Developing sociolinguistic competence through explicit instruction: The case of future-time expression in L2 Spanish

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A major challenge in language acquisition is progressing from one-to-one form-meaning associations to expressing a particular meaning through multiple forms (Andersen, 1990). Variationists focused on language acquisition follow the tenet of tracking development in not only rates of use of a particular variant but also the independent factors that condition such use (Bayley & Tarone, 2012). Future-time expression provides an interesting test-case for the acquisition of variation in Spanish since numerous forms are used in this temporal context, including the morphological future *iré* 'I will go', periphrastic future *voy a ir* 'I am going to go', and present indicative *voy* 'I go'. Although recent work has considered to what extent classroom learners use and select the aforementioned forms in variable contexts (e.g., Gudmestad & Geeslin, 2013; Kanwit, 2017), research in this vein has not integrated pedagogical interventions, despite increasing calls for instruction on sociolinguistic variation (Geeslin with Long, 2014; Gutiérrez & Fairclough, 2009). With this gap in the literature in mind, the present study investigates the development of sociolinguistic competence (Canale & Swain, 1980) in six Spanish classes through either traditional instruction, an explicit intervention in which students received instruction regarding general trends in overall rates of use of future-time forms and the effects of independent variables on such use (e.g., temporal distance, the presence of temporal adverbs, formality), or the explicit instruction coupled with spiraling activities to reinforce instructed concepts. We present longitudinal data collected at four points throughout a semester-long course from 54 participants

by means of five tasks: oral and written production tasks, a contextualized preference task, a metalinguistic awareness task, and a self-reflection task. Results indicate that students in the instruction groups demonstrated more target-like rates of use and selection and sensitivity to independent linguistic factors when compared to the control group. The responses of the instruction groups in the metalinguistic task were informed by the cognitive explanations of why the future variants are differentially preferred. Overall, the current dissertation provides evidence that the pedagogical intervention implemented is effective in raising sociolinguistic competence, as seen in learners' variable expression of the Spanish future across tasks.

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Acknowledgements

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1.0 Introduction

The main aim of this dissertation is to investigate the effects of a pedagogical intervention about future-time expression in Spanish on the acquisition of sociolinguistic competence in the second language (L2) classroom. Most studies have focused on study abroad as the preferred (or only) way to develop sociolinguistic competence but this dissertation is an attempt to demonstrate how students can acquire both target-like variation regarding the future in Spanish and sociolinguistic competence in the classroom after one semester with a sound pedagogical intervention containing information on language variation and contextualized tasks that target production, selection, and awareness.

A main tenet of this dissertation is that future expression is multifunctional, able to be expressed through multiple forms. Furthermore, in the dissertation the L2 system is purported to be an independent linguistic system that may have characteristics of the L1 (i.e., English), the L2, both, or neither. This interlanguage grammar will be analyzed in terms of the variation that it permits and the ways in which it conveys future meanings. This chapter begins with a brief description of relevant developments in the history of the field of second language acquisition (SLA) and some of its present concerns in order to situate the dissertation within this larger body of work. This is followed by a short overview of the key construct of communicative competence (to receive full attention in Chapter 2), which is succeeded by a brief overview of the importance of developing sociolinguistic competence in the classroom and an appeal to future-time expression as a vehicle for investigating such competence. Following this explanation, the dissertation is situated within a larger body of work that calls for such studies. The chapter ends with a presentation of the contents of the remainder of the dissertation.

1.1 Key developments in SLA relevant to this dissertation

The first approaches to language learning were guided by Behaviorist theories which believed that the environment was the cause of human behavior and so a child would learn language through the imitation of stimuli that were present in the environment and through habit-formation. Behaviorism centers on environmental stimuli, responses to those stimuli, and then whether such responses are rewarded or punished. Skinner (1957) was of the major figure for these approaches in that he claimed that language learning took place through imitation of language stimuli. These principles were the base for the Audiolingual Method of instruction, which consisted of the repetition of stimuli in order to form correct habits. In this method of instruction, errors were corrected immediately as they deviated from the provided stimuli.

The Contrastive Analysis Hypothesis rose to fame (Lado, 1957) at the same time as Behaviorist theories. Stemming from the idea that people learned languages via the input in the environment and creating habits, a problem to consider was that once learners had formed habits in their L1, they would encounter problems in creating new and different habits for their L2. The Contrastive Analysis Hypothesis then would serve to predict those areas that showed differences between the L1 and the L2 and therefore become problematic to learn and to create new habits for. Therefore, only those areas that were different in the L2 with respect to the L1 should be taught in language classrooms, since the areas that were similar between languages would be automatically transferred. However, this idea was not completely useful in language classrooms given the fact that it was not always the case that a difference between the L1 and the L2 would be difficult to learn and not all similar knowledge was automatically transferred (e.g., Eckman, 1987).

Contrary to more language-external views, Chomsky (1965) “proposed that learners were capable of creating language and that the knowledge needed to do so came from the learner’s own

mind, not the environment" (Geeslin with Long, 2014, p.12-13). Chomsky devised the idea that language learning was guided by some innate knowledge or internal grammar (i.e., Universal Grammar [UG]), with which every person was equipped since birth. According to UG approaches, exposure to input helps to set the appropriate language-specific parameters of the grammar.

Moreover, the role of errors and linguistic variation has changed over the course of SLA history. The view of errors having to be corrected immediately changed when Corder (1967) claimed that learners' errors could provide information about internal rules at a specific moment in the acquisition process. The idea that errors were systematic and followed rules gave way to the notion of interlanguage (Selinker, 1972). Interlanguage was considered the internal system of a language learner that was systematic, independent, and ever-changing. This system contained elements from the L1 and the L2 and elements that belonged to neither. From examining the interlanguage of learners, researchers could identify developmental stages that learners go through before acquiring a specific grammatical structure (Long, 1990). The developmental stages also presented movement from one-to-one mappings to multifunctionality, since learners moved from using one form to express one meaning to using different forms to do so (Anderson, 1990).

An additional factor central to developmental stages to take into consideration was put forth by Pienemann (1989) in his learnability or teachability hypothesis, which claimed that instruction could cause the acceleration of the rate at which a structure is learned but that learners still needed to progress through all the natural stages of acquisition. Pienemann's hypothesis (1989) was related to Krashen's input theory (1982), which claimed that for acquisition to take place, learners had to be exposed to knowledge that was not more than one stage above their current developmental level ($i + 1$), however impossible to operationalize this may have been.

While previous approaches explored the obligatory contexts where a form should be used, the concept-oriented approach (von Stutterheim & Klein, 1987) built an analysis around all of the forms used to express a specific meaning, which is a functional approach. By providing the full picture of how a learner expresses a given meaning, the stages of development can be delineated, as well as the movement from one-to-one mapping to multifunctionality. Lastly, of relevance to the present dissertation, the variationist approach draws from Canale and Swain's (1980) notion of communicative competence, since learners need to consider both linguistic and social aspects of the language in order to acquire target-like patterns that exist in native language. Therefore, the variationist approach claims that there exist language structures that are variable in their use depending on linguistic and extralinguistic factors that affect when one form is used over others. This variability is illustrated in Preston's coin-tossing metaphor (2000). In this metaphor, each side of the coin represents a variant within the variable structure from which learners need to choose. Since selection is not random, each of the linguistic and extralinguistic factors that affect the selection of one form over the other add weight to the coin. For example, if a learner of L2 Spanish is expressing the past and the action referred to was ongoing, weight would be added to the imperfect (e.g., *comía* 'I was eating'), as opposed to the preterite (e.g., *comí,* 'I ate'), side of the coin. Further weight would be added to the imperfect side if, for example, the action were backgrounded, as opposed to foregrounded, in discourse. Thus, unless contradicted by the range of other linguistic and social factors which may affect past-time expression, the learner would be more likely to use the imperfect in such a scenario, although the nature of a coin toss also reveals that even a highly favorable context (i.e., a coin heavily weighted to one side) may still land on the other side a small percentage of the time, which further reveals the possibility of variation in learner language. The numerous studies within the variationist approach have demonstrated the

importance of sociolinguistic competence in L2 learning by integrating the factors that affect the use of one variant of a variable structure over others into their analyses. The topics introduced in this section will be expanded in Chapters 2 and 3.

1.2 Communicative competence

Stemming from the distinction between performance and competence inspired by Noam Chomsky (1965), several scholars have attempted to define competence, regard it as communicative competence, and describe its component parts (Hymes, 1967, 1972; Candlin, 1981; Widdowson, 1983; Campbell and Wales, 1970; Canale and Swain, 1980, Savignon, 1972). Chapter 2 will outline the main attempts at doing so starting with the idea of communicative competence proposed by Hymes (1967, 1972) and Campbell and Wales (1970), Canale and Swain (1980), and Celce Murcia (2007). Communicative competence was defined as "the relationship and interaction between grammatical competence and sociolinguistic competence (Canale & Swain, 1980, p.6). A key component of this historical sequence will be the review of one of the most influential descriptions of communicative competence as a theoretical framework by Canale and Swain (1980). For example, Canale and Swain (1980) indicated the different parts of communicative competence and presented the importance of communicative competence by proposing a framework in which to include all the competences in language teaching. I will then move on to the modifications their framework has undergone over the years together with a description of its main components. The second half of Chapter 2 will focus specifically on the component of sociolinguistic competence, its definition and conceptualization, and its analysis in empirical research studies.

1.3 Developing sociolinguistic competence in the classroom: the case of future-time expression

A large number of morphosyntactic structures have been studied not only in the context of variation within native speaker populations but also in their acquisition and development by learners in the classroom and in study abroad programs. For Spanish, these structures include copula choice (Geeslin, 2000), subjunctive vs. indicative mood (Gudmestad, 2012), simple present vs. present continuous (Fafulas, 2013), differential object marking (Killam, 2011), among others. Nevertheless, less attention has been given to the development of sociolinguistic competence in the L2 Spanish *classroom*. The main problem is that for Spanish, as for other languages, classroom and textbooks typically present an 'invariant' variety of the language and learners are taught neither variation nor sociolinguistic competence; the problem is not that learners are incapable of learning it, but they are not given the opportunity to do so (Gutiérrez & Fairclough, 2006). Gutiérrez and Fairclough (2006) emphasize that "traditional foreign language instruction in the US has been based on the teaching of a standard variety of Spanish (almost exclusively the written form of the language) and therefore, on the rejection of local varieties" (pp.180-181). Not only have local varieties been rejected, but the variation that exists in the Spanish-speaking world has also been ignored, along with consideration of use by speakers of the language, as opposed to the presentation of grammatical forms that may or may not be robustly used, at the expense of other forms that may not be presented (Gutiérrez & Fairclough, 2006). The solution these authors propose and that the present dissertation aims to explore is that "key sociolinguistic concepts and [a] sample of language variation should be included in all language textbooks and should be presented to students, even at the basic levels of instruction" (Gutiérrez & Fairclough, 2006, p.186-187). By exposing students to different varieties, learners can become aware of the diversity in

the use of variable structures within the Spanish-speaking world. Our main goal should not be for learners to memorize how each dialect uses a specific form or to commit to memory an exhaustive list of all variables that may constrain the form's use, but to give learners a more realistic view of the language they are learning, given that oftentimes the information that textbooks and grammars present and how that language is used in the real world do not overlap (Etienne & Sax, 2009; Gutiérrez & Fairclough, 2006; Poplack & Dion, 2009).

Many structures and their variant forms could serve to illustrate this disconnection, but the current dissertation will focus on future-time expression following the suggestion by scholars who have posited the future as an especially good example of a structure for which the forms favored in naturalistic use and those featured in classroom instruction may vary widely (Blas Arroyo, 2004; Gutiérrez & Fairclough, 2006). Moreover, future expression has been rather widely researched across dialects and is constrained by linguistic and social factors, so there is ample evidence to inform how instruction on the form might be redesigned(e.g., Almeida & Díaz, 1998; Blas Arroyo, 2000, 2008; Escobar, 1997; Gutiérrez, 1995, Kanwit & Solon, 2013; Orozco, 2005, 2006; Sedano, 1994, 2006; Silva-Corvalán, 1994; Silva-Corvalán & Terrell, 1989). Moreover, as will be reviewed in detail in Chapter 2, the identified effects of linguistic and social variables on future-time expression lend themselves well to concise classroom explanations and together with the fact that the way future is explained in the classroom and how it is used in the real world do not typically overlap make the future an ideal structure of emphasis for this dissertation.

1.4 The current study

Given the call for a better representation of language variation and the enhancement of sociolinguistic competence in the in-classroom contexts so that learners of Spanish can develop a more nuanced level of communicative competence and a more complex interlanguage grammar (Etienne & Sax 2009; Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006), this dissertation implements a pedagogical intervention and a battery of tasks and activities in order for learners to gain awareness of the variation present in native future expression and the factors that affect such variation.

The dissertation contains six additional chapters. Chapter 2 includes the theoretical background and offers an account of the frameworks of communicative competence and sociolinguistic competence, together with an explanation of the importance of sociolinguistic competence in SLA more generally and a description of how futurity is expressed in Spanish. Chapter 3 contains an account of the previous literature, including a description of variation theory, implicit and explicit learning and instruction, and metalinguistic awareness. This is followed in the same chapter by a presentation of studies regarding the acquisition of sociolinguistic competence, acquisition of variation in Spanish, and research of futurity for Spanish. Chapter 3 finishes with a presentation of the gap between textbooks and actual use of the language and with the principal contributions of the dissertation. Chapter 4 contains the research questions that guide the current study and the method section formed by a description of the participants, the tasks, the procedure, the dependent and independent variables, the data analysis, and a description of the pilot study. The results of the study are presented in Chapter 5. Chapter 6 includes a discussion of the dissertation's findings in order to contextualize the rests in the larger body of research that has preceded the study and to offer interpretations and explanations of why learners may have

progressed in the way that they have. The chapter ends with the conclusions, limitations, and future directions of the dissertation.

2.0 Theoretical background

I will begin Chapter 2 with an explanation of the conception of communicative competence stemming from the distinction between performance and competence as proposed by Chomsky and review its historical development as a framework, including its different parts and their definitions. I will present five main models of communicative competence (Bachman & Palmer, 1996; Canale & Swain, 1980; Celce-Murcia, 2007; Celce-Murcia, Dörnyei, & Thurrell, 1995; Hymes, 1967) and then concentrate on the component of communicative competence most central to this dissertation, sociolinguistic competence. I will present both the different conceptualizations and definitions of sociolinguistic competence by different researchers and a discussion of its importance for second language acquisition. The last part of the first chapter will describe how futurity is expressed in Spanish and present the variationist research that exists for native speakers.

2.1 Communicative competence

In the contemporary literature, it is widely understood that a major goal of second language (L2) learning is to develop communicative competence, which allows for successful communication in an L2 (Littlewood, 2006). This goal, however, was not always perceived the same way among linguists:

> "In the early days of second language learning studies, this goal was conceived primarily in terms of grammar and vocabulary – literally, then in terms of *language* elements. However, subsequent developments in linguistics and related disciplines have led to a

much wider conceptualization of the knowledge and abilities that second language learners need to acquire" (Littlewood, 2006, p. 503).

As Littlewood well summarizes, the focus of second language acquisition was formerly on linguistic/grammatical competence; that is, the knowledge of grammar and vocabulary (Geeslin with Long, 2014). In Chomsky's book *Aspects of the Theory of Syntax* (1965), the famous theorist and linguist proposed a distinction between the concepts of competence and performance that would become a hotly debated subject in the next decades, from which counterarguments would later advocate for communicative competence.

Chomsky regarded *competence* as "the monolingual speaker-listener's knowledge of language;" that is, internalized rules that make the speaker capable of producing and understanding grammatical utterances and *performance* as "the actual use of language in real situations", or, otherwise stated, what the speaker actually produces (Bagaric & Mihaljevic Djigunovic, 2007, p.95). For Chomsky, the main goal of linguistic research should be "the speaker-listener's internal grammar that judges the grammaticality of sentences" produced in a homogeneous speech community (Kamiya, 2006, p.64).

Some linguists saw a resemblance between Chomsky's distinction between competence and performance and Ferdinand de Saussure's distinction between *langue* and *parole* where *langue* was understood as "both a social product of the faculty of speech and a collection of necessary conventions that have been adopted by a social body to permit individuals to exercise that faculty" (Saussure, 1959, p.9): in other words, the sets of rules and conventions form part of the *competence* that Chomsky proposed, while *parole* was the execution of the faculty of speech, the actual use of *langue* or what Chomsky called *performance* (Bagaric & Mihaljevic Djigunovic, 2007).

Reacting to Chomsky's (1965) distinction between performance and competence and this distinction's deficiencies, such as the exclusion of heterogeneous speech communities and the sociocultural context of communication. Hymes (1972) was the first to coin the concept of communicative competence by incorporating the concepts that were missing in Chomsky's idea of competence. While Chomsky's idea of language structure and acquisition was context-free, context and social interaction were central concepts for Hymes. As Hymes states, "in addition to linguistic competence (the rules for describing sound systems and for combining sounds into morphemes and morphemes into sentences) one also needed notions of sociolinguistic competence (the rules for using language appropriately in context) to account for language acquisition and language use" (in Celce Murcia, 2007, p.42). Therefore, Hymes' definition of communicative competence encompasses both grammatical and sociolinguistic abilities. Hymes further proposed four parameters to the rules that governed communication: whether something was possible, feasible, appropriate to the context, and performed (Savignon, 1983). Figure 2-1 presents a graphic representation of Hymes' model.

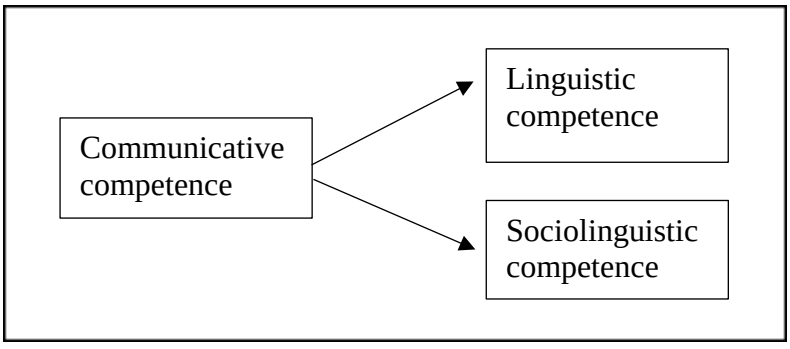

Figure 2-1 Communicative competence model by Hymes (1967, 1972)

Applied linguists and language teachers used Hymes' framework as the groundwork for a new approach to language teaching in response to the commonplace approaches at the time, such as the grammar translation and audiolingual methods. The grammar translation method derived from traditional approaches of teaching Latin and Greek and consisted of providing learners with grammar rules through a deductive and teacher-centered approach and practicing these rules through grammar drills so that students could later translate literary texts between the source language and the target language (Prator & Celce-Murcia, 1979). The audiolingual method, based on Behaviorism and American structuralism, provided learners with stimuli that they could imitate to create good linguistic habits and strengthen associations. The errors learners made were immediately rectified so that learners would not form bad habits (Geeslin with Long, 2014).

These applied linguists and teachers that rebelled against the two classical approaches had "communication as the goal of second or foreign language teaching" together with "building up learners' communicative competence" (Celce-Murcia 2007, p.42); accordingly, communicative purpose was included within the social context wherein the utterances are created and used. After Hymes, additional authors discussed communicative competence (Campbell & Wales, 1970; Candlin, 1981; Halliday, 1970; Savignon, 1972, 1983; Widdowson, 1978, 1983; Wilkins, 1972), which fostered the next major contribution to the concept from Canale and Swain (1980). The authors pulled from the main ideas of Hymes and colleagues, proposing a new theoretical framework of communicative competence towards language teaching and pedagogy. They defined communicative competence as "the relationship and interaction between grammatical competence and sociolinguistic competence", resembling what Hymes had described a few years prior (Canale & Swain, 1980, p.6). They distinguished communicative competence from communicative performance and defined the latter as the "realization of these competences (grammatical and

sociolinguistic) and their interaction in the actual production and comprehension of utterances" (Canale & Swain, 1980, p.6).

In their well-known article, they proposed three main components of communicative competence: grammatical competence, sociolinguistic competence, and strategic competence. They defined grammatical competence as the knowledge learners have regarding the rules of morphology, syntax, sentence grammar, semantics, and phonology, a definition similar to Chomsky's original concept of linguistic competence. Sociolinguistic competence was further divided into two sets of rules: sociocultural rules of use and rules of discourse. Sociocultural rules of use referred to the knowledge speakers have about the appropriateness of utterances with respect to communicative events and contextual factors (sociocultural and sociolinguistic) such as topic, role of participants, norms of interaction, register, etc. Rules of discourse included "cohesion (grammatical links) and coherence (appropriate combination of communicative functions) of groups of utterances" (Canale & Swain, 1980, p.30). The last competence, strategic, was understood as the verbal and nonverbal strategies a learner deploys in order to compensate for a breakdown in other competencies so that communication can still be possible. The authors indicated two types of strategies, noting the interaction between this competence and the other two: the first type related to grammatical competence and the second type to sociolinguistic competence. Figure 2-2 shows a representation of Canale and Swain's model of communicative competence.

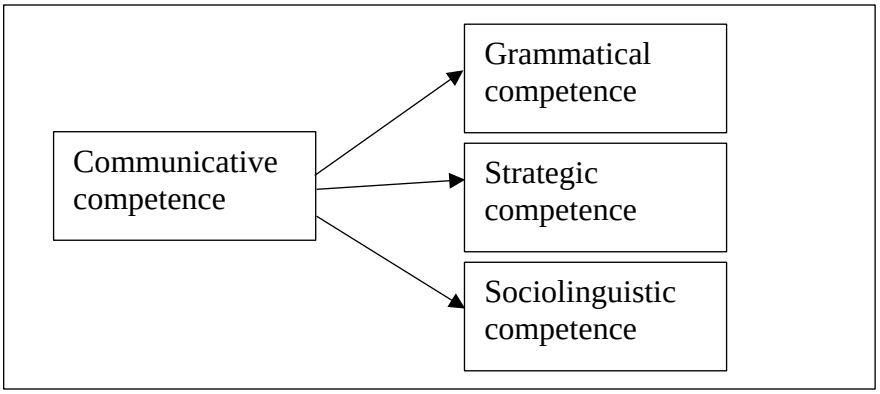

Figure 2-2 Communicative competence model by Canale and Swain (1980)

In summary, Canale and Swain's (1980) main contributions to the framework proposed by Hymes were the addition of strategic competence and the change in terminology from linguistic competence to grammatical competence. Their article was extremely influential since it was the first to describe the importance and potential use of communicative competence for language teaching and to ensure "that non-linguistic aspects of language such as sociolinguistic competence would not be ignored in the understanding of communicative competence" (Mizne, 1997, p.12). In fact, these non-grammatical rules which apply to other aspects of a language must be acquired by the L2 learner in order to be communicatively competent (Kamiya, 2006). Even for a native speaker in their L1, as they grow up, the communicative needs and communication efforts become more complex, and it is not only a matter of knowing the meaning or use of a word or utterance but also whether it is appropriate for the specific context in which it is used. As Hymes (1972) notes: "a normal child acquires knowledge of sentences not only as grammatical but also as appropriate" (in Savignon, 1983, p.12).

After Canale and Swain's approach on communicative competence and for the next three decades, other authors revisited the model by changing some of its components and refining some

of the definitions. Canale (1983) added a fourth competence, discourse competence, and described it “as mastery of rules that determine ways in which forms and meanings are combined to achieve a meaningful unity of spoken or written texts” (Bagaric & Mihaljevic Djigunovic, 2007, p.97).

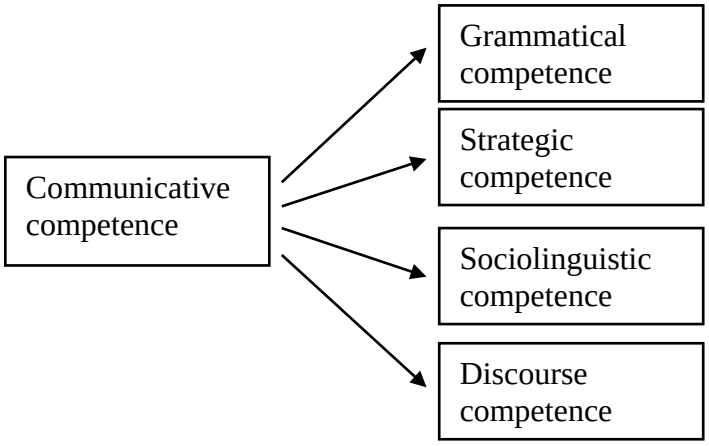

Figure 2-3 Communicative competence model by Canale (1983)

Celce-Murcia, et al. (1995) added actional competence to Canale and Swain’s framework. For these authors, actional competence was “the ability to comprehend and produce all significant speech acts and speech act sets” (Celce-Murcia et al., 1995, p.42). They made two more changes to the framework: sociolinguistic competence became sociocultural competence, understood as “the cultural background knowledge needed to interpret and use a language effectively” (Celce-Murcia et al., 1995, p.42) and grammatical competence was returned to its original conception as linguistic competence in order to promote the idea that this competence included not only the knowledge of the grammar of a language alone but also its lexicon. Their major contribution to

the framework was the important notion that the various components of communicative competence are interrelated (Figure 2-4).

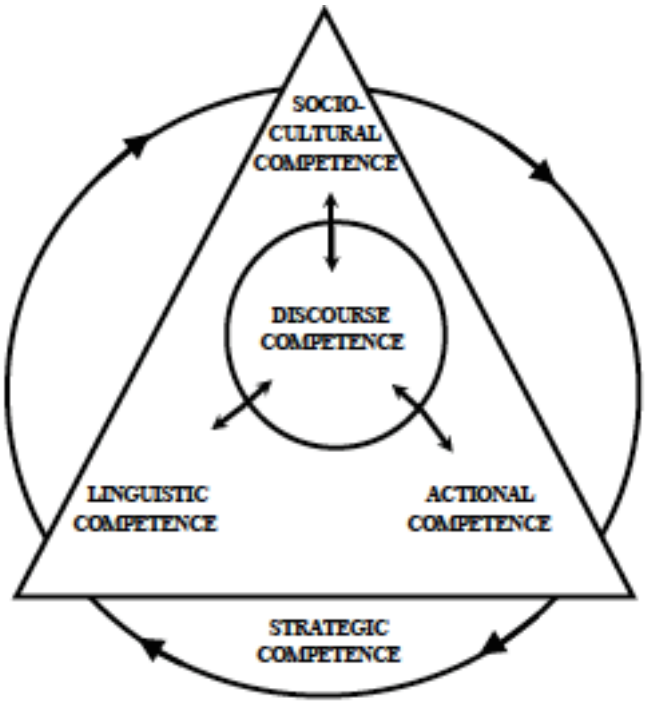

Figure 2-4 Communicative competence model by Celce-Murcia et al. (1995)

(taken from Celce-Murcia, 2007, p.44)

Bachman and Palmer (1996) elaborated on Bachman's (1990) model of communicative language ability which was based on Canale and Swain's (1980) communicative competence model. In Bachman and Palmer (1996), communicative language ability is comprised of two main types of knowledge: language knowledge and strategic competence. The first area, language knowledge, is divided into two areas of knowledge: organizational and pragmatic. These two types

of knowledge are further divided into other subcomponents: a) organizational knowledge, which consists of grammatical knowledge (areas of vocabulary, morphology, syntax, and phonology) and textual knowledge (comprehension and production of texts), and b) pragmatic knowledge, which consists of functional (pragmatic conventions) and sociolinguistic knowledge (sociolinguistic conventions for appropriateness). The second subsection in this model, strategic competence, is comprised of three further subareas: goal setting, assessment, and planning. According to some authors, Bachman and Palmer's model is "more complex, more comprehensive and much clearer" when compared to that of Canale and Swain's (Bagaric & Mihaljevic Djigunovic, 2007, p.99) (Figure 2-5).

