirect object pronouns with use of the L1. This would also support the aforementioned logic that the L2 group’s high(er) mean on immediate posttest 1 was largely due to DOs being a less complex topic than indirect object pronouns.

Unlike immediate posttests 1 and 2, the results for immediate posttest 3 indicate that the English-only group was associated with the numerically highest mean ($M = 72$). However, since the NLR group was also taught grammar in English and represents the group with the second highest mean score, the results for immediate posttest 3 still indicate, at least numerically, an advantage for L1 instruction on grammatical performance. These results also show that the Spanish-only group was — again — associated with the numerically smallest mean of posttest scores ($M = 56$). Figure 4.4 captures this observation.

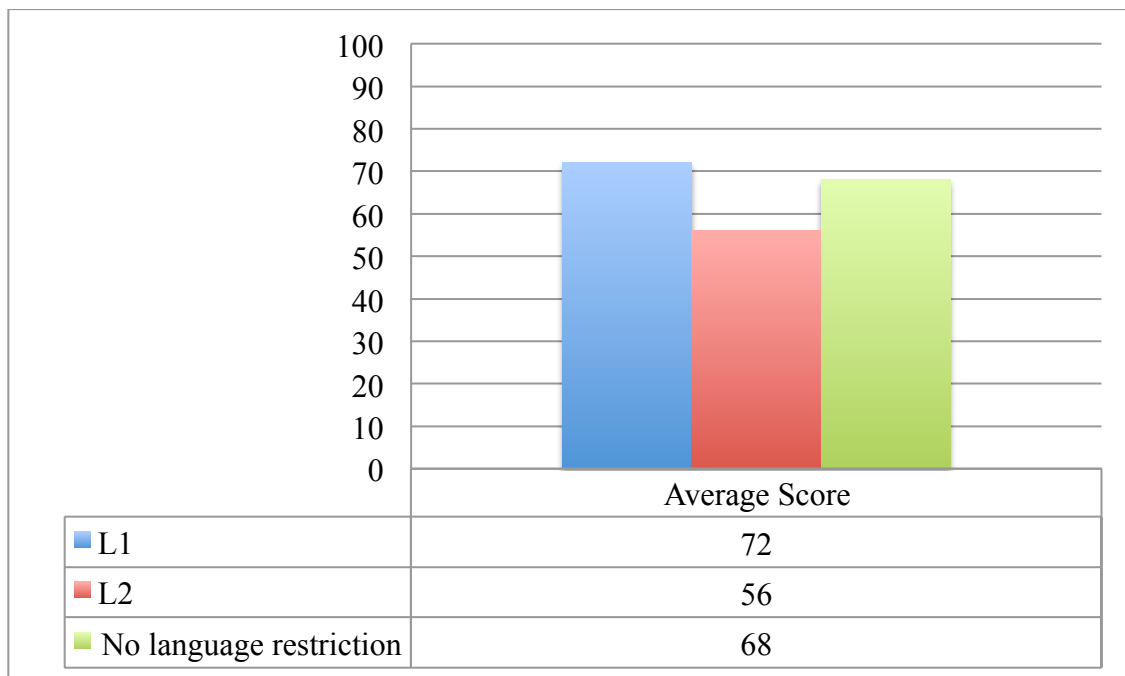


Figure 4.4: Immediate Posttest 3 Averages

At the delayed posttest there were similar trends across the three groups' mean scores. The L2-only group was associated with the numerically smallest mean of posttest scores ($M = 46$) and both the L1-only group and the NLR group were associated with the numerically highest mean ($M = 68$). This mean difference of 22% reflects a somewhat large gap between subjects who received grammar instruction in English compared to Spanish. This result offers one indication that lessons taught in the L2 were not as sustainable as those taught in the L1. Overall, these findings suggest that L1 use is beneficial not just for immediate gains in grammar performance but also retention rates of the grammar in question. The retention rates separated by instructional condition can be seen as follows:

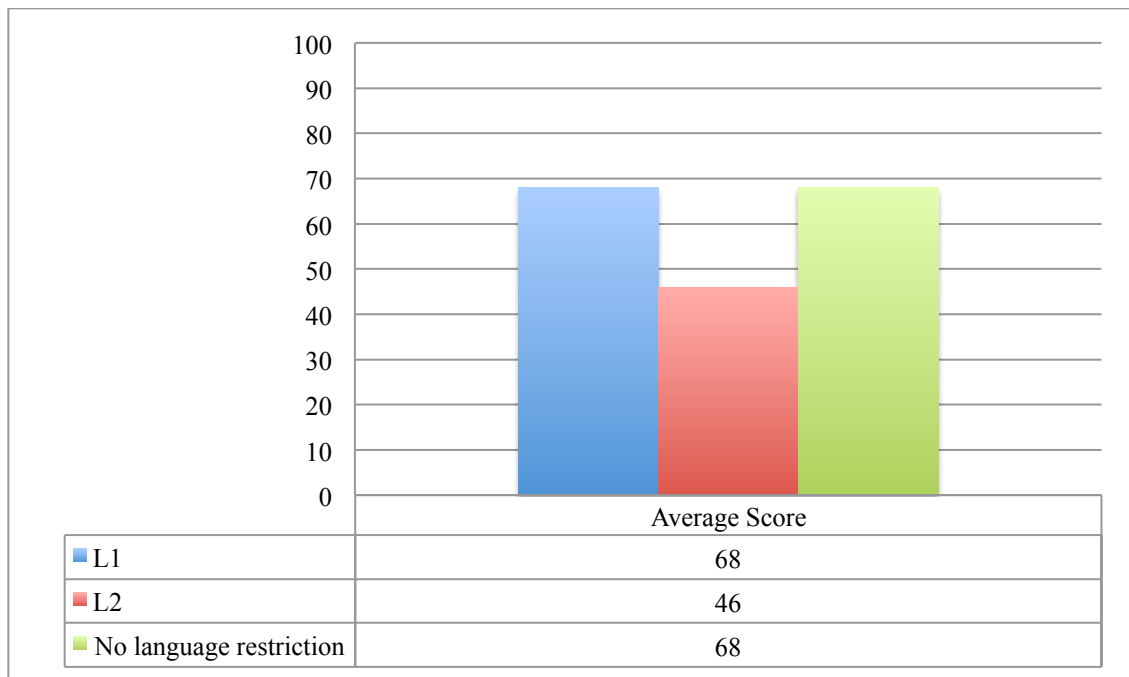


Figure 4.5: Delayed Posttest Averages

As is clear from the previous figures, the group that received instruction in Spanish-only routinely performed numerically lower than the L1-only and NLR groups, which received grammar instruction in English. Evidently, this observation held true both for immediate gains and retention rates. The general findings from this preliminary descriptive analysis would offer

support for various researchers' arguments in favor of L1 use in the classroom to ensure comprehension and improve learning (Rolin-Ianziti & Brownlie, 2002; Chambers, 1992; Swain & Lapkin, 2000; Butzkamm, 1998).

As previously stated, Krashen's (1982) affective filter hypothesis posits that languages are best learned when learners' affective filter is low. He also contends that a high affective filter inhibits learning and should be avoided at all costs. Field notes taken during classroom observations revealed that there was apparent frustration for the Spanish-only group. Such frustration was evident through comments such as "Why doesn't [the instructor] just say it in English?" "Forget it." and "I'm so done; I hate this class." There were also non-verbal cues that suggested frustration. For example, in the Spanish-only group many students were rolling their eyes, putting their heads down, and turning to other students for comprehension checks because they did not understand. To be sure, when asking a friend how to do an activity, one student included the comment "I'm lost." The instructor also mentioned the "baffled" look she observed on the faces of her L2-only students during instruction. In comparison to the L2 group, there was more laughter than frowns during class time for the other two groups, which received the grammar explanation in English. Also, there were more affirming nods throughout instruction with the L1 and NLR groups, indicating that they appeared to be following the lesson. The observed low affective filter during grammar presentations in the NLR and L1-only groups could explain those students' numerically better performance at testing time.

Another trend worth noting is that the pretest scores, which established baseline levels for the groups, confirm that the Spanish-only group was the lowest-performing group to begin with. At first glance, this could arguably be considered a reason for their continued low scores. However, at pretest the differences between the groups were minimal, especially between the

L1-only and L2-only groups (31% and 25%, respectively), establishing that all three groups were comparable at the commencement of the study. Further, for later tests this difference grows considerably. For example, the delayed posttest averages between the L1-only and L2-only groups were 68% and 46%, respectively. Thus the researcher determined that this somewhat large gap between the two averages, which did not appear at the pretest, suggests that language of instruction could be the reason for such noticeable differences rather than simply different baselines.

As can be seen from the preceding figures, comparing average scores can certainly offer quite a bit of insight as to the effects of the first language on grammar performance in an L2. However, to determine if any of these differences between groups was statistically significant, the data were subjected to testing using SPSS. In order to find out whether language of instruction had a significant impact on students' grammar performance, a One-way between groups ANOVA was performed for each of the three immediate posttests and the delayed posttest. The results from these statistical analyses will be presented in the following sections, first for each of the three immediate tests, then the delayed posttest.

4.3 Statistical analysis

4.3.1 Preliminary analysis

As noted, the pretest omitted subjects receiving 70% or higher from the study, thereby ensuring that all subjects began with similar baselines and those who had previous knowledge of the topic(s) did not skew the results. In addition, to further ensure comparability between the subjects, a One-way ANOVA was conducted to assess possible pretest grammar differences of the qualifying participants. Comparison of means of the pretest grammar scores revealed that there were no statistically significant differences between the three accelerated beginner Spanish

sections $F(2, 52) = 1.28, p = .286$. After confirming comparability between subjects, each individual test was subjected to the ANOVA analysis, the results of which will be reported in the following section.

4.3.2 Data analyses with immediate tests

A One-way ANOVA test of group means was conducted to evaluate the immediate impact of instruction with no language restriction, Spanish-only instruction, and English-only instruction on students' grammatical performance. Results from the three immediate posttests (for DOs, IOs, and both combined) indicated that there were no statistically significant differences between the conditions when tested immediately after instruction, for any of the three object pronoun lessons. Nonetheless, important findings were revealed and the results yielded from the statistical analyses will be presented in the subsequent sections.

4.3.2.1 Immediate posttest 1

Prior to conducting a One-way ANOVA with the means for immediate posttest 1 (regarding DOs), the assumption of homogeneity of variances was tested but was not satisfied based on Levene's F test, $F(2,48) = 3.18, p = .050$. This statistical result for the homogeneity of variance assumption indicated that the groups included in this analysis could just be inherently different, and the differences found might not be attributable to the language of instruction, thus complicating the validity of the ANOVA results. Since the equal variances assumption was violated, the Welch and Brown-Forsythe adjusted F statistics were used instead. The results from these tests are reported in Table 4.1 below.

Observing the results in Table 4.1, using the Welch statistic, we find that the adjusted F ratio did not yield a statistically significant effect, $F(2, 28.52) = 1.08, p = .351$. This finding

Table 4.1: Robust Tests of Equality of Means for Immediate Posttest 1

	Statistic ^a	df1	df2	Sig.
Welch	1.087	2	28.518	.351
Brown-Forsythe	.802	2	35.685	.457

a. Asymptotically F distributed.

confirms no statistically significant differences between group means at the $p < .05$ level for immediate posttest 1, which would seem to indicate that language of instruction does not have a significant impact on the learning of direct object pronouns when tested immediately after instruction.