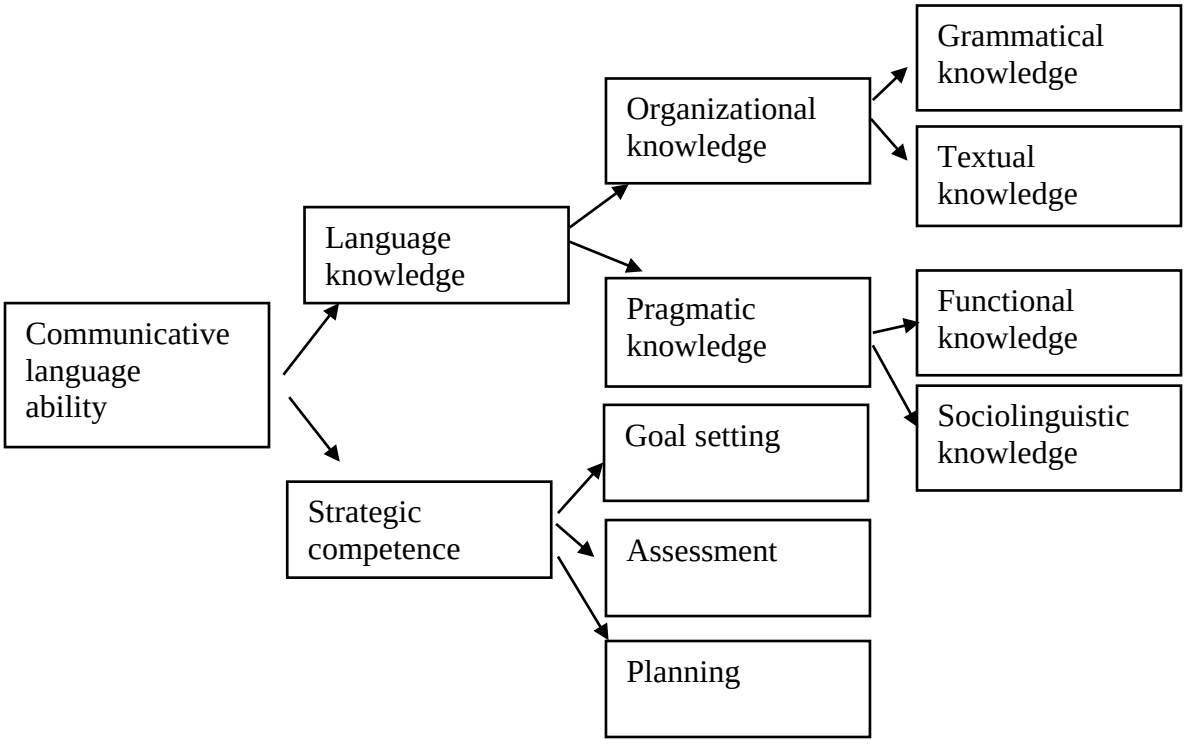

Figure 2-5 Communicative competence model by Bachman and Palmer (1996)

Almost 10 years after Celce-Murcia et al. (1995) modified Canale and Swain's model (1980), Celce-Murcia (2007) revisited her own previous model and proposed a revision so that it would be more useful for and directed to language teachers. Her model contained six interrelated components. The first component, sociocultural competence, was equated with pragmatic knowledge; that is, the knowledge that allows a speaker to produce appropriate utterances taking into account the social and cultural context in which communication takes place. This competence also included "knowledge of language variation with reference to sociocultural norms of the target language" (Celce-Murcia, 2007, p.46). The second was discourse competence, which "refers to the selection, sequencing, and arrangement of words, structures, and utterances to achieve a unified spoken message" (Celce-Murcia, 2007, p.46). Discourse competence was composed of four sub-components: cohesion, deixis, coherence, and generic structure. Linguistic competence is understood as in previous models and includes knowledge about phonology, lexicon, morphology, and syntax. Formulaic competence, the fifth competence, is composed of constructs, or "chunks" of language, such as routines, collocations, idioms, and lexical frames that speakers use in everyday communication. Interactional competence is divided into three areas: actional competence, conversational competence, and nonverbal/paralinguistic competence. The last competence, strategic, refers to those processes that speakers/learners use to "enhance their own L2 learning" (Celce-Murcia, 2007, p.50). Strategic competence is divided into two major strategies: learning and communication. Learning strategies include cognitive, metacognitive, and memory-related. Communication strategies include achievement, stalling, self-monitoring, interacting, and social. In the words of Celce-Murcia (2007) "the revised model […] is comprehensive and accurate, it suggests a number of principles for the design and implementation

of language courses that aim at giving learners the knowledge and skills they need to be linguistically and culturally competent in a second or foreign language" (p. 51).

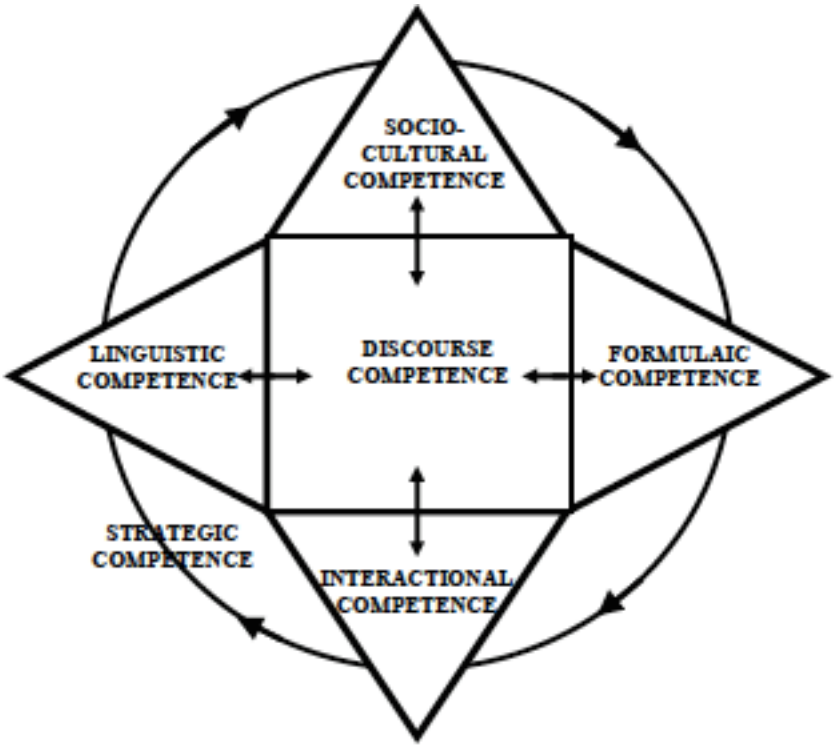

Figure 2-6 Communicative competence model by Celce-Murcia (2007)

(taken from Celce-Murcia, 2007, p.45)

In sum, Chomsky's definitions of the concepts of competence and performance and focus on decontextualized grammar (i.e., syntax) caused a series of reactions that criticized the lack of sociocultural context of communication in his approach, and that, at the same time, yielded work on communicative competence (Hymes, 1972). While previous models such as the grammar

translation and the audiolingual methods focused solely on translations and grammar rules and drills (thus emphasizing grammar), the model proposed by Hymes included linguistic and sociolinguistic competences. This model was expanded by Canale and Swain (1980) who included strategic competence as one of the three areas that formed communicative competence. Later on, Canale (1983) added discourse competence. The other three models presented in this section: Celce-Murcia et al. (1995), Bachman and Palmer (1996), and Celce-Murcia (2007) based their models on Canale and Swain's (1980) main ideas but further clarified and divided the component parts much more in depth than their predecessors. Celce-Murcia et al. (1995) and Celce-Murcia (2007) understood the model as a more cohesive approach, thus interrelating its components so that all components affected each other. Bachman and Palmer (1996), rearranged the components under two major concepts: language knowledge and strategic competence but did not make the components interrelated as in Celce-Murcia (2007)'s approach.

Having provided an overview of the changing nature of the framework of communicative competence and its component parts as proposed by numerous linguists, I now focus on sociolinguistic competence, its definition by different authors, and its importance in the field. I will return to the acquisition of sociolinguistic competence in empirical studies in Chapter 3.

2.2 Sociolinguistic competence

For Hymes (1967, 1972), Campbell and Wells (1970), Canale and Swain (1980) and other authors, sociolinguistic competence referred to the speaker's knowledge of the rules of language use. Canale and Swain further added that it was the "knowledge for interpreting utterances for social meaning" (p.30), and divided this competence into sociocultural rules of use and rules of

discourse. Savignon (1983) added to that notion by claiming that "sociolinguistic competence requires an understanding of the social context in which language is used: the roles of the participants, the information they share, and the function of the interaction" (p.37). Littlewood (2006) thought of sociolinguistic competence to consist of "knowledge of how to use language appropriately in social situations, e.g., conveying suitable degrees of formality, directness and so on" (p.503), similar to how Geeslin with Long define this competence in their 2013 book. As Mizne (1997) writes, this competence "requires adjusting one's grammatical forms to be appropriate to the setting in which the communication takes place" (p.12). Dewaele, who did work on the acquisition of sociolinguistic competence in French as a foreign language, abides by the definition of sociolinguistic competence proposed by Lyster (1994) "as the capacity to recognize and produce socially appropriate speech in context" (p.263).

Celce-Murcia et al. (1995) and Celce-Murcia (2007) labeled this competence as sociocultural and not as sociolinguistic, given the importance of both social and cultural factors of the context. They understood sociocultural competence as pragmatic knowledge, thus joining the two competencies into one and defined it as knowledge of "how to express messages appropriately within the overall social and cultural context of communication" including language variation present in the target language (Celce-Murcia, 2007, p.46). The three main areas of sociocultural competence were social contextual factors such as age, gender, status, and social distance; stylistic appropriateness that include politeness strategies, genres, and registers; and cultural factors including language variation and other background knowledge about the target language. Bachman and Palmer (1996) also included the topic of language variation into their conceptualization of sociolinguistic competence, defining it as the "language user's knowledge to create or interpret language appropriate to a particular language use setting (including) knowledge of

dialects/varieties, registers, natural or idiomatic expressions, cultural references, and figures of speech" (Zhang, 2018, p. 30).

Even though Celce-Murcia (2007) and others propose the concept of sociocultural competence, given the extensive research on the acquisition of sociolinguistic competence (e.g., Dewaele, 2004; Lemée, 2002; Regan, 1995, 1996, 1997, 2004; Rehner, 2002; van Compernolle & Williams, 2012a), for this dissertation I will consider the concept of *sociolinguistic competence* as defined and understood by Canale and Swain (1980). Therefore, for the goal of this dissertation, I assume that "when language learners learn how to manipulate their utterances to make them appropriate to the situation in which they are speaking, it is said that they have achieved *sociolinguistic competence* in that language" (Mizne, 1997, p.8-9).

In sum, sociolinguistic competence entails speakers to be familiar with the social context of the utterance and to use appropriate forms for that specific context (e.g., Hymes, 1967; Campbell and Wells, 1970; Canale and Swain, 1980). For Celce-Murcia et al. (1995) and Celce-Murcia (2007), this competence required knowledge about the contextual factors of the utterance but also about the cultural factors that would allow a user of the language to know what is appropriate within that culture, therefore they changed the name of this competence to sociocultural instead of sociolinguistic.

Having described its evolving definitions, I move on now to discuss the importance of sociolinguistic competence.

2.3 Importance of sociolinguistic competence

The field of second language acquisition and language teaching has evolved from considering linguistic competence and the knowledge of linguistic structures as the goal of language learning into including other factors such as the context and the appropriateness of the utterance. A language learner may produce an utterance that is grammatical and perfectly understandable to native ears, but that is missing the social meaning given the lack of knowledge of sociolinguistic competence by the learner; “the result (of this exchange) is grammatically sound statements that are misunderstood (by the listener) since (such statements) do not conform to the sociolinguistic norms of the target language” (Mizne, 1997, p.9). It is clear “that grammar and lexical meanings of words alone cannot give persons the ability to express their meaning in a foreign or second language. There are some other factors that must play a role in language learning” (Mizne, 1997, p.7). These other factors are related to the cultural context such as the time of the utterance, the setting, and the participants, as all of these factors play a role in the expression of meaning being accurate and appropriate (Mizne, 1997). So, as Van Compernolle and Williams (2012a) say, “within this perspective (of communicative competence), linguistic competence is never enough, because it is also necessary to know which features of a language should or should not be used in particular sociocultural contexts” (p.185) given that these contexts are particular to a specific culture in general and community of speech in particular. Thus, sociolinguistic competence is considered a vital part of communicative competence (Geeslin with Long, 2014).

The idea that sociocultural contexts are particular to specific cultures relates to two topics: sociolinguistic relativity and sociolinguistic variation. Sociolinguistic relativity refers to the fact that each community has its own way to communicate that reflects the conventions and rules

shared by the members of that specific community and that those patterns of use change from community to community (Wolfson, 1989). Therefore, in order for students to learn the ways in which members of a specific community communicate with each other, they need to learn the culture of that society, thus "emphasizing again the importance of teaching both cultural and sociolinguistic aspects of language" (Mizne, 1997, p.13).

The abilities and competencies described in the communicative competence models are considered what "a learner must have in order to be a competent user of a given language" (Geeslin with Long, 2014, p.70). However, sociolinguistic competence has traditionally received less attention than the other competencies, especially grammatical competence (Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006). Despite traditionally receiving less emphasis in the classroom than grammatical competence, sociolinguistic competence is an important factor in becoming competent and able to function in a language given that 1) variation abounds in languages and 2) natives differ in the way they use language for linguistic, social, stylistic, and pragmatic reasons, among others. Among the knowledge learners need to acquire in order to develop sociolinguistic competence is therefore the sociolinguistic variation found within native speakers.

Sociolinguistic variation, therefore, "refers to the choices a speaker makes when selecting the forms necessary to convey a message that is appropriate in a given context" (sometimes subconsciously) (Geeslin with Long, 2014, p. 3), and this variation, also referred to as Type II variation (Rehner, 2002), is key for the acquisition of sociolinguistic competence and to communicate in a foreign language as a whole (Geeslin with Long, 2014). Though native speakers may not be able to put in words the differences between the variants of the same variable and the factors that affect this choice, they know enough about sociolinguistic variation to subconsciously

choose the appropriate variant (Geeslin with Long, 2014). Sociolinguistic variation has an effect on the comprehension and production in second languages at both the linguistic and nonlinguistic levels.

In recent years, variationist research has expanded and developed our knowledge on variable forms within natives and learners while exploring the linguistic and social variables that constrain the use of variable forms in a variety of languages and for a wide range of variation - not only morphosyntactic, but also phonetic, pragmatic, and stylistic.

Despite the growing presence and relevance of variationist studies that provide information on how speakers of a language use certain variable structures (e.g., Geeslin, 2003; Gutiérrez, 1995; Orozco, 2005; Sedano, 1994) and the work in acquisition of foreign languages in indicating the importance of sociolinguistic competence as an integral part of communicative competence (e.g., Mizne, 1997; Regan, 1996; Valdman, 2003; van Compernolle & Williams, 2011, 2012a), language variation and sociolinguistic competence have often been ignored in the fields of teaching and education, along with in language classrooms, in informing how both language and the skills learners need to develop are taught (Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006).

Summing up, sociolinguistic competence has traditionally received less attention in the classroom and in textbooks, even though the context and the appropriateness of the utterance are key components to successful communication. Grammatical competence has been the focus of language teaching for decades; however, a learner can produce a grammatically acceptable utterance that is not appropriate according to contextual factors such as the situation and the interlocutor, thus not realizing fully successful communication. Sociolinguistic relativity and sociolinguistic variation are key concepts for the understanding of sociolinguistic competence, as the former relates to the differences that exist in how communities express meaning through

utterances according to their own rules and conventions, and the latter to the sometimes-subconscious choices speakers make depending on the context of the utterance.

2.4 Futurity in Spanish

Several structures could have been used to study sociolinguistic competence, but future-time expression was chosen because it is expressed via numerous forms but lags behind in receiving attention in variationist studies that include pedagogical interventions. As we will discuss in the next chapter, future-time expression has been examined through observations on how future is acquired in traditional classrooms and in study abroad locations, although in neither case through pedagogical interventions beyond the standard curriculum. I will next describe how future is expressed in Spanish and present an overview of the literature for Spanish native speakers and the trends observed from previous studies.

As in English and other languages, there exist many ways to convey futurity in Spanish: periphrastic and morphological future forms, present indicative, conditional, present subjunctive, periphrastic subjunctive forms, modal + infinitive (i.e., lexical futures), imperfect subjunctive, imperfect indicative, present perfect indicative, and *ir* "to go" + gerund (Gudmestad & Geeslin, 2011, Gutiérrez, 1995; Solon & Kanwit, 2014). The three most common forms that have received attention in research are the morphological or synthetic future (MF) (1), the periphrastic or analytical future (PF) (2), and the present indicative (PI) (3) (Blas Arroyo, 2004; Gudmestad & Geeslin, 2011; Kanwit & Solon, 2013; Kanwit, 2017, Orozco, 2005, Sedano 1994; Silva-Corvalán & Terrell, 1989; Solon & Kanwit, 2014):

1) *Saldré para el aeropuerto mañana*.

Leave.1SG.FUT. to the airport tomorrow.

"I will leave (MF) for the airport tomorrow."

2) *Voy a salir para el aeropuerto mañana.*
AUX.go.1SG.PRES to leave.INF to the airport tomorrow.

"I am going to leave (PF) for the airport tomorrow."

3) *Salgo para el aeropuerto mañana.*
Leave.1SG.PRES to the airport tomorrow.

"I leave (PI) for the airport tomorrow."

(From Kanwit & Solon, 2013, p. 206)

There is a growing body of variationist research that targets future-time expression in Spanish in different geographical locations and using various elicitation tasks, informing us of general trends of future expression and the social and linguistic variables that constrain native use in the Spanish-speaking world. The main focus of attention has been on Latin American Spanish for which numerous accounts exist: Argentina (Sánchez & Ferrer, 1990; Vidal de Battini, 1964), Chile (Oroz, 1964; Silva Corvalán & Terrell, 1989), Colombia (Flores, 1964; Montes Giraldo, 1962; Orozco, 2005), Cuba (Paufler, 1977), the Dominican Republic (Silva Corvalán & Terrell, 1989), Mexico (Ávila, 1968; Gutiérrez, 1990, 1994, 2002; Kanwit & Solon, 2013; Lope Blanch, 1983; Moreno de Alba, 1970, 1978; Valdez, 1969), Perú (Escobar, 1997), Puerto Rico (Silva Corvalán & Terrell, 1989; Zentella, 1997), and Venezuela (Iuliano, 1976; Iuliano & De Stefano, 1979; Sedano, 1994; Silva-Corvalán & Terrell, 1989).

Some of the factors that affect native variation of the future are the distance between speech and event time, the presence of temporal adverbials, the type of clause, grammatical person and number, and the certainty of the event, among others (Blas Arroyo, 2008; Gutiérrez, 1995; Orozco, 2005, 2007; Sedano, 1994; Kanwit & Solon, 2013). The general patterns observed in these countries were that MF usage has declined in favor of the PF, which has become the most common form to express futurity, appearing in most contexts, whereas the PI is less common and more restricted to immediate contexts in the presence of a temporal adverb (Kanwit, 2017; Kanwit & Solon, 2013). For example, Orozco (2005), who investigated the Spanish variety in Northern Colombia, reported production rates of 18.5% for MF and 45.9% for PF, thus indicating the vitality and preference of the PF in that variety. The research for Latin American varieties exemplifies a change in progress that is accelerated in U.S. Spanish varieties due to contact with English (Gutiérrez, 1990, 1995, 2002; Orozco, 2006; Silva-Corvalán, 1994; Zentella, 1990). The evidence from U.S. Spanish varieties such as areas in the Southwest of the U.S. (Gutiérrez, 1995, 2002), Los Angeles (Silva-Corvalán, 1994), and New York (Zentella, 1990) showed low rates or no use of MF indicating its way to disappearance. This consistent trend of MF reduction overall led some authors to generalize it to all of the Spanish-speaking world (Orozco, 2005). Though true for the majority of the varieties on one side of the Atlantic, some studies (the few that exist) that examined Peninsular Spanish uncovered several differences from the general trend of reduction of MF: while there is evidence to claim that PF use has increased in Spain, there is still maintenance of MF for some areas that have been researched (Blas Arroyo, 2008; Kanwit & Solon, 2013).

When compared to the amount of research on futurity for Latin American varieties, research about futurity for Peninsular Spanish is scarce. However, a number of studies have investigated the Spanish of the Canary Islands where researchers found that the MF still had some

degree of vitality, especially in written texts (Almeida & Díaz Peralta, 1998; Díaz Peralta & Almeida, 2000; Troya, 1998).

To this day, there are only two studies that offer an insight on Peninsular Spanish where Spanish is in contact with Valencian: Castellón (Blas Arroyo, 2008) and Valencia (Kanwit & Solon, 2013). Blas Arroyo (2008) researched the patterns of usage of the MF and PF in the Sociolinguistic Corpus of Castellón and reported 55.5% usage of MF compared to 44.5% of PF, providing evidence to support both the language change that is similar to Latin-American varieties as well as the inhibition of that change (i.e., deceleration) due to the vitality the MF still enjoys in the Spanish of Castellón. Kanwit and Solon (2013) reported rates of selection from a preference task of MF, PF, and PI for Spanish native speakers in Valencia: 45.0% for MF, 47.5% for PF, and 7.1% for PI. The results of Kanwit and Solon (2013) also aligned with the same trends reported in Blas Arroyo (2008). Kanwit and Solon (2013) reported the factors that affected native selection of future forms: temporal distance, clause type, and presence of a temporal adverbial. Blas Arroyo (2008) and Kanwit and Solon (2013) thus reported maintenance of MF and explained this finding due to the contact situation with Valencian given that, similar to Catalan, it expresses the future mainly through MF as the canonical future form:

(4) *El concert començarà ara mateix.*
The concert start.1SG.FUT. right now

"The concert will start (MF) right now."

Contrary to the case of Spanish in contact with English where the change in progress seems to be accelerated towards the disappearance of MF, language contact in Spain appears to be slowing down the change in progress observed in Latin American Spanish and completed in U.S.

Spanish (Enrique-Arias, 2010). This demonstrates that for these dialects the MF is not declining in favor of the PF at the rates previously observed in Latin American Spanish.

In conclusion**,** Spanish speakers may express futurity by means of different structures, but the three most common ones are the morphological future, periphrastic future, and the present indicative (Blas Arroyo, 2004; Gudmestad & Geeslin, 2011; Kanwit & Solon, 2013; Kanwit, 2017, Orozco, 2005, Sedano 1994; Silva-Corvalán & Terrell, 1989; Solon & Kanwit, 2014). These forms have received the most attention in research. Numerous researchers have focused their investigations in the Spanish of Latin America and the Spanish in the U.S (Ávila, 1968; Escobar, 1997; Flores, 1964; Gutiérrez, 1990, 1994, 2002; Iuliano, 1976; Iuliano & De Stefano, 1979; Kanwit & Solon, 2013; Lope Blanch, 1983; Montes Giraldo, 1962; Moreno de Alba, 1970, 1978; Oroz, 1964; Orozco, 2005; Paufler, 1977; Sánchez & Ferrer, 1990; Sedano, 1994; Silva Corvalán & Terrell, 1989; Valdez, 1969; Vidal de Battini, 1964; Zentella, 1997).

The overall trends indicate that the morphological future is declining in favor of the periphrastic future in Latin America (e.g., Orozco, 2007). Researchers have observed this change in progress that was almost completed for the varieties of Spanish in the US explored in the literature (Gutiérrez, 1990, 1995, 2002; Orozco, 2006; Silva-Corvalán, 1994; Zentella, 1990). However, some researchers have provided evidence for the vitality of the MF in some regions in Spain, especially in the Valencian Community (Blas Arroyo, 2008 in Castelló, and Kanwit & Solon, 2013 in Valencia) and the Canary Islands (Almeida & Díaz Peralta, 1998; Díaz Peralta & Almeida, 2000; Troya, 1998). The former studies explained the vitality of the MF due to the contact situation of Spanish with Valencian in these communities. Researchers have also reported on the effect of independent variables for future-time expression: distance between speech and event time, the presence of temporal adverbials, and the type of clause, among others (Blas Arroyo,

2008; Gudmestad & Geeslin, 2011; Kanwit & Solon, 2013, Orozco, 2005; Sedano, 2006). Regarding temporal distance, researchers found that immediate contexts favored the use of the periphrastic future while distant contexts especially favored the morphological future. As for the presence of a temporal adverbial, the morphological future was preferred over the periphrastic future when an adverbial was present. Lastly, subordinate clauses favored the use of the periphrastic future (Kanwit and Solon, 2013).

3.0 Previous literature

In the present chapter, I will present the variationist approach as the framework overarching this dissertation. Next, I will give an overview of implicit and explicit learning and instruction including the concept of metalinguistic awareness and task-based variation. The most important part of this chapter will be the debate that exists on how sociolinguistic competence is better acquired (in class or during study abroad), and I will present the opinions of different researchers on this topic. Later, I will discuss previous studies that have tracked the acquisition of sociolinguistic competence by second language learners through different linguistic structures starting with studies that have explored study abroad and ending with in-class attempts. Next, I will offer a comprehensive review of how futurity is acquired by learners and the chapter will end with a presentation of the gap between textbooks and actual use of the language and with the principal contributions of the current study.

3.1 Variation theory

One vein of research has moved towards explaining and describing the variability in interlanguage from early stages of acquisition to native-like usage of forms: L2 variationism. This vein of research followed the early example of work that investigated acquisition in the earlier stages of the learning process and that provided evidence for the systematicity and the rules that governed the interlanguage of learners (Bayley & Preston, 1996). This new field of variationist research evolved and explained the variability that exists in learners comparing it to the one that

native speakers show (Geeslin with Long, 2014). Variationist research, based on sociolinguistics and the work of Labov (1972), focuses on investigating the overall rates of use of the variants of a variable structure (future, past, mood, copula, etc.) and the effects of linguistic and social factors (among them gender, socioeconomic status, register and regional origin) on the choice within the variants therefore "uncovering the systematic nature of second language variation" (Geeslin with Long, 2014, p.167). This area of linguistics deals with the probabilities of variants being used in specific contexts. This probabilistic approach is illustrated with Preston's (2000) coin-tossing metaphor. In this metaphor, each side of the coin represents one of the variants of the dependent variable the speaker needs to choose from. Selection is not random, but the factors that favor the selection of a variant add weight to each side of the coin; as Dewaele (2004) puts it "several factors contribute to the probability of one variant being selected" (p. 302). For example, one side of the coin would be a variant of futurity such as the periphrastic future and the other side would be the morphological future. Factors such as temporal distance and presence of a temporal adverbial would add weight to the side of the coin of a particular variant. As reported in the previous chapter, when the temporal distance was more than a year away (distant future) and a temporal adverbial was present, the morphological future was preferred, therefore these variants (presence of temporal adverbial and distant future) would make it more likely (although not categorically) for the morphological future to be selected.

Variationist studies have informed second language acquisition more generally by implementing new methodologies typical of sociolinguistic research, such as multivariate analysis using Goldvarb X (Sankoff, Tagliamonte, & Smith, 2005) and Varbrul (Sankoff, 1988). Goldvarb X evaluates the interactions between both linguistic and extralinguistic independent variables and the dependent variable and offers a weight that established the probability of an independent

variable having an effect on the dependent variable. Varbrul analysis "is used to determine which of the linguistic and extra-linguistic independent variables contribute to the prediction of the use of one of the variants of the dependent variable over the other when all factors are considered simultaneously in a single statistical model" (Kanwit, 2014, p. 12). More recent variationist studies (e.g. Kanwit, Elias, & Clay, 2018) have used the Rbrul package of R for their statistical analysis, thus moving away from a tradition of Goldvarb and Varbrul analyses (Johnson, 2009). When compared to Goldvarb X, Rbrul offers more flexibility and does not overestimate effects significance as it constitutes a "new version of the variable rule program" (Johnson, 2009, p.359). Another advantage of Rbrul is that while evaluating the role of the independent variables on the dependent variables it allows the researcher to account for the individual participant and the individual verb as random effects, since each participant provides more than one token and verbs may be represented differentially across the different categories of the independent variables (Johnson, 2009; Tagliamonte, 2012).

Early variationist studies researched the acquisition of English and French as second languages (e.g., Adamson & Regan, 1991; Bayley & Langman, 2004; Canale & Swain, 1980; Preston, 1993; Regan, 1995, 2004; Rehner, Mougeon, & Nadasdi, 2003; Tarone, 1983). For the past two decades, the empirical research for Spanish as an L2 has been expanding and including more variants and structures that show variation in L1 speakers (e.g., copula contrast in Geeslin, 2000, 2003; variable subject expression in Geeslin & Gudmestad, 2008b; variable mood in Gudmestad, 2012; futurity in Kanwit & Solon, 2013).[1]

1 See Díaz-Campos (2011) for an overview.

I will now explore some of the concepts upon which the variationist framework is built. Labov (1966) is considered the father of variationist sociolinguistics stemming from his work on the variable production of /r/ in three department stores in New York City. He discovered the systematicity of the variation according to linguistic and social factors that conditioned such production. Labov's work on native speakers that uncovered the conditioning of linguistic and social factors in their choice of variants was later used by other scholars to investigate variability in L2 speech. In 1972, Selinker is usually given credit for establishing the concept of interlanguage (IL) in reference to the system of learner language that contained both features of the first and the target languages. ILs then also follow the universal principles that are known to govern all-natural languages, and even though they are mixed systems (containing elements from the first and the target language) they do not violate the universal principles of either language. ILs are also known to be independent in that they also contain elements that are part of neither system and are dynamic systems that are restructured as the learners acquire more structures. Nevertheless, in an earlier study, Corder (1967) noted that systematicity is a characteristic of IL because this type of language is not random but systematic, since "when learners make an error repeatedly, that error is stemming from a rule in the interlanguage" (Geeslin with Long, 2014, p.14). Corder demystified errors from being considered mere deviations of the target language that should be corrected immediately, as in Audiolingual Methods, but to be taken as an indication of progress in that a learner is forming new rules and generalizations about the language to be learned. Corder further distinguished input from intake, defining input as "the linguistic data available to a learner", while intake is defined as "only the portion of the input that is actually attended to and made available to the developing system" (Geeslin with Long, 2014, p.16). ILs are understood to be always changing and restructuring within the gradual process of language acquisition "rather than (going through) a

series of instantaneous changes from non-target like structures toward target-like structures and patterns of use" (Geeslin with Long, 2014, p.16).