4.3.2.2 Immediate posttest 2

The analysis for immediate 2 (measuring IOs) was carried out in the same way. Prior to conducting the ANOVA, the assumption of homogeneity of variances was tested but, as with immediate posttest 1, was not satisfied based on Levene's F test, $F(2,49) = 3.81, p = .029$. Likewise, the more robust Welch and Brown-Forsythe adjusted F statistic tests were used. The results from these tests are reported in Table 4.2.

Table 4.2: Robust Tests of Equality of Means for Immediate Posttest 2

	Statistic ^a	df1	df2	Sig.
Welch	2.566	2	29.510	.094
Brown-Forsythe	2.979	2	35.603	.064

a. Asymptotically F distributed.

Observing the above results, the adjusted F ratio for the Brown-Forsythe statistic yielded a marginally significant effect, $F(2, 35.6) = 2.98, p = .064$. Bearing in mind the small sample size, these results tend toward significant differences between the group means for immediate posttest

2, favoring English (L1) grammar instruction. Although we cannot conclude that there is a statistically significant difference with the current sample, this marginally significant finding suggests that for indirect object pronouns language of instruction might have a greater effect.

4.3.2.3 Immediate posttest 3

Prior to conducting the ANOVA for immediate posttest 3 (on combined object pronouns), the assumption of homogeneity of variances was tested and was satisfied based on Levene's F test, $F(2,43) = 1.29, p = .285$. The results from the One-way ANOVA are reported below in Table 4.3.

Table 4.3: One-way ANOVA Results for Immediate Posttest 3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2055.584	2	1027.792	1.292	.285
Within Groups	34197.286	43	795.286		
Total	36252.870	45			

Observing the above results, the independent between groups ANOVA did not yield a statistically significant effect, $F(2, 43) = 1.29, p = .285$. This finding shows no statistically significant difference between the group means at the $p < .05$ level for immediate posttest 3, which would seem to indicate that language of instruction does not have a significant impact on the learning of combined object pronouns when tested immediately after instruction.

4.3.3 Discussion of immediate results

Considering the results from all three immediate posttests (the one for DOs, IOs, and both combined), the previous statistical analyses demonstrated that language of instruction did not have a statistically significant effect on object pronoun performance when tested immediately after instruction. This is consistent with the findings in Viakinnou-Brinson (2006) where there

were no statistically significant differences between a French-only condition and French/English condition for mean immediate test grammar scores. However Rell (2005), which analyzed two different grammar constructions, concluded that language of instruction for direct/indirect objects was statistically significant at immediate testing, favoring the L1 condition. From the statistical analyses alone, it would seem at first glance that for the present study a TL or L1 approach to teaching object pronouns would be moot. That is, there were not statistically significant differences favoring one approach over another at immediate testing, suggesting that neither approach significantly facilitates or hinders the short-term learning of object pronouns in Spanish. This notion would support literature in favor of a near exclusive TL approach (Chambers, 1991; Atkinson, 1987; Krashen, 1982). However, for a topic as debated as language use in the classroom, the researcher opted to consider other indications of the efficacy of language use. Thus, the telling results from the raw scores on the immediate posttests (displayed in section 4.2) were taken under consideration. Some of the observations made from these scores are further explained below.

Although the immediate gains did not yield any statistically significant results for the present paper, it is important to note that, according to their raw scores, students in both this study and Rell (2005) who were taught targeted grammar structures in L1 generally outperformed their L2-only counterparts. These results appeared to support other studies that advocated the use of the LI as a cognitive and facilitating tool in performing a task in the second language (Cook, 2001; Antón & DiCamilla, 1999; Castellotti, 1997). Further, this is consistent with the findings in Tian and Macaro (2012) regarding vocabulary acquisition, where those that received the L1 equivalents benefited more at immediate testing. Joyce (2015) also found advantages for L1 translation over L2 definitions for the recognition of L2 vocabulary. However,

in terms of knowing the meaning of the target language itself and fostering general language development, Joyce (2015) determines an advantage for L2 definitions. While those that received a translation already understood the meaning of the vocabulary words, he reasons, for those students that received the L2 definitions, “it was not just about learning target vocabulary; it was also about learning the meaning of the L2 definitions” (p. 10). This finding has undeniable implications for the present study in that, just because the L1 might be useful for recognizing targeted grammar forms, it might not necessarily follow that it also fosters greater understanding of the TL forms or improved language development. However, the production results from the present research do seem to support this notion, implying that perhaps for FonF grammar episodes, as opposed to vocabulary, the L1 has more far-reaching benefits. From these studies, it seems that L1 use aids students’ learning of the topic in question during explicit form focused instruction, which leads them to perform better at immediate testing. Therefore, while the statistical analysis did not find the difference in means for the immediate posttests to be significant, the raw scores lend credence to L1 use achieving higher overall percentages.

These immediate test scores also have implications for the question of which language (L1 or TL) is the most effective within an explicit FonF approach. As outlined in Chapter 2 (section 2.1.3.3), explicit FonF involves metalinguistic explanations, which each of the groups in the present study received. However, the L2-only group received the explanations in Spanish. Since either the NLR group or the L1-only group performed better than the L2-only group on every assessment, (although not statistically significant) the means from the present study offer support for the argument that with Spanish object pronouns, explicit FonF in the students’ L1 promotes greater student learning than explicit FonF in the TL. Because implicit instruction techniques were not used in the present study, it is not possible to deduce the effectiveness of

explicit vs. implicit FonF. However, although not clearly delineated in FonF literature, the researcher would argue that receiving metalinguistic explanation in the L1 would be considered more explicit than receiving the same explanation in the TL because L1 use is more overt. According to this interpretation, the results from the present study seem to further denote a benefit for more explicit FonF, as indicated in other studies (Spada & Tomita, 2010; Norris & Ortega, 2000).

In terms of the efficacy of input enhancement measures, as stated previously (section 1.1 and 2.1.1.4) the L1 was used in this study as a type of input enhancement to draw learners' attention to the target forms (object pronouns), and in this way, make the input more salient. Although it is not possible to compare the effectiveness of L1 use with other input enhancement techniques, the immediate results from the present study offer support for the notion that input enhancement, by way of the L1, promotes noticing and facilitates language acquisition during form-focused instruction. To be sure, the groups that received such enhancement—the L1-only and NLR group—outperformed the L2-only group, which did not receive the L1 input enhancement during FonF. This quantitative data justifies opinions by Ferrer (2005a, 2005b) and Swain and Lapkin (2000) that the L1 might be used as an important cognitive tool for noticing. Just as processing instruction (a teaching approach derived from input enhancement, see section 2.1.3.5) has been found to be more helpful for assisting learners in connecting form to meaning, the results from the present study suggest that so, too, might L1 use have a similar positive effect.

Despite showing some benefit for L1 use, the present study could also find limited support for a TL approach to teach grammar, particularly for direct object pronouns. That is, students' near equal grammar performance in the L1-only and L2-only condition for immediate

posttest 1 appears to call into question theorists' views that the LI is an indispensable tool in the classroom. As mentioned before, however, this was more likely due to the relative ease of the topic in question (direct object pronouns) and thus should not be generalized. The unpredictability of the effect of TL and L1 use on grammatical performance according to the topic in question has been corroborated in other studies. For example, in her study comparing the *hace . . . que* construction with direct/indirect object pronouns, Rell (2005) discovered that those with instruction in the L2 surpassed their L1 classmates for the *hace . . . que* expressions but not for object pronouns. She reasons that this difference in performance could be due to the formulaic nature of *hace . . . que* expressions and that the topic of object pronouns tends to be difficult for students (Rell, 2005). Regardless of the topic, however, the overall results from the immediate posttests in this study support Cook's (2001) argument that students are less efficient at absorbing information from the TL than from the LI (p. 414). The findings from the delayed posttest analysis illustrating the retention of targeted grammar structures will be presented in the next section.

4.3.4 Delayed posttest data analysis

A One-way ANOVA assessed the effect of instructional condition on grammar retention. Like the immediate posttests, there was not a statistically significant difference in group means for the delayed posttest. However, the results still offer a notable contribution to determining effects of L1 use in the classroom. Just as in the other analyses, prior to conducting the ANOVA with the delayed posttest scores the assumption of homogeneity of variances was tested. Similar to immediate posttest 3, the homogeneity of variances was satisfied based on Levene's *F* test, $F(2,38) = .530, p = .593$. Detailed ANOVA results are presented in Table 4.4.

Table 4.4: One-way ANOVA Results for Delayed Posttest

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4311.236	2	2155.618	3.190	.052
Within Groups	25678.667	38	675.754		
Total	29989.902	40			

Observing the above results, the independent between groups ANOVA yielded a marginally significant effect, $F(2, 38) = 3.19, p = .052$. While the results presented in the above table do not demonstrate statistical significance at the conventional $p < .05$ level, it should be highlighted that a significance level where $p = .052$ is still worth considerable attention. Even though post-hoc tests are not necessary for marginally significant results, since these results were so close to statistical significance, they were nonetheless included in order to further evaluate the nature of the differences between the three means. Results from Fisher's LSD test—the most liberal of the post-hoc tests—indicated that grammar performance at the delayed posttest, and thus retention of object pronouns, was better for the English-only group ($M = 67.92, SD = 22.65$) over the Spanish-only group ($M = 46.00, SD = 28.05$). Therefore, these results might indicate that language of instruction has a marginally significant effect on retention of object pronouns, again favoring an English (L1) grammar explanation.

4.3.5 Discussion of delayed results

Similar to the results found after immediate testing, the ANOVA analysis for the delayed posttest revealed that there were no statistically significant differences in the grammar performance of the three language groups. However the marginally significant result, favoring an

English explanation, suggests that grammar instruction in English is not only more effective (according to comprehension and production activities) but also more sustainable over a longer period. This finding is supported in Rell (2005) where, although also not statistically significant, the retention rates for the L1 group were greater than those of the L2 subjects, suggesting a beneficial role for the L1 in the long-term acquisition of direct/indirect object pronouns. At the delayed posttest in Rell (2005) the observed difference between the L1 and L2 language groups (7.9%) was smaller than in the present study (22%), demonstrating that language of instruction had a slightly larger effect on retention rates for the present sample.

When considering the descriptive results, the raw scores for the delayed posttest also indicate an advantage for an L1 approach to teaching Spanish object pronouns. These findings suggest that explicit FonF in the L1 over the TL not only has a positive effect on student learning in the short-term, but also for the retention of targeted structures. Similarly, the finding that input manipulation is advantageous for immediate gains also appears to be withheld for the retention of Spanish object pronouns. However, although the delayed posttest results in the present study favor L1 instruction, this is not always evident in the literature. Some of these disparate findings are provided below.

Unlike the present paper, the notion that English instruction could be beneficial for the retention of grammar forms was not withheld in other studies (Tian & Macaro, 2012; Viakinnou-Brinson, et al., 2012; Viakinnou-Brinson, 2006). In contrast to the results found in the present paper, Viakinnou-Brinson (2006) found a significant result at delayed posttest favoring French-only instruction, revealing that there was a larger increase in students' grammar performance with the French-only condition. Indeed, findings in Viakinnou-Brinson (2006) indicate that TL instruction was more advantageous for the retention of grammar structures than the

French/English condition. She reasoned that this result could be because French-only instruction might have pushed students to apply certain cognitive strategies, such as thinking in French, working harder, and forcing themselves to figure things out (Viakinnou-Brinson, 2006). Evidently the results in the present study, which support L1 use for the retention of grammar forms, call into question the notion asserted in Viakinnou-Brinson (2006) that in a TL-only condition the grammar “sticks better” and is “more ingrained” (p. 85). For vocabulary acquisition, there also appears to be support for a TL approach for the retention of taught lexical items. For example, the results in Tian and Macaro (2012) showed that the benefit of receiving Chinese (L1) equivalents for English vocabulary words that was evident at immediate testing was not sustained in the long term. When compared to the present paper, these studies confirm that there is competing evidence for the effectiveness of language of instruction on the retention of target structures.

By looking at the effects of language of instruction on both immediate and delayed test scores, while not statistically significant, the descriptive results in the present study show that there is limited support for a L1 approach. In fact, the continual low scores by the L2-only group suggest that L1 use might have served as a tool for allowing students to convert the input to intake, as advanced by Turnbull (2001) and Van Lier (1995). Perhaps, as proposed by Sharwood-Smith (1985), the L2-only students were not able to process the input they heard and assimilate it to their linguistic system, whereas the groups that received instruction in the L1 were able to understand the input, store the linguistic knowledge, and draw on that knowledge to more successfully complete the posttests. Because adult learners will likely use their L1 to learn a L2, regardless of whether or not the instructor allows it (Cook, 2001; Harbord, 1992) the present research might help to ease the concern that many pedagogues express towards L1 inclusion in

the classroom (see Duff & Polio, 1994; MacDonald, 1993; Chambers, 1991, 1992). That is, such L1 connections do not appear to hinder student learning for Spanish object pronouns.

4.4 Quantitative results conclusion

Bearing in mind individual differences among the participants (see Chapter 2, section 2.6), which certainly contribute to successful language learning, the general conclusion that can be drawn from the quantitative data is that foreign language grammar instruction in the L1 benefits learning outcomes more than grammar instruction in the L2. However, if considering the statistical analysis alone, (without the descriptive results), the lack of significant differences between the groups would suggest that language of instruction does not greatly affect object pronoun performance. Despite none of the results being statistically significant, the discussion from the previous several pages asserts that the findings in this study are certainly practically significant. Indeed allowing students to focus on form in the L1, rather than attempting to comprehend meaning in the L2, resulted in higher immediate gains and retention rates for Spanish object pronouns. The descriptive results in this study seem to indicate that using the L1 to manipulate TL input does in fact facilitate student learning. We now turn to the findings from the qualitative data.

4.5 Qualitative results

The quantitative results, while essential, form only part of the overall study. By incorporating the participants' voices, qualitative data can elucidate more information than a strictly quantitative approach and thus be used to further explain quantitative results. A complete analysis of the quantitative test results in combination with the qualitative data permits a more thorough and comprehensive conclusion about the role of the LI and the L2 during foreign language grammar instruction. As such, the purpose of the qualitative portion of the study was to

further examine in depth students' overall instructional language preferences regarding an L2 or L1 approach to teach grammar. This chapter highlights the qualitative data including subjects' translations from the immediate posttests and delayed posttest as well as their questionnaire responses in which they indicated which instructional treatment they preferred and elaborated as to why. Field notes from the classroom observations supplement this data when appropriate.

4.6 Translation observations

In order to further understand comprehension of the object pronoun structure, the production part of both the immediate tests and the delayed posttest included a place for students to translate their rewritten sentences into English (see Chapter 3). Figure 4.6 illustrates the percentage of correctly translated sentences for each test by language group. As explained in section 3.6.3, for a response to be considered correctly translated, the student only had to demonstrate accurate use of the pronoun. He/she was not penalized for errors unrelated to pronoun use. The translation results for each test by language group are the following:

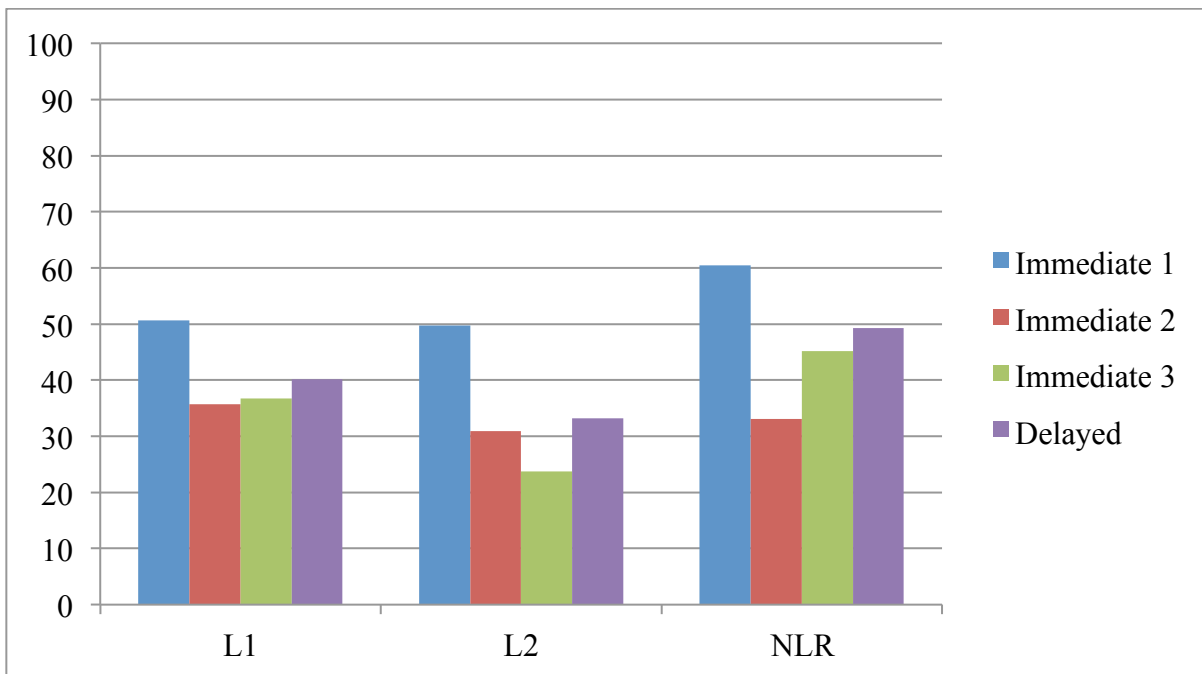


Figure 4.6: Percentage of Correct Translations by Language Group per Test

As the above chart illustrates, on average all students were more accurate in their translations for direct object pronouns, evident in immediate posttest 1. This confirms that for the population in this study DOs were a less challenging topic, both for replacing the pronoun and understanding its meaning. Immediate posttest 2 appeared to give students the most translation trouble with a mere 35% as the highest correct translation score, which, as expected, the L1-only group received. While the translation percentages in general do not show substantial differences between the instructional treatments, there continued to be fewer translation errors overall when grammar instruction took place in the L1, as evidenced by the repeated low percentages in the L2-only group. This suggests that the meaning of the pronominal forms was more transparent when explained in the L1, consistent with findings elsewhere (Rell, 2005). However, given the relatively low percentages of correct translation (the majority of scores are below 50%) compared to scores on the tests, it seems that a large number of subjects, regardless of language of instruction, were unable to successfully translate the sentences into English, an observation also expressed in Rell (2005). These findings would seem to indicate that when teaching object pronouns, language teachers should emphasize the *meaning* of object pronouns along with the structure. Further, according to these results, such instruction would be more beneficial in the students' L1.

4.7 Student attitudes and language preferences

The next component of qualitative data included in this study comes from student responses on the questionnaire. Part I of the questionnaire elicited demographic information from the students while Part II of the questionnaire—separated into survey questions and open-ended free response questions—represented the data for student attitudes and preferences. The

following two subsections highlight the prominent findings from part II of the questionnaire, beginning with survey questions.

4.7.1 Survey questions

The questions from Part II pertained to actual language use in the classroom. The survey questions required learners to choose a response from the existing possible answer choices and explain their choice. Figure 4.7 below shows students' responses to a question about attitudes towards Spanish.

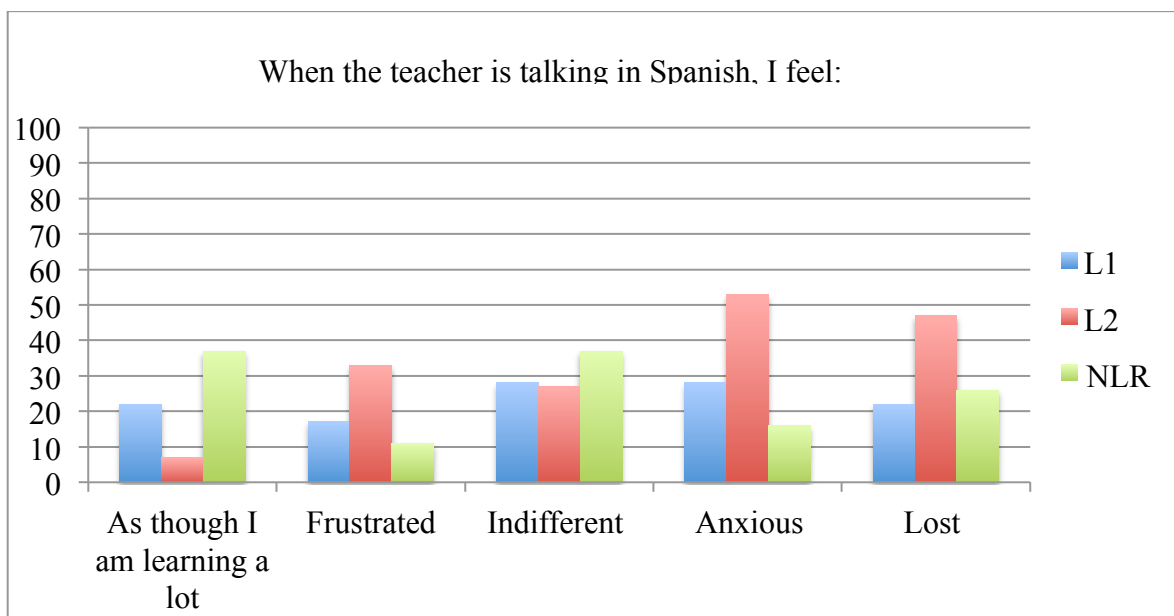


Figure 4.7: Students' Attitudes about Instructor Language Use

Observing the above results, it is clear that there are very distinct differences between the three groups in terms of their feelings about Spanish use by the instructor. One of the most salient findings is in the L2-only group. As shown in the chart, this group had the highest percentage of students who felt “anxious,” “lost” and “frustrated” by Spanish use. These findings run in contrast to those found by Levine (2003), whose study revealed that the higher the amount of L2 use in the classroom, the lower the level of TL anxiety reported by students.

The level of student anxiety also has implications for TL learning. When considering the performance results for the L2-only group in this study as relates to their anxiety, there appears to be support for Krashen's (1982) Affective Filter Hypothesis (see Chapter 2). The higher anxiety reported in the L2-only group indicates that, according to Krashen (1982), they would also have a high affective filter, which would then impede successful language acquisition. This would certainly seem true in the present study where, for object pronouns, the L2-only group routinely demonstrated lower performance than the other groups. Not only do the quantitative results for the L2-only group suggest that they did not learn as successfully, but evidently the students themselves did not feel like they were learning. The above graph shows that the L2-only group had the lowest percentage of students (in fact only one student) who felt as though they were learning a lot when receiving Spanish instruction. Even with just three days of complete target language use by the instructor, this could be evidence that students developed strong(er) negative opinions about TL-only use because they were able to experience it firsthand.