Two very important concepts for the variationist framework are Type I and Type II variation. Type I (Rehner, 2002) or vertical variation (Adamson & Regan, 1991) is seen in "the manner in which a lower-level learner varies in expressing the same function in more than one way (…). Such variability reflects movement toward the next developmental stage and usually entails alternating between a nativelike and a developmental form" (Kanwit 2017, p.2) such as *sé* and *sabo*, respectively, to express the present indicative of the verb *saber* (to know). Type II, or horizontal, variation, on the other hand, concerns the use of two native-like forms and refers to the fact that "more proficient learners may create a rule-based system in which they use one form in a particular linguistic or social context and another variant in a different context" (Kanwit, 2017, p.2). This variation, then, is related to the variation observed in native speakers who also vary in their use of structures depending on linguistic and social factors such as age, gender, speech community, socioeconomic status, among others. An example of Type II variation, or native-like variation, is seen in a recent article about intensification of adjectives that showed that native Spanish speakers show variation in the way they intensify adjectives by means of using the adverbs *muy* 'very' and *bien* 'really' (Kanwit, Terán, & Pisabarro Sarrió, 2017). The fact that learners show different types of variation where more than one form is used to express the same function relates to the concept of multifunctionality, a concept proposed by Andersen (1984, 1990). Multifunctionality refers to when multiple forms are used to express one meaning or when multiple meanings are expressed with one single form (Bardovi-Harlig, 2015). An example of this movement from one-to-one mapping to multifunctionality can be seen in how learners of English acquire futurity. Bardovi-Harlig (2004, 2005) reported how learners in the early stages of

acquisition expressed futurity only with the form *will*, and as their learning process progressed, they started to use an additional form, *going to.* As Bardovi-Harlig writes: "with time, learners do expand their systems beyond the initial stage described by the one-to-one principle and move into a stage characterized by multifunctionality *(such that learners may express future with either will or going to)*, but at the outset they begin with a transparent, invariant, and simple association of futurity and *will*" (Bardovi-Harlig, 2015, p.57) (parenthesis and emphasis added).

Type I and Type II variation and multifunctionality are important constructs considered in variationist approaches (Kanwit, 2017) and in the concept-oriented approach (von Stutterheim & Klein, 1987), respectively. The concept-oriented approach has been used in conjunction with variationist approaches as researchers consider the former approach "compatible with research on variation in second language acquisition and the acquisition of variable targets" (Bardovi-Harlig, 2015, p.58).[2] A basic premise of the concept-oriented approach is that "as new forms enter the interlanguage, the inventory and balance of forms change, which in turn alters the functional load that each form bears" (Kanwit, 2017, p.4). Meaningful units (i.e., words and morphemes) have a function and an associated functional load within an utterance. For instance, if an adverb such as *mañana* 'tomorrow' were to be the only word in an utterance that expressed future time, the functional load of that word would be high, since it expresses 100% of the futurity in its utterance. If, instead, the utterance contained some future morphology on the verb such as *estudiaré mañana* 'I will study tomorrow', the functional load would be shared between the adverb and the verb.

[2] For an in-depth discussion of the concept-oriented approach, see Bardovi-Harlig (2015). For an in depth-discussion of the compatibility between variationist approaches and concept-oriented approaches see Kanwit (2017).

This process of forms entering the interlanguage, which is then restructured to fit the new forms, relates to the U-shaped development that learners show during their acquisition process. As learners redistribute functional loads and restructure the forms, they are making sense of more complex options than they had in earlier stages of acquisition. Thus, they may at first show progress mastering the less complex form (one-to-one mapping), but as they map more forms to one meaning (multifunctionality) and learn the linguistic and social variables affecting the use of those forms, they may show more errors in usage. More errors result in a decrease in their accuracy, which is visible until they master the use of multiple forms to express one meaning in later stages of acquisition, hence showing U-shaped development. The benefits of using the concept-oriented approach is that "all forms that express a particular function are considered, which provides a functional approach that can illustrate the full extent to which learners convey meaning" (Kanwit, 2017, p. 3). Therefore, research following this approach does not limit the exploration to specific forms *a priori* but researchers observe all the forms learners use to express a specific meaning. For example, the coding of the future-time forms in the present dissertation is not limited to only verbs with a future morphology such as the morphological future, but also includes other structures and verbs as long as they have an unambiguous future reference such as the present indicative, the periphrastic future, lexical futures, and the present progressive, among other forms.

In sum, variation theory aims to describe the variability that exists in the interlanguage of learners from the beginning stages of acquisition to their use of native-like forms. This vein of research compares learner variation with native variation by exploring overall rates of use of the variants of a variable structure and the effects of linguistic and social factors on the choice. This idea is illustrated by the coin-tossing metaphor by Preston (2000). Selection is not random, but the weight of each factor affects the choice of one variant or another. To explore the effect and weight

of independent variables on the dependent variable, variationist studies have used different analysis in Goldvarb X, Varbrul, and more recently Rbrul. Though early variationist studies focused on English and French as second languages, in the past few decades studies focusing on Spanish as a second language have proliferated in the variationist field. Labov's work on native speakers and the factors conditioning the choice of variants set the path for researchers to use similar methods. Interlanguage as a concept was defined as a mixed ever-changing system that contained both forms of the native language, the target language and forms that belonged to neither, and in which errors were systematic rather than random (Selinker, 1972). Type I and Type II variation are central concepts within the variationist approach as one explains the variation found in learners and the other the variation found in natives. Within Type I variation, learners are known to move from one-to-one mapping towards multifunctionality but also to show U-shaped development. The concept-oriented approach which considers all forms expressing a specific function has been used in conjunction with variationist approaches.

Now that variation theory and the concept-oriented approach have been introduced, we turn our attention to implicit and explicit learning and instruction and the concept of metalinguistic awareness.

3.2 Implicit versus explicit learning

The main distinctions between implicit and explicit learning come from cognitive psychology and refer to the learners' perspective. The two types of learning show differences regarding a series of factors: demands on memory, attention, and awareness. *Implicit learning* takes place without requiring attention and "learners remain unaware of the learning that has taken

place, although it is evident in the behavioral responses they make" (R. Ellis, 2009, p.3). Hence, learners are unable to put their knowledge into words. This learning does not require high levels of attention or conscious memorization. According to Dörnyei (2009), this type of learning involves the acquisition of knowledge without conscious awareness and attempt to acquire such knowledge, thus making acquisition automatic.

On the other hand, *explicit learning* takes place through memorization and involves the use of working memory. It is a conscious type of learning and the knowledge that is acquired is explicitly represented (N. Ellis, 1994; Hulstijn, 2002). Therefore, "learners are aware that they have learned something and can verbalize what they have learned" (R. Ellis, 2009, p.3). For Dörnyei (2009), this type of learning refers to "the learner's conscious and deliberate attempt to master some material or solve a problem" (p.136). The distinction between implicit and explicit learning has become an area of debate as some researchers believe that these two types of learning are completely dissociated from each other (i.e., do not interface), whereas others do (e.g., Reber, 1993; Reber, Walkenfeld, & Hernstadt, 1991). It is generally agreed that some sort of awareness is needed in order for learning to occur, which would therefore make implicit learning also somewhat conscious (R. Schmidt, 1994, 2001).

It is also important to note the difference between implicit and explicit learning versus implicit and explicit knowledge (R. Schmidt, 1994). According to R. Ellis (2009), learning "refers to the *processes* involved in learning", while knowledge "concerns the *products* of learning" (p.6). Overall, explicit knowledge is conscious, verbalizable, part of controlled processing, and it is stored in declarative memory only. On the other hand, implicit knowledge is tacit, seen in learners' behavior, part of automatic processing, and it is stored in procedural memory. This mapping, however, does not seem to be as straightforward as it appears (R. Ellis, 2009): procedural memory

only stores implicit knowledge, whereas declarative memory stores explicit knowledge but it can also store implicit knowledge.[3]

A further disagreement exists among researchers regarding the sort of knowledge that stems from implicit learning, as some argue that "it consists of knowledge of fragments or exemplars, and others arguing that it is rule-based" (R. Ellis, 2009, p.8). It is possible too that learners develop an explicit representation of some knowledge they acquired implicitly and while learning something explicitly, they may acquire some other linguistic feature implicitly; however, it is still possible that implicit instruction can result in both implicit and explicit knowledge, whereas explicit instruction likely only yields explicit learning (since rules are being provided) (R. Ellis, 2009).[4]

On the whole, cognitive psychology set the basis for the distinction between implicit and explicit learning. The differences between these concepts are based on memory, attention, and awareness. Implicit learning does not include the intern to form a rule, as learners are likely not able to articulate their knowledge into words. It does not require conscious memorization. Explicit learning involves attempting to form a rule and uses working memory, it is conscious and explicitly represented, and thus learners can verbalize their knowledge as some sort of rule. Many researchers do not completely agree with the distinction as they believe some awareness is necessary for any type of learning to occur. A difference also exists between learning and knowledge: learning refers to the cognitive processes while knowledge refers to the result of learning.

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[3] For a discussion on procedural and declarative memories, see Ullman (2015).

[4] The topic about explicit versus implicit instruction will be treated in the following section.

3.3 Implicit versus explicit instruction

Language instruction is "an attempt to intervene in interlanguage development" (R. Ellis, 2009, p.16). This intervention can be indirect or direct. Indirect means "to create conditions where learners can learn experientially through learning how to communicate in the L2" (R. Ellis, 2005b, p.713), while direct "involves the pre-emptive specification of what it is that the learners are supposed to learn and draws on a structural syllabus" (R. Ellis, 2009, p.16). Direct interventions are further categorized as implicit instruction and explicit instruction. These concepts are understood from the teachers' perspective, thus involving factors external to the learner (Figure 3-1).

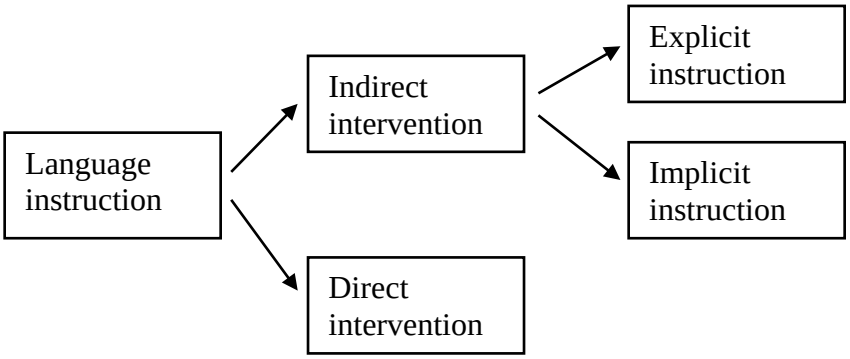


Figure 3-1 Types of language instruction

Taken from Figure 1.1 in R. Ellis (2009), p. 17

Implicit instruction involves learners coming up with the rules of a linguistic structure by inference without being really conscious of this process (DeKeyser, 1995). That is, "it seeks to provide learners with experience of specific exemplars of a rule or pattern while they are not

attempting to learn it. As a result, they internalize the underlying rule/pattern without their attention being explicitly focused on it" (R. Ellis, 2009, p.16). Implicit interventions are classified under the category of direct interventions. Some implicit interventions are direct when there is a specific linguistic structure as the goal of the intervention, but it is hidden from learners to prevent them from being aware of the learning goal or target. According to R. Ellis (2009) "this type of implicit instruction involves creating a learning environment that is enriched with the target feature, but without drawing leaners' explicit attention to it" (p.17). Implicit instruction or the lack of explicit instruction can be related to procedural memory (Ullman, 1995). It is possible that implicit instruction could result in both implicit and explicit knowledge (R. Ellis, 2009).

Explicit instruction involves active thinking of a rule during the learning process (DeKeyser, 1995) and "includes all types (of instruction) in which rules are explained to learners, or when learners are directed to find rules by attending to forms" (Doughty & Long, 2003, p.265). Thus, "learners are encouraged to develop metalinguistic awareness of the rule" (R. Ellis, 2009, p.17), which can be achieved by means of deduction, that is "if rule explanation forms part of the instruction", or by means of induction, that is, "if the learners are asked to attend to particular forms and try to find the rules themselves" (DeKeyser, 1995, in Doughty & Long, 2003, p.267). Explicit instruction has been shown to increase learning in declarative memory as it involves awareness and conscious attention to the input received (Ullman, 2015). Explicit instruction likely only yields explicit learning and not implicit learning (since rules are being provided) (R. Ellis, 2009). Housen and Pierrard (2006) differentiated these two types of instruction according to several characteristics, shown in Table 3-1.

Table 3-1 Differential characteristics between implicit and explicit instruction

Implicit instruction	**Explicit instruction**
Attracts attention to target form	Directs attention to target form
Is delivered spontaneously (e.g. in an otherwise communication-oriented activity)	Is predetermined and planned (e.g. as the main focus and goal of a teaching activity)
Is unobstrusive (minimal interruption of communication of meaning)	Is obtrusive (interruption of communicative meaning)
Presents target forms in context	Presents target forms in isolation
Makes no use of metalanguage	Uses metalinguistic terminology (e.g. rule explanation)
Encourages free use of the target form	Involves controlled practice of target form

Taken from Housen and Pierrard (2006 p.10) in R. Ellis 2009, p.18

Implicit and explicit types of instruction can be reactive and proactive. When implicit instruction is reactive the teaching is task-based and the attention to the form comes from the way the tasks are carried out, as in a question and answer task in which learners have to find the differences between two pictures and have to use specific vocabulary words to describe individuals. When proactive, the tasks themselves elicit the use of a form and offer the opportunity to use the form, as in a role play in which the learners have to buy a train ticket and the task elicits to use of wh-questions in English, asking for the time, the price, and destination. When explicit instruction is reactive, it means that "teachers provide explicit or metalinguistic corrective feedback on learners' errors in the use of target feature" (R. Ellis, 2009, p.17), as in by means of an explanation of why it was an error such when a student uses *sabo* instead of *sé* and the teacher explains that *saber* (to know) is an irregular verb and that the first person singular in the present changes to an irregular form that does not follow the language's general pattern. When proactive either the teacher provides metalinguistic explanations of the rules before the activities or when

the teacher allows learners to come up with the rules from the data in the activity. For example, a teacher explains the uses of the present progressive before the activity and then learners have to complete an activity that requires them to describe what people are doing in a picture.

Seeing the different types of language instruction that had been used in the literature, researchers posed the question of whether instruction affects the learning process, and if so, in what ways (Davies & Elder, 2006). According to Dörnyei (2009), while implicit language learning works for L1 learners in acquiring native-like proficiency, it does not seem to work as efficiently for the L2, especially at a later age. The evidence that implicit learning does not work for L2 learning is that in some programs, such as immersion, which provide excellent conditions for implicit learning, learners still fail to reach native-like proficiency. The other piece of evidence comes from Norris and Ortega (2000) who reviewed empirical studies from 1980 to 1988 to "determine the overall effectiveness of L2 instruction, as well as the relative effectiveness of types of instruction" (implicit versus explicit) (Doughty & Long, 2003, p.264). Norris and Ortega (2000) concluded that explicit L2 instruction had an advantage over implicit L2 instruction. One of the reasons lies in the fact that the effectiveness of L2 instructions such as focus on form and focus on forms is demonstrated to be more durable and assures that students notice certain linguistic features that are the focus of the L2 instruction. This finding is supported by several other researchers (e.g., Alanen, 1995; de Graaff, 1997; DeKeyser, 1995; Doughty, 1991; Gass, Svetics & Lemelin, 2003; N. Ellis, 1993; Robinson, 1997; Rosa & O'Neill, 1999). While two studies found no differences between the two types of language instruction (Doughty, 1991; Shook, 1994), no study found that implicit learning was better than explicit learning for L2 learners. Thus, it is clear that when researchers compare naturalistic language learning of the L2 (immigrants in a new country) versus

classroom instruction, evidence points at instruction having a positive effect on improving learning, as will now be explored (Littlewood, 2006).

In fact, the findings also indicate that instruction can cause an acceleration of the learning rate in that although both subjects that received instruction and those who did not receive instruction improved, the ones who received instruction showed a greater improvement (Doughy & Long, 2003). What is important to note, however, is that learners have to be at the appropriate stage of development in order to acquire new knowledge. This point relates to Pienemann's (1989) learnability or teachability hypothesis "according to which instruction can accelerate the rate of learning but not cause learners to skip a natural stage" (Littlewood, 2006, p.513) and to Krashen's (1982) input theory where learners have to be exposed to knowledge no more than one stage above their current knowledge ($i + 1$) for acquisition to take place.[5] According to Dörnyei (2009) simple exposure to L2 input together with some sort of communicative practice is not enough, so "we need to complement implicit learning with explicit learning procedures – such as focus on form (or controlled practice)- in order to push the learners beyond communicatively effective language towards target-like second language ability" (p.301) (parenthesis added) (Long, 1991, 1997). This author and others (e.g., DeKeyser & Juffs, 2005; Doughty & Williams, 1998; Spada, 1997) are of the opinion that "effective L2 learning needs to include an explicit component" (Dörnyei, 2009, p.175).

[5] There are some problems with Krashen's theory in that the way Krashen separated acquisition from learning cannot be proven (Littlewood, 2006). In addition, it is not clear what Krashen meant by 1 in i+1, or how it is defined (VanPatten & Williams, 2015). Due to the difficulty to operationalize i+1, the Input hypothesis has fallen out of use in second language acquisition.

Before we finish this section, an important distinction should be made between *learning* explained in the previous section and *instruction* that was just discussed. R. Schmidt argues how implicit instruction does not always result in implicit learning and that explicit instruction does not necessarily result in explicit learning since "learners have minds of their own and may follow their own inclinations, irrespective of the nature of the instruction they receive" (R. Ellis, 2009, p.6). Thus, the provision of implicit instruction is no guarantee that learners might not still form explicit rules and undergo explicit learning.

Summing up, language instruction may have positive effects on the development of leaners' interlanguage. Interventions can be divided into indirect (creating conditions where learnings can learn through experience) and direct (designing a syllabus with a structure in mind for learners to learn). Direct interventions can further be divided into implicit and explicit instructions. Implicit instructions provide learners with examples of a rule without drawing explicit attention to the particular structure. Explicit instruction provides the rule and the explanation about the rule to learners, thus directing attention to the linguistic structure. Learners then develop metalinguistic awareness of the rule presented and explained. Implicit and explicit types of instruction can be further divided into reactive and proactive types. Researchers have questioned the role of instruction on learning and whether it has beneficial effects. Implicit learning is facilitative for L1 learners but often not for L2 learners, as they fail to reach native-like proficiency. Norris and Ortega (2000) concluded that explicit L2 instruction was more beneficial and advantageous over implicit L2 instruction. Instruction can cause an acceleration of the learning rate so that learners who received explicit learning improved faster than the ones who received no instruction. Instruction needs to have an explicit component (focus on form) in order for learners to acquire the linguistic structure or rule.

3.4 Metalinguistic awareness

R. Schmidt (1994, 2001) distinguishes between two types of awareness. One type of awareness involves noticing and perception, thus requiring conscious attention to the elements on the surface., for example when a teacher makes students pay attention to the different parts of a structure such as *I am going to study* so that students realize they need a conjugated *to be* form, the *going* form, and an infinitive. The other type, metalinguistic awareness, involves analysis and awareness of the elements underlying the surface and the rules of linguistic phenomena, for example in what situations and for what purpose that structure would be used in actual language. In this case, the teacher would inform the students that the example presented above *I am going to study* represents a distant that is nearer to the moment of speech and a more informal variant. Metalinguistic awareness as a construct means the ability to consciously reflect on the nature and the use of language and it has been used widely for research about children and also about adults in how they develop their L2 and L3 (Mora, 2001; Bialystok, 2001). Kinginger and Farrell (2004) used a similar approach with meta-pragmatic awareness, understood as the knowledge of the social meaning attached to forms that vary in the second language and the awareness that the forms may mark aspects of social contexts, for example a teacher explaining the use of a particular pragmatic feature such as requests and the implications or consequences that using it effectively or not may bring to the communicative exchange; for example, using the conditional to indicate a formal request 'Would you pass me the salt?' instead of an imperative 'Pass the salt!'. Dörnyei (2009) notes the importance of metalinguistic awareness in the field of second language acquisition:

> "It has been a well-established finding for at least two decades that learners who acquire the L2 in ways that do not emphasize metalinguistic awareness (e.g. picking up the L2 in the host environment without formal instruction of studying in an L2 immersion

school) will continue to have difficulty with basic structures, particularly with those that are neither salient nor have any significant communicative value" (p.173).

Some authors such as Tarone (2007) and van Compernolle and Williams (2011) express their concern around the problematic practice of defining what second language learners know about variation through performance tasks, seeing that "performance data alone are not sufficient for evaluating what L2 learners know about, and how they perceive, social and stylistic variation in the language they are studying" (van Compernolle & Williams, 2011, p. 26). Their proposal moves away from the uni-dimensional perspective of assessing students' competence: besides collecting performance data, some other type of non-performance data such as metalinguistic explanations and self-reports, or written reflections should be collected to provide a much more complete view of students' sociolinguistic competence.

In sum, there are two types of awareness: one that involves noticing and conscious attention to the elements on the surface, and another (metalinguistic awareness) that involves analysis and awareness of elements underlying the surface. Metalinguistic awareness as an ability allows speakers to consciously reflect on the nature and use of language. When evaluating the full range of knowledge of second language learners, performance data are not enough, and metalinguistic awareness tasks such as metalinguistic explanations and self-reports or reflections that target competence data are useful.

Now that the framework of variationist sociolinguistics has been presented and the differences between implicit and explicit learning and instruction have been discussed, I move on to the issue of how sociolinguistic competence is acquired and the debate between in class and study abroad acquisition of this competence.

3.5 Acquisition of sociolinguistic competence

As established in the first chapter, learners can prevent misunderstandings and problems within communication by increasing their level of sociolinguistic competence. The question then arises: how can learners acquire sociolinguistic competence?

The first issue in the acquisition of sociolinguistic competence is that of proficiency level. It is a widespread view that guides current university curricula of foreign languages that advanced topics like culture should be taught once students have a certain level of proficiency (Gutiérrez & Fairclough, 2006). The same idea is applied when teaching sociolinguistic competence and variation in the classroom, if in fact these topics are taught at all. Young (1991) proposes that learners should acquire linguistic competence in the first place and later, sociolinguistic competence (Regan, 1995). Hence, we could relate this order of acquisition of competences to the stages of development for any linguistic form. As mentioned previously, regardless of the instruction or task used with learners, only those learners at the right stage of development will actually make use of the input received and finally acquire the form. The question then is whether it could be beneficial for language students to receive instruction of variation at the same time as they are presented with a specific linguistic form in order for the two competences, linguistic and sociolinguistic, to be developed analogously instead of waiting until the linguistic form has been acquired to then introduce the variation. Some supporters of presenting variation with linguistic forms "think that teaching stylistic variation early in the foreign language curriculum should be an essential concern" (Etienne & Sax, 2009, p.588) similar to Gutiérrez and Fairclough's (2006) suggestions.

The second issue and the focus of this section is that of study abroad. It is a common practice for students of a second or foreign language to study abroad when they have reached a

somewhat advanced level of proficiency. Bayley and Regan (2004) support the need for study abroad:

> "Classroom study is not sufficient for learners to acquire target-like patterns of variability. It may be that what is categorical in NS speech is more easily acquired in the classroom than what is variable. The acquisition of NS patterns of variability appears to require prolonged contact with native speakers" (p.10).

This idea is supported by many researchers in the field of second language acquisition and language teachers, and as Geeslin with Long (2014) state "linguists and nonlinguists alike often believe that a second language learner must spend time in a setting that provides intense exposure to the second language in real contexts of use in order to acquire communicative competence" (p. 200).

Given the differences in the conceptualization regarding study abroad contexts, in this dissertation I adhere to Geeslin with Long's (2014) definition that study abroad "refers to all experiences in which students travel to another country for the purpose of studying language and/or content in a classroom setting" (p. 200). Numerous researchers have investigated the effects of study abroad on the acquisition of communicative competence (Dewaele, 2004; Kanwit & Solon, 2013; Regan, 1995, 1996, 2004; Sax, 2003).[6] Researchers agree that "for students living in the target language culture, it might be assumed that they will acquire sociolinguistic competence simply by immersion" (Mizne, 1997, p.9) and as Dewaele (2004) claims "only a prolonged and

[6] See Geeslin with Long (2014) for a comprehensive review of studies focusing on acquisition in the study-abroad context.

regular contact with [native speakers] of the [target language in noneducational settings] seems to have a noticeable effect on the learners' sociolinguistic competence" (in van Compernolle & Williams, 2012a, p.185).

A number of studies for French as a foreign/second language support this idea given that findings show benefits of study abroad on the development of sociolinguistic competence in the speech of *advanced* learners when compared to learners in classrooms or immersion contexts in the process of acquiring the same variable structure (e.g. Dewaele, 1992, 2004; Dewaele & Regan, 2002; Regan & Mougeon, 1999; Thomas, 2004). Numerous studies have focused on morphosyntactic variation in French such as *ne* deletion and variation of *nous* versus *on*, while some others have focused on forms of address and acquisition of sociopragmatic competence. Regarding acquisition of morphosyntactic variation in study abroad contexts, Regan (1995, 1996, 1997) investigated the development of *ne* deletion rates in the French of five English speakers before and after they spent a year in a Francophone region. Her results pointed to an increase in the deletion of *ne* in three of the learners after their study abroad period. These students overshot the target by deleting *ne* at higher rates than French native speakers. Nevertheless, she found evidence to support study abroad as being beneficial for students in acquiring variation and sociolinguistic competence, such that (target-like) deletion of *ne* dramatically increased after the year abroad and the learners showed similarities to native speakers regarding the effects of independent variables on *ne* deletion. These effects were in relation to lexicalized phrases, subject, following segment, verb, and style. When participants used a lexicalized phrase such as *Je ne sais pas* 'I don't know', then they would tend to retain the *ne* and not delete it. Regarding subject, the use of a pronoun favored the deletion of *ne* while the use of a full NP disfavored *ne* deletion. If the following segment contained a vowel it disfavored *ne* deletion. As for the effect of the verb, *ne*

deletion was favored by auxiliaries but disfavored by the main verb. Lastly, *ne* deletion wa favored in casual styles but disfavored in monitored style.

In a longitudinal study, Regan (1996) investigated the behavior of the same learners who studied abroad a year later and found that the deletion rates of *ne* that were high by the end of the study abroad year were maintained after an additional year. Thomas (2004) also investigated *ne* deletion in two groups of learners of French, at-home and study abroad, and he found that those learners who studied abroad increased their *ne* deletion, approximating native-like patterns while the learners in the at-home location decreased their *ne* deletion rates.

Thomas' (2004) findings also support study abroad as a powerful context to acquire variation patterns closer to those shown in native speech. Several studies explored the variation of *nous* versus *on* in learners of French while studying abroad. Sax (2003) and Lemée (2002) investigated the effects of study abroad on the French interlanguage of American and Irish students in France, respectively. These studies found a significant effect for study abroad on the rates of subject pronouns. Sax found that the longer the period of study abroad, the higher the rates of *on* in students' speech. Lemeé found that all her different proficiency groups used *on* more often than *nous* (69% vs. 31%, respectively) and that the rates of use of each variant were very similar across groups. She found also that the learners who studied abroad for less time used *on* at higher rates than the rest but that "the proportion of *on* in the highest group (which had studied abroad for a year) was linked to their growing sociolinguistic competence" (in Dewaele, 2004, p. 310) (parenthesis added). These studies show evidence that study abroad is in fact beneficial for the acquisition of variable structures due to the fact that the experience of study abroad provides more input and opportunity for practice in communicative contexts.

Despite solid evidence pointing at study abroad as an ideal context for learners of a second/foreign language to acquire aspects of communicative competence, other studies have reported that some advanced learners show minimal gains in linguistic and sociolinguistic competence (Regan, 1995). Part of this lack of gains is related to the employment of tasks that measure overall proficiency but not gains in sociolinguistic competence, such as traditional uses of standardized written tests or the Oral Proficiency Interview (as noted in Geeslin, Fafulas, & Kanwit, 2013). These tasks were not designed in order to track sociolinguistic development during the study abroad experience. Instead, other tasks, such as a contextualized preference task, track the changes in the conditioning of variable structures according to relevant independent linguistic variables, which may thus reveal on the development of sociolinguistic knowledge and the extent to which learners approximate native patterns (Geeslin et al., 2013; Kanwit, Geeslin, & Fafulas, 2015).

Celce-Murcia (2007) agrees with previous research that considers study abroad as "the best experience for language acquisition"; however she only agrees as long as "the learner has adequate basic preparation in both linguistic and sociocultural competence coupled with good powers of observation" (p.46). This connects to the first issue we emphasized at the beginning of this section on study abroad: Celce-Murcia acknowledges the fact that learners need to have had certain exposure to linguistic and sociocultural competences before they study abroad for them to fully benefit from the experience. This idea was investigated by Cohen and Shively (2007), who implemented a strategy-building intervention regarding sociolinguistic aspects of requests and apologies in Spanish and in French before students went abroad. The intervention was made of three different components: a face-to-face orientation in class which was the intervention before study abroad, a self-study guidebook with strategies to learn language, culture, and speech acts,

and electronic journaling by the students. The 86 students were randomly assigned to either the experimental or the control group. Results showed that both groups improved their performance in using requests and apologies from before studying abroad (time 1) to after their study abroad (time 2), and there were no significant differences between them. Findings also indicated that "for some of these students awareness about mitigating requests was enhanced by the treatment" (Cohen & Shively, 2007, p. 189). Their study then provided evidence for the benefits of receiving information on the target structure to raise their awareness before learners studied abroad, as suggested by Celce-Murcia (2007) and Gutiérrez and Fairclough (2006).