Even though the most frustration came from the L2-only group, very few students overall, regardless of the language group, felt frustrated by Spanish use (19% of total participants). This is consistent with the findings in Suby & Asención-Delaney (2009) where only 18% of the beginner students in their study reported feeling frustrated when the instructor spoke in Spanish. These authors indicate that a potential reason for which students in their study did not feel frustrated could have been because their instructor knew how and when to use Spanish effectively. In Suby & Asención-Delaney (2009), the overall lack of frustration felt by the students correlated positively with the feeling that they were learning a lot when their instructor used Spanish in class (as 70% of students indicated). However, in the present study, only a small percentage of students overall (23%) felt that they were learning a lot when their

instructor used Spanish in class. This finding indicates that even though there were not a large number of students who felt frustrated by Spanish use, this did not mean that they believed Spanish helped them learn.

To address this concern further, another question from this part of the questionnaire evaluated how much the students felt they would learn if the instructor used more Spanish in the classroom. The largest percentage of students (43%) felt that they would learn less if the instructor used more Spanish. In Suby & Asención-Delaney (2009), on the other hand, the highest percentage of students reported that they would learn the same amount (48%). However, in both studies few students felt that they would learn more with more Spanish in the classroom. This certainly implies that, while students see some benefit to TL use, a large number consider too much Spanish use to hinder their linguistic development, thus validating many instructors' and researchers' opinions that English (L1) can be used to aid in comprehension (Cook, 2001; Atkinson, 1987, 1993).

The following several questions asked about the students' beliefs regarding instructor language choice in the classroom (see Table 4.5 below). As explained in section 3.6.3, the researcher took the average of the students' responses for each question; these averages are represented in the table below. The first four questions used a Likert-type scale from one to five, with one being strongly disagree and five being strongly agree. Questions 5 & 6 were evaluated on a three-point scale, with 1 = too little, 2 = the right amount, and 3 = too much. The averages of each group's responses are presented in Table 4.5. Observing the results from Table 4.5 (below), the averages across the three groups for every question reveal minimal differences in student beliefs regarding TL or L1 use.

Table 4.5: Averages for Students' Beliefs about Language Use in the Classroom

#	Question	L1	L2	NLR
1	I believe there are no situations in which English should be used in the classroom (i.e. I believe total immersion in Spanish in class is best.)	2.6	1.2	1.6
2	I believe that only Spanish should be used to learn about grammar in the Spanish class.	2.2	1.6	1.7
3	I believe that regardless of how much Spanish students choose to use, the instructor should use Spanish at all times in the classroom.	1.8	1.6	2.0
4	I believe that Spanish is enjoyable and learning the language is fun. Even if it were not a requirement, I would want to learn Spanish.	2.7	2.0	3.3
5	I believe that my instructor uses _____ Spanish in the classroom	1.8	2.1	2.0
6	I believe that my instructor uses _____ English in the classroom.	2.1	1.9	2.0

It is clear that all students in the present study believe that there is a place for English in the classroom. The responses to question 2 reveal that one of the places students believe English-use is acceptable is for learning grammar, which supports findings in other studies (Thompson, 2009; Viakinnou-Brinson, 2006). This sentiment was evident with comments such as, “to explain grammar rules I need it spoken in English so I can focus on learning the rules instead of deciphering the lesson.” Many students advocated for “a balance of both Spanish and English” with comments like “grammar is the most difficult part of Spanish and should be explained using a mix of English and Spanish.”

The L2-only group most strongly disagreed with question 1, rejecting the idea that total immersion in Spanish in class is best. Some students even commented that it would be “awful” and “a detriment.” This is not surprising given that this same group of students reported to feel the most anxious, lost, and frustrated by instructor Spanish use (see Figure 4.7). The most common reason students gave for rejecting Spanish immersion was that it would hinder their

learning and confuse them, as clearly expressed by one student: “I would get lost and overwhelmed and not learn anything.” Another student commented, “Sometimes we need a break from all the Spanish to have a moment to comprehend it all.” In a most extreme opinion, one student wrote “to only speak Spanish would be a waste of time. We wouldn’t be able to communicate.” The L2-only group was also the one to most strongly disagree that instructors should use Spanish at all times in the classroom, question 3. This aversion to Spanish in the classroom that is not found quite so strongly with the other groups is likely due to the fact that the L2 group had experienced such immersion and thus knows firsthand the “overwhelming” feeling that can accompany exclusive Spanish instruction at the beginner level.

While the use of both languages appeared to be the most popular opinion, there were some to support a TL-only classroom. Among those that supported total immersion, they gave reasons such as “we need to hear the language to help us learn” and “listening to it more would force us to get used to understanding it.” Another student commented on the affective benefit of hearing the target language with the comment, “if students are constantly speaking Spanish then their fluency and confidence levels will increase.” However, this sentiment was only shared by a small minority.

Another salient difference between the groups is that of question 4 regarding motivation. The group with no language restriction reported the strongest desire to learn Spanish. Given that motivation can have a significant influence on student performance this finding could explain the higher average of the NLR group for immediate posttest 1, 2, and the delayed posttest. Further, the group that reported the least enjoyment of Spanish and thus the least desire to learn Spanish was the L2-only group, which continuously performed lower than the other two groups. While it is beyond the scope of this study to draw conclusions about student motivation and their effect

on grammar performance, the limited information we gathered is certainly worth noting since, based on the quantitative results, it seems to correlate positively with performance. These results could also affirm that individual differences, and motivation in particular, has an important impact on language learning, upholding the notion that motivation is a continued predictor of second language learning success (Dörnyei & Skehan, 2003).

Despite the strong opinions against the use of Spanish observed in the previous questions, with respect to overall language use, the students in the L2-only group reported that the instructor used the right amount of Spanish in the classroom. In fact, consistent with Thompson (2009), the averages for all groups in this study reveal that students believed their instructor used the right amount of Spanish, or very close to it, with 2 = the right amount. These results support the work by Duff & Polio (1994, 1990) that found that the majority (71%) of students are pleased with the amount of target language use by their instructor. Likewise, the results in Suby and Asencicón-Delaney (2009) show that most beginner students (79%) were happy with the linguistic behavior of their instructor. Not surprisingly, with the sample in this study, the group that reported too little Spanish use (albeit barely too little) by their instructor was the English-only group. Given that these students experienced an English-only condition, they might have felt deprived of the target language, a concern posited by firm TL-only advocates (see Ellis 1984). However, contrary to what might be expected, this group did not report that there was too much English. Rather, the results show that they believed their instructor used the right amount of English, suggesting that English use by the instructor is not seen as a detriment.

4.7.2 Open-ended questions

For the last part of the questionnaire the students were asked to complete eight open-ended questions regarding instructor language use in the classroom. The participants' responses

coalesced into three groups: (1) instructional language preference for being taught grammar and reasons for such responses, (2) perceptions about the advantages and disadvantages of being taught in Spanish and English in general, and (3) feelings towards instructor language use. Although there was some overlap among the responses in each category (especially between instructional language preference for grammar and perceptions about the disadvantages and advantages of either approach), each category is presented separately for the sake of clarity. The results appear below.

4.7.2.1 Instructional language preference for being taught grammar

Spanish/English preference:

As indicated in many of the responses previously presented, most students expressed that a combination of Spanish and English would be best for learning grammar. This opinion is echoed in other empirical studies on language choice (Viakinnou-Brinson, 2006; Rell, 2005). A constantly recurring sentiment expressed by most students was that an English explanation “should be used first to understand the concept, then review and practice in Spanish.” Indeed a majority of students felt that English instruction would help make certain grammar structures “easier to grasp,” but after the explanation Spanish should be incorporated in examples and for practicing such structures. Many also mentioned that English should be used with Spanish for grammar instruction “to provide clarity” and aid in comprehension, evident through comments like “English helps me understand the material better.” Other students commented on the way English would be beneficial for drawing comparisons between the two languages. The following comments provide evidence for this opinion: “English helps you to differentiate grammar between the two languages” and “not all rules from English transfer to Spanish.”

Another student mentioned how L1 use for teaching grammar affects participation with the remark, “this will make students feel comfortable and want to participate.” This sentiment has been shared both by students in other studies (Rell, 2005) and foreign language scholars (Auerbach, 1993; Collingham, 1988). While the student in the present study was only speculating, the classroom observations validated this opinion. During instruction for the L2-only group the instructor commented, “*No quieren hablar hoy*” [You (plural) do not want to talk today], suggesting that they normally would have participated more, but the Spanish use either a) intimidated them enough to not want to speak out or b) hindered their understanding so that they did not know how to participate appropriately. The apparent change in behavior due to Spanish use seen with the students in this study would seem to indicate that TL-use has serious consequences for the willingness to participate in the classroom. This finding is particularly relevant for language teachers since within the framework of Communicative Language Teaching, the method currently receiving the most popularity in the United States, participation plays a critical role. Therefore, it becomes increasingly important to implement strategies that promote active participation in the classroom (Rell, 2005), which according to these findings could include limited L1 use.

Spanish-only preference:

Although students recognized the benefits of Spanish immersion—evidenced through comments such as “hearing Spanish in the classroom is important for practice and pronunciation and especially to help with vocabulary”—only one student reported to prefer grammar teaching in Spanish-only. This student reasoned that in Spanish-only “[students] would learn the grammatical structures of the language faster.”

English-only preference:

While most students supported the use of both Spanish and English for teaching grammar, there were nonetheless several students who believed that English-only should be used for grammar. Most of the comments from these students were made on the basis that grammar itself is difficult, rather than the Spanish language being too hard to comprehend. One such student commented, “Grammar is the hardest part of the language so teaching it in Spanish only adds to the difficulty.” This notion was further demonstrated in the response “Grammar concepts require a level of explanation that is better understood by English-speakers in English.”

4.7.2.2 Advantages/disadvantages of being taught in Spanish or English in general

In addition to answering questions about instructional preference for being taught grammar, students also answered questions about their perceptions on the advantages of both a Spanish and English approach to foreign language teaching in general. Following are the results as indicated by students’ responses.

Advantages of being taught in Spanish:

The main advantages mentioned by students were: (1) enhancement of critical language skills (2) meaning negotiation (i.e., “Spanish forces us to figure things out”), and (3) faster speaking and language development. These findings are consistent with other studies that looked at student perceptions of advantages and disadvantages to instructor language use (Viakinnou-Brinson, 2006). Although it was not possible to ascertain what learning Spanish “faster” meant for these students, according to the immediate testing scores this opinion does not seem to be true.

Some comments also addressed how being taught in Spanish contributed to changing cognitive habits. One student wrote, “Your brain will be able to think in Spanish instead of

thinking in English and then translating.” This comment is almost identical to one from Viakinnou-Brinson’s (2006) study of students learning French where one student wrote “in a French-only condition, “[students] are forced to learn and understand the only way [they] know how to say things, rather than thinking in English and converting to French in [their] heads.” In addition, several students stressed how instruction in Spanish contributed to improving their language skills. For example, one student wrote, “You develop better conversation skills.” Another offered a similar reflection and acknowledged that in a Spanish-only condition, “I would be more prepared to write and speak in Spanish.” A number of students suggested that a Spanish-only condition “challenged [them] to listen and pay closer attention,” and “made [them] apply [themselves].” Along these lines a student wrote, “With only Spanish I have no choice but to figure things out.”