In a summary of studies that explored the effect of immersion on the acquisition of sociolinguistic competence, King and Silver (1993) concluded "that the length of stay in a second language environment is beneficial for acquiring sociolinguistic competence but *insufficient and time consuming*" (p. 48). Van Compernolle and Williams (2012a) have somewhat of an opposing view from the previous researchers who praise study abroad as the ideal context to develop communicative competence and state that "previous research tends to assume that sociolinguistic competence only develops as a result of sufficient input in the right context (e.g. study abroad). This raises the question of whether sociolinguistic variation can be explicitly taught and learned in formal, structured educational settings" (p.185).

Van Compernolle and Williams have explored the acquisition of sociolinguistic and sociopragmatic competence in a classroom setting on multiple occasions (2009, 2011, 2012a, 2012b). In their 2011 study the authors used metalinguistic explanations and self-reports as means of triangulating their data about L2 learners' performance with respect to sociolinguistic competence. They focused on the variation of the negative particle *ne* in French. Van Compernolle and Williams (2011) designed a model that lasted an entire semester (15 weeks) and was divided

into: (1) pre-intervention activities, which included a diagnostic writing task, and three chat tasks; (2) an intervention, which was divided into two parts: a presentation of excerpts of spoken texts followed by an instructor-led discussion about topics such as the relationship of interlocutors and the level of formality, and a presentation of a transcript from which learners were instructed to pose their own hypotheses about variation; and finally (3) post-intervention activities which included more chat tasks and an end-of-semester questionnaire.

The learners were divided into two groups: the explicit instruction (EI) group, which received "an explicit explanation of how variation between *ne* presence and absence (in addition to other linguistic variables) was related to the relative formality of the communicative context" (p.31), and a non-explicit instruction group (NEI). The researchers reported "no difference between the EI and NEI group or between pre- and post-intervention chat tasks" (p.33), which they attributed to the short length of the intervention, as it only lasted one class period of one hour. Learners completed an end-of-semester questionnaire that evaluated "learners' ability to recognize and explain variation between *ne* presence and absence" (van Compernolle & Williams, 2011, p.38). For this purpose, learners were presented with three sentences and were asked to explain the differences between the negative sentences. Overall, findings indicated that the EI group understood *ne* variation better than the NEI group. Variation as a concept did not seem difficult to grasp by learners in both groups; however, while the NEI group gave vague explanations on what variation is and the variation between *ne* and lack of *ne*, the EI group focused on the variation of *ne* and gave more concrete answers about how the variation worked. The authors claimed that "this finding does provide evidence that explicitly drawing learners' attention to a particular form and its context(s) of use is more effective than simply exposing them to authentic discourse with little or no guidance" (p. 37). The authors argued that the students in the explicit instruction group that

received information about variation had a better ability to identify the variation present in the sentences and their sociostylistic meaning when compared to those students who were only presented with authentic materials without the intervention. In the comparison of metalinguistic knowledge with actual performance in the chat tasks, although students did not seem to delete *ne* in the post-intervention chat tasks, EI students did understand the variation, as indicated in their responses to the metalinguistic task. Van Compernolle and Williams (2011), concluded that their results "indicate that the absence of variation in learners' performance does not necessarily mean that they are unaware that variation exists or what this variation means along social and stylistic dimensions" (p.43). Even though no significant differences were found between the EI and the NEI groups, the EI group benefitted from the intervention, considering that the authors observed an effect of the explicit intervention on the learners' awareness of variation of *ne*.

Van Compernolle and Williams (2012a) investigated the acquisition of sociolinguistic competence in a group of L2 learners of French in their second year of university through the variable use of the negative particle *ne*. Their study contained a variety of data sources, including ethnographic field notes, learners' explanations, and analysis of linguistic variation, and small-group, inter-learner online chat discussion. The authors focused on two language awareness tasks completed at the end of the semester and the inter-leaner text-based online chat discussions. For the language awareness tasks, learners had to explain the variable use of the particle *ne*. The online chat discussions consisted of American students conversing with students in France through a chat. One important contribution of this study is that at the beginning of the L2 French students' semester "the instructor began to introduce the concept of language variation in concert with language analysis tasks that provided learners with evidence of the specific features of discourse that vary in French" (van Compernolle & Williams, 2012a, p.191). The researchers reported that

the learners improved in their understanding of variation through the explanations and the language analysis tasks. Through the presentation and discussion of quantitative and qualitative analyses, the researchers were able to show that learners developed control over *ne* variation, "which begins to emerge as a sociolinguistic resource by the end of the academic term" (van Compernolle & Williams, 2012a, p.184). The researchers further showed that "properly organized pedagogical activity can help learners to develop their understanding of variable features of discourse, which ultimately lead to the development of their performance abilities" (van Compernolle & Williams, 2012a, p.184).

In fact, other authors such as Mizne (1997) share the idea that "classroom instruction is needed in addition to immersion to help students achieve sociolinguistic competence better and faster" (p.10). Mizne (1997) investigated the effectiveness of a module she created to teach the speech act of compliments to 11 adult students from different language backgrounds. The researcher divided the module into three stages: in the first stage, she taught cross-cultural differences to the learners; in the second stage, she taught students about the rules of usage for speech acts of compliments within the American culture; and in the third stage, she asked students to complete a survey in which they had to evaluate how helpful her explanations were and to rank the difficulty level of the speech acts learned. All in all, findings indicated that students who had lived longer in the US found the explanations more helpful. Mizne interpreted this to mean that it is most useful to teach cultural information to students once they have had the time to experience the target culture for some time. Mizne (1997) suggested that in order to present sociolinguistic competence in the ESL classroom, students needed to be taught culture and sociolinguistic issues explicitly in the classroom. However, she observed some problems in doing so, due to the fact that "culture is hard to define" (p.10), and sociolinguistic issues are so ingrained that students are not

even aware of those issues in their L1, which can make it difficult for them to grasp such concepts in their L2. She concludes that "it is beneficial to supplement these methods (of teaching culture and sociolinguistic issues) with approaches that incorporate these topics directly into the teaching syllabus" (p.10). The point Mizne raises connects well to the ideas of other researchers about the importance of integrating sociolinguistic competence into the curriculum (Celce-Murcia, 2007; Cohen & Shively, 2007; Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006)

In sum, the question proposed in this section is that of how learners can acquire sociolinguistic competence. One key issue is that of proficiency level. Learners at the necessary stage of development will use the input and acquire the linguistic form; therefore, some authors have claimed that it is important for students to develop their linguistic competence before being taught sociolinguistic competence and variation (Young, 1991). Some other authors have a contrary opinion and think that it is beneficial for students to be taught variation of linguistic forms starting at the beginning levels (Etienne & Sax, 2009; Gutiérrez & Fairclough, 2006). Another issue is that of the value of study abroad itself. Many researchers support the idea that study abroad is highly beneficial for students to acquire variation and sociolinguistic competence (Dewaele, 2004; Kanwit & Solon, 2013; Regan, 1995, 1996, 1997, 2004). Despite the benefits of study abroad some researchers think that the students should have certain exposure to sociocultural competences and variation before the stay abroad (Celce-Murcia, 2007). In fact, a study by Cohen and Shively (2007) showed greater benefits for those students who received an intervention about sociolinguistic factors affecting requests and apologies before studying abroad when compared to the students who did not receive such instruction.

An additional question is whether sociolinguistic variation and competence could be taught in the classroom. Van Compernolle and Williams (2009, 2011, 2012a, 2012b) have explored the

acquisition of acquisition of sociolinguistic and sociopragmatic competence in classroom settings and found that those students who received pedagogical interventions (e.g., analysis tasks, concept-based instruction tutorial, pedagogical sessions with a tutor) performed better in metalinguistic tasks. Several authors then, are supporters of teaching variation in the classroom and to include it in the curriculum (e.g., Gutiérrez & Fairclough, 2006; Mizne, 1997).

3.6 Acquisition of variation in Spanish

According to Geeslin with Long (2014), the overarching question of acquisitionists interested in variation "has changed from whether or not study abroad is superior to the at-home learning toward an interest in whether learners can acquire sociolinguistic competence and, if so, how learner grammars develop over time to reach this state" (p.202). Research in this vein has focused on a variety of morphosyntactic structures (Geeslin with Long, 2014). On the one hand, researchers have explored the acquisition of variable linguistic forms in the Spanish classroom setting while maintaining the status quo of the class: the copula contrast (Geeslin, 2000, 2003), subjunctive vs. indicative mood (Geeslin & Gudmestad, 2008a; Gudmestad, 2006, 2012, 2013; Kanwit & Geeslin, 2014), present simple vs. present progressive (Fafulas, 2013; Geeslin & Fafulas, 2012), differential object marking (Killam, 2011), and subject expression (Geeslin & Gudmestad, 2008b, 2011; Gudmestad & Geeslin, 2010; Gudmestad, House, & Geeslin, 2013).

Regarding acquisition of variable Spanish morphosyntactic forms in the study abroad setting, I will highlight two recent studies: Kanwit et al. (2015) and Kanwit et al. (2018). Kanwit et al. (2015) explored the acquisition of three structures: the perfective past (i.e., present perfect versus preterit), the copula contrast, and the present progressive versus present indicative by

students during a seven-week stay abroad in Mexico or Spain. The authors argued that "not all structures are affected equally in the immersion environment" due to the fact that "structures which are more highly variable for NSs would be more difficult to restructure for L2 learners" (p.340). Overall, the authors were able to support the effect of study abroad on the approximation of students' behaviors in the target language, thus reflecting the regional norm. This finding was proven by learners adapting their rates of selection and the effect of linguistic predictors to the patterns exhibited by native speakers. Another recent study, Kanwit et al. (2018), explored the acquisition of variable adjective intensification. Building on the finding that natives in Spain and Argentina show variability in the selection of *muy* and *bien* as intensifiers of adjectives (Kanwit, et al., 2017), they explored the acquisition of these two forms in two locations: Mexico and Spain. The researchers found that students who spent time in Mexico selected *bien* at higher rates than those who studied in Spain, supporting previous research that showed greater viability of *bien* in Latin American dialects as compared to Peninsular ones, except for Spanish in contact with Catalan (Kanwit & Pisabarro Sarrió, in press).

Considering the aforementioned studies on acquiring variation at home or abroad, (it) "support(s) the assertion that learners move towards native-like forms of use and also that there is a good deal of individual variation, even in the same learning context" (Geeslin with Long, 2014, p.202). Among the many factors known to affect second language learning and individual variation, one of them is the learners' L1 and the other is the type of task employed. The L1 is known to affect the outcomes of the L2 due to language transfer (Littlewood, 2006; Odlin, 1989). Regarding task-based variation, some research (Geeslin & Gudmestad, 2008a) offers evidence that "task was a greater source of variability than the participants' L1" (Kanwit, 2014, p.14) and "that learners performed differently across different tasks" (Larsen-Freeman, 1975 in Kanwit 2014,

p.11). As Kanwit (2014) notes, researchers need to be aware of the variation resulting from the employment of different tasks and whether the tasks asked students to select or produce a form, since the latter requires a greater cognitive burden (R. Ellis, 2005a; McCarthy, 2008). Also, participants are more likely to use more formal variants in written tasks than in oral ones (Sedano, 2006). It is important to note that previous research has shown that the behavior of the individual learners may parallel the behavior of the group of learners as a whole (Bayley & Langman, 2004), even though Geeslin and Gudmestad (2011) found a great deal of individual variation at all proficiency levels.

The studies presented above only focused on students acquiring variation either at home or during study abroad but the status quo and curriculum were maintained in the classroom (i.e., there were no instructional interventions). However, a different type of study that falls between solely measuring the effects of study abroad and implementing pedagogical interventions is illustrated by Cohen and Shively (2007), who included both a pre-study abroad pedagogical intervention and a study abroad experience. As presented before, there is a growing number of studies that implemented tasks and interventions to help students develop sociolinguistic and sociopragmatic competence for French as a foreign language (van Compernolle & Williams, 2011, 2012a, 2012b). There have been few pedagogical interventions in the Spanish classroom that attempt to enhance learners' awareness of language variation and to improve their sociolinguistic competence. To my knowledge, there is only one study that has analyzed the effects of a pedagogical intervention in the Spanish classroom without the pre-requisite of students spending some time abroad, which was the preliminary study (Pisabarro Sarrió, in preparation) that guides the present dissertation. Pisabarro Sarrió (in preparation) explored the development of sociolinguistic competence by means of an intervention that explicitly taught learners of Spanish about overall rates of future

forms and the effects of independent variables (i.e., temporal distance, presence of temporal adverbs, and geographic region of interlocutor) on such forms. Both the control and the treatment groups completed two written tasks: a contextualized preference task and a written production task at four points during one semester (i.e., 15 weeks). Results indicated that the treatment group showed selection and production rates and sensitivity to the linguistic factors that approximated more to the native speakers' patterns when compared to the control group. Therefore, this study was able to provide evidence for the usefulness of an explicit pedagogical intervention that provides information to learners about the variation that exists in native speech in the classroom during one semester instead of during the course of five semesters or some time abroad as previous research has shown. More information about the preliminary study will be provided in chapter 4: methods.

Summing up, the overarching question of L2 variationists has changed focus from whether study abroad is superior to at-home learning to how learners develop their grammars in order to acquire sociolinguistic competence. Many Spanish structures have been explored in the Spanish classroom although they maintain the university-wide curriculum: the copula contrast (Geeslin, 2000, 2003), subjunctive vs. indicative mood (Geeslin & Gudmestad, 2008a; Gudmestad, 2006, 2012, 2013; Kanwit & Geeslin, 2014), present simple vs. present progressive (Fafulas, 2013; Geeslin & Fafulas, 2012), differential object marking (Killam, 2011), and subject expression (Geeslin & Gudmestad, 2008b, 2011; Gudmestad & Geeslin, 2010; Gudmestad, House, & Geeslin, 2013). A few other studies have explored acquisition of morphosyntactic variables in the study abroad context (e.g., Kanwit et al., 2015; Kanwit et al., 2018). Both of these studies reported that the study abroad experience benefitted the learners in that they adapted the rates of selection and the effects of linguistic predictors to those demonstrated by native speakers of the country where

the learners studied abroad. The native language of the learners and the type of task employed in the research affect second language learning and individual variation. Language transfer and differences in cognitive load can be the resulting effects of these factors. While quite a few studies have explored the acquisition of variation in Spanish either in the classroom or in the study abroad context, to this date only Cohen and Shively (2007) have explored the effects of a pre-study abroad intervention on the acquisition of the variation in apologies and requests. For French a number of studies have investigated the impact of interventions on the acquisition of sociolinguistic and sociopragmatic competence (van Compernolle & Williams, 2011, 2012a, 2012b). The dissertation pilot study (Pisabarro Sarrió, in preparation) is the only study thus far that has implemented a pedagogical intervention in at the at-home contexts in order to help students become aware of variation in future expression in Spanish. This study provided evidence for the usefulness of an intervention given that participants approximated native patterns and showed similar effects for the linguistic variables to those shown by natives.

3.7 Research on futurity for Spanish

Regarding variationist research that focuses on learners of Spanish as a second or foreign language, the studies that have investigated acquisition of futurity can be grouped into three main foci according to their main objectives. In the first focus, early studies tracked learners' incidental acquisition of future through reading (Lee, 2002; Rossomondo, 2007). The second focus includes studies that have researched the development of variable rules and emergence of future forms in order to establish stages of acquisition for a variety of proficiency levels (Gudmestad & Geeslin, 2011, 2013; Kanwit, 2014, 2017, in press; Solon & Kanwit, 2014). In the last focus, one study has

explored the acquisition of the sociolinguistic variation of future in a study abroad context (Kanwit & Solon, 2013).

Beginning with the first of these foci, Lee (2002) and Rossomondo (2007) explored the incidental acquisition of the morphological future (e.g., *viajaré* 'I will travel') through reading a passage that contained the form. The learners of both studies had not been previously exposed to the future form before reading the passage. Lee (2002) manipulated the following variables: frequency of exposure of the morphological future, participants' orientation to the task, and presence of temporal adverbials. While Rossomondo (2007) also manipulated presence of temporal adverbials, she included a temporal adverbial with each of the forms and not only at the beginning of the paragraphs, as in Lee (2002). The results in Lee (2002) indicated that participants could extract meaning from the future forms and that all the variables he manipulated were significant factors in the comprehension of the future form. Presence of adverbials seemed to help learners recall more information than when the adverbials were absent in the immediate post-test, but not in the delayed post-tests (two weeks and a month later). Rossomondo (2007) reported a facilitating effect for comprehension of the future form when adverbials were present.

While these two studies tested incidental acquisition of the morphological future, the next studies examined production of futurity. Gudmestad and Geeslin (2011) collected data from semi-structured sociolinguistic interviews from 32 participants, half highly advanced, graduate learners of Spanish and half native speakers of Spanish from different countries. The researchers investigated the effects of the presence of temporal adverbials, temporal distance, clause type, certainty of the action, contingency, negation, and person and number. From all the forms that participants used to express futurity, the researchers reported the morphological future (MF), periphrastic future (PF), and present indicative (PI) as the most commonly used forms for both

groups. For the learner group, the PF was the most frequent form, followed by the PI, and lastly by the MF. For the native group, the PF was also the most frequently used form followed by the MF and by the PI. In order for learners to properly acquire futurity, they needed to reduce the use of PF and increase the use of MF. The variables of presence of adverbial, temporal distance, and clause type were significant for both participant groups, whereas the certainty of the event and person and number were also significant for native speakers. For both groups, the PF was favored when an adverbial was not present, whereas the PI occurred in contexts where an adverbial was present. As for temporal distance, the PF was also favored in immediate and same day contexts while the MF was reserved for temporal contexts that were farther away. For both groups of participants, the variable clause type had a similar effect: subordinate clauses favored the presence of the PF while the PI was preferred in main clauses.

As a follow-up study, Gudmestad and Geeslin (2013), designed a preference task and collected data from learners of Spanish from five different proficiency levels, in contrast to their 2011 study where they only sampled highly advanced learners. Stemming from their finding that the MF, PF, and PI were the most frequent variants to express futurity, the preference task asked the participants to choose one of those three variants from a variety of contexts that manipulated presence of temporal adverbial, temporal distance, and presence of (un)certainty markers. The researchers reported high rates of PF selection for all levels except for the lowest level of proficiency, which showed more selection of the PI. The results of this study mirrored those of the 2011 study, with the additional finding that while no group reached native-like selection rates for all three forms, the learners in group 5 (the most advanced) selected the PF at rates similar to those of the native speakers. Moreover, an interesting finding was a general decrease of MF selection across levels. Regarding the effect of the independent linguistic variables, the researchers reported

that the presence of a certainty marker had a favoring effect for the PI and the MF overall, as opposed to the PF. As for temporal distance, learners showed more native-like patterns of selection as their proficiency levels increased in that the PI was favored with immediate contexts, the MF was favored in distant contexts, and the PF was selected across distances. Presence of adverbials only had a significant effect for the group with the highest proficiency, which selected more PF in the absence of adverbials.

Solon and Kanwit (2014) also included five different levels of beginning and intermediate learners of Spanish. Instead of a preference task, participants completed an oral conversation task and a letter-writing task modeled after the instrument used in Moses (2002). Results showed that as proficiency increased, the use of the PI decreased in favor of a higher use of the MF. While the PI was the most common form for all groups in both tasks, the most proficient group employed more PF in general. It was also reported that the MF was more common in the written task, while lexical futures were more frequent in the oral task. As seen in Sedano (2006) who reported more MF in written registers, this finding in Solon and Kanwit (2014) can be related to a similar finding in Bardovi-Harlig (2004) comparing *will* to *going to* in L2 English, as more complex forms will appear more in writing than in oral speech due to the fact that written tasks allow more time for learners to process their knowledge whether oral tasks do not allow said processing time and hence simpler forms are produced such as the PI or the MF. Regarding the stages of acquisition, results pointed to the early appearance of the PF before the MF in written and oral tasks. The authors also reported use of both the MF and PF by the more advanced learners, which they interpreted as an indication of greater multifunctionality with higher proficiency.

Building on the three previous studies reported above, Kanwit (2014) included seven groups: five learner groups of Spanish from a range of proficiency levels, a group of native

speakers of Spanish, and a group of monolingual speakers of English. The participants were asked to complete three tasks: an oral personal prompt response task, a contextualized preference task, and an allowable temporal distance task. Kanwit did not limit the dependent variable to a pre-determined subset of future forms, but followed the concept-oriented approach by taking into account every form in a future-time context that was unmistakably encoding a state or event after speech time. He explored the effect of a wide range of independent linguistic variables: temporal distance, temporal adverbials, clause type, person and number, lexical type (verb class), temporal morphology of the preceding verb, negation, certainty, contingency, and animacy.

As for the oral personal prompt response task, which is reported in Kanwit (2017), participants in Level 1 used the present indicative (PI) at high rates and as proficiency developed, the use of the PI decreased while the use of the periphrastic future (PF) increased. For this level, the morphology of the previous verb, lexical type of verb, and temporal distance were significant predictors: production of MF, PF, PI and lexical futures favored the probability of production of those same variants in the next token, respectively; dynamic verbs favored the PF and the verb *tener* favored the PI; the PI was favored in immediate contexts while lexical futures were favored in year-away contexts. Level 2 participants were found to use the morphological future (MF) the most, as this form was taught in their level. As in Level 1, the morphology of the previous verb and lexical type of verb were significant predictors, although temporal distance was not: the production of the PF, PI, and lexical futures resulted in a high probability that the same tenses would be produced in the following token, respectively; the PI was favored with psychological and perceptual verbs. In Level 3, the use of PI was still high, and it was observed that the use of PF increased while the use of MF decreased. Together with temporal morphology of the preceding verb, lexical type and temporal distance, person/number was also a significant predictor. 1st person

subjects and year-away distance favored the lexical future over the PF. The production of the MF raised the probability of another MF to be produced. The MF was favored by dynamic, *ir*, and stative verbs while the PF was favored by dynamic and motion verbs. In Levels 4 and 5, the tendency continued: the PF increased while the MF decreased. The same four linguistic variables in Level 3 were significant for Level 4. The PF was favored with dynamic, motion, and psychological/perceptual verbs. The PF was favored in immediate and later today contexts. The PI was favored by 3rd person pronouns and the PF was favored with dynamic, motion, and psychological/perceptual verbs. All the factors included in the analysis were significant at Level 5: the temporal morphology of the preceding verb, lexical type, person/number, temporal distance, and the presence of a temporal adverb. For Level 5, the production of the MF raised the probability of another MF to be produced, dynamic, motion, psychological/perceptual and stative verbs favored the PF, 3rd person favored the PI, the MF was disfavored in all temporal distance when compared to the year-away context, and the PF was favored over the PI when an adverb was not present.

Regarding the contextualized preference task of Kanwit (2014), which manipulated temporal distance, presence of temporal adverbial, and clause type, at Level 1 learners selected the three forms, PI, PF, and MF, at the same rates. Only temporal distance was significant for this group: the PI was favored over the PF within the today distance when compared to the year-away distance. Similar to the previous task, because the MF was introduced at Level 2, that was the most selected form for this level followed by the PF and the PI. In this group, none of the predictors was selected as significant by the multinomial regression. Learners at Levels 3 and 4 selected the PF with the highest rates, although the MF was still selected at higher rates. The PI experienced a decrease in selection when compared to level 2 results. While only temporal distance and clause

type were significant predictors for level 3, all three linguistic variables were selected as significant in level 4. The MF is disfavored in immediate and later today contexts and the PI is favored when a temporal adverb is present in the clause. Learners at Level 5 selected the PF at the highest rates, approximating the rates of native speakers. In this level all three linguistic variables are also selected as significant by the model: the PI is favored in main clauses and when an adverb in present and the MF is favored in year-away contexts, similar to the effects observed for Level 4.

As for the allowable temporal distances task, Levels 1, 2, and 3 behaved similarly, thus creating a different pattern from the more experienced levels (Levels 4 and 5). For the lower groups, longer distances favored the PF rather than the MF, while the PI was allowed with year-away contexts. The latter trend decreased with more proficiency. Levels 4 and 5 had similar patterns: there was an observable increase of allowing year-away contexts for the MF more than for the PF, and there was a decrease of further distances being permitted for the PI. Verb form and lexical type were chosen as significant predictors by the statistical model for all five levels. For all levels, when the verb was in the PI the today response was disfavored compared to immediate contexts, and the week or more response was disfavored when compared to immediate contexts. For Levels 3 and 4, motion verbs disfavored the selection of later today distance over the immediate distance. For all levels stative, dynamic and motion verbs decreased the selection of week or more contexts over immediate contexts, and it was dynamic verbs that disfavored the selection of today over immediate contexts.

In an effort to combine variationist sociolinguistics and the concept-oriented approach, Kanwit (2017) investigated the acquisition of futurity by five groups of L2 learners from different proficiency levels in a classroom context. The participants completed an oral personal prompt response task that included eight prompts: six future contexts and two distractors and manipulated

the variable of temporal distance. Kanwit reported that as proficiency increased, the use of the PI decreased, the use of PF increased, and the use of MF by learners matched that of native speakers. Regarding lexical futures, their use was also more frequent as proficiency levels increased and was similar to the use demonstrated by native speakers. Kanwit explained the five stages that the learners in his study experienced in their acquisition of futurity. The first stage is marked by high rates of use of the present indicative together with the frequent use of temporal adverbials. Lexical futures are used to mark distant temporality. In stage two, the rates of present indicative use seem to decrease in favor of more presence of morphological future. Stage three presents a prominent increase in periphrastic future use and a decrease of the other two forms: the morphological future and the present indicative while the use of lexical futures is favored by the use of the first person. In this stage, the present indicative becomes restricted to same-day contexts. Learners then show multifunctionality rather than being specialists in one form. In the last stage, stage five, the use of the present indicative decreases and appears mostly in the presence of an adverbial, while the morphological and periphrastic futures continue to increase. Some of Kanwit's (2017) contributions were the investigation of lexical futures as a future form worth studying together with the three most common forms of futurity in Spanish: morphological and periphrastic futures and present indicative; the inclusion of lexical verb type as a linguistic variable in the analysis; and the proposal of five developmental stages in the acquisition of future-time expression.

Kanwit (in press) focused on the restructuring of future forms as they enter the learners' interlanguage systems. Contrary to previous literature that used a cross-sectional design, Kanwit (in press) used a longitudinal design in order to track the evolution of the changing interlanguage of the same learners of Spanish. The participants completed an oral production and a written preference task three times over the course of nine-weeks without an intervention or special

materials, therefore maintaining the regular structure of the class. A fourth-semester class was chosen as learners are introduced to the morphological future for the first time in that level. The author included temporal distance, presence of temporal adverbials, and clause type as the independent linguistic variables. The oral production task and written task revealed similar patterns: learners used and selected the PI at higher rates at Time 1 and then gradually decreased their use/selection over Times 2 and 3. Given that the learners received instruction about the morphological future before Time 2, data showed an increase in use/selection of MF at Time 2 and a decrease at Time 3. The opposite trend was observed for the periphrastic future: while its use/selection started quite high at Time 1, it decreased as the MF increased at Time 2, and then it increased again at Time 3, thus showing a U-shaped development. For the oral production task, the author reported some use of lexical futures and preterite forms. One comment mentioned by the author regarding the present indicative was that the "PI was used at much higher rates than it was selected, whereas the PF and MF were always selected at higher rates than they were produced" (Kanwit, in press, p. 24).

Regarding the linguistic and extralinguistic variables included in this study, temporal distance, test time, and grammar score were selected as significant predictors for both tasks, whereas clause type and presence of a temporal adverbial were not significant. The author explains the results of using multiple tasks as they "supported claims that leaners may develop rates of occurrence or the role of independent linguistic variables in a more controlled context before they can apply such restrictions to language use" (p.29). As far as tracking the learners' development across the three times, the analysis revealed "that the midpoint of a U-shaped curve shows development in itself, as reduction in the rate of a form results in restricting it to specific linguistic contexts as other variants are restructured around the newly limited form" (p.33). Some of the

contributions of this article were greater control for the individual as a random effect through data analysis in Rbrul, the use of a longitudinal design, and the implementation of two different types of tasks.

Lastly, Kanwit and Solon (2013) remains to this date the only study that has explored the acquisition of futurity of Spanish in a study abroad setting. This investigation followed learners who studied abroad in two locations within the Spanish-speaking world: Valencia, Spain, and Mérida, Mexico. These two locations show different usage rates of MF, PF, and PI and therefore, the authors wanted to investigate whether learners would move towards the respective native-like patterns of their study abroad locations. For this purpose, learners were asked to complete a written contextualized questionnaire modeled after Gudmestad and Geeslin (2013) at the beginning and at the end of their stay (seven weeks apart). The task manipulated three independent linguistic variables: temporal distance, clause type, and the presence of adverbials. At Time 1, the groups were not significantly different from each other but at Time 2, the results indicated that the group that studied in Valencia showed higher rates of selection of the MF in accordance to native patterns in that city. The study showed an overall movement of learner patterns towards the native tendencies of each location, including cases in which the learners overshot the native patterns in terms of frequency rates.