Disadvantages of being taught in Spanish:

The same fervor that was demonstrated by students to depict the advantages of a Spanish-only condition was also observed in their critique of that same Spanish-only approach. Like with the use of Spanish to teach grammar, most students’ comments in this category had to do with Spanish causing a lack of understanding. The following student’s response illustrates the previous argument: “I don’t pick up on everything the teacher says and it clouds understanding.” Other students echoed the same sentiment in the assertions that follow: “I get easily confused with what means what” and “I don’t know what is being taught.” Some students felt that such a lack of understanding left them confused or frustrated. One student said, “. . . at a certain point there is no point of even trying to understand because I am so far behind.” Other students echoed the feeling of getting lost, and similarly wanting to “give up.” As mentioned previously, this feeling of distress was also observed in field notes of classroom behavior.

Advantages to being taught in English:

Students' perceptions of the advantages of being taught in English were similar to their English/Spanish preference responses to teaching grammar. Four interrelated themes clearly emerged from findings in this category: (1) ease of understanding, (2) better, more "full" understanding, (3) clarification of taught concepts, and (4) speed of explanation. Ease of understanding and "complete" comprehension were constantly recurring responses. For one student, an English-only condition makes it "easier to understand and remember the material." In addition to ease and better understanding of rules, several students believed that an English-only condition would allow them to better understand instructions given by the teacher and thus they would "know what to do," "know what the instructor is asking/saying and thus work better" and also "be able to follow along." Several also mentioned the affective benefit of English use, as described later in section 4.7.2.3.

Disadvantages to being taught in English:

The most consistent response for this category was that of "missing out" on necessary Spanish exposure. Several reported that they would not hear enough Spanish. A number of students felt that they would be "deprived of experiencing true Spanish" and not be exposed to the "natural rhythm." One student wrote that in an English-only condition [they] aren't practicing Spanish enough." Similarly, another suggested, "there is not as much exposure to vocab/phrases."

A common concern among students regarding an English-only condition was the temptation to use English as a crutch and thereby "relying too much on what they already know" (English). One student commented that this over-reliance on English "might hurt the learning process." Another student felt that in an English-only condition "it is easier to slack off and not

focus.” This directly corresponds to opinions by MacDonald (1993) and Swain (1986) that L1 use has negative consequences for student motivation. Not only has a lack of concentration due to L1 use been shown with students in other studies (Rell, 2005), but it can also be corroborated with behavior witnessed during the observations. For example, several students in the L1-only and NLR groups were slow to begin activities when directed to and engaged in conversations unrelated to the material during the lesson. However, the observed lack of attention did not seem to hinder their grammar performance in the present study.

In addition, several students expressed concerns about slow language and fluency development when instructed in an English-only condition. One student wrote “it hinders us from learning as quickly” perhaps because, as another student commented “we become accustomed to just English instead of Spanish.” Another expressed a similar concern in the following response: “English-only instruction means more time we have to spend learning the words.” Others worried about how L1 use would negatively affect the Spanish they would be able to attain for the future, evidenced by comments like “it doesn’t prepare us enough for higher level courses,” and “I would not know as much Spanish.” One student summed up this sentiment adequately by stating the adage “if you don’t use it, you’ll lose it.”

4.7.2.3 Students’ attitudes about Spanish and English language use

Another facet of instructor language use is how students feel in regards to the language being used. Since affective factors undeniably influence language learning, more insight as to the affective reaction of students with Spanish and English instruction is important. Two of the open-ended questions addressed feelings about language use, one question regarding English and the other Spanish. The most salient responses are presented below.

Feelings about instructor Spanish use in class:

In spite of the many disadvantages that students found for Spanish instruction, there were many positive feelings surrounding instructor Spanish use. As mentioned previously, several students noted that when the instructor uses Spanish in class they feel “as though they are learning more” and “challenged.” Some even reported to like it. One reason students gave for liking Spanish in the classroom is that they feel more proud of themselves, confident, and “pleased” when they hear and understand Spanish as “it makes [them] feel like [they] know something” and “shows [them] that [they] are learning.” Along with feeling challenged, a number of students reported that Spanish use “made them listen more carefully.” Still, others reported to feel “annoyed” “angry or frustrated,” “nervous,” “confused” and “bored/uninterested,” particularly because they do not understand what the instructor is saying. One student remarked, “I feel overwhelmed.” This would certainly validate the common justification by teachers for using the L1 to avoid student frustration (Suby & Asención-Delaney, 2009).

Feelings about instructor English use in class:

As to be expected given the previous thoughts about the advantages of English-use in the classroom, most of the feelings associated with English use in class were positive. Some of the more frequent responses were that students felt “reassured” “relieved” “at ease” and “comfortable” with English use. In addition, a different student mentioned that in an English-only condition students would have “more confidence” and it would be “more enjoyable/relaxed.” Such feelings would imply a low affective filter, thus validating Levine’s (2003) opinion that L1 use can help lower learners’ affective filter. To again reference Krashen’s (1982) hypothesis, this low anxiety environment allegedly facilitates acquisition by allowing the

input “in,” as confirmed by several students who reported that they felt like they “were actually understanding.” Similarly, a student wrote, “it makes me feel better because I know what I am doing.” Students also reported that English use helped them understand better because they “could take detailed notes” and “could better ask questions to learn and master the material for exams.” Students in Rell (2005) also reported that L1 use allowed them to ask more questions for clarification. Along the lines of feeling more comfortable, one student commented on how English use fosters rapport-building with the following opinion: “I like that I can converse and connect with [my teacher] on a more personal level in English because there is no language barrier.” Only one student expressed a negative feeling about English use in the classroom, mentioning that sometimes it makes them feel “slightly disappointed.”

4.8 Instructor beliefs

The instructor beliefs according to the responses on the instructor questionnaire were not vastly different from that of the students’. The instructor in this study supported L1 use in the classroom, especially for the following situations: translation of unknown vocabulary, presenting grammar/grammar instruction, giving instructions, error corrections, responding to students’ use of English, classroom management, and classroom administration. These preferences were confirmed in practice, as the class observations from the NLR group (measuring the instructor’s unaltered language behavior) demonstrated the instructor using Spanish throughout class except during some of the above-mentioned situations. The participating instructor recognized that English is useful to ensure the students’ “actually understand what they are doing” and can then “practice more in Spanish.” This opinion does not differ from that of other language teachers, as the majority of teachers in fact favor L1 inclusion

in the classroom (Tian & Macaro, 2012). However, like the students, the instructor in this study also acknowledged that Spanish-only might help students' comprehension level develop faster.

One reported difference between the students and their instructor was in the amount of language use in the classroom. While the students, on average, believed their instructor used the right amount of both English and Spanish, the instructor felt that she used too little Spanish and too much English. This could be related to the notion of instructor guilt about using L1 in the L2 classroom (see section 2.3.2), causing them to think even a small amount of L1 use is too much. Like instructors in other studies (Suby & Asención-Delaney, 2009; Polio & Duff, 1994, 1990) the instructor for the present study admitted to using English because of the time constraints of a 50-minute class period and to be sure the students understand the vocabulary and grammar. For this reason, many researchers suggest use of the L1 to make efficient the already limited time spent in the L2 classroom (Macaro, 2001; Butzkamm, 1998; Atkinson, 1993, 1987; Chambers, 1992; among others) and this study would seem to suggest that doing so would not result detrimental to learning.

4.9 Qualitative results conclusion

The qualitative results were an essential component of the study in question. From the observations we learned that the students who received the L2 only condition were noticeably more frustrated and confused during instruction, whereas the other two groups that received English instruction for the targeted grammar lessons were much more relaxed and happier overall. The main themes extrapolated from the students' questionnaire responses were that grammar should be taught using both Spanish and English and that Spanish use in the classroom is asserted to not only hinder understanding, but also leaves students feeling lost and overwhelmed, while L1 use promotes an environment conducive to learning. Overall, most

students felt that English use helped them understand, made them feel comfortable, and contributed positively to their participation. Further, students reported to be generally content with the language behavior of their instructor. The next and final chapter of the present paper summarizes the relevant findings from this study, presents its limitations, and lastly offers some suggestions for future research.

CHAPTER 5 CONCLUSION

The primary objective of this study was to determine the effect of instructor language use during form-focused instruction on the object pronoun performance (DOs, IOs, and both combined) of beginner Spanish students at both immediate and delayed testing. To this end, participants were divided into three instructional language conditions: one group received instruction in English (L1-only group), another received instruction in Spanish (L2-only group) and the third group received instruction with no language restriction. All groups completed three separate immediate posttests—one for each of the targeted forms—followed by a delayed posttest covering all three forms at once (DOs, IOs, and joint DO-IO forms). These data were then subjected to a statistical analysis using SPSS. The secondary objective of this study was to understand in depth students' instructional language preferences by qualitatively examining reasons for such preferences, as indicated on a student questionnaire.

This chapter will first summarize the prominent quantitative findings of the present research, as well as highlight findings from the qualitative data. Then, the limitations will be presented. Lastly, this chapter will conclude with suggestions for future research. In the following section, the research questions as originally proposed in Chapter 3 will be restated to present the quantitative findings.

5.1 Summary of quantitative findings

The quantitative results as revealed by the statistical analysis and mean scores will be summarized in response to each of the research questions, starting with question 1.

Research Question 1: What effect does language of instruction (Spanish-only, English-only, or no language restriction) have on the object pronoun (DOs, IOs, both combined) performance of L2 learners of Spanish when tested immediately after instruction?

The statistical data analysis revealed that language of instruction has no apparent effect on students' object pronoun performance when tested immediately after instruction. Results from three separate One-way ANOVAs, one for each immediate posttest (DOs, IOs, both combined), did not yield statistically significant findings for any test. Therefore, we must conclude that there were not statistically significant differences in immediate posttest means between the three instructional language conditions. It is worth mentioning, however, that while nothing resulted statistically significant at the $p < .05$ level, the results for immediate posttest 2 (on IOs) tended toward significance favoring L1 instruction, suggesting that language of instruction might have a greater impact for indirect object pronouns. Even as statistical significance was not found with the immediate posttests, a further look into the raw scores from the descriptive results does reveal important findings, presented below.

Research Question 1(a): Which instructional language condition— Spanish-only, English-only, or no language restriction—yields higher results on the DO immediate posttest?

In comparing averages from the DO immediate posttest (immediate posttest 1) across the three instructional language conditions, the results showed a slight advantage for L1 instruction. Even though the L1-only and L2-only groups received the same average, the NLR group, which also received grammar instruction in English (L1) received the highest average. The researcher concluded that since the L2-only group performed lower on every other assessment, their higher score on immediate posttest 1 was likely due to the grammar structure in question (DOs) rather than language of instruction.

Research Question 1(b): Which instructional language condition yields higher results on the IO immediate posttest?

With respect to IO pronouns, mean scores from immediate posttest 2 revealed a positive effect for L1 instruction. Again, the NLR group was associated with the numerically highest mean and the L2-only group with the lowest mean. The L2-only group also experienced a somewhat considerable drop in scores from immediate posttest 1 to immediate posttest 2, supporting the notion that DOs might have been a less complex grammatical feature to understand. The fact that those who received instruction in their L1 outperformed the L2-only group for immediate posttest 2 suggests that it might be more beneficial, for immediate gains, to teach indirect object pronouns with use of the L1.

Research Question 1(c): Which instructional language condition yields higher results on the combined DO-IO immediate posttest?

The descriptive results comparing class averages for immediate posttest 3 showed that the English-only group was associated with the numerically highest mean while the L2-only group still received the lowest mean. As with the other pronominal forms, these findings indicate, at least numerically, an advantage for L1 instruction on the immediate grammatical performance of combined object pronouns.

Research Question 2: What effect does language of instruction (Spanish-only, English-only, or no language restriction) have on L2 Spanish learners' retention of targeted pronoun structures when tested two weeks after instruction is over?