The PI was the least selected future form by both groups, but learners selected it following native-like patterns regarding the effects of the linguistic variables. At Times 1 and 2, immediate contexts yielded higher selection of the PI and while the learners who studied in Mérida increased PI selection in the today context following native speakers from this city, learners who studied in Valencia decreased it to match the patterns of natives. Similar to the native speakers in Valencia and Mérida, who selected more PI in main clauses, learners in both groups increased their selection

of PI in main clauses from Time 1 to Time 2, reflecting the same pattern. Similarly, learners from both groups also increased their selection of PI when an adverbial was present in the sentence, mirroring the same pattern found in native speakers' selections.

Regarding the comparison of PF and MF selection and the effects of the independent linguistic factors, the study provided additional evidence to support learners' sensitivity to the local norms of native speakers. For Mérida learners, clause type and presence of temporal adverbial were significant predictors at Time 1, whereas at Time 2 neither of these factors was significant, which was the case for the native speakers. For Valencia learners, those two factors were significant at both Times 1 and 2, but learners moved towards native-like patterns such that immediate temporal contexts and main clauses favored the PF.

The studies reported in this section share some common results and trends. First, the three most common future forms learners produce and select are the MF, the PF, and the PI (Gudmestad and Geeslin, 2011). The three main independent variables that affect future choice are the temporal distance, the presence of an adverb, and the clause type. The trends observed for these variables were that immediate contexts, presence of an adverbial, and main clauses favored the use/selection of the PI. Presence of an adverb and distant future contexts favored the use/selection of the MF, and main clauses and immediate and intermediate contexts favored the use/selection of the PF. These trends were more observed as course level increased and aligned more with native speakers' trends; thus, as proficiency increased learners moved more towards native-like patterns. It was also observed that leaners produced higher rates of MF at the level where this form was introduced to then lower their use/selection in other levels. Lastly, learners tended to use/select PF or PI at higher rates in the lower levels, thus showing evidence of one-to-one mapping and then gradually started

adding more future variants in moving towards multifunctionality (Gudmestad & Geeslin, 2011, 2013; Kanwit, 2014, 2017; Kanwit & Solon, 2013; Solon & Kanwit, 2014).

The studies on variable future-time expression summarized above contributed to existing knowledge of the stages of acquisition of futurity by learners and tracked their development by using a wide array of tasks from contextualized preference tasks (Gudmestad & Geeslin, 2013; Kanwit & Solon, 2013) to written and oral production tasks (Kanwit, 2017; Solon & Kanwit, 2014). Of key importance to the current dissertation is Kanwit and Solon (2013), who concluded that the two groups of learners who studied abroad in Mexico and in Spain were able to acquire sociolinguistic variation and approximated native-like selection rates present in their respective study abroad locations. Crucially, however, all of the studies reported in this section focused mainly on how the different future forms emerged in the learners' interlanguage by maintaining the status-quo of classroom instruction rather than providing students with instruction on the variation that exists in the way natives use the future forms or by adjusting the type of information in instructional materials.

For this reason, the current dissertation includes a pedagogical intervention in the L2 Spanish class in order for students to be exposed to what guides the variation that exists regarding futurity expression in the Spanish-speaking world, thus attempting to offer them sociolinguistic knowledge to accelerate a process that would otherwise be only attained from contact with native speakers during a study abroad program or by exposure to Spanish for five consecutive semesters (Kanwit, 2014, 2017).

3.8 Gap between textbooks and actual use of the language

As van Compernolle (2013) indicates, “recent scholarship in the domain of L2 pedagogy (Etienne & Sax, 2009) has critiqued typical language classrooms and textbooks for lacking sufficient emphasis on sociostylistic variation” (p.344). Several authors have called for changes to the current curricula of foreign language classes in order to include sociolinguistic variation in textbooks and classroom materials given the lack of actual representation of variable forms and the lack of usage of such forms by students (Etienne & Sax, 2009; Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006; Valdman, 2003).

Etienne and Sax (2009) investigated the way French textbooks “develop students’ sociolinguistic competence and particularly the use of stylistic variation” (p.584). They investigated the treatment that textbooks offer to variation for three morphosyntactic variables in French (i.e., *on* versus *nous*, *ne* deletion, and interrogatives) and if the activities in the textbooks offered opportunity for students to explore such variation. The authors “advocate for a curricular shift” and “argue for a more explicit focus on stylistic variation of French in language textbooks from the beginning of language study” (p.584). The findings pointed to an overrepresentation of the formal variants in the textbooks “although these three variants (*nous*, *ne* retention, and inversion questions) are minimally used by native speakers” (p.597). The researchers observed how these more formal variants received the privilege and attention of the textbooks to the detriment of the inclusion of the variants that are more commonly observed in native speaker speech, forcing upon students a distorted representation of the language as they will encounter it in real life and in actual contact with authentic materials and native speakers. Etienne and Sax (2009) explained how most textbooks present as an objective “the development of oral proficiency in the first and second years” in their prefaces, but that “few illustrate the link between these goals

and the teaching of stylistic variation; even fewer propose a systematic and coherent treatment of the issue along the curriculum" (p.597). The authors conclude the study by reflecting on the importance of "an explicit discussion of French as it is commonly used by educated native speakers" (p.601), as it provides students with "valuable real-life knowledge" (p.601) and helps them "foster their interlanguage development and awareness" (p.602).

Valdman (2003) explored the option of constructing pedagogical norms in order to solve the problem of lack of exposure to actual variation shown by native speakers. His idea was that foreign language instruction "must aim to impart a substantive body of knowledge about the particular foreign language and the cultures of the communities that use it" (p.57-58). He argued that learners need to be "sensitized to the variability that exists in the target language and to become familiar with the various parameters with which it correlates" (p.58) for them to be able to reject the idea of standard varieties or "less worthy" dialects. He continues his discussion about how most foreign language teachers use the standard norm and how that is detrimental for students given that "that norm will seldom be evident in the samples of authentic oral texts to which learners will be exposed" and that "(it) will make it difficult for them to understand authentic texts" (p.58), thus preventing them from acquiring the rules that guide actual vernacular language. His solution to accounting for variation is the creation of a pedagogical norm. This pedagogical norm is informed by the behavior of native speakers and by creating a baseline of the different variants based on three factors: linguistic, sociopsychological and acquisition. In his article, Valdman offers pedagogical norms for the variation that exists for a morphosyntactic and a phonetic variant. He concluded that instructed learning informed by sociolinguistic factors resulted in improved performance and fewer prejudices about language variation.

Gutiérrez and Fairclough (2006) also commented on the issues discussed in the previous two studies reviewed in this section: the tradition of teaching a 'standard' variety in the Spanish classroom, the need to include variation present in native speech, and the creation of a pedagogical norm. As the authors discuss, "traditional foreign language instruction in the United States has been based on the teaching of a standard variety of Spanish… and, therefore on the rejection of local varieties" (p.180-181). As van Compernolle (2013) summarizes:

> "In short, L2 classrooms focus almost exclusively on standard language varieties, thereby marginalizing the more common informal linguistic forms widely used by native speaker communities. When sociostylistic variation is presented, it is often described in terms of simplistic rules of thumb, or narrowly empirical conventions of use (van Compernolle & Williams, 2012b)" (p.344).

Gutiérrez and Fairclough (2006) comment that it is not possible to teach students all existing varieties of Spanish, but that the introduction of language variation and characteristics of different dialects will help students develop awareness and a broader knowledge, as well as increasing their linguistic repertoire. The authors comment on a point raised in previous sections about the proficiency level of the students as a factor constraining how much they can acquire: even though variation should start to be taught in beginning levels of proficiency, the amount of variation presented would depend on the proficiency of students, such that "instruction should gradually move from awareness of linguistic variation to productive use of alternative dialects and from a focus on local varieties, registers, and styles, to other varieties, registers, and styles of Spanish around the world" (p.184). They argue that classes should start with the variation observed in local varieties of Spanish in the US, accounting for the fact that students would most probably

be exposed to those dialects than other varieties of the Spanish-speaking world. The authors argue that "when creating a pedagogical norm (…) not only student needs but also the local or regional sociolinguistic contexts need to be taken into account" (p.174) given that the objective is for students to be able to communicate with Spanish speakers across the Spanish-speaking world.

Typical language classrooms and textbooks lack emphasis on sociolinguistic variation, thus preventing students from being aware of variation in the language of study as used by speakers in the real world. Several authors have called for the inclusion of variation in teaching materials (Etienne & Sax, 2009; Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006; Valdman, 2003). Valdman (2003) for instance proposed the creation of a pedagogical norm informed by actual behavior of native speakers taking into account linguistic, sociopsychological, and acquisitional factors. The results of his study provided evidence that a pedagogical norm that included sociolinguistic information was beneficial for students as they improved in their performance and showed more positive opinions about language variation. Gutiérrez and Fairclough (2006) are adamant critics of the way classrooms and textbooks present language as a standard idealized variety while rejecting a range of regional varieties that represent actual language use. They propose that language variation be included in the classroom by means of authentic materials and starting at the beginning levels.

3.9 Principal contributions of the dissertation

I will present now the main contributions of this dissertation point by point. The main contributions are the inclusion of a pedagogical intervention, the investigation of task-based

differences in production and preference across modalities, and triangulation of qualitative and quantitative tasks.

3.9.1 Pedagogical intervention

As mentioned in the previous section, the current study is innovative in comparison to the rest of the studies that investigated acquisition of future tense in that it includes a pedagogical intervention in the Spanish classroom where learners were presented with the examples of the three most common forms to express futurity in Spanish (MF, PF, and PI) and the linguistic factors affecting the choice of variant. Thus, this intervention is informed by actual cognitive factors affecting the use of future as studied in native speaker speech. Mizne (1997) argued in her study that "there is an obvious need for teachers to help their students achieve a high level of sociolinguistic competence; however, there are not many resources available to help teachers approach this task" (p.10). The pedagogical intervention used in the current dissertation (described in depth in the Method chapter) was designed to serve as a resource for teachers to introduce variation in the classroom even at lower levels by means of examples where different forms of the future are used and by presenting the effects of the linguistic variables on the choice of native speakers from the Spanish-speaking world as a whole. The information presented in the intervention was based on the findings of relevant variationist research that investigated native speakers' use of future forms, thus overcoming "one of the challenges in acquiring sociolinguistic competence (which) is accounting for the multitude of differences of language use among cultures" (Mizne, 1997, p.13). This point is crucial as it involves the inclusion of language variation in the classroom that so many researchers, linguists, and teachers are demanding in response to the static and invariant standard variety of the language presented in textbooks and by some instructors

(Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006). This “standard” variety does not often correspond to any variety used by native speakers in the real world.

3.9.2 The role of task-related differences

This dissertation takes into account task-related differences and how those affect the form and structure of study: the future. Such task-related differences are related to the individual tasks, to the differences between production and selection, and the use of explicit or implicit knowledge (R. Ellis, 2009). Past studies have focused on production (oral and/or written) (Gudmestad & Geeslin, 2011; Kanwit, 2017; Solon & Kanwit, 2014) or preference (Kanwit & Solon, 2013), though more recent studies have called for the need for task triangulation given the role of task-based variation (Geeslin & Gudmestad, 2008a). Written tasks tend to foster use and production of more formal language, which in the case of future, means higher use/selection of morphological future (Sedano, 2006), while oral tasks tend to enhance the use of more informal language and more common forms such as the periphrastic future and the present indicative (Solon & Kanwit, 2014). In the pilot study presented above (Pisabarro Sarrió, in preparation) there were slight differences in results between the written production task and the preference task since both tasks were written. For the preference task, the control group and treatment group selected forms in a much more differentiated way not only between groups but also between forms, whereas for the written task the control used all forms at similar rates and the treatment showed preference for the periphrastic future due to the common, daily-life topic of the task.

3.9.3 The benefits of task triangulation

Following from task-related variation and the inclusion of different oral and written tasks in the current dissertation, the design also includes the use of a metalinguistic awareness task (described in detail in the Method chapter). This task asked learners to analyze some dialogues that featured future forms (present indicative, morphological future, and periphrastic future) so that students gave their views on why such forms were used in those contexts. Van Compernolle and Williams also used a metalinguistic awareness task in their 2011 study. They argued for the need of such tasks in obtaining information about the type of knowledge students acquired that is not always visible from their performance in production tasks. In addition to the metalinguistic awareness task completed at Times 1 and 4 (at the pretest and at the delayed posttest 2, respectively), the current dissertation included a self-report task where students had to summarize what they had learned from the pedagogical intervention at Time 2 (at the immediate posttest). Similar to the metalinguistic awareness task, this self-report task forced students to reflect on their own learning, thus more likely processing the information explicitly.

3.10 Goals and motivation

The main issue that the current dissertation aims to address is the disconnect between the information presented in textbooks and classrooms and the actual use of language by native speakers. For Spanish as a second/foreign language, to my knowledge, no study has explored how an intervention in the classroom can help students become aware of variation and develop sociolinguistic knowledge and competence, like the work of van Compernolle and Williams for

French (2011, 2012a). Some of the research still "assume(s) that sociolinguistic competence only develops as a result of sufficient input in the right context (e.g. study abroad)" (van Compernolle & Williams, 2012a, p. 185). However, as Gutiérrez and Fairclough (2006) suggest, if sufficient input in the right context were provided to students at all levels of proficiency and to all learners in at-home classrooms regardless of study abroad experience, learners could potentially develop an awareness of variation resulting from a more accurate description of the language as it is used in real contexts by real users, which in time could bolster their sociolinguistic competence. The present dissertation is a first step in filling the aforementioned gap in the literature by implementing an explicit pedagogical instruction of the sociolinguistic variation of future expression in Spanish in lower-intermediate classes in order to see whether such intervention enhances learners' sociolinguistic competence in the at-home institution. The focus is specifically on future expression, since the structure has been explored sufficiently to identify relevant constraining variables and to illustrate that speakers use numerous forms in this context, but prior work has not yet addressed the acquisition of variable future-time expression through the provision of an explicit instruction containing information on language variation.

4.0 Results

The present chapter includes the goals of the study followed by the research questions that guide this dissertation. Next, the methodology of the research is presented including a detailed description of the participants, the tasks, and the design of the study. Then a description of both linguistic and extralinguistic variables is presented. This section concludes with a summary of the pilot study performed by the researcher in the fall semester of 2017.

4.1 Goals and Research questions

The goals of this research are twofold: the present dissertation expands on previous literature on the teaching of sociolinguistic competence (i.e., work in the French classroom) and it aims to investigate the effects of explicit instruction on the development of sociolinguistic competence and awareness of variation in the Spanish classroom, thus responding to researchers who have called for an inclusion of variation in the classroom.

Taking into account the gaps and motivations for this dissertation presented in the previous chapters, the following research questions serve as a guide for the dissertation plans.

The more general question is the following:

> Does explicit instruction on sociolinguistic variation in the L2 Spanish classroom have any effects in enhancing the sociolinguistic competence of learners expressing the future in an explicit instruction group or an explicit instruction plus spiraling activities group, as compared to a control group that does not receive such instruction?

In order to help answer the main guiding question, a set of more focused questions is also explored:

1) What are the rates of use and selection of the future forms across tasks (i.e., oral production, written production, contextualized preference) and across groups (i.e., control, instruction, instruction plus spiraling activities)?
2) How do rates of use and selection change over time (four points over a semester)?
3) What are the linguistic and extralinguistic variables that predict use and selection of the future variants? Do the effects of the independent variables on the dependent variable change over time?
4) Are there any gains in sociolinguistic competence in terms of changes in learners' metalinguistic awareness from Time 1 to Time 4?
5) What are the patterns of production and selection of participants in English? Are these patterns similar to the Spanish ones at Time 1?

4.2 Method

The study included six groups of learners of Spanish as a second language. Participants were asked to complete a battery of tasks in both Spanish and English that targeted future-time expression: an oral production task, a written production task, and a contextualized preference task in both languages. Participants also completed a language background questionnaire, a metalinguistic awareness task, a self-reflection task, a Spanish grammar test, and a verb conjugation test. Their respective instructors completed the first three tasks at the beginning of the experiment. Participants completed the battery of tasks in Spanish (oral production task, written

production task, and contextualized preference task) at four different times throughout the spring semester of 2018 (Time 1 took place one month after the semester started, Time 2 took place two days after Time 1, Time 3 took place two weeks after Time 2, and Time 4 took place six weeks after Time 3, such that the last data collection was approximately 8 weeks after the first). The English tasks were only completed once at the beginning of the experiment (these tasks each took approximately 10 to 15 minutes to be completed) together with the language background questionnaire, the Spanish grammar test, and the verb conjugation test. Participants had the duration of a regular class to complete the tasks (50 minutes) in the following order: oral production task, written production task, and contextualized preference task. All the tasks and the intervention took place during regular class time in the regular Spanish classroom. Due to time limitations and the number of tasks to be completed in the pretest (Time 1), the language background questionnaire and the verb conjugation test were completed online via Qualtrics before participants had to take part in the instruction at Time 2.

4.3 Participants

The pool of participants of the study consisted of 54 learners pertaining to six different classes. All participants were American students of Spanish as a second/foreign language at the University of Pittsburgh. All were currently enrolled in Spanish 2, a low-intermediate second-semester Spanish class offered by the Department of Hispanic Languages and Literatures. The participants came from intact classes and each class was randomly assigned a condition: control, instruction, or instruction plus spiraling activities. Two classes were assigned to each condition thus creating three groups. As will be explained later in the tasks section in this chapter, the control

group received a traditional grammar instruction of the morphological future, while the instruction groups received the pedagogical intervention that was informed by sociolinguistic research on futurity in native speakers of Spanish. The difference between the two instruction groups consisted of instruction plus spiraling activities group completing three sets of additional spiraling tasks completed between the two delayed posttests that the instruction group did not complete.

The control group had 18 learners: 8 women and 10 men. Their ages ranged between 18 and 27 and their mean age was 20.22 years of age. The group consisted of four freshmen, five sophomores, six juniors, and three seniors. Participants' mean score in the Spanish grammar test was 8.67 out of 25 possible points. The instruction group had 19 learners: 9 women and 10 men. Their age range was 18 – 37 and their mean age was 21.21. The group consisted of five freshmen, six sophomores, one junior, and seven seniors. The mean grammar score was 10.26. The last group, instruction plus spiraling activities, had 17 learners: 6 women and 11 men. The learners' ages ranged from 18 to 24 with a mean age of 20.53. The group consisted of one freshman, six sophomores, eight juniors, and two seniors. The mean grammar score for this group was 9.18.

All participants reported English as their native language, and only three reported ever speaking Spanish at home (one in the instruction plus spiraling activities group and two in the control group). A total of 17 participants reported practicing Spanish outside of the class (five in the control group, six in the instruction group, and six in the instruction plus spiraling activities group). All the students who participated in the study had taken Spanish 1 at the University of Pittsburgh before enrolling in Spanish 2. None were placed directly to Spanish 2 through a placement test. Participants ranged in the years they studied Spanish in high school from none to four. Only five participants reported having study abroad experience in a Spanish-speaking country during high school (four in the control group and one in the instruction group between one month

and one year). Out of the 54 participants only 14 expressed a desire to study abroad during college (five in the control group, four in instruction, and five in instruction plus spiraling activities) and while 39 reported studying Spanish as a requirement (14 in the control group, 12 in the instruction group, and 13 in instruction plus spiraling activities), only 15 considered it useful and necessary (four in control, seven in instruction, and four in instruction plus spiraling activities). Only five students in the current sample reported studying Spanish towards a major or a minor (two in the control group and three in the instruction group). Although the projected pool of participants consisted of 116 students, who were the total number of students enrolled in the six classes, due to participant attrition in missing at least one session, 62 of them were excluded from the study.

Table 4-1 Participants' information

Group	Number of participants	Gender	Mean age	Grammar score	College year
Control	18	8 Women 10 Men	20.22	M= 8.67 SD= 2.50 Range= 3-12	4 freshmen 5 sophomores 6 juniors 3 seniors
Instruction	19	9 Women 10 Men	21.21	M= 10.26 SD=2.51 Range= 7-17	5 freshmen 6 sophomores 1 junior 7 seniors
Instruction plus spiraling activities	17	6 Women 11 Men	20.53	M= 9.18 SD= 1.74 Range= 7-14	1 freshman 6 sophomores 8 juniors 2 seniors

A one-way between subjects ANOVA was performed in order to determine whether there were any significant differences in grammar scores across groups. The ANOVA indicated that there were not significant differences between the groups $F(2, 51) = 2.347$, $p = .106$.

Six different instructors taught the six classes that were part of the current research. There were three female and three male instructors. The instructors came from a variety of countries: the four native Spanish speakers came from Cuba, Mexico, Puerto Rico, and Colombia. The two non-native Spanish speakers were from the US and from South Korea. All the instructors were students in the PhD program of Hispanic Literatures in the department of Hispanic languages and literatures.

4.4 Pedagogical intervention

The three groups (control, instruction, instruction plus spiraling activities) corresponded to the type of pedagogical intervention each of the groups received regarding future expression. The control group received a grammar-based explanation on the morphological future, its conjugations, and irregularities. This group was considered the control as the type of explanation the students received corresponds to the traditional way of explaining tenses not only by textbooks but also by instructors in many language programs. This type of explanation does not contain information on the variation that exists in the Spanish-speaking world or the factors that affect the choice speakers make when expressing futurity.

The explanation the two instruction groups received attempted to remedy the lack of variation and of real-world knowledge. The instruction group received a more sociolinguistic-based explanation that presented the three most common forms of expressing the future, namely

present indicative, periphrastic future, and morphological future, examples of each in context and how each form is affected by the variables known to constrain their use: temporal distance, and presence of temporal adverbials. This approach was more teacher-centered in that the explanation conducted by the teacher followed a more deductive approach in which the teacher explained the content and the participants interpreted the examples from the teacher's explanation. The instruction plus spiraling activities group received a similar version of the intervention as the previous group but it contained information from a more cognitive point of view including formality as a factor. The presentation was not completely teacher-centered as in the previous two groups, but students uncovered the information from examples presented to them in a Powerpoint presentation and from the guiding questions of the researcher following a more inductive approach. In this inductive approach, the participants analyzed sample sentences and reached their own conclusions about how different factors affected the use of the future variants portrayed in the examples. Then, their conclusions were confirmed or modified by the teacher in a short explanation. The guiding questions served to maintain the students' conclusions focused on the main independent variables of interest: formality, temporal distance, and presence of temporal adverbials. After the students had uncovered all the variables and their effect on each of the three future forms presented, the researcher reviewed the main highlights using further examples. The Powerpoint slides used for the two instruction groups can be found in Appendix A.

4.5 Tasks

The tasks completed by the participants will now be described in detail in the order in which they were completed: language background questionnaire, verb conjugation test, oral

production task, written production task, contextualized preference task, English tasks, metalinguistic awareness task, language grammar test, self-reflection task, and spiraling activities. The learners had 50 minutes to complete all tasks which occurred during a regular class session (except for the spiraling activities which took place on a different class day). Due to time limitations to complete all the tasks in the pretest, the language background questionnaire and the verb conjugation task were completed online via Qualtrics. In addition to the pedagogical intervention, the instruction plus spiraling activities group participated in three additional spiraling activities between the two delayed posttests in their regular classroom time that were audio-recorded.

4.5.1 Language background questionnaire

The language background questionnaire (LBQ) served to collect demographic data and included questions about participants' age, gender, native language, previous Spanish experience, intention to study abroad, years of high school Spanish, and reasons for studying Spanish in college. This questionnaire was written in English for the learners. This questionnaire was completed only once at Time 1 and it was completed via Qualtrics due to time restrictions. It only took between five and ten minutes to complete this task. Appendix B contains the questionnaire.

4.5.2 Verb conjugation test

The verb conjugation test (VCT) was a short grammar task that asked the participants to conjugate several verbs in context using the present indicative, the periphrastic future, and the morphological future in different persons. This task served to demonstrate that the learners were

familiar with these forms and that they were able to conjugate the verbs before starting the experiment and completing the rest of the tasks. This task was also completed on Qualtrics before the immediate post-test. It took between five and seven minutes to complete this task. The full task can be found in Appendix C but example 1 shows an item of the test:

(1) Conjuga los verbos entre paréntesis con la estructura ir + a + infinitivo:

*Tú _____ **(ir a estudiar)** a la biblioteca mañana.*
*Mi amiga _____ **(ir a estudiar)** a la biblioteca mañana.*
*Mis amigos _____ **(ir a estudiar)** a la biblioteca mañana.*

"(1) Conjugate the verbs between brackets with the structure *ir +a* + infinitive:
You (singular) _____(go to study) in the library tomorrow.
My friend _____(go to study) in the library tomorrow.
My friends _____(go to study) in the library tomorrow.

Regarding the present indicative, all participants conjugated this tense correctly except for four participants who did not answer the question (two participants in the control group, one in the instruction, one in the instruction plus spiraling activities group). As for the periphrastic future, 35 participants conjugated this variant correctly (16 in the control group, 10 in instruction, and 16 in instruction plus spiraling activities). For this variant, three participants used the infinitive form (one in instruction, and two in instruction plus spiraling activities), four conjugated both verbs in the form (*ir* and the infinitive) (three in instruction, and one in instruction plus spiraling activities), six participants conjugated this form as the present indicative (two in the control and four in instruction), one participant in the control conjugated the form as the morphological future, and four did not answer or the conjugation part was not shown in Qualtrics (two in control, one in instruction, and one in instruction plus spiraling activities). Finally, for the morphological future, 20 participants out of the total of 54 correctly conjugated the variant (eight in the control, six in each instruction group), 11 did conjugate half the verbs correctly (three in the control, seven in

instruction, and one in instruction plus spiraling activities), 12 conjugated the variant as other tenses such as the present indicative, the present perfect, and the preterite (four in each group), and 11 did not know the variant, did not answer at all, or the conjugation part was not shown on Qualtrics (three in the control, two in instruction, and six in instruction plus spiraling activities).

4.5.3 Oral production task

The oral production task (OPT) was audio-recorded in the language lab while the other tasks were completed on paper in the same setting. This task presented six different situations to the learners and they were instructed to provide a spoken answer to each of the situations in Spanish. Participants were instructed to say as much as they would like and to make an educated guess if they lacked certainty. All situations asked the students to talk about their plans (first three situations) or their best friend's plans (last three situations). This task manipulated the variables of temporal distance and formality of the interlocutor. The three temporal distances were near future (immediately after class, this afternoon, or tonight), intermediate future (this summer which meant three months away or fall break, which meant eight months away), and distant future (spring 2019, which meant one year away or summer 2019, which meant a year and a half away). This task had two different versions that varied item order depending on the expected formality level that would be used with the interlocutor. For version A, in the first three situations the students were asked to talk to their classmates (informal) while in the three last situations they were asked to talk to their professor (formal). For version B, the interlocutors were reversed in that the participants were first asked to talk to their professor and then to their classmate. Example 2 shows an item of the task:

*(2) Habla a **tu compañera de clase** sobre **tus** planes para inmediatamente después de esta clase y para esta tarde.*

"(2) Talk to your classmate about your plans for immediately after this class and for this afternoon."

Participants completed the same version of the task throughout the entire experiment. This task took between 10 and 15 minutes to complete. Though an oral task was not included when piloting, it was included in the current dissertation in order to obtain oral data and to be able to triangulate the data together with the written data both in production and in selection. The full task can be found in Appendix D.

4.5.4 Written production task

Next, participants completed a written production task (WPT) modeled after the oral production task described above. Participants were instructed to write an email to two different interlocutors about their plans or their best friend's plans for three different future distances. Therefore, the difference between the oral task and this written task is that this current task only presented the students with two situations that contained all three future contexts instead of six different contexts as in the oral task. This task also manipulated temporal distance and formality of the interlocutor. Temporal distance had three variants: near (immediately after class, this afternoon, or tonight), intermediate (this summer or fall break), and distant future (spring 2019 or summer 2019). For formality, the task had two versions depending on the order the email recipients were presented: version A and version B. Version A presented the classmate first followed by the boss, and version B presented the boss first followed by the classmate. The instructions asked the participants to write as much as they would like in Spanish in order to respond to the two prompts. This task took between 10 and 15 minutes to complete. Example 3 presents an item of the task:

*(3) Escribe un correo electrónico **a tu compañera de clase**. En este correo debes describir **tus** planes para estos contextos:*

- *para inmediatamente después de esta clase y para esta tarde.*
- *Para este verano*
- *Para la primavera de 2019.*

(3) Write an email to your classmate. In this email you should describe your plans for the following contexts:

- immediately after class and this afternoon
- this summer
- spring 2019

Even though this task was considered more formal than the oral task given the fact that it was a written task and asked to write an email, it contained two levels of formality regarding the interlocutor: classmate as more informal, and boss as more formal. The entire task can be found in Appendix E.