Like with the immediate posttests, a One-way ANOVA of delayed posttest means assessed the effect of instructional condition on object pronoun retention and found no apparent effect. That is, at a significance level of $p < .05$, the results from the analysis revealed that there were no statistically significant differences between the instructional language conditions at delayed testing. Nevertheless, worth attention is the fact that the ANOVA yielded a marginally

significant effect much narrower than that of immediate posttest 2, which the researcher considers a notable result. Therefore, these results might indicate that language of instruction does impact the retention of object pronouns, again favoring an English (L1) grammar explanation. This finding is supported by the descriptive results, explained below.

Research Question 2(a): Which instructional language condition yields higher results on the delayed posttest?

For the delayed posttest, which included all three pronominal forms (DOs, IOs, and both combined), the class averages are similar to the trends observed in the immediate posttest scores. That is, the L2-only group was associated with the numerically smallest mean of posttest scores and both the L1-only group and the NLR group were associated with the numerically highest mean. This result implies that information from the lessons taught in the L2 was not as sustained over time, indicating an advantage for L1 instruction on the retention of object pronouns in Spanish.

Considering the overall quantitative results in the present paper, it was determined that language of instruction did not have a statistically significant effect on the acquisition of DOs, IOs, or both combined, nor on the retention of these forms. However, despite not achieving statistically significant results, and bearing in mind the small sample size, it is worth noting that certain analyses (immediate posttest 2 and the delayed posttest) did yield results that tended toward significance, both favoring L1 instruction. The fact that no statistically significant differences were found between the language conditions could be looked at in two ways, depending on the language being advocated: either that 1) TL use does not hinder the learning or retention of object pronouns in Spanish or 2) L1 use does not hinder the learning or retention of object pronouns in Spanish. Based on the statistical data analyses, neither approach appears to

significantly hinder or facilitate the learning of Spanish object pronouns for beginner students. Those in support of an exclusive TL approach would surely be encouraged by these results. However, the researcher concluded that the effect of language use on grammar performance is more nuanced than what a statistical analysis can explain. It is when we consider the raw scores on the assessments and the qualitative data that some subtle effects of language use are revealed.

The descriptive results from this study, as previously mentioned, are certainly practically significant. In the present investigation, subjects who received instruction in the L1 outperformed those with instruction in the L2 for direct and indirect object pronouns, both at immediate and delayed testing. This improved learning would surely validate the idea of using the L1 for metalinguistic explanations during the 10% of class time that ACTFL allows the L1 (as mentioned in Chapter 1). These findings also suggest that exclusive TL input might not be conducive to learning, opposing Krashen's (1982) input hypothesis. The fact that the L2-only group continually demonstrated lower performance than the other two groups could indicate that for the learning of object pronouns, such exclusive TL input might not actually be "comprehensible," at least not according to what was demonstrated on the production and comprehension tasks. Thus, these findings confirm what has been expressed elsewhere (Long, 1991; Schmidt, 1990; Swain, 1985) that mere input in the TL might not be all that a learner needs to successfully acquire the TL. In fact, based on the performance results from this study, it could be argued that since use of the L1 helped students better learn the form, it could also allow input to be more comprehensible (as speculated in Chapter 2, section 2.1.1.1).

As Macaro (2001) insightfully remarked "no study so far. . .has been able to demonstrate a causal relationship between exclusion of the LI and improved learning" (p. 85) and the present study is no exception. On the contrary, for learning Spanish direct and indirect object pronouns,

students evidently benefited more from form-focused instruction in the L1 than the L2. It would seem that allowing students to focus on form in the L1, rather than attempting to comprehend meaning in the L2, results in higher immediate gains and retention rates for direct and indirect object pronouns. Thus, these findings suggest that using the L1 during form-focused instruction to manipulate the input and make the TL form(s) more salient could in fact be a useful language-learning tool (Ferrer 2005a, 2005b; Macaro, 2005, 2001; Nation, 2003; Storch & Wigglesworth, 2003; Swain & Lapkin, 2000). In fact, from these descriptive results, there seems to be little reason to completely exclude the L1 from the classroom.

5.2 Summary of qualitative findings

The qualitative results, consisting of translation analysis, responses from the language questionnaire, and classroom observations were an essential component of the study in question. Like the raw scores from both the immediate tests and delayed posttest, the translation percentages revealed an advantage for instruction in the L1, as the L2 group was the one that consistently produced the most translation errors. However, the relatively low percentages across the groups indicate that translation might not be clearly understood by students in general, regardless of the language of instruction. The questionnaire results, as guided by the third research question, will be summarized below.

Research Question 3: What are the students' overall instructional language preferences regarding the use of the L1 and the TL in the classroom?

Whether students preferred instruction in the L1, L2, or both, virtually all made ardent, detailed comments on the language questionnaire, evidence of how strongly students felt about the topic. From their responses, it was clear that subjects expressed a preference for grammar instruction in the L1, or a combination of L1 and L2 use, over instruction in solely the L2. While

arguments favoring sole use of the L2 covered fewer categories than those favoring the L1, they centered on the idea that more L2 exposure could hasten L2 acquisition and improve their vocabulary. In contrast, those preferring L1 instruction argued that it benefitted them more to completely understand what the teacher was saying and then be able to use Spanish in practice. These students also reported that L1 use made them feel more comfortable. The idea that L1 use created a low(er) anxiety environment was expressed by many participants and observed in class observations. According to Krashen's (1982) affective filter hypothesis, this type of environment is conducive to language learning because the learners' affective filter is open to receiving the comprehensible input. Further, both field notes from observations and student responses confirmed the common held belief by many language teachers that use of too much L2 frustrates and confuses students, impeding the learning process. The scores illustrated in the descriptive results confirm the idea that a low affective filter, observed among the L1 instruction groups, facilitated language learning. Therefore, from an affective perspective, L1 use can help learners better receive the input by making them feel more at ease. By and large, students were able to see advantages of both TL and L1 use in the classroom and were overall happy with the language use of their instructor.

Research Question 3(a): How do instructor language preferences compare to the students' reported language preferences?

According to responses on the instructor questionnaire, the instructor's preferences regarding TL and L1 use were very similar to those of the students. To be sure, the instructor also supported L1 use in the classroom, especially for the following situations: translation of unknown vocabulary, presenting grammar/grammar instruction, giving instructions, error corrections, responding to students' use of English, classroom management, and classroom

administration. Moreover, these beliefs about language use were corroborated with the classroom observations from the NLR group, where the normal behavior of the instructor was to use Spanish (L2) except during some of the reported instances.

5.3 Limitations

Several limitations to this study need to be considered in order to help understand the contribution of this research to the area of L1 and TL use in the classroom. First, the sample size constitutes one very important limitation. Statistical power increases as sample size increases. Thus, having a small sample size complicates the ability to obtain generalizable results and to conduct reliable statistical analyses. Therefore, a One-way ANOVA with small sample sizes may not have sufficient power to detect any statistically significant difference among the samples, even if the means are in fact significantly different. In addition, the fact that the students did not receive any credit for participating and that the test did not factor into student grades is a limitation. The lack of any compensation or penalty based on the performance on the tests made them low-stakes tests, which likely resulted in less effort at testing time. This is particularly worth noting since most students in this study were taking Spanish to fulfill a language requirement (see section 3.4.1), rather than out of interest, thus already potentially hindering their chances of putting a concerted effort into the course.

Another area of concern was the fact that it was not possible to effectively record the students in their pair work or to record comments from all students. Although the researcher made every effort to capture the most dialogue possible, (i.e. sitting in a middle aisle of the classroom, at the back, alternating recorder placement to different sides of the desk), still, many students' comments were missed, especially those that were far from the recorder. Observations from field notes proved more useful for assessing student reactions. Perhaps high-quality video

equipment could better record student utterances, however a video recorder was not used for the present study primarily due to concerns by the participating instructor, but also so as not to alter the behavior of the students and/or teacher to a behavior that was not representative of the normal daily interactions.

Finally, the issue of time constraints (both within class and the greater semester timeline) was considered another limitation to this study. The fact that the research was carried out only over the course of a semester limits the findings, particularly in terms of retention rates for the pronominal forms. The researcher is aware that administering the delayed posttest two weeks after the completion of the lessons, while done in other studies (Tian & Macaro, 2012), is not a very long time. However as stated, this timeframe was established in accordance with the participating instructor's schedule. Moreover, the accelerated nature of the course, which covers a large amount of material in two weeks, lends heavier weight to the adequacy of a two-week timeline. Similarly, the researcher understands that a grammar explanation of 10 minutes is very little time to assess whether a form has been learned. However, the time constraints of the fast-paced curriculum at this level, as well as the participating instructor's concerns, had to be considered when designing the present study. It should be noted that the researcher does not assert that the form is completely learned after that time. Rather, it was deemed a sufficient amount of time to be able to assess the effect of TL and L1 use when learning grammar, which was the principal aim of the study. In spite of these limitations, this investigation into the effect of instructional language condition on grammar performance is an important step in building classroom research on TL and L1 instruction. Some ideas for future studies that would further deepen the limited empirical evidence regarding language choice are presented in the following section.

5.4 Suggestions for future research

Bearing in mind individual differences, the main conclusion of this study is that form-focused grammar instruction in the L1 appears to benefit learners more than instruction in the L2 for Spanish object pronouns. Given the limited scope of this conclusion, future research most certainly needs to be conducted with reference to other grammar points. This is especially crucial since L1 use has had different effects depending on the grammar point in question (Rell, 2005). It was beyond the scope of the present study to investigate the students' ability to correctly use the targeted grammar structures in a communicative sense, but future research needs to explore how grammar gains are demonstrated in speaking activities when students receive instruction in either the TL or L1.

This investigation focused on beginner-level university students only. This was largely because the topics under study were taught at this level and because lower level students see the need for more use of English in the classroom (Thompson, 2009). Future studies could investigate the effect of TL and L1 instruction on the grammar performance of intermediate and advanced level Spanish classes. Such a study would be of particular interest for making comparisons (both quantitative and qualitative) since, as expressed in Thompson (2009), "these levels appear more interested in being exposed to the TL due to their additional experience with the language and greater proficiency" (p. 543). In addition, further studies need to consider not just the quantity of exposure to the TL but also the quality of the speech being used by the instructor and how that may play a role in helping the students both use and understand more of the TL.

5.5 Conclusion

In this study a mixed methodology approach offered a wider scope within which to analyze the effects of instructor L1 and TL use in the L2 classroom as relates to beginner level university students' grammatical performance. Further, it enabled a tangible numerical understanding of the impact of language of instruction for both immediate gains and retention rates of the targeted grammar structure, thereby expanding the lack of empirical research on this topic. Similarly, it offered insight into the use of the L1 for input manipulation during form-focused instruction. With the qualitative data, it allowed a deeper understanding of students' language preferences on the use of Spanish and English in the classroom and the reasons for such preferences. Since many teachers at all language levels use the students' L1 during TL grammar instruction, a study that attempted to quantify the effect of such language use was certainly contributive. However given the lack of significant results, debate as to the optimal use of the L1 and TL in the classroom continues. While this study has contributed to the body of research about instructor language use in the classroom, it is hoped that the mere attempt at determining how language choice affects adult learners' grammatical performance in a classroom setting will raise continued awareness both about language choice and SLA as a whole.

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APPENDIX A PRE/DELAYED POSTTEST

Please print your first name initial followed by the month and day of your birthday: (e.g. K729) *Note: The information you indicate here will be the identifier you use for all other assessment materials.*

I, Katie Mickel, would like to ask for your help by answering the following questions concerning Spanish grammar. Your answers here will not affect your grade in this course. Please answer to the best of your ability. Thank you very much!

Direct Object Pronouns. Select the correct pronoun based on the context given. There is just one correct response.

_____ 1. Yo hago mi tarea. Yo _____ hago.

- a) Las
- b) Los
- c) La
- d) Lo

_____ 2. No tienen que leer una novela romántica. No _____ tienen que leer.

- a) Los
- b) Lo
- c) La
- d) Las

_____ 3. No tiene esos bolígrafos. No _____ tiene.

- a) Lo
- b) Los
- c) Las
- d) La

_____ 4. Yo tengo un libro muy viejo. Yo _____ tengo.

- a) Las
- b) Los
- c) Lo
- d) La

_____ 5. Nosotros ponemos esas mesas para la fiesta. Nosotros _____ ponemos para la fiesta.

- a) Lo
- b) Las
- c) La
- d) Los

Instructions: (A) In Spanish, rewrite the sentence replacing the underlined portion with the correct **direct object** pronoun based on the context given. (B) Then, on the second line, translate the rewritten sentence into English to the best of your ability. Make sure to use complete sentences.

Model: Mi profesor tiene los exámenes.

- A) Mi profesor los tiene.
- B) My profesor has them.

1. Tienes lechuga para la ensalada.

Translate the above rewritten sentence:

2. Juegas videojuegos muy violentos.

Translate the above rewritten sentence:

3. Mi amiga y yo tomamos café todos los días.

Translate the above rewritten sentence:

4. Mi mamá cocina papas fritas cada (*every*) noche.

Translate the above rewritten sentence:

5. Necesitan dinero para ir al gimnasio.

Translate the above rewritten sentence:

Indirect Object Pronouns. Choose the correct pronoun for the blank based on the context given. There is just one correct response.

- _____ 1. Eduardo dijo a María la verdad sobre la situación. Eduardo _____ dijo la verdad sobre la situación.
- a) Se
 - b) Le
 - c) Lo
 - d) La
- _____ 2. Gabriela va a escribir una carta a usted. Gabriela _____ va a escribir una carta.
- a) Le
 - b) Lo
 - c) Las
 - d) Se
- _____ 3. Juan Patricio sacó una foto a sus padres. Juan Patricio _____ sacó una foto.
- a) Se
 - b) La
 - c) Lo
 - d) Les
- _____ 4. El chico mandó las revistas a su tía. El chico _____ mandó las revistas.
- a) Las
 - b) Le
 - c) La
 - d) Se
- _____ 5. Los estudiantes dan sus exámenes a nosotros. Los estudiantes _____ dan sus exámenes.
- a) Se
 - b) Les
 - c) La
 - d) Nos

Instructions: (A) In Spanish, rewrite the sentence replacing the underlined portion with the correct **indirect object** pronoun based on the context given. (B) Then, on the second line, translate the rewritten sentence into English to the best of your ability. Make sure to use complete sentences.

Model: Mi papá da el sombrero a ti.

- A) Mi papá te da el sombrero.
- B) My dad gives you the hat.

1. Mandaste las cartas a tus tíos.

Translate the above rewritten sentence:

2. Santiago dio un beso a su novia en el aeropuerto.

Translate the above rewritten sentence:

3. Ella dice un secreto a mí.

Translate the above rewritten sentence:

4. Mi amigo da treinta dólares a su abuelo.

Translate the above rewritten sentence:

5. Yo mandé una invitación para la fiesta a mis primos.

Translate the above rewritten sentence:

Direct and Indirect Object Pronouns Together. Choose the correct rewriting of the sentence with the underlined expressions changed to pronouns. There is just one correct response.

_____ 1. Quiero comprar un vestido para mi hermana.

- a) Se la quiero comprar.
- b) Quiero comprárla.
- c) Se lo quiero comprar.
- d) Quiero comprarle.

_____ 2. Voy a escribir una carta a mis padres.

- a) Se la voy a escribir.
- b) Se los voy a escribir.
- c) Voy a escribirlesla.
- d) Voy a escribirselos.

_____ 3. Voy a dar este regalo a mi abuela.

- a) Voy a darle.
- b) Se la voy a dar.
- c) Se lo voy a dar.
- d) Voy a dársela.

_____ 4. Dieron mi libro a Fernanda.

- a) Se la dieron.
- b) Lo dieron.

- c) Se lo dieron.
- d) Le dieron.

_____ 5. Ella lee un cuento a su hija.

- a) La lee.
- b) Se la lee.
- c) Se lo lee.
- d) La se lee.

Instructions: (A) In Spanish, rewrite the sentence replacing the underlined portion with the correct **direct and indirect object** pronouns based on the context given. (B) Then, on the second line, translate the rewritten sentence into English to the best of your ability. Make sure to use complete sentences.

Model: Ella vende el té a mí.

- A) Ella me lo vende.
- B) She sells it to me.

1. Regalaste rosas blancas a tus padres para su aniversario.

Translate the above rewritten sentence:

2. Los vecinos trajeron un pastel a mi mamá.

Translate the above rewritten sentence:

3. El hombre dio direcciones a ti.

Translate the above rewritten sentence:

4. Ellos dieron información importante al médico.

Translate the above rewritten sentence:

5. Mi abuelo regaló un teléfono a mi hermano.

Translate the above rewritten sentence:

APPENDIX B IMMEDIATE POSTTEST 1

Please print your first name initial followed by the month and day of your birthday: (e.g. K729) *Note: The information you indicate here will be the identifier you use for all other assessment materials.*

I, Katie Mickel, would like to ask for your help by answering the following questions concerning Spanish grammar. Your answers here will not affect your grade in this course. Please answer to the best of your ability. Thank you very much!

Direct Object Pronouns. Select the correct pronoun based on the context given. There is just one correct response.

- _____ 1. Tú vas a comprar toallas para el viaje. Tú _____ vas a comprar para el viaje.
- a) Lo
 - b) La
 - c) Los
 - d) Las
- _____ 2. Ricardo tiene papeles de inmigración para viajar a Europa. Ricardo _____ tiene.
- a) Lo
 - b) Las
 - c) Los
 - d) La
- _____ 3. Ella no necesita dinero para ir al cine. Ella no _____ necesita para ir al cine.
- a) Lo
 - b) Los
 - c) Las
 - d) La
- _____ 4. No conozco esa canción. No _____ conozco.
- a) Las
 - b) Los
 - c) Lo
 - d) La
- _____ 5. Mi mamá no tiene tiempo para cocinar. Mi mamá no _____ tiene.
- a) La
 - b) Lo
 - c) Los
 - d) Las
- _____ 6. No puedo encontrar mis llaves. No _____ puedo encontrar.
- a) Lo
 - b) Los
 - c) Las
 - d) La

Instructions: (A) In Spanish, rewrite the sentence replacing the underlined portion with the correct **direct object** pronoun based on the context given. (B) Then, on the second line, translate the rewritten sentence into English to the best of your ability. Make sure to use complete sentences.

Model: Mi profesor tiene los exámenes.

- A) Mi profesor los tiene.
- B) My profesor has them.

1. Miguel tiene manzanas en su mochila.

Translate the above rewritten sentence:

2. Ves árboles de diferentes tipos en el parque.

Translate the above rewritten sentence:

3. Paula oye ese tren desde su casa.

Translate the above rewritten sentence:

4. Ella toma decisiones importantes por mí.

Translate the above rewritten sentence:

5. No puedes encontrar ese museo.

Translate the above rewritten sentence:

6. Necesitamos periódicos importantes para el proyecto.

Translate the above rewritten sentence:

APPENDIX C IMMEDIATE POSTTEST 2

Please print your first name initial followed by the month and day of your birthday: (e.g. K729) *Note: The information you indicate here will be the identifier you use for all other assessment materials.*

I, Katie Mickel, would like to ask for your help by answering the following questions concerning Spanish grammar. Your answers here will not affect your grade in this course. Please answer to the best of your ability. Thank you very much!

Indirect Object Pronouns. Select the correct pronoun based on the context given. There is just one correct response.

- _____ 1. Carla _____ pidió un favor a su hermano Fernando.
 - a) Lo
 - b) Se
 - c) Les
 - d) Le
- _____ 2. Rosario _____ habló de sus vacaciones a ti.
 - a) Se
 - b) Le
 - c) Te
 - d) Les
- _____ 3. Mi madre llamó a mi abuela y _____ preguntó sobre el viaje.
 - a) Les
 - b) Le
 - c) Se
 - d) Lo
- _____ 4. María _____ mandó las cartas a sus amigas.
 - a) Las
 - b) Los
 - c) Le
 - d) Les
- _____ 5. Carlos _____ dio los regalos a Rosita y Andrea.
 - a) Les
 - b) La
 - c) Le
 - d) Los
- _____ 6. Manuela y Patricio _____ dieron la comida a mi perro.
 - a) Le
 - b) Los
 - c) Se
 - d) Les

Instructions: (A) In Spanish, rewrite the sentence replacing the underlined portion with the correct **indirect object** pronoun based on the context given. (B) Then, on the second line, translate the rewritten sentence into English to the best of your ability. Make sure to use complete sentences.

Model: Mi papá da el sombrero a ti.

- A) Mi papá te da el sombrero.
- B) My dad gives you the hat.

1. Ricardo lee el periódico a sus nietos.

Translate the above rewritten sentence:

2. Verónica y Diego contaron la historia a nosotros.

Translate the above rewritten sentence:

3. Mandaste los chocolates a tu esposa.

Translate the above rewritten sentence:

4. Él no trajo el café a mis amigos.

Translate the above rewritten sentence:

5. El camarero da la carta a Juan.

Translate the above rewritten sentence:

6. Pides una comida buena a tu mamá.

Translate the above rewritten sentence:

APPENDIX D IMMEDIATE POSTTEST 3

Please print your first name initial followed by the month and day of your birthday: (e.g. K729) *Note: The information you indicate here will be the identifier you use for all other assessment materials.*

I, Katie Mickel, would like to ask for your help by answering the following questions concerning Spanish grammar. Your answers here will not affect your grade in this course. Please answer to the best of your ability. Thank you very much!

Direct and Indirect Object Pronouns Together. Choose the correct rewriting of the sentence with the underlined expressions changed to pronouns. There is just one correct response.

_____ 1. Marcos trajo comida fresca a nosotros.

- a) Marcos lo nos trajo.
- b) Marcos la se trajo.
- c) Marcos nos la trajo.
- d) Marcos se la trajo.

_____ 2. Mi madre dio sus anillos a mi hija.

- a) Mi madre la los dio.
- b) Mi madre se los dio.
- c) Mi madre las se dio.
- d) Mi madre le los dio.

_____ 3. Mi abuelo regaló estos zapatos a los niños.

- a) Mi abuelo las se regaló.
- b) Mi abuelo les los regaló.
- c) Mi abuelo se las regaló.
- d) Mi abuelo se los regaló.

_____ 4. Juan y Paco dan tu premio a ti.

- a) Juan y Paco se lo dan.
- b) Juan y Paco lo te dan.
- c) Juan y Paco te lo dan.
- d) Juan y Paco le lo dan.

_____ 5. Mariana va a contar una historia a Paula.

- a) Mariana le la va a contar.
- b) Mariana se la va a contar.
- c) Mariana se lo va a contar.
- d) Mariana la se va a contar.

_____ 6. Mi madre quiere comprar una camisa nueva a mí hermana.

- a) Mi madre quiere comprársela.
- b) Mi madre quiere comprarlo.
- c) Mi madre la me quiere comprar.
- d) Mi madre quiere comprármela.