4.5.5 Contextualized preference task

The contextualized preference task (CPT) contained 18 contextualized items. These 18 items formed a story about a day in the participant's college life. Of the 18 items, 12 were experimental items and six were distractors. The six distractors related to other grammatical structures of Spanish such as *ser* and *estar*, preterite and present perfect, indirect object pronouns, and direct object pronouns. Throughout the day featured in the story, participants (main characters of the story) had conversations with their best friend and with their advisor. Formality was conceptualized in the two interlocutors: their best friend being more informal and the advisor being more formal. This task also had two versions as the previous tasks: version A and version B. Version A featured their best friend as the interlocutor in the first six items and their advisor in the other six. Version B reversed the order of the interlocutors featuring the advisor in the first half of

the task and their best friend in the second half of the task. The linguistic variables that were manipulated in the task were temporal distance and presence of temporal adverbials. For temporal distance, the same three distances in the other two tasks were manipulated: near future (within the same day), intermediate future (within some months but less than a year), and distant future (more than one year away). Temporal adverbials had two variants: either a temporal adverbial was present or absent. In the task, the first item of a specific temporal distance contained the temporal adverbial while the following item, still of that same temporal distance, did not contain the temporal adverbial so that half of the experimental items contained a temporal adverbial and the other half did not. This task took between 10 and 15 minutes to complete. Examples 4 and 5 show two items of the task of the same temporal distance (one with an adverb and the following one without one):

(4) Tu mejor amiga y tú se encuentran en la universidad en la mañana. Tú le dices a ella:
a. Esta tarde estudiaré en la biblioteca.
b. Esta tarde voy a estudiar en la biblioteca.
c. Esta tarde estudio en la biblioteca.

"(4) Your best friend and you meet up in the university in the morning. You tell her:
a. This afternoon I will study in the library.
b. This afternoon I am going to study in the library.
c. This afternoon I study in the library."

(5) Ella piensa que es una buena idea. Tú sigues pensando en tus planes y dices:
a. Voy a cenar en Five Guys.
b. Ceno en Five Guys.
c. Cenaré en Five Guys.

"(5) She thinks that it is a good idea. You keep thinking about your plans and add:
a. I am going to have dinner at Five Guys.
b. I have dinner at Five Guys.
c. I will have dinner at Five Guys."

As observed in the example, each item contained a context sentence followed by three options from which participants had to choose the one they preferred. These options were identical sentences except for containing one of the three future verb forms: MF, PF, or PI. The order of the response options was randomized throughout the entire task. The response options were either direct quotes from the main character of the story (the participants) or their interlocutors in the story: their best friend or their advisor.

This task and the linguistic variables manipulated were modeled after other contextualized preference tasks used in previous studies that investigated future-time expression (Gudmestad and Geeslin, 2013; Kanwit and Solon, 2013) and all verbs were in the first person singular and were regular except for one (*volar* 'to fly') that had a root change in the present indicative. The complete task can be found in Appendix F.

4.5.6 Tasks in English

The study also used an oral and written production task and a contextualized preference task in English similar to the ones described above. The tasks manipulated the linguistic variables of temporal distance and presence of temporal adverbial (for preference task) and only temporal distance (for oral and written production). Formality of the interlocutor was also manipulated in all three tasks resulting in two versions for the tasks in English where the order of presentation of the interlocutors was reversed as in the tasks in Spanish. The purpose of collecting data in English was to obtain a baseline of future preference and use in the participants' native language in order to compare those preferences/uses with Spanish (Fafulas, 2013). In addition, the findings from the English tasks could be compared to the known tendencies for English in previous studies that investigated future-time expression (Bardovi-Harlig, 2005). These tasks took between 15 and 20

minutes to complete. Appendix G shows the oral production task, Appendix H shows the written production task, and Appendix I shows the preference task.

4.5.7 Metalinguistic awareness task

Van Compernolle and Williams (2010) provided evidence that sociolinguistic "performance does not necessarily mean that [learners] are unaware that variation exists" or of how it works (p.18). For this reason, the study included an additional task that targeted not performance (as it was targeted by the other tasks described above) but competence directly in the form of a metalinguistic awareness task in which participants provided metalinguistic explanations about the variation that exists for future expression in Spanish. This task presented some questions to participants about their knowledge regarding future-time expression in Spanish, their previous exposure to morphological future and the other two forms, and what they know about the forms and their uses. Following van Compernolle and Williams (2010), the task was performed in English as participants were able to express such abstract knowledge better in their L1, considering their relative inexperience in Spanish. Participants were asked to complete this task at Time 1 and then again at Time 4 in order to track their progress and to see if their sociolinguistic knowledge changed over time. The full task can be found in Appendix J.

4.5.8 Language grammar test

The Spanish grammar test (LGT) was a lextale-Esp (used in Kanwit & Solon, 2013 taken from García-Amaya, 2011) in order to assess the level of proficiency of the participants and to confirm via an objective grammar test that participants had been appropriately placed in Spanish

2. This test was a contextualized story that contained twenty-five multiple-choice grammatical items. The items contained different structures that are typically taught in Spanish classrooms. As explained before, a one-way between subjects ANOVA revealed that the differences between groups were not significant: F (2, 51) =2.347, p=.106. The language grammar test is included in Appendix K.

4.5.9 Self-reflection task

The self-reflection task (SRT) was completed by all three groups only once at Time 2 right after the intervention. This task asked the students to summarize what they had learned in the class that day and to indicate whether they had any doubts about what they had learned. This task served to inform the researcher whether the students had understood what the intervention was intended to teach them. As with the metalinguistic awareness task, the participants were instructed to respond to this task in English so that they could express the abstract knowledge better in their native language. This task can be found in Appendix L.

4.5.10 Spiraling activities

In addition to the tasks that all groups completed described above, the two classes in the instruction plus spiraling activities group completed a set of three additional tasks between the two delayed posttests (between Time 3 and Time 4). These three tasks were spiraling activities that consisted of two parts: an interpretation component and a production component. The objective of these tasks was to reintroduce the future-time expression concepts learned in the explanation this group received before the immediate posttest through a variety of topics that were part of their

normal curriculum and textbook. The first activity used the topic of traveling; the second one included the topics of social change and the role of women; and the third activity included the topics of science and technology. The format of the three activities was the same: the first part was an interpretation task and asked the students to read two short dialogues that had verbs in bold and then explain why the speakers in the dialogues had used those specific future forms. The second part of the activity was a production task and provided the students with two situations for which they had to create a short dialogue of four lines representing each situation. The participants were also asked to explain why they had used the specific future forms they chose for the dialogues. These three spiraling activities were performed as part of their normal classroom work and were completed in groups. Students wrote their responses on the worksheets provided and were audio-recorded while completing the activities. The three spiraling activities are included in Appendix M.

4.6 Procedure

Data were collected longitudinally throughout the spring semester of 2018 at four different occasions. The pretest (Time 1) took place one month after the start of the semester and two days before the intervention and immediate posttest. In the pretest the participants completed the three main tasks in both Spanish and English: oral production task, written production task, and contextualized preference task. They also completed the metalinguistic awareness task and the Spanish grammar test at Time 1. The other two tasks, the language background questionnaire and the verb conjugation test were completed online via Qualtrics. The intervention and the immediate post-test (Time 2) took place two days after the pretest and the participants completed the three

main tasks only in Spanish. Participants were also asked to complete a self-report where they explained what they have learned from the explanation in class and to let the researcher know if they had any further doubts about the content of the intervention. The intervention and the immediate posttest took place the day in which the syllabus for the course (Spanish 2) indicated that the morphological future was scheduled to be explained. The rest of the data collection days were scheduled on days where the syllabus indicated reading/speaking practice days in order to preserve regular class time for instructors on other days. The first delayed post-test (Time 3) took place two weeks after the immediate post-test (Time 2). In the delayed post-test 1 participants were asked to complete the three main tasks in Spanish (oral production task, written production task, and contextualized preference task). The second delayed post-test (Time 4) took place eight weeks after the immediate post-test (Time 2) and six weeks after the first delayed post-test (Time 3). For this last delayed post-test, participants were asked to complete the main three tasks in Spanish as well as the metalinguistic awareness task in order to track their sociolinguistic development from Time 1 to Time 4. As explained before, the spiraling activities that were completed by the two classes in the instruction plus spiraling activities group took place between the two delayed post-tests with a two-week separation between each.

Table 4-2 Data collection procedure [7]

Group	**Pretest (Time 1)**	**Posttest (intervention) (Time 2) (2 days after Time 1)**	**Delayed Posttest 1 (Time 3) (2 weeks after Time 1)**	**Additional activities (every two weeks)**			**Delayed Posttest 2 (Time 4) (8 weeks after Time 1)**
Control	LBQ VCT MAT OPT WPT CPT English tasks LGT	OPT WPT CPT SRT	OPT WPT CPT	--	--	--	OPT WPT CPT MAT LGT
Time to complete tasks	50 minutes	50 minutes	30 minutes	--	--	--	50 minutes
Instr.	LBQ VCT MAT OPT WPT CPT English tasks LGT	OPT WPT CPT SRT	OPT WPT CPT	--	--	--	OPT WPT CPT MAT LGT
Time to complete tasks	50 minutes	50 minutes	30 minutes	--	--	--	50 minutes

[7] Abbreviations
LBQ: Language background questionnaire
VCT: Verb conjugation task
MAT: Metalinguistic awareness task
OPT: Oral production task
WPT: Written production task
CPT: Contextualized preference task
LGT: Language grammar task
SRT: Self-reflection task

Table 4-2 (continued)

Instr. plus spiral. Activ.	LBQ VCT MAT OPT WPT CPT English tasks LGT	OPT WPT CPT SRT	OPT WPT CPT	Spiral. Act. 1	Spiral. Act.2	Spiral. Act.3	OPT WPT CPT MAT LGT
Time to complete tasks	50 minutes	50 minutes	30 minutes	20 min.	20 min.	20 min.	50 minutes

4.7 Data coding for production tasks

The analysis includes all forms of future-expression and, based on piloting, the three most frequent future forms were expected to be: morphological future, periphrastic future, and present indicative. All future forms (not only the three most common ones) are considered for the descriptive statistics regardless of prescriptive accuracy regarding context of use and person and number agreement, as long as intended future reference was unambiguous. Therefore, all attempts at expressing the future are included in the descriptive analysis. This type of analysis is based on the concept-oriented approach (von Stutterheim & Klein, 1987) and following this approach all forms that express futurity are taken into account in the analysis. Then, the three forms that had been included in instruction constitute the primary focus of the analysis. These forms also happened to be the only ones which were used more than 20% of the time by participants.

4.7.1 Dependent variable

The dependent variable is the form used in future time contexts. In the current study those forms are morphological future, periphrastic future, present indicative, present progressive, conditional, lexical futures, subjunctive, and future progressive. Verbs in the present indicative whose temporal reference was ambiguous and could be applicable to a present event or state were excluded from the analysis, and only those with an unambiguous future reference were included.

4.7.2 Independent linguistic variables

The two independent linguistic variables coded in the current dissertation were temporal distance and presence of temporal adverbial. These variables are the most commonly described in the literature as significant predictors of the choice of future form in studies not only about natives but also L2 speakers (Blas Arroyo, 2004, 2008; Gutiérrez, 1995; Kanwit, 2017; Orozco, 2005, 2007; Sedano, 1994). Two other linguistic variables were coded: clause type and person and number of the subject. Given the uneven distribution of the tokens for these two variables and the low token count for some cells (i.e., little use of subordination and primary use of 1SG subjects), these variables were not included in the statistical analyses. Cross-tabulations for these two variables can be found in Appendices P (for the oral production task) and T (for the written production task). For the contextualized preference task these two variables were controlled (i.e., actions occurred in main clauses and with 1SG subjects). Five additional independent extralinguistic variables were coded: test time, formality of the interlocutor, task version, grammar score, and participant gender.

4.7.2.1 Temporal distance

Past studies have considered five groups of temporal distances that included immediate future, later the same day, within the week, within months, and at least one year away (Gudmestad & Geeslin, 2011, 2013; Kanwit, 2014, 2017; Kanwit & Solon, 2013). These past studies included participants of different levels of proficiency from low-beginner to advanced, with later groups showing more nuanced sensitivity across distances. However, due to the inclusion of only one lower level course, only three groups of temporal distance were considered: 1) near future (within the same day), 2) intermediate (between 3 and 8 months away), and 3) distant (more than a year away). These three categories have been shown to be more different from each other across a variety of learner levels and were thus selected as the three distances for this dissertation. Moreover, in piloting, evidence was also provided that showed differences between the three distances. Past studies (Gudmestad & Geeslin, 2011; Kanwit & Solon, 2013) have found that periphrastic future was less restricted as it was used across more temporal contexts, that the present indicative was mostly used in same day contexts while the morphological was restricted to contexts further in the future.

4.7.2.2 Presence of temporal adverbials

This variable was coded according to two categories: presence or absence of a temporal adverbial. For presence, the context considered was only within the same sentence. Besides coding for presence or absence of adverbial, the individual adverbial was also coded separately (e.g. *esta tarde, después, esta noche, para el verano, para las vacaciones de otoño*, etc.). Based on previous studies (Gudmestad & Geeslin, 2011; Kanwit & Solon, 2013), it was expected that the present indicative would co-occur most often with temporal adverbs, morphological future would be

favored by the presence of adverbs and periphrastic future would appear less with temporal adverbs.

4.7.2.3 Clause type

Clause type was coded depending on whether the main verbs expressing futurity were in main or subordinate clauses and was coded in the two production tasks and controlled in in the contextualized preference task, as all future-time contexts occurred in main clauses. According to previous research the trends observed were that the present indicative would be favored in main clauses whereas the other tenses were more equally distributed across types of clauses (Gudmestad & Geeslin, 2011; Kanwit & Solon, 2013). Since learners produced relatively few subordinated future-time contexts, this variable is not included in further statistical analyses, although it is reported in Appendices P for the oral production and S for the written production.

4.7.2.4 Person and number

The person and number of the subject of the verb expressing futurity was also coded in the two production tasks. For the contextualized preference task, this variable was controlled, as all future-time verbs had a 1st person singular. Taking into account previous literature, for first person singular the PF is expected to be used and/or selected (Gudmestad & Geeslin, 2011), whereas the third person singular is thought to be an especially viable context for the PI due to scheduling as with *el examen es el lunes* 'the exam is on Monday' (Kanwit, 2017). Since learners produced a limited set of persons and numbers, this variable is not included in further statistical analyses, although it is reported in Appendices P for the oral production task and in S for the written production task. We now turn to the extra-linguistic variables.

4.7.3 Independent extra-linguistic variables

The four independent extra-linguistic variables included in the analysis were test time, formality of the interlocutor, task version, and grammar score. Participant gender was coded but given the uneven distribution of gender, this variable is not included in further analyses, although it is reported in Appendices P for the oral production task, in T for the written production task, and in X for the contextualized preference task.

4.7.3.1 Test time

Test time was coded for when participants completed the tasks. As described above, participants completed the tasks at four different times throughout the semester: Time 1 corresponded to the pre-test, Time 2 as the immediate post-test (which took place two days after Time 1), Time 3 as the first delayed post-test (which took place two weeks after Time 2), and Time 4 as the second delayed post-test (which took place eight weeks after Time 2) .

4.7.3.2 Formality of the interlocutor and the task

Though formality was not manipulated in the pilot study, it was included as a variable in the dissertation and it is approached in two ways in the present study: across tasks and within tasks. Firstly, given the triangulation of the tasks and the inclusion of more formal and more informal type of tasks, in the discussion it will be considered in a more global sense to the extent that the written tasks are more formal than the oral tasks in the present study. Written tasks are considered to be more formal tasks and to prompt the production of more formal language, which in the case of future expression may point to a higher production of morphological future (Sedano, 1994). On

the other hand, the oral task is a more informal task and prompts the use of more informal language, which in this case may reduce the production of morphological future.

Secondly, it is coded as an extra-linguistic independent variable within each of the elicitation tasks, based on whether the interlocutor had greater or equal power than the participant, as more or less formality would be expected in each case, respectively. Therefore, formality was conceptualized as the type of interlocutor the participants were addressing: either a classmate/best friend or their boss/advisor/professor. As with the type of task, addressing a more formal interlocutor such as a boss is expected to prompt higher use and selection of morphological future when compared to addressing a classmate. For these reasons and seeing the inherent presence of formality in both task type and future form, formality was included as a variable in the present dissertation.

4.7.3.3 Task version

Task version was operationalized as the order in which the interlocutors were presented in the tasks. There were two interlocutors depending on formality level: best friend or classmate as the more informal interlocutor expected to prompt more informal language and professor, boss, or advisor who prompted more formal language. There were two task versions for the three main tasks: oral production, written production, and contextualized preference. Version A featured the more informal interlocutor first (best friend or classmate) followed by the more formal one (professor, boss, or advisor) whereas version B featured the opposite order: more formal first followed by more informal. In order to not introduce further variables to the study, participants completed the same version of the tasks across all four times of data collection. We predicted that starting with the more informal interlocutor could prime participants to produce/select the more informal future variant (PF) throughout the task, while starting with the more formal interlocutor

could prime participants to produce/select the more formal future variant (MF). These trends were found in the results of the pilot study.

4.7.3.4 Grammar score

The grammar scores of participants in the three groups ranged between 3 and 17 points out of a possible 24 and, according to the scores' distributions, two groups were created: low and high. The low scores group ranged from 3 to 9 points and the high scores group ranged from 10 to 17 points. Below is a distribution of grammar scores per group (Table 4-3).

Table 4-3 Distribution of grammar scores per group

Grammar score	Control	Instruction	Instruction plus spiraling activities
3	1	0	0
4	1	0	0
7	4	1	2
8	1	5	5
9	3	1	4
10	4	5	3
11	2	3	2
12	2	2	0
14	0	0	1
15	0	1	0
17	0	1	0
Total	18	19	17

For this variable, we expect the low scores participants to produce the PI at higher rates overall since this form is not as complex, is acquired earlier, and such participants still have not acquired the multiple future forms, thus showing one-to-one mapping. On the other hand, we

expect the higher grammar score participants to produce more different and complex forms and develop multifunctionality earlier than the other participants.

4.7.3.5 Participant gender

Participants were coded according to gender in a binary way, as women or men. This variable has often been excluded in previous research on L2 temporal expression but it has deemed relevant in the two studies reported in this section. Geeslin and Gudmestad (2010) reported that one of the factors affecting the choice of future variants was the speakers' gender when talking about native Spanish variation. For non-native speakers of Spanish, the researchers reported that the men produced the PF more often than the women. The same trend was found for native speakers of Spanish in addition to the men using the MF more than the women.

In Kanwit (2014), it was reported that for the oral production task the distribution for men and women was similar but two trends were worth mentioning: 1) women produced less PI than men and 2) women in general used more PF than men. For the preference task, women selected PF more than men overall across Levels, though at Level 1 the selection of future forms was very similar across sexes. The author argued that the women selected more MF than men in both production and preference tasks after instruction of MF forms, which for that sample indicated that women demonstrated greater sensitivity to those forms.

For this dissertation we expect results to be in line with the ones reported above: females producing and selecting more PF and MF than men and men producing and selecting more PI than women overall. As mentioned before, this variable is not included in further analyses, although it is reported in Appendices P for the oral production task, in S for the written production task, and in V for the contextualized preference task.

4.8 Data analysis

As noted before, all attempts at expressing the future were included in the analysis regardless of their prescriptive correctness as long as use was to express futurity in an unambiguous way. Each future form was coded for the independent linguistic variables (temporal distance, presence of adverbials, clause type, and person and number). Production of future forms in oral and written tasks was compared to the preference task across groups. The four sets of longitudinal data were compared and allowed for the tracking of development of the use and production of future forms and of sociolinguistic competence throughout the semester and especially before and after the intervention. The data collected for English were coded in order to see whether patterns of use and selection in the participants' L1 was transferred to their L2 due to their low proficiency in Spanish. The data collected for the Spanish instructors were also coded and analyzed in order to observe to what extent learners showed similar preferences to their instructors and the possible type of input they may be receiving.

4.9 Multivariate analyses

For the oral and written production tasks and for the preference task, descriptive statistics were run to provide the frequency of use and selection of the future forms overall. Multivariate regressions provided further information as to what independent variables were significant predictors for the model for each group and thus had a significant effect on the dependent variable in favoring one of the variants over another. Individual participant and verb were run as random effects. Predictors of use/selection were compared across the four data points for each task. These

tests were run for all three tasks (oral, written, and preference). The first round of multivariate regressions considered all test times together (and will be reported in Chapter 5: Results). A second set of multivariate regressions were run for each test time separately (reported in Appendices O for the oral production task, R for the written production task, and in U for the contextualized preference task). Finally, another set of multivariate regressions was carried out by combining Time 1 with 2 and Time 3 with 4 (reported in Chapter 5: Results). The times were combined in order to avoid low token counts for some forms especially at Time 1, therefore we combined the two first times at the beginning of the experiment (Times 1 and 2) and the two last times at the end of the experiment (Times 3 and 4). Further cross-tabulations were performed to highlight changes across independent variables according to test time (each time separately) including the following independent variables: temporal distance, presence of temporal adverbials, formality of the interlocutor, task version, and grammar score. Clause type, person and number of the subject, and participant gender were not included in the analyses due to small tokens in certain cells, but the crosstabulations for these variables are included in the appendices (P for the oral production task, S for the written production task, and V only participant gender for the contextualized preference task).

4.10 Pilot study

The researcher performed one pilot study in the fall semester 2017 prior to the present dissertation. The pilot study contained two tasks: a written production task and a contextualized preference task in Spanish across four times throughout the semester. The tasks manipulated the independent variables of temporal distance (near, intermediate, and distant) and geographic

location of interlocutors for both tasks (Spain, Colombia), and presence/absence of temporal adverbial only for preference. The participants were 16 students of two low-intermediate Spanish 2 classes: one was the control group and the other the instruction group. The control group was taught the morphological future following a traditional grammar-based approach through the verb conjugations and then participants completed fill-in-the-gap exercises from their textbook. The experimental group received an explicit explanation on the sociolinguistic variation that exists in the way Spanish-speakers express futurity. The explicit explanation corresponded to the one presented to the instruction group in the current dissertation. Results indicated that learners in the instruction group demonstrated more target-like rates of use and selection and sensitivity to independent linguistic factors (mainly, temporal distance) when compared to the control group: this group did not select the MF at higher rates than the control group did but selected the PF at higher rates. The instruction group also preferred the MF with distant future, while they preferred the PI with near future. These gains were maintained across both delayed post-tests (Time 3 and Time 4) in both the production and preference tasks. The pilot study provided evidence that learners were able to develop sociolinguistic competence in expressing the future even at lower levels of proficiency with only one intervention and without having studied abroad.

5.0 Results

First, I will offer an overview of the total number of tokens of future-time expression across tasks taking into account all attempts used to express the future. After that I will go in depth for each of the Spanish tasks performed in the order they were completed: oral production task, written production task, and the contextualized preference task. The results of these three tasks in English and by the instructors will also be presented at the end of each section of the corresponding Spanish tasks. For these tasks, I will present an overview of the total use and selection of all future forms in each of the tasks and then focus on the three most common forms: MF, PF, and PI (for Spanish) and "will", PF, and present progressive (for English). Next, I will present the results of the multivariate analyses and explore the effects of each of the linguistic and sociolinguistic factors on the dependent variable through crosstabulations. After the quantitative results have been reported, I will present the qualitative results of the following tasks: metalinguistic awareness task, self-reflection task, and spiraling activities (for the instruction plus spiraling activities group).

5.1 Total tokens per group and task

Before presenting the results of each task, we give the reader an overview of the total production/selection of future forms across the tasks in Spanish and in English. The total number of tokens produced by participants in both the Spanish and the English tasks summed up to 7,012: 5,723 for the Spanish tasks and 1,282 for the English tasks. Tables 5-1 and 5-2 summarize the number of tokens per task and group. Across the Spanish and the English tasks, the instruction

group produced the largest number of tokens in all of the individual tasks, which is partially a reflection of the fact that the group contained one more participant than the control and two more than the other instruction group.

Table 5-1 Number of future-time tokens across Spanish tasks

Group	Oral production task	Written production task	Contextualized preference task	Group total
Control (n=18)	373	519	864	1,756
Instruction (n=19)	690	680	912	2,282
Instruction plus spir. act. (n=17)	421	448	816	1,685
Task total	1,484	1,647	2,592	5,723

Table 5-2 Number of future-time tokens across English tasks

Group	Oral production task	Written production task	Contextualized preference task	Group total
Control (n=18)	58	126	216	400
Instruction (n=19)	145	136	228	509
Instr. plus spir. act. (n=17)	78	91	204	373
Task total	281	353	648	1,282

We present now an overview of the total production/selection of future forms across the tasks in Spanish for the six instructors of the three groups of participants. The total number of tokens produced by the instructors of the six classes in the Spanish tasks summed to 184 tokens.

The instructors in control group and the instruction group produced the most tokens for the oral production task, all instructors produced a similar number of tokens for the written production task, and all instructors produced the same number of tokens in the contextualized preference task. The instructors in instruction group produced the most tokens of all three groups across the three tasks. Table 5-3 summarizes the number of tokens per task per group the instructors belonged to.

Table 5-3 Number of future-time tokens produced by the instructors across Spanish tasks

Group	Oral production task	Written production task	Contextualized preference task	Group total
Control (n=2)	21	16	24	61
Instruction (n=2)	22	19	24	65
Instruction plus spir.act. (n=2)	16	18	24	58
Task total	59	53	72	184

For the present dissertation data was obtained from the participants in their L1, English, and also from their instructors in Spanish and provide this information in the results section in order to better understand the learners' performance on the Spanish tasks in the light of the use and the preferences of the instructors and of the learners' possible starting points based on their L1.

5.2 Spanish oral production task (Participants)

The first task completed by participants asked them to answer a total of six prompts. In these prompts they spoke to their classmate about their plans for three different times (after class, next spring, next summer) and to their professor about their best friend's plans for the three same times or vice versa depending on the task version they had.

5.2.1 Frequencies of use

The present section illustrates the overall frequencies of use of all the forms in future-time contexts for the three participant groups in the Spanish oral production task. Table 5-4a presents the distribution of all the forms used in the oral production task.

Participants produced a total of 1,484 tokens in the oral production task. The control group used the highest number of different forms to express the future when compared to the other two groups: morphological future (37.0%), periphrastic (27.9%), present indicative (27.1%), progressives at a rate of 2.2% (including progressive, present progressive, and future progressive), lexical futures (LF), conditional and verbless/invented at a rate of 1.3% each, subjunctive at a rate of 1.1%, and infinitive at a rate of 0.8%. Note that there were 0% participles. Continuing with the instruction group, participants in this group used the present indicative at the highest rates (37.8%), followed by the periphrastic (36.7%), and the morphological future (12.5%). The less common forms were infinitive (4.8%), participle (0.1%,), lexical futures (3.6%), verbless (1.7%), subjunctive (1.4%), and preterite (1.3%). For the last group, instruction plus spiraling activities, periphrastic (35.9%), present indicative (34.2%), and morphological (23.8%) were the most

produced tenses. These were followed by infinitives at a rate of 2.4% (0% participles), lexical futures (1.7%), verbless (1.2%), preterite (0.5%), and subjunctive (0.4%).

Between-group chi-square comparisons were run to determine where groups significantly differed in form production. These comparisons are summarized in Tables 5-4b, 5-4c, and 5-4d and are described below. For each comparison that was significant, Cohen's *d* values are also reported to indicate the effect sizes of differences between groups (Plonsky & Oswald, 2014). Note that a Cohen's *d* value of around 0.2 represents a small effect size, around 0.5 a medium effect size, and around 0.8 a large effect size. All comparisons reported are 2 x 2 comparisons that isolate the form in question against all other forms from one group to another. Comparisons were performed for each of the three most commonly produced forms (i.e., MF, PF, and PI). Beginning with the MF (Table 5-4b), note that the three group comparisons were all significant, each at the $p < .001$ level. The control group produced significantly more MF than the instruction group, with a medium effect size, and also significantly more MF than the instruction plus spiraling activities group, with a small effect size. The MF was also produced at significantly different rates between the instruction group and the instruction plus spiraling activities group, with a small effect size based on the instruction plus spiraling activities group's production of the MF at higher rates than the instruction group.

Table 5-4a Distribution of all produced forms in the Spanish oral production task

Group	PF		PI		MF		LF		Infinitive/ participle		Verbless/ invented		Subj.		Pret.		Progr.		Cond.		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Control	104	27.9	101	27.1	138	37.0	5	1.3	3	0.8	5	1.3	4	1.1	0	0.0	8	2.2	5	1.3	373	100
Instr.	253	36.7	261	37.8	86	12.5	25	3.6	34	4.9	12	1.7	10	1.4	9	1.3	0	0.0	0	0.0	690	100
Instr. plus spir. act.	151	35.9	144	34.2	100	23.8	7	1.7	10	2.4	5	1.2	2	0.4	2	0.5	0	0.0	0	0.0	421	100

Table 5-4b Chi-Square comparisons (2x2) of oral production of morphological future versus all other forms across groups

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
***Control vs. instruction	1063	87.6	1	<.001	0.60
***Control vs. instruction plus spir. act.	794	16.5	1	<.001	0.29
***Instruction vs. instruction plus spir. act.	1111	23.9	1	<.001	0.30

Note: * p<.05, ** p<.01, *** p<.001

As for the PF (Table 5-4c), the control group produced this variant significantly less than both the instruction group and the instruction plus spiraling activities group, with each comparison yielding a small effect size. The two instruction groups did not produce the PF at significantly different rates from each other.

Table 5-4c Chi-Square comparisons (2x2) of oral production of periphrastic future versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
**Control vs. instruction	1063	8.38	1	.004	0.18
*Control vs. instruction plus spir. act.	794	5.78	1	.016	0.17
Instruction vs. instruction plus spir. act.	1111	0.0723	1	.788	--

Note: * p<.05, ** p<.01, *** p<.001

Lastly, for the PI comparison (Table 5-4d), the control group also produced this variant at a significantly lower rate than both of the instruction groups and again with a small effect size for both comparisons. No significant differences were found for PI production between the instruction groups.