Instructions: (A) In Spanish, rewrite the sentence replacing the underlined portion with the correct **direct object** **and indirect object** pronouns based on the context given. (B) Then, on the second line, translate the rewritten sentence into English to the best of your ability. Make sure to use complete sentences.

Model: Ella vende el té a mí.

- A) Ella me lo vende.
- B) She sells it to me.

1. No quiero dar una segunda oportunidad a mis amigos.

Translate the above rewritten sentence:

2. Ernesto y yo compramos un abrigo rojo para él.

Translate the above rewritten sentence:

3. Ella escribió una carta a su amigo.

Translate the above rewritten sentence:

4. Él canta su canción favorita a su hermana.

Translate the above rewritten sentence:

5. Yo traje galletas a los vecinos.

Translate the above rewritten sentence:

6. Van a regalar su coche a nosotros.

Translate the above rewritten sentence:

APPENDIX E STUDENT QUESTIONNAIRE

Adapted from the questionnaires used in Levine (2003), Thompson (2009) and Suby & Asención-Delaney (2009)

Please print your first name initial followed by the month and day of your birthday: (e.g. K729)

I, Katie Mickel, would like to ask you to help by answering the following questions concerning foreign language learning. There are no “right” or “wrong” answers; I am just interested in your personal opinion. Please give your answers sincerely as this will guarantee the success of the research. The background information gathered here is strictly confidential and will not affect your course grade. Thank you very much for your help!

I. DEMOGRAPHIC INFORMATION

INSTRUCTIONS: Mark your selected options with an X or provide the information requested.

Male _____ Female _____ Age _____

1. Is English your native language? Yes _____ No _____
(If no, *what is your native language?*) _____

2. Prior to this class, how many years of formal Spanish instruction have you had? (Including high school/elementary)

_____ less than 1 _____ 1 _____ 2 _____ 3 _____ 4 _____ More than 4

3. At what age did you begin formal Spanish instruction?

_____ 5 or younger _____ 6-9 _____ 10-13 _____ 14-18 _____ Older than 18

4. When was your last Spanish course? Month _____ Year _____
Was this course in a) high school _____ b) college _____

5. Have you been in a Spanish speaking country? Yes _____ No _____
If yes, how long was your stay(s)? _____

6. Did you grow up *primarily* in an English-speaking environment? Yes _____ No _____
If no, what language was spoken? _____

7. Is Spanish spoken in your home? No _____ Yes _____ (*by whom?*) _____

8. I take this class because it is (*mark all that apply*):

_____ a requirement _____ part of a major _____ an interest _____ other
specify the reason: _____

II. LANGUAGE USE IN YOUR CURRENT CLASS

INSTRUCTIONS: Mark with an X the answer that most accurately describes your current Spanish language classroom and your own feelings regarding language teaching and language use in the classroom.

1. My instructor uses Spanish to communicate with students about _____ of the time in the classroom.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []

2. My instructor uses Spanish to communicate grammar points about _____ of the time we spend working on or discussing grammar.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []

3. When my instructor is talking in Spanish, I understand what she is saying about _____ of the time.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []

4. When my instructor explains grammar in Spanish, I understand about _____ of the time.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []

5. When the teacher is talking in Spanish, I feel:
_____ as though I am learning a lot
_____ frustrated
_____ indifferent
_____ anxious
_____ lost

6. If the teacher used more Spanish in the classroom:
_____ I would learn more
_____ I would learn less
_____ I would learn the same amount

7. If the teacher used more English in the classroom:
_____ I would learn more
_____ I would learn less
_____ I would learn the same amount.

III. BELIEFS REGARDING INSTRUCTOR LANGUAGE CHOICE

INSTRUCTIONS: Circle the number that most accurately describes your BELIEFS about Spanish and English usage in the language classroom. Please explain your choice.

1 2 3 4 5
Strongly disagree Disagree Neutral Agree Strongly agree

1. I believe that there are no situations in which English should be used in the classroom (i.e. I believe that total immersion in Spanish in class is best.)

Strongly disagree 1 2 3 4 5 Strongly agree

Explain:

2. I believe that **only Spanish** should be used to learn about grammar in the Spanish class.

Strongly disagree 1 2 3 4 5 Strongly agree

Explain:

3. I believe that, regardless of how much Spanish students choose to use, the instructor should use **Spanish at all** times in the classroom.

Strongly disagree 1 2 3 4 5 Strongly agree

Explain:

4. I believe that Spanish is enjoyable and learning the language is fun. Even if it were not a requirement, I would want to learn Spanish.

Strongly disagree 1 2 3 4 5 Strongly agree

Explain:

INSTRUCTIONS: Mark with an X the response that most accurately describes your beliefs. Please explain what you mean.

5. I believe that **my instructor** uses _____ **Spanish** in the classroom.
Too little [] the right amount of [] too much []

Explain:

6. I believe that **my instructor** uses _____ **English** in the classroom.
Too little [] the right amount of [] too much []

Explain:

7. Please mark with an X the situations when you believe it is appropriate for your instructor to use **English** in class (check all that apply)

- a) _____ presenting vocabulary
- b) _____ translation of unknown vocabulary
- c) _____ presenting grammar/grammar instruction
- d) _____ giving instructions
- e) _____ error corrections
- f) _____ jokes
- g) _____ to establish empathy/solidarity with class
- h) _____ student praise
- i) _____ classroom management
- j) _____ respond to student use of English
- k) _____ classroom administration

n) Other -Explain _____

IV. OPEN-ENDED QUESTIONS

INSTRUCTIONS: Please respond honestly and completely to the following questions regarding instructor language use in the Spanish class.

1. For the lessons on direct objects [lo(s), la(s)] indirect objects [me, te, le/s, nos, se] and both combined you received instruction either in English-only or Spanish-only. How well do you feel you understand these grammar concepts? Please explain.

2. In your opinion, what are some *advantages* to being taught in **English-only**? Please explain your answer.

3. In your opinion, what are some *advantages* to being taught in **Spanish-only**? Please explain your answer.

4. Do you believe there are *disadvantages* to being taught in English? Give reasons why.

5. Do you believe there are *disadvantages* to being taught in Spanish? Give reasons why.

6. How does it make you feel when your instructor uses Spanish in class?

7. How does it make you feel when your instructor uses English in class?

8. Do you believe grammar should be taught in English, Spanish, or both? Please explain.

Thank you very much for your participation!

APPENDIX F INSTRUCTOR QUESTIONNAIRE

I. ACTUAL LANGUAGE USE IN THE CLASSROOM

INSTRUCTIONS: Mark with an X the answer that most accurately describes your Spanish language classroom and your own feelings regarding language teaching and language use in the classroom.

1. With the L1 (English-only) group, I used **English** when speaking **to my students** about _____ of the time.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []
2. With the L2 (Spanish-only) group, I used **Spanish** when speaking **to my students** about _____ of the time.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []
3. With the no language restriction group, I used **Spanish** when speaking **to my students** about _____ of the time.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []
4. In general, I use **Spanish** to communicate with students about **grammar** for _____ of the time we spend working on or discussing grammar.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []
5. In general, I use **English** to communicate with students about **grammar** for _____ of the time we spend working on or discussing grammar.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []
6. When talking in Spanish, my students **understand** what I am saying about _____ of the time.
0-30% [] 30-50% [] 50-70% [] 70-80% [] 80-90% [] 90-100% []

II. BELIEFS REGARDING LANGUAGE USE IN THE FOREIGN LANGUAGE CLASSROOM

INSTRUCTIONS: Circle the number that most accurately describes your **BELIEFS** about Spanish and English use in the foreign language classroom.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1. I believe that there are no situations in which **English** should be used in the classroom (i.e. I believe that total immersion in **Spanish** classes is best.)

Strongly disagree	1	2	3	4	5	Strongly agree
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Explain your answer:

2. I believe that **only Spanish** should be used to learn about grammar in the Spanish class.

Strongly disagree	1	2	3	4	5	Strongly agree
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Explain your answer:

3. I believe that, regardless of how much Spanish students choose to use, the instructor should use **Spanish at all** times in the classroom.

Strongly disagree 1 2 3 4 5 Strongly agree

Explain your answer:

INSTRUCTIONS: Mark with an X the answer that most accurately describes your current Spanish language classroom and your own feelings regarding language teaching and language use in the classroom.

4. I believe that I use _____ **Spanish** in the classroom.
Too little [] the right amount of [] too much []

Explain:

5. I believe that I use _____ **English** in the classroom.
Too little [] the right amount of [] too much []

Explain:

6. Please mark with an X the situations when you believe it is appropriate to use **English** in class (check all that apply)

- a) _____ presenting vocabulary
- b) _____ translation of unknown vocabulary
- c) _____ presenting grammar/grammar instruction
- d) _____ giving instructions
- e) _____ error corrections
- f) _____ jokes
- g) _____ to establish empathy/solidarity with class
- h) _____ student praise
- i) _____ respond to student's use of English
- j) _____ classroom management
- k) _____ classroom administration

n) Other -Explain _____

III. OPEN-ENDED QUESTIONS

INSTRUCTIONS: Please respond honestly and completely to the following questions regarding your own language use and student responses to this language use in your Spanish classes.

1. Did you feel more comfortable teaching the designated grammar lessons (DOs and IOs) in one language over the other? (i.e. In English-only or Spanish-only?) If so, indicate the language and give reasons why.

2. Did you notice a difference in student behavior (i.e. participation, attentiveness, understanding) teaching in one language over the other? If so, indicate the language and please explain.

3. In your opinion, what are some *advantages* to teaching in **English-only**? Please explain your answer.

4. In your opinion, what are some *advantages* to teaching in **Spanish-only**? Please explain your answer.

5. Please comment on any other opinions you have regarding language use (Spanish or English) for teaching grammar.

Thank you very much for your participation!

APPENDIX G IRB
APPROVAL



ACTION ON EXEMPTION APPROVAL REQUEST

TO: Katherine Mickel
Foreign Languages and Literatures

FROM: Dennis Landin
Chair, Institutional Review Board

DATE: July 2, 2015

RE: IRB# E9410

TITLE: The Effect of the Use of the Students' L1 in Grammar Instruction: A Report on Student Preferences and Performance in the TL

Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu | lsu.edu/irb

New Protocol/Modification/Continuation: New Protocol

Review Date: 7/2/2015

Approved X **Disapproved** _____

Approval Date: 7/2/2015 **Approval Expiration Date:** 7/1/2018

Exemption Category/Paragraph: 1; 2b

Signed Consent Waived?: Yes

Re-review frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable):

Protocol Matches Scope of Work in Grant proposal: (if applicable)

By: Dennis Landin, Chairman 

**PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is CONDITIONAL on:**

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. **SPECIAL NOTE:**

*All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>

VITA

Katherine (Katie) Mickel was born in Monroe, LA, where she lived until moving to Athens, GA, to attend college at the University of Georgia. She received a B.A. in International Affairs, with a minor in Spanish and a certificate in Latin American and Caribbean Studies. After her graduation from UGA in May 2013, Katherine lived in Ecuador where she had the chance to further her Spanish language skills and gain valuable teaching experience. While there, she applied for the Hispanic Studies graduate program at Louisiana State University. In August of 2014 she started the program at LSU, where she anticipates graduating from this May of 2016 with a MA in Hispanic Studies and a concentration in linguistics. Upon graduation, Katherine hopes to teach Spanish language courses in a collegiate setting and continue pursuing her interest in foreign language pedagogy.