As indicated above, for all three groups, the three most commonly produced forms were the morphological future, the periphrastic future, and the present indicative. Table 5-5 presents the number of tokens and the percentages of use of these three forms. For the rest of the results of the oral production task, I will only take into account these three most used forms. By considering only the three most common tenses the number of tokens decreased to 1,338 tokens.

Table 5-4d Chi-Square comparisons (2x2) of oral production of present indicative versus all other froms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
***Control vs. instruction	1063	12.5	1	<.001	0.22
*Control vs. instruction plus spir. act.	794	4.71	1	.030	0.15
Instruction vs. instruction plus spir. act.	1111	1.48	1	.224	--

Note: * p<.05, ** p<.01, *** p<.001

Table 5-5 Distribution of most common variants in the Spanish oral production task

Group	**MF**		**PF**		**PI**		**Total**	
	N	%	N	%	N	%	N	%
Control	138	40.2	104	30.3	101	29.4	343	100
Instruction	86	14.3	253	42.2	261	43.5	600	100
Instruction plus spir. act.	100	25.3	151	38.2	144	36.5	395	100

The three groups demonstrated differentiated patterns of use: while the control group produced the morphological future at the highest rates (40.2%), followed by the periphrastic (30.3%) and the present indicative (29.4%), the instruction group used the present indicative and the periphrastic future at similar rates (43.5% vs 42.2%, respectively), followed by a low rate of use of the morphological (14.3%). The instruction plus spiraling activities group showed a similar pattern to that of the instruction group: this last group used the periphrastic and the present indicative at similar rates (38.2% vs 36.5%, respectively), followed by the morphological future (25.3%).

As shown in Figure 5-1, at Time 1 the control group produced the PF at a higher rate than the other two variants while the other two groups produced more PI overall. At Time 2, the control group showed an increase in the production of MF, which became the most produced variant by

far compared to the PI and the PF, which were produced at similar rates to each other. For the other two groups, the increase took place for the PF, which became the most produced form, as the PI was maintained at similar rates as at Time 1, and there was a slight increase of the MF, which would never surpass PF or PI production. The control group showed very similar patterns for Times 3 and 4: the production of MF decreased while still being the most produced variant and both the PF and the PI increased but never surpassed the MF. The instruction group also displayed the same pattern across Times 3 and 4: the production of PF was maintained at similar rates as at Time 2, but the production of PI increased to surpass the PF. The production of MF decreased across these two times to be produced at very low rates. For the instruction and spiraling activities group, Times 3 and 4 showed almost opposite patterns: at Time 3, the pattern was maintained from Time 2 at very similar rates as the PF and the PI were produced the most while the MF was produced at low rates. At Time 4 the production of PI and PF decreased while the production of the MF increased to become the most produced variant.

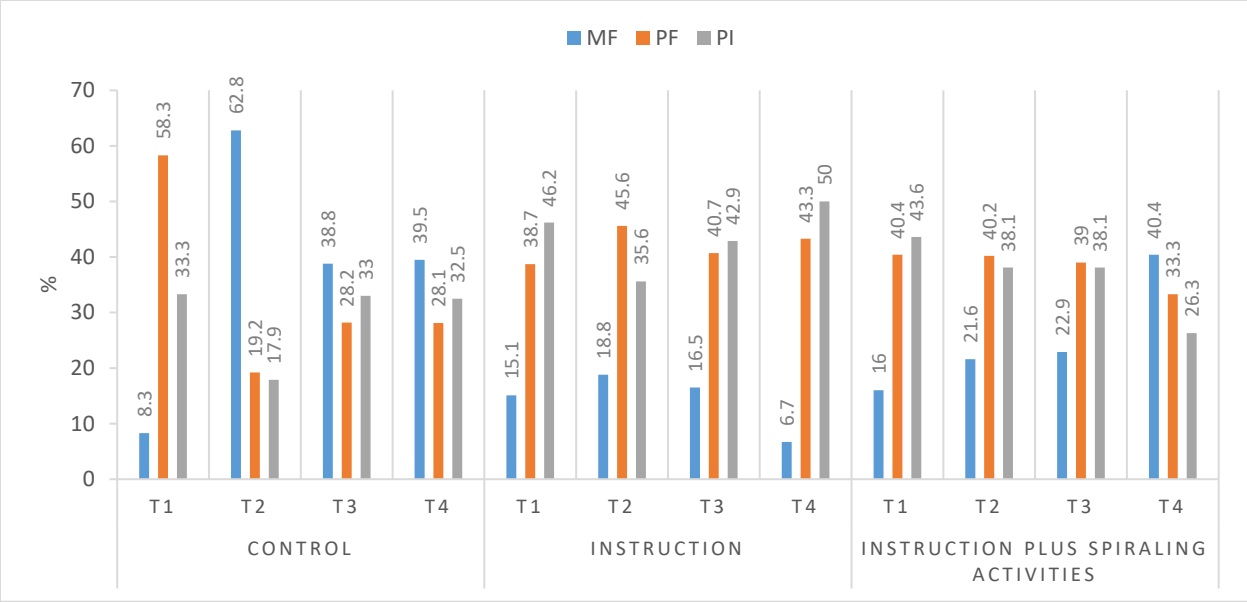


Figure 5-1 Distribution of future forms by test time and group for Spanish oral production task

5.2.2 Multivariate analyses

Multivariate regressions provided further information as to what independent variables were significant predictors in the predictive model for each group, revealing which variables had a significant effect on the dependent variable in favoring one of the variants over another. The independent variables included in the analyses were temporal distance, presence of temporal adverbials, formality of the interlocutor, task version, grammar score, and test time. Clause type, person and number of the subject, and participant gender were not included in the multivariate regression due to the small token counts for numerous cells across one or more categories of the variables in question. Individual participant and verb were run as random effects since each participant provided more than one data point and since different distribution of individual verbs across future variants could affect the results (Johnson, 2009). The most commonly produced form

was the PF across groups and therefore this variant was chosen as the base form that was compared against the other two variants (i.e., MF and PI) in order to provide token counts that were as robust and informative as possible.

The significance of the predictors as indicated by the multivariate analyses when all test times are considered together in one predictive model for each group for the oral production task is summarized in Table 5-6.[8] We remind the reader that the independent variables of clause type, person and number, and participant gender were excluded from the analyses due to small token counts for some cells. For the control group two variables were significant predictors for the comparison between the PF and the MF in the oral production task: test time and grammar score. The PF was favored over the MF at Time 1 and by the lower grammar score group. No significant predictors were selected as significant by the model for the comparison between the PF and the PI. Therefore, the control group does not become sensitive to temporal distance or the presence of a temporal adverbial. For the instruction group, temporal distance and test time were significant variables for the comparison between the PF and the MF: the PF was favored over the MF in near contexts and at Times 3 and 4. However, no factors were selected as significant predictors by the model for the PF versus the PI comparison. Finally, for the instruction plus spiraling activities group, temporal distance, presence of temporal adverbials, task version, and test time were selected as significant predictors for the comparison between the PF and the MF. The PF was favored over the MF in near contexts, in the presence of an adverbial, in task version A (informal interlocutor first), and at Time 2. Only temporal distance and grammar score were selected as significant by

[8] The complete table with the results of the multivariate analyses and factor weights with all test times are considered together can be found in Appendix N.

the model for the comparison between the PF and the PI for this group: the PF was favored over the PI in intermediate contexts and by the lower grammar score group.

Table 5-6 Significant predictors in the multivariate analysis for the Spanish oral production task when all test times are considered

	Control		Instruction		Instruction plus spiral. act.	
Independent variables	PF vs. MF	PF vs. PI	PF vs. MF	PF vs. PI	PF vs. MF	PF vs. PI
Temporal distance	--	--	X***	--	X***	X*
Presence of adverbial	--	--	--	--	X*	--
Formality of Interlocutor	--	--	--	--	--	--
Task version	--	--	--	--	X*	--
Grammar score	X***	--	--	--	--	X*
Test time	X***	--	X***	--	X***	--

Note: * p=0.05, ** p=0.01, *** p≤0.001, -- not significant

Now that the general significance of the factors in the multivariate analyses has been presented considering all test times together, we move on to present the results of the multivariate analyses by test time. The four test times were first considered independently, and a regression was run for each time separately for each of the participants' group; however, due to the small number of tokens for some cells (e.g., low production of the MF at Time 1, low use of certain

forms outside of 1SG contexts, etc.) a different approach was considered.[9] In order to see how conditioning according to the independent variables developed over time but to still have enough data to avoid small cells in the statistical models, Times 1 and 2 were combined in one model per group, as were Times 3 and 4 in another model per group, while still maintaining test time as an independent variable in each model. First, the significance of the independent variables across test times is summarized in Table 5-7.

Table 5-7 Significant predictors in the multivariate analysis for the Spanish oral production task for Times 1-2 and Times 3-4

	Control				**Instruction**				**Instruction plus spiral. act.**			
Independent variables	PF vs. MF		PF vs. PI		PF vs. MF		PF vs. PI		PF vs. MF		PF vs. PI	
	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4
Temporal distance	--	--	--	--	X***	X*	--	--	X***	X***	--	--
Presence of adverbial	--	--	X**	--	--	X*	--	X*	X*	X***	--	--
Formality of Interlocutor	--	--	X*	--	X*	--	--	--	X*	--	--	--
Task version	--	--	--	--	--	--	--	X*	--	--	--	--
Grammar score	--	--	--	--	--	--	--	--	--	--	--	X*
Test time	--	--	--	--	X**	--	--	--	X*	X*	--	--

Note: * p=0.05, ** p=0.01, *** p≤0.001, -- not significant

[9] The tables of the regressions with test time is considered separately can be found in Appendix O for the Spanish oral production task.

Starting with the control group, none of the variables were chosen as significant by the regression model at any of the times for the PF vs. MF comparison; however, presence of adverbials and formality of the interlocutor did become significant for the PF vs. PI comparison at Times 1 and 2, while no variables were significant at Times 3 and 4. For the instruction group at Times 1 and 2, temporal distance and formality of the interlocutor were significant variables for the PF vs. MF, while no variables were significant for the same time for the PF vs. PI comparison. For the instruction group at Times 3 and 4, temporal distance was also significant for the PF vs. MF comparison in addition to presence of temporal adverbials, while for the PF vs. PI comparison presence of temporal adverbials was also significant in addition to task version. Lastly, for the instruction plus spiraling activities group for the PF vs. MF comparison, temporal distance, presence of temporal adverbials, and formality of interlocutor were significant predictors at Times 1 and 2, while at Times 3 and 4, temporal distance and presence of temporal adverbials were maintained as significant. As for the PF vs. PI comparison, no variables were selected as significant predictors for Times 1 and 2 and for Times 3 and 4, only grammar score was significant. In sum, only the instruction groups developed sensitivity to the linguistic variables of temporal distance and presence of temporal adverbials for the PF vs. MF comparison across times.

The directionality of the effects of the independent variables will be explored next when the results of the regressions are presented. Tables 5-8a and 5-8b include the results for the combination of Times 1 and 2 and Times 3 and 4, respectively, for the control group. Tables 5-8c and 5-8d present the results for the combination of Times 1 and 2 and Times 3 and 4 for the instruction group, respectively, and Tables 5-8e and 5-8f present the results for the combination of Times 1 and 2 and Times 3 and 4 for the instruction plus spiraling activities group, respectively.

As explained before, for all the multivariate regression models presented in the current dissertation, the PF was chosen as the base for the comparison against the other two variants (MF and PI) seeing that the PF was overall the most produced/selected form across groups. Therefore, in all the regressions the MF and PI are entered in the model as the input values, therefore a factor weight above 0.500 indicates a favoring effect of the base value (PF) over the other variants (MF and PI), whereas a factor weight below 0.500 indicates a disfavoring effect of the base value (PF) thus favoring the other variant within the comparison (either MF or PI). When the independent variables are selected as significant predictors by the regression model, the factor weights are not between brackets and the range is indicated. The range is the difference between the highest and lowest factor weights. When the independent variables are not significant, the factor weights for each variable are displayed between brackets to indicate their lack of significance. Besides the presence or lack of brackets in the factor weights and the range, the *p* value (displayed under each independent variable) is the most common and important indicator of the significance of an independent variable. For each of the variants within each independent variable, besides the factor weight, the reader will find the N and the percentage which correspond to the total number of tokens for both variants in the comparison and the corresponding percentage produced or selected of the base category (PF) for each variant of the independent variables. After the presentation of all the factor weights for each independent variable in a given table, the readers will find the total number of N (tokens) produced/selected of the both variants in the comparison across all independent variables and the relative rate of PF overall. The relative rate of the PF is used to interpret the factor weights, for example in the following table, the relative rate of the PF in the PF vs. MF comparison is 41.8%, so the .580 factor weight for the presence of an adverb reflects the slightly higher use of PF in those contexts, at 46.0%.

We start by discussing the results of the regression for the control group.

Table 5-8a Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the control group at Times 1-2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	34	41.2	[0.530]	30	60.0	[0.373]
Intermediate	21	42.9	[0.461]	22	59.1	[0.695]
Distant	24	41.7	[0.509]	21	57.1	[0.424]
			p=0.925			*p*=0.899
Presence of temporal adverbials						
Yes	50	46.0	[0.580]	40	67.5	0.365
No	29	34.5	[0.420]	33	48.5	0.635
						Range 27
			p=0.405			*p*=0.00519
Formality of interlocutor						
Classmate	42	47.6	[0.595]	37	67.6	0.651
Professor	37	35.1	[0.405]	36	50.0	0.349
						Range 30
			p=0.206			*p*=0.0126
Task version						
A (inf. first)	37	35.1	[0.429]	19	73.7	[0.922]
B (formal first)	42	47.6	[0.571]	54	53.7	[0.078]
			p=0.734			*p*=0.133
Test time[10]						
1	--	--	--	44	63.6	[0.529]
2	--	--	--	29	51.7	[0.471]
				p=0.566		
Grammar score						
Lower	25	44.0	[0.541]	42	50.0	[0.042]
Higher	54	40.7	[0.459]	31	71.0	[0.958]
			p=0.846			*p*=0.337
N= 79		Relative rate 41.8% PF		N= 73	Relative rate 58.9% PF	

[10] Test time could not be run in this comparison due to low use of the MF at Time 1; therefore, this variable was excluded from this analysis.

Table 5-8a (continued)

Participant (random)		
Rand. St. Dev.	2.144	7.639
Verb (random)		
Rand. St. Dev.	0.001	2.595
Fixed R^2	0.036	0.228
Random R^2	0.562	0.735
Total R^2	0.598	0.963
Log likelihood	-45.353	-19.252

For the comparison of PF vs. MF, no factor was selected as significant by the model, but some trends could be observed from the analysis. Participants in the control group produced the PF over the MF at nearly identical rates regardless of temporal distance at the first two test times (e.g., about 42% PF at each of the three distances). The presence of an adverbial yielded a higher rate of PF than the absence of an adverb. Higher PF production was observed when the interlocutor was informal, in task version B (formal interlocutor first), and in the lower grammar score group. For the PF vs. PI comparison, two variables were selected as significant predictors by the regression: presence of temporal adverbials and formality of the interlocutor. For these two variables, the PF was favored over the PI in the absence of an adverbial and with an informal interlocutor. For the non-significant factor groups, the PF was used at relatively higher rates with the near future (though with intermediate contexts at a similar rate), in task version A (informal interlocutor first), at Time 1, and in the higher grammar score group.

Table 5-8b Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the control group at Times 3-4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	57	43.9	[0.541]	56	44.6	[0.543]
Intermediate	43	41.9	[0.501]	41	43.9	[0.431]
Distant	46	39.1	[0.459]	35	51.4	[0.527]
			p=0.856			*p*=0.944
Presence of temporal adverbials						
Yes	98	39.8	[0.471]	92	42.4	[0.696]
No	48	45.8	[0.529]	40	55.0	[0.304]
			p=0.672			*p*=0.181
Formality of interlocutor						
Professor	72	45.8	[0.598]	69	47.8	[0.460]
Classmate	74	37.8	[0.402]	63	44.4	[0.540]
			p=0.1			*p*=0.713
Task version						
A (inf. first)	70	40.0	[0.510]	56	50.0	[0.823]
B (formal first)	76	43.4	[0.490]	76	43.4	[0.177]
			p=0.954			*p*=0.249
Test time						
3	69	42.0	[0.471]	63	46.0	[0.574]
4	77	41.6	[0.529]	69	46.4	[0.426]
			p=0.632			*p*=0.546
Grammar score						
Lower	79	51.9	[0.709]	95	43.2	[0.503]
Higher	67	29.9	[0.291]	37	54.1	[0.497]
			p=0.213			*p*=0.946
N=146		Relative rate 41.8% PF		N= 132	Relative rate 46.2% PF	
Participant (random)						
Rand. St. Dev.		2.287		4.251		
Verb (random)						
Rand. St. Dev.		0.655		3.667		
Fixed R^2		0.098		0.077		
Random R^2		0.57		0.836		
Total R^2		0.668		0.913		
Log likelihood		-76.413		-45.624		

For both comparisons at Times 3 and 4, no variables were selected as significant in the regression unlike at Times 1 and 2 when for the PF vs. PI comparison presence of temporal adverbials and formality of interlocutor were significant predictors. Even though none of the variables were selected as significant for either comparison at Times 3 and 4 some trends could be observed for the control group: starting with the PF vs. MF comparison, the PF was yielded at slightly higher rates in near and intermediate contexts, in the absence of a temporal adverbial, with a formal interlocutor, in task version B (formal interlocutor first), and by the lower grammar score group. For the PF vs. PI comparison, the PF was produced at higher rates in distant contexts, in the absence of an adverbial, with a formal interlocutor, in task version A (informal interlocutor first), and by the higher grammar score group.

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some similarities and differences regarding the variables' effects. First, none of the variables were significant for the PF vs. MF comparison across times. The PF was yielded at similar rates across temporal distances for Times 1 and 2 and Times 3 and 4, which seems to provide evidence to support the fact that participants in the control group did not develop sensitivity to the effects of temporal distance. Regarding some of the similarities across times, the PF was produced at higher rates in task version B (formal interlocutor first) and by the lower grammar score group. Some differences were also observed: while the presence of an adverb yielded higher rates of PF at Times 1 and 2, it was in the absence of an adverb that the PF was produced at higher rates at Times 3 and 4; and while the PF was produced at higher rates with the informal interlocutor at Times 1 and 2, it happened so with the formal interlocutor at Times 3 and 4. Regarding the PF vs. PI comparison, presence of an adverbial and formality of the interlocutor were significant variables at Times 1 and 2 but not at Times 3 and

4, in fact these variables showed opposite directionalities: at Times 1 and 2 the PF was produced at higher rates in the presence of an adverb but in the absence of one at Times 3 and 4; the PF was produced at higher rates with an informal interlocutor at Times 1 and 2 but with a formal one at Times 3 and 4. As for the non-significant variables, the PF was produced at similar rates across temporal distances but it was more favorable in distant contexts, the PF was produced at higher rates in task version A (informal interlocutor first) and with the higher grammar score group across both times comparisons.

We continue with the results of the regression for the instruction group. Starting with the PF vs. MF comparison, temporal distance, formality of the interlocutor, and test time were significant predictors according to the regression results for the instruction group when the first two test times were considered. The PF was favored in near contexts, with an informal interlocutor, and at Time 2. For the other three non-significant variables, PF production was higher in the presence of an adverbial, in task version B (formal first), and by the lower grammar score group. As for the PF vs. PI comparison, no independent variables were selected as significant predictors in the regression. More favorable PF production were observed with near and distant contexts (as opposed to intermediate), in task version A (informal interlocutor first), at Time 2, and by the higher grammar score group. The PF was used over the PI at nearly identical rates regardless of the presence of a temporal adverb or the formality of the interlocutor.

Table 5-8c Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the instruction group at Times 1-2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	65	90.8	0.969	110	53.6	[0.458]
Intermediate	48	62.5	0.233	64	46.9	[0.529]
Distant	47	53.2	0.095	48	52.1	[0.513]
			Range 87			
			p=1.81e-08			*p*=0.89
Presence of temporal adverbials						
Yes	78	75.6	[0.546]	116	50.9	[0.504]
No	82	67.1	[0.454]	106	51.9	[0.496]
			p=0.592			*p*=0.957
Formality of interlocutor						
Classmate	73	79.5	0.656	114	50.9	[0.486]
Professor	87	64.4	0.344	108	51.9	[0.514]
			Range 32			
			p=0.0398			*p*=0.83
Task version						
A (inf. first)	93	68.8	[0.429]	114	56.1	[0.829]
B (formal first)	67	74.6	[0.571]	108	46.3	[0.171]
			p=0.873			*p*=0.176
Test time						
1	64	71.9	0.244	101	45.5	[0.401]
2	96	70.8	0.756	121	56.2	[0.599]
			Range 52			
			p=0.00205			*p*=0.166
Grammar score						
Lower	40	75.0	[0.780]	63	47.6	[0.303]
Higher	120	70.0	[0.220]	159	52.8	[0.697]
			p=0.456			*p*=0.464
N=160		Relative rate 71.2% PF		N=222		Relative rate 51.4% PF
Participant (random)						
Rand. St. Dev.		4.629		3.284		
Verb (random)						
Rand. St. Dev.		0.014		0.957		
Fixed R^2		0.269		0.108		
Random R^2		0.634		0.696		
Total R^2		0.903		0.804		
Log likelihood		-53.106		-79.685		

Table 5-8d Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the instruction group at Times 3-4

	PF vs. MF			PF vs. PI		
Factor	**N**	**% (of PF)**	**Factor weight**	**N**	**% (of PF)**	**Factor weight**
Temporal distance						
Near	71	81.7	0.859	124	46.8	[0.311]
Intermediate	60	75.0	0.387	92	48.9	[0.524]
Distant	48	75.0	0.206	76	47.4	[0.668]
			Range 65			
			p=0.0275			*p*=0.739
Presence of temporal adverbials						
Yes	104	81.7	0.722	152	55.9	0.521
No	75	72.0	0.278	140	38.6	0.479
			Range 44			*Range 4*
			p=0.0252			*p*=0.0425
Formality of interlocutor						
Classmate	80	81.2	[0.454]	152	42.8	[0.353]
Professor	99	74.7	[0.546]	140	52.9	[0.647]
			p=0.635			*p*=0.221
Task version						
A (inf. first)	106	84.0	[0.932]	195	45.6	0.424
B (formal first)	73	68.5	[0.068]	97	51.5	0.576
						Range 15
			p=0.277			*p*=0.0424
Test time						
3	104	71.2	[0.562]	152	48.7	[0.395]
4	75	86.7	[0.438]	140	46.4	[0.605]
			p=0.543			*p*=0.0965
Grammar score[11]						
Lower	46	73.9	[0.102]	--	--	--
Higher	133	78.9	[0.898]	--	--	--
			p=0.345	--		
N=179		Relative rate 77.7% PF		N=292		Relative rate 47.6% PF
Participant (random)						
Rand. St. Dev.		5.981		12.239		
Verb (random)						
Rand. St. Dev.		0.015		1.936		

[11] Grammar score could not be run in the PF vs. PI comparison due to low token counts and therefore this variable was excluded from the analyses in this case.

Table 5-8d (continued)

Fixed R^2	0.178	0.007
Random R^2	0.753	0.972
Total R^2	0.931	0.979
Log likelihood	-41.61	-48.962

Only two independent variables had a significant effect on the dependent variable for the PF vs. MF comparison: temporal distance and presence of temporal adverbials. Near contexts and the presence of an adverbial favored the PF over the MF. For the other variables, it was observed that PF production was more favorable with an informal interlocutor, in task version A (informal interlocutor first), at Time 4, and by the higher grammar score group. As for the PF vs. PI comparison, the two significant variables were presence of temporal adverbials and task version: the PF was favored in the presence of an adverbial and in task version B (formal interlocutor first). As for the non-significant variables, PF was produced at similar rates regardless of temporal distance, but slightly higher PF rates were produced with formal interlocutors, and at Time 3.

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some similarities and differences regarding the variables' effects. Temporal distance was significant across times (Times 1-2 and Times 3-4) and the directionality of the effect for this variable was the same across time as well: the PF was favored in near contexts. Presence of temporal adverbials was only significant at Times 3-4 although the effect was the same across times: there was higher production of the PF in the presence of an adverbial for the PF vs. MF comparison. Formality of the interlocutor was significant at Times 1 and 2 but not at Times 3 and 4, although the directionality of the effect was the same across times: the PF was more favorable with an informal interlocutor. Regarding the other two variables, task version and grammar score, the effects were complementary across times:

higher PF production was observed with task version B (formal interlocutor first) and by the lower grammar score group at Times 1 and 2 but with task version A (informal interlocutor first) and by the higher grammar score group at Times 3 and 4. Moving on to the PF vs. PI comparison, while no variable was significant at Times 1 and 2, presence of an adverbial and task version became significant at Times 3 and 4: PF was favored at near and distant contexts at Times 1 and 2 whereas the PF was produced at similar rates at Times 3 and 4; PF was favored in task version A (informal interlocutor first) at Times 1 and 2 but in task version B (formal interlocutor first) at Times 3 and 4. As for the non-significant variables, while the PF was produced at similar rates regardless of presence of an adverbial at Times 1 and 2, it was produced at higher rates in the presence of an adverbial at Times 3 and 4.Formality of interlocutor displayed a similar behavior since the PF was produced at similar rates regardless of interlocutor at Times 1 and 2 but it was produced at higher rates in the presence of a formal interlocutor. The PF was produced at higher rates by the higher grammar score group but, as noted in the previous table, grammar score was not run at Times 3 and 4.

We finish with the results of the regression for the instruction plus spiraling activities group. Due to the low production of MF in the comparison PF vs. MF for the near contexts (6.2%) in the instruction plus spiraling group, the regression returned some small token counts and therefore the near and the intermediate contexts were combined in a new model due to their similar trends. After the combination, the regression selected temporal distance, presence of temporal adverbials, formality of interlocutor, and test time as significant factors.

Table 5-8e Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the instruction plus spiraling activities group at Times 1-2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	--	--	--	70	42.9	[0.378]
Intermediate[12]	71	83.1	0.965	51	56.9	[0.583]
Distant	42	42.9	0.035	34	52.9	[0.541]
			Range 93			
			p=5.14e-08			*p*=0.254
Presence of temporal adverbials						
Yes	78	73.1	0.587	115	49.6	[0.464]
No	35	57.1	0.413	40	50.0	[0.536]
			Range 17			
			p=0.0163			*p*=0.585
Formality of interlocutor						
Professor	55	69.1	0.588	78	48.7	[0.464]
Classmate	58	67.2	0.412	77	50.6	[0.536]
			Range 18			
			p=0.0265			*p*=0.495
Task version						
A (inf. first)	38	89.5	[0.940]	61	55.7	[0.618]
B (formal first)	75	57.3	[0.060]	94	45.7	[0.382]
			p=0.213			*p*=0.172
Test time						
1	53	71.7	0.530	79	48.1	[0.513]
2	60	65.0	0.470	76	51.3	[0.487]
			Range 6			
			p=0.0347			*p*=0.812
Grammar score						
Lower	72	61.1	[0.328]	80	55.0	[0.628]
Higher	41	80.5	[0.672]	75	44.0	[0.372]
			p=0.461			*p*=0.123
N=113		Relative rate 68.1% PF		N=155	Relative rate 49.7% PF	
Participant (random)						
Rand. St. Dev.		13.876		0.842		

[12] For the PF vs. MF comparison, due to the low production of MF in the near contexts, the near and intermediate distances were combined and are reflected under the intermediate distance.

Table 5-8e (continued)

Verb (random)		
Rand. St. Dev.	36.865	1.243
Fixed R^2	0.213	0.09
Random R^2	0.785	0.37
Total R^2	0.998	0.46
Log likelihood	-29.069	-90.752

The PF was favored in near/intermediate contexts, in the presence of an adverbial, with a formal interlocutor, and at Time 1. Higher PF rates were yielded in task version A (informal interlocutor first) and by the higher grammar score group. As for the PF vs. PI comparison at Times 1 and 2, no variables had a significant effect on the dependent variable, but higher rates of PF production were yielded in intermediate and distant contexts, with an informal interlocutor, in task version A (informal interlocutor first), at Time 2, and by the lower grammar score group. The PF was produced at similar rates regardless of the presence or absence of a temporal adverbial.

Finally, for the combination of Times 3 and 4 for the instruction plus spiraling activities group, temporal distance, presence of temporal adverbials, and test time were selected as significant predictors by the regression for the PF vs. MF comparison. PF was favored in near contexts, in the presence of an adverbial, and at Time 3. Higher rates of PF were produced with a formal interlocutor, in task version A (informal interlocutor first), and by the higher grammar score group. As for the PF vs. PI comparison at Times 3 and 4, only grammar score was selected as significant by the model: PF was favored by the lower grammar score group. Higher rates of PF were produced in intermediate contexts, in the presence of an adverbial, with a formal interlocutor, in task version B (formal interlocutor first), and at Time 4.

Table 5-8f Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the instruction plus spiraling activities group at Times 3-4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	36	97.2	0.989	75	46.7	[0.379]
Intermediate	51	54.9	0.348	45	62.2	[0.662]
Distant	51	21.6	0.020	20	55.0	[0.455]
			Range 97			
			p=6.14e-14			*p*=0.0709
Presence of temporal adverbials						
Yes	112	57.1	0.728	115	55.7	[0.564]
No	26	38.5	0.272	25	40.0	[0.436]
			Range 46			
			p=0.0419			*p*=0.362
Formality of interlocutor						
Professor	71	54.9	[0.579]	70	55.7	[0.526]
Classmate	67	52.2	[0.421]	70	50.0	[0.474]
			p=0.356			*p*=0.634
Task version						
A (inf. first)	39	64.1	[0.655]	50	50.0	[0.520]
B (for. first)	99	52.2	[0.345]	90	54.4	[0.480]
			p=0.297			*p*=0.738
Test time						
3	65	63.1	0.683	81	50.6	[0.477]
4	73	45.2	0.317	59	55.9	[0.523]
			Range 37			
			p=0.0258			*p*=0.672
Grammar score						
Lower	100	52.0	[0.420]	85	61.2	0.655
Higher	38	57.9	[0.580]	55	40.0	0.345
						Range 31
			p=0.6			*p*=0.0111
N=138		Relative rate 53.6% PF		N=140	Relative rate 52.9% PF	
Participant (random)						
Rand. St. Dev.		1.317		0		
Verb (random)						
Rand. St. Dev.		2.085		1.098		
Fixed R^2		0.572		0.139		
Random R^2		0.278		0.231		
Total R^2		0.85		0.37		
Log likelihood		-50.692		-78.953		

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some similarities and differences regarding the variables' effects. Temporal distance, presence of temporal adverbials, and test time were selected as significant in both time comparisons (Times 1 - 2 and Times 3 - 4), while formality of interlocutor was only significant at Times 1 and 2 but not at Times 3 and 4. As for temporal distance, the PF was favored in intermediate contexts at Times 1 and 2 but in near contexts at Times 3 and 4. The PF was always favored by the presence of an adverbial across times. While the PF was favored with the formal interlocutor at Times 1 and 2, PF was produced at similar rates regardless of interlocutor at Times 3 and 4. Higher rates of the PF were produced in task version A (informal interlocutor first) and by the higher grammar score group across times.

Moving on to the PF vs. PI comparison, no variable was selected as significant at Times 1 and 2, while grammar score was the only significant variable at Times 3 and 4. The PF was favored by the lower grammar score group across both time comparisons. Higher rates of PF production were observed in intermediate and distant contexts at Times 1 and 2 and only in intermediate contexts at Times 3 and 4. While PF was produced at similar rates regardless of the presence or absence of a temporal adverbial at Times 1 and 2, higher PF production was observed in the presence of an adverbial at Times 3 and 4. As for formality of interlocutor, PF was produced at similar rates regardless of interlocutor at Times 1 and 2 but the form was more favorable with the formal interlocutor at Times 3 and 4. Lastly, for task version, PF was produced at higher rates in task version A (informal interlocutor first) at Times 1 and 2, and in task version B (formal interlocutor first) at Times 3 and 4.

Now that the regression results have been presented, we move on to present the crosstabulations results for each of the independent variables considered in the analyses in order

to zoom in on how the independent variables affected the three variants of the dependent variable at each of the test times.

5.2.3 Crosstabulations of Independent Variables with Test Time

The present section presents the results of the crosstabulations considering each independent variable individually: temporal distance, presence of temporal adverbial, formality of interlocutor, task version, and grammar score.[13]

For all crosstabulations, the distribution of each variant of the dependent variable is presented according to each variant of the independent variable the crosstabulation is presenting, therefore the distributions are displayed in N (tokens) and percentages of each variant (PF, MF, and PI). The percentages for each variant divided according to the variants of the independent variables (e.g., near, intermediate, distant) are then to be compared to the baseline percentage of total use/selection of each variant (PF, MF, PI) presented in the right-most column in each table. If the percentage of a given dependent variant according to an independent variant is higher than the baseline for that dependent variant, then there is favoring effect; however, if that percentage is lower than the baseline there is a disfavoring effect, for example, if the MF is used at a rate of 5.0% for near contexts but the baseline use for MF is 8.3%, the MF is disfavored in near contexts, whereas if the MF is used at a rate of 15.4% for intermediate contexts but the baseline use is 8.3%,

[13] Recall that clause type, person and number, and participant gender were coded as independent variables but were not included in the regression analyses due to small token counts for numerous cells. They are therefore also excluded from the current section, but nevertheless, crosstabulations for these variables for the Spanish oral production task can be found in Appendix P.

the MF is favored in such contexts. For all the cross-tabulations in the present dissertation the percentages that are really distinct from their baseline are in bold to help the reader identify the major favoring effects detailed in the explanations.

We begin the explanations of the crosstabulations for each independent variable with temporal distance.

5.2.3.1 Temporal distance

Participants in the control group showed a distribution of MF use that was higher for the intermediate distance at Times 1 and 3 (15.4% and 40.6%, respectively) compared to its baseline rates of production at those two test times (i.e., 8.3% and 38.8%, respectively). The MF was also produced at higher percentages with near contexts at Times 2 and 3 (66.7% and 40.5%, respectively). Lastly, the MF was also produced at higher rates with the most distant future (years) at Times 2 and 4 (68.2% and 52.9%, respectively). Regarding production of the PF, this group demonstrated a number of U-shaped trends. Two trends were clear: at Times 1 and 3 participants favored the form with near contexts and distant contexts (60.0% and 60.0% at Time 1, and 33.3% and 31.0% at Time 3, respectively) compared to the baseline rates at those times. At Times 2 and 4 the PF was favored with intermediate contexts (26.1% and 35.3%, respectively). Distribution of the PI was also U-shaped, at Times 1 and 4 the PI was favored by near contexts (35.0% and 43.5%, respectively), whereas at Times 2 and 3 it was most used with intermediate (21.7% at Time 2 and 40.6% at Time 3) and distant contexts (18.2% at Time 2 and 34.5% at Time 3).

Participants in the two instruction groups showed much more cohesive trends regarding temporal distance. For the instruction group the MF was favored by both intermediate and distant contexts at Time 1 (27.8% and 22.2%, respectively), Time 3 (17.2% and 18.8%, respectively), and Time 4 (10.2% and 7.5%, respectively) and only by distant contexts at Time 2 (37.2%). The PF

was used at higher rates with near contexts for Time 1 (48.2%), Time 2 (53.3%) and Time 3 (42.1%) and with intermediate at Time 4 (44.9%). For the PI two trends were observed according to test time: while it was only favored by near contexts at Time 1 (48.2%) and Time 4 (54.1%), the PI was favored by both near and intermediate contexts at Time 2 (40.0% and 39.1%, respectively) and Time 3 (43.4% and 43.1%, respectively).

Participants in the instruction plus spiraling activities group favored the MF with distant contexts across all four times (26.9% at Time 1, 53.1% at Time 2, 50.0% at Time 3, and 83.3% at Time 4), in addition to intermediate at Time 1 (18.8%). For Times 2 and 3 participants did not produce any token of MF with near contexts. The PF was favored with near contexts at Time 1 (50.0%), Time 3 (47.6%), and Time 4 (44.1%) and with intermediate contexts at Time 2 (58.6%), Time 3 (39.4%), and Time 4 (42.9%). The PI was produced at high rates with the near context across all four times (44.4%, 66.7%, 52.4%, and 52.9%, respectively).

Table 5-9 Crosstabulation with temporal distance by group and test time for the Spanish oral production task

Group	**Time**	**Response**	**Temporal distance**						**Form Total and Baseline %**	
			Near		**Intermediate**		**Distant**			
Control	1	MF	1	5.0	2	**15.4**	1	6.7	4	8.3
		PF	12	60.0	7	53.8	9	60.0	28	58.3
		PI	7	**35.0**	4	30.8	5	33.3	16	33.3
		Total	20	100	13	100	15	100	48	100
	2	MF	22	66.7	12	52.2	15	**68.2**	49	62.8
		PF	6	18.2	6	**26.1**	3	13.6	15	19.2
		PI	5	15.2	5	**21.7**	4	18.2	14	17.9
		Total	33	100	23	100	22	100	78	100
	3	MF	17	40.5	13	40.6	10	34.5	40	38.8
		PF	14	**33.3**	6	18.8	9	31.0	29	28.2
		PI	11	26.2	13	**40.6**	10	34.5	34	33.0
		Total	42	100	32	100	29	100	103	100

Table 5-9 (continued)

	4	MF	15	32.6	12	35.3	18	**52.9**	45	39.5
		PF	11	23.9	12	**35.3**	9	26.5	32	28.1
		PI	20	**43.5**	10	29.4	7	20.6	37	32.5
		Total	46	100	34	100	34	100	114	100
Instruction	1	MF	2	3.6	10	**27.8**	6	**22.2**	18	15.1
		PF	27	**48.2**	10	27.8	9	33.3	46	38.7
		PI	27	48.2	16	44.4	12	44.4	55	46.2
		Total	56	100	36	100	27	100	119	100
	2	MF	4	6.7	8	17.4	16	**37.2**	28	18.8
		PF	32	**53.3**	20	43.5	16	37.2	68	45.6
		PI	24	**40.0**	18	39.1	11	25.6	53	35.6
		Total	60	100	46	100	43	100	149	100
	3	MF	11	14.5	10	17.2	9	18.8	30	16.5
		PF	32	42.1	23	39.7	19	39.6	74	40.7
		PI	33	43.4	25	43.1	20	41.7	78	42.9
		Total	76	100	58	100	48	100	182	100
	4	MF	2	3.3	5	**10.2**	3	7.5	10	6.7
		PF	26	42.6	22	44.9	17	42.5	65	43.3
		PI	33	**54.1**	22	44.9	20	50.0	75	50.0
		Total	61	100	49	100	40	100	150	100
Instruction plus spir. activities	1	MF	2	5.6	6	18.8	7	**26.9**	15	16.0
		PF	18	**50.0**	12	37.5	8	30.8	38	40.4
		PI	16	44.4	14	43.8	11	42.3	41	43.6
		Total	36	100	32	100	26	100	94	100
	2	MF	0	0.0	4	13.8	17	53.1	21	21.6
		PF	12	33.3	17	**58.6**	10	31.3	39	40.2
		PI	24	**66.7**	8	27.6	5	15.6	37	38.1
		Total	36	100	29	100	32	100	97	100
	3	MF	0	0.0	9	27.3	15	**50.0**	24	22.9
		PF	20	**47.6**	13	39.4	8	26.7	41	39.0
		PI	22	**52.4**	11	33.3	7	23.3	40	38.1
		Total	42	100	33	100	30	100	105	100
	4	MF	1	2.9	14	40.0	25	**83.3**	40	40.4
		PF	15	**44.1**	15	**42.9**	3	10.0	33	33.3
		PI	18	**52.9**	6	17.1	2	6.7	26	26.3
		Total	34	100	35	100	30	100	99	100

5.2.3.2 Presence of temporal adverbials

Starting with the control group, the MF was more commonly produced without an adverb present in the sentence (as opposed to with an adverb) at Time 1 (15.0% use of MF without an adverb, compared to 8.3% use of MF overall) and Time 4 (43.8%), whereas it was more common with an adverb present at Times 2 (70.5%) and 3 (40.6%). As for the PF, it was more commonly produced with a temporal adverbial present at Times 1 (64.3%), 2 (20.5%), and 4 (29.3%), and only at Time 3 (41.2%) was it more common without an adverb. The PI was more frequent without an adverb at Times 1 (35.0%) and 2 (29.4%) and with an adverb at Times 3 (37.7%) and 4 (32.9%).

The instruction group again presented quite more cohesive trends regarding MF and PF: the MF was favored when an adverb was not present in the sentence across all times (17.4% at Time 1, 23.4% at Time 2, 17.2% at Time 3, and 8.7% at Time 4), whereas the PF was favored when an adverb was present across all times (40.0% at Time 1, 45.9% at Time 2, 46.1% at Time 3, and 54.3% at Time 4). The PI was divided between being more frequent with an adverb at Times 1 (48.0%) and 2 (38.8%), and without an adverb at Times 3 (47.3%) and 4 (60.9%).

As for the instruction plus spiraling activities group, the MF was more common without an adverb at all times (20.7% at Time 1, 34.6% at Time 2, and 41.7% at Time 3) except for Time 4 when it was common with an adverb (41.5%). The reverse case was true for the PF: this variant was common with an adverb at all times (43.1% at Time 1, 40.8% at Time 2, and 46.9% at Time 3) except at Time 4 when it was more common without an adverb (41.2%). The PI was divided between being more frequent with an adverb at Times 2 (42.3%) and 4 (26.8%) and without an adverb at Times 1 (44.8%) and 3 (45.8%).

Table 5-10 Crosstabulation with presence of temporal adverbials by group and test time for the Spanish oral production task

Group	Time	Response	Presence of adverbials				Form Total and Baseline %	
			Yes		No			
			N	%	N	%	N	%
Control	1	MF	1	3.6	3	**15.0**	4	8.3
		PF	18	**64.3**	10	50.0	28	58.3
		PI	9	32.1	7	35.0	16	33.3
		Total	28	100	20	100	48	100
	2	MF	31	**70.5**	18	52.9	49	62.8
		PF	9	20.5	6	17.6	15	19.2
		PI	4	9.1	10	**29.4**	14	17.9
		Total	44	100	34	100	78	100
	3	MF	28	40.6	12	35.3	40	38.8
		PF	15	21.7	14	**41.2**	29	28.2
		PI	26	**37.7**	8	23.5	34	33.0
		Total	69	100	34	100	103	100
	4	MF	31	37.8	14	**43.8**	45	39.5
		PF	24	29.3	8	25.0	32	28.1
		PI	27	32.9	10	31.3	37	32.5
		Total	82	100	32	100	114	100
Instruction	1	MF	6	12.0	12	17.4	18	15.1
		PF	20	40.0	26	37.7	46	38.7
		PI	24	48.0	31	44.9	55	46.2
		Total	50	100	69	100	119	100
	2	MF	13	15.3	15	**23.4**	28	18.8
		PF	39	45.9	29	45.3	68	45.6
		PI	33	**38.8**	20	31.3	53	35.6
		Total	85	100	64	100	149	100
	3	MF	14	15.7	16	17.2	30	16.5
		PF	41	**46.1**	33	35.5	74	40.7
		PI	34	38.2	44	**47.3**	78	42.9
		Total	89	100	93	100	182	100
	4	MF	4	4.9	6	8.7	10	6.7
		PF	44	**54.3**	21	30.4	65	43.3
		PI	33	40.7	42	**60.9**	75	50.0
		Total	81	100	69	100	150	100
Instruction plus spir. activities	1	MF	9	13.8	6	**20.7**	15	16.0
		PF	28	**43.1**	10	34.5	38	40.4
		PI	28	43.1	13	44.8	41	43.6
		Total	65	100	29	100	94	100
	2	MF	12	16.9	9	**34.6**	21	21.6
		PF	29	40.8	10	38.5	39	40.2

Table 5-10 (continued)

		PI	30	**42.3**	7	26.9	37	38.1
		Total	71	100	26	100	97	100
	3	MF	14	17.3	10	**41.7**	24	22.9
		PF	38	**46.9**	3	12.5	41	39.0
		PI	29	35.8	11	**45.8**	40	38.1
		Total	81	100	24	100	105	100
	4	MF	34	41.5	6	35.3	40	40.4
		PF	26	31.7	7	**41.2**	33	33.3
		PI	22	26.8	4	23.5	26	26.3
		Total	82	100	17	100	99	100

5.2.3.3 Formality of the interlocutor

For the control group, the MF was more common with the formal interlocutor (i.e., the professor) at Times 1 (14.8%) and 2 (64.9%), while it was more common with the informal interlocutor (i.e., a classmate) at Times 3 (41.5%) and 4 (42.9%). No MF was produced with the more informal interlocutor at Time 1. The opposite trend was observed for the PF: this variant was more commonly produced with a classmate at Times 1 (82.0%) and 2 (19.5%) and with a professor at Times 3 (30.0%) and 4 (31.0%). The PI was favored with the formal interlocutor at Times 1 (44.4%), 3 (34.0%), and 4 (32.8%) and with a classmate at Time 2 (19.5%).

The instruction group favored the MF with the more formal interlocutor at all times (15.9% at Time 1, 27.6% at Time 2, and 22.0% at Time 3) except for Time 4 when MF was neither favored nor disfavored by either interlocutor (6.6% classmate vs. 6.8% professor). The PF was more common with the more formal interlocutor at Times 1 (41.3%) and 4 (50.0%), whereas it was more common with the informal interlocutor at Time 2 (27.6%). The PF was not favored by either interlocutor at Time 3 (40.7% for both interlocutors). For the PI, it was more commonly produced with the classmate at all times (50.0% at Time 1, 38.4% at Time 2, 56.4% at Time 3, and 56.6% at Time 4).

For the instruction plus spiraling activities group, the MF was more commonly produced with the more informal interlocutor at Time 1 (18.0%) and Time 3 (25.0%), and with the more formal interlocutor at Time 4 (42.9%). The MF was neither favored nor disfavored with either interlocutor at Time 2 (21.7% classmate vs. 21.6% professor). The trends for PF and PI were reversed: while the PF was more common with the formal interlocutor at Times 1 (43.2%), 3 (41.5%) and 4 (34.7%) and more common with the informal interlocutor at Time 2 (43.5%), the PI was favored with the informal interlocutor at Times 1 (44.0%), 3 (38.5%), and 4 (30.0%), and favored with the more formal interlocutor at Time 2 (41.2%).

Table 5-11 Crosstabulation with formality of the interlocutor by group and test time for the Spanish oral production task

Group	**Time**	**Response**	**Formality of interlocutor**				**Form Total and Baseline %**	
			Classmate		**Professor**			
			N	%	N	%	N	%
Control	1	MF	0	0.0	4	**14.8**	4	8.3
		PF	17	**81.0**	11	40.7	28	58.3
		PI	4	19.0	12	**44.4**	16	33.3
		Total	21	100	27	100	48	100
	2	MF	25	61.0	24	64.9	49	62.8
		PF	8	19.5	7	18.9	15	19.2
		PI	8	19.5	6	16.2	14	17.9
		Total	41	100	37	100	78	100
	3	MF	22	**41.5**	18	36.0	40	38.8
		PF	14	26.4	15	30.0	29	28.2
		PI	17	32.1	17	34.0	34	33.0
		Total	53	100	50	100	103	100
	4	MF	24	42.9	21	36.2	45	39.5
		PF	14	25.0	18	31.0	32	28.1
		PI	18	32.1	19	32.8	37	32.5
		Total	56	100	58	100	114	100
Instruction	1	MF	8	14.3	10	15.9	18	15.1
		PF	20	35.7	26	41.3	46	38.7

Table 5-11 (continued)

		PI	28	**50.0**	27	42.9	55	46.2
		Total	56	100	63	100	119	100
	2	MF	7	9.6	21	**27.6**	28	18.8
		PF	38	**52.1**	30	39.5	68	45.6
		PI	28	38.4	25	32.9	53	35.6
		Total	73	100	76	100	149	100
	3	MF	10	11.0	20	**22.0**	30	16.5
		PF	37	40.7	37	40.7	74	40.7
		PI	44	**56.4**	34	37.4	78	42.9
		Total	91	100	91	100	182	100
	4	MF	5	6.6	5	6.8	10	6.7
		PF	28	36.8	37	**50.0**	65	43.3
		PI	43	**56.6**	32	43.2	75	50.0
		Total	76	100	74	100	150	100
Instruction plus spir. activities	1	MF	9	18.0	6	13.6	15	16.0
		PF	19	38.0	19	43.2	38	40.4
		PI	22	44.0	19	43.2	41	43.6
		Total	50	100	44	100	94	100
	2	MF	10	21.7	11	21.6	21	21.6
		PF	20	43.5	19	37.3	39	40.2
		PI	16	34.8	21	41.2	37	38.1
		Total	46	100	51	100	97	100
	3	MF	13	25.0	11	20.8	24	22.9
		PF	19	36.5	22	41.5	41	39.0
		PI	20	38.5	20	37.7	40	38.1
		Total	52	100	53	100	105	100
	4	MF	19	38.0	21	42.9	40	40.4
		PF	16	32.0	17	34.7	33	33.3
		PI	15	**30.0**	11	22.4	26	26.3
		Total	50	100	49	100	99	100

5.2.3.4 Task version

Task version A featured the informal interlocutor first and the formal interlocutor second (i.e., classmate and professor, respectively), and task version B featured the more formal interlocutor first and then the informal second (i.e., professor and classmate, respectively).

Starting with the control group, the MF was favored with task version B (formal interlocutor first) at Times 1 (10.0%) and 4 (45.9%), and with task version A (informal interlocutor

first) at Times 2 (93.5%) and 3 (55.6%). The PF showed the opposite trend: this variant was more common with task A at Times 1 (72.2%) and 4 (34.0%) and with task B at Times 2 (29.8%) and 3 (32.8%). As for the PI, this variant was favored with task B for Times 1 (40.0%), 2 (27.7%), and 3 (41.4%), and with task A at Time 4 (34.0%).

For the instruction group, the MF was favored by task A at Time 1 (27.3%) (no MF was produced in task B) and favored by task version B at the other times (23.6% at Time 2, 24.3% at Time 3, and 12.0% at Time 4). The PF was more common in task version A at Time 2 (61.0%) and 4 (45.0%) and in task version B at Time 1 (54.7%) and 3 (42.9%). As for the PI, it was more commonly produced in task version A at Times 1 (47.0%), 3 (49.1%), and 4 (51.0%), and in task version B at Time 2 (47.2%).

Finally, for the instruction plus spiraling activities group, the MF was favored by task B (more formal interlocutor first) at all times (26.3% at Time 1, 24.6% at Time 2, 26.4% at Time 3, and 45.6% at Time 4) (no MF was produced in task version A at Time 1). The PF was more commonly produced in task version A at Times 1 (62.2%), 3 (42.4%), and 4 (35.5%) and in task version B at Time 2 (40.6%). As for the PI, this variant was favored in task version B at Time 1 (47.4%), and in task version A at the other times (46.4% at Time 2, 42.4% at Time 3, and 35.5% at Time 4).

Table 5-12 Crosstabulation with task version by group and test time for the Spanish oral production task

Group	Time	Response	Task version				Form Total and Baseline %	
			A (informal first)		B (formal first)			
			N	%	N	%	N	%
Control	1	MF	1	5.6	3	10.0	4	8.3
		PF	13	**72.2**	15	50.0	28	58.3
		PI	4	22.2	12	**40.0**	16	33.3
		Total	18	100	30	100	48	100
	2	MF	29	**93.5**	20	42.6	49	62.8
		PF	1	3.2	14	**29.8**	15	19.2
		PI	1	3.2	13	**27.7**	14	17.9
		Total	31	100	47	100	78	100
	3	MF	25	**55.6**	15	25.9	40	38.8
		PF	10	22.2	19	**32.8**	29	28.2
		PI	10	22.2	24	**41.4**	34	33.0
		Total	45	100	58	100	103	100
	4	MF	17	32.1	28	**45.9**	45	39.5
		PF	18	**34.0**	14	23.0	32	28.1
		PI	18	34.0	19	31.1	37	32.5
		Total	53	100	61	100	114	100
Instruction	1	MF	18	**27.3**	0	0.0	18	15.1
		PF	17	25.8	29	**54.7**	46	38.7
		PI	31	47.0	24	45.3	55	46.2
		Total	66	100	53	100	119	100
	2	MF	11	14.3	17	**23.6**	28	18.8
		PF	47	**61.0**	21	29.2	68	45.6
		PI	19	24.7	34	**47.2**	53	35.6
		Total	77	100	72	100	149	100
	3	MF	13	11.6	17	**24.3**	30	16.5
		PF	44	39.3	30	42.9	74	40.7
		PI	55	**49.1**	23	32.9	78	42.9
		Total	112	100	70	100	182	100
	4	MF	4	4.0	6	12.0	10	6.7
		PF	45	45.0	20	40.0	65	43.3
		PI	51	51.0	24	48.0	75	50.0
		Total	100	100	50	100	150	100
Instruction plus spir. activities	1	MF	0	0.0	15	**26.3**	15	16.0
		PF	23	**62.2**	15	26.3	38	40.4
		PI	14	37.8	27	**47.4**	41	43.6
		Total	37	100	57	100	94	100
	2	MF	4	14.3	17	24.6	21	21.6
		PF	11	39.3	28	40.6	39	40.2
		PI	13	**46.4**	24	34.8	37	38.1

Table 5-12 (continued)

		Total	28	100	69	100	97	100
	3	MF	5	15.2	19	**26.4**	24	22.9
		PF	14	42.4	27	37.5	41	39.0
		PI	14	**42.4**	26	36.1	40	38.1
		Total	33	100	72	100	105	100
	4	MF	9	29.0	31	**45.6**	40	40.4
		PF	11	35.5	22	32.4	33	33.3
		PI	11	**35.5**	15	22.1	26	26.3
		Total	31	100	68	100	99	100

5.2.3.5 Grammar score

Starting with the control group, the MF was favored by the high score group at all four times (11.5%, 78.4%, 59.5%, and 54.3%, respectively), whereas the PI was favored by the lower grammar score group at all four times (45.5%, 26.8%, 40.9%, and 41.2%, respectively). The PF showed more variability to the extent that it was favored by the higher grammar score group at Time 1 (65.4%), whereas it was favored by the low score group at Times 2 (24.4%), 3 (31.8%), and 4 (29.4%). For the instruction group it was also the high score group that favored MF production at all times (15.9%, 20.6%, 18,4%, and 7.3%, respectively). The PF and the PI showed opposite trends: the PF was favored by the high score group at Times 1 (44.3%), 3 (50.9%), and 4 (49.0%) and by the low score group at Time 2 (54.8%), whereas the PI was favored by the low score group at Times 1 (64.5%), 3 (63.2%), and 4 (61.1%) and by the high score group at Time 2 (37.4%). Lastly, contrary to the trends observed in the control group, the instruction plus spiraling activities group favored the MF when the participants belonged to the lower grammar score group at each test time (26.5%, 25.4%, 31.9%, and 40.6%, respectively) and favored the PI when participants belonged to the higher grammar score group at all times (57.8%, 42.1%, 58.3%, and 34.3%, respectively). The PF showed the opposite trends from the instruction group: for the

instruction plus spiraling activities group, this variant was favored by the lower grammar score group at Times 1 (42.9%), 3 (40.6%), and 4 (37.5%), and by the higher grammar score group at Time 2 (42.1%).

Table 5-13 Crosstabulation with grammar score by group and test time for the Spanish oral production task

Group	Time	Response	Grammar score				Form Total and Baseline %	
			Lower		Higher			
			N	%	N	%	N	%
Control	1	MF	1	4.5	3	**11.5**	4	8.3
		PF	11	50.0	17	**65.4**	28	58.3
		PI	10	**45.5**	6	23.1	16	33.3
		Total	22	100	26	100	48	100
	2	MF	20	48.8	29	**78.4**	49	62.8
		PF	10	**24.4**	5	13.5	15	19.2
		PI	11	**26.8**	3	8.1	14	17.9
		Total	41	100	37	100	78	100
	3	MF	18	27.3	22	**59.5**	40	38.8
		PF	21	31.8	8	21.6	29	28.2
		PI	27	**40.9**	7	18.9	34	33.0
		Total	66	100	37	100	103	100
	4	MF	20	29.4	25	**54.3**	45	39.5
		PF	20	29.4	12	26.1	32	28.1
		PI	28	**41.2**	9	19.6	37	32.5
		Total	68	100	46	100	114	100
Instruction	1	MF	4	12.9	14	15.9	18	15.1
		PF	7	22.6	39	**44.3**	46	38.7
		PI	20	**64.5**	35	39.8	55	46.2
		Total	31	100	88	100	119	100
	2	MF	6	14.3	22	20.6	28	18.8
		PF	23	**54.8**	45	42.1	68	45.6
		PI	13	31.0	40	37.4	53	35.6
		Total	42	100	107	100	149	100
	3	MF	9	13.2	21	18.4	30	16.5
		PF	16	23.5	58	**50.9**	74	40.7
		PI	43	**63.2**	35	30.7	78	42.9
		Total	68	100	114	100	182	100
	4	MF	3	5.6	7	7.3	10	6.7
		PF	18	33.3	47	**49.0**	65	43.3

Table 5-13 (continued)

		PI	33	**61.1**	42	43.8	75	50.0
		Total	54	100	96	100	150	100
Instruction plus spir.act.	1	MF	13	**26.5**	2	4.4	15	16.0
		PF	21	42.9	17	37.8	38	40.4
		PI	15	30.6	26	**57.8**	41	43.6
		Total	49	100	45	100	94	100
	2	MF	15	**25.4**	6	15.8	21	21.6
		PF	23	39.0	16	42.1	39	40.2
		PI	21	35.6	16	42.1	37	38.1
		Total	59	100	38	100	97	100
	3	MF	22	**31.9**	2	5.6	24	22.9
		PF	28	40.6	13	36.1	41	39.0
		PI	19	27.5	21	**58.3**	40	38.1
		Total	69	100	36	100	105	100
	4	MF	26	40.6	14	40.0	40	40.4
		PF	24	**37.5**	9	25.7	33	33.3
		PI	14	21.9	12	**34.3**	26	26.3
		Total	64	100	35	100	99	100

5.2.4 Summary of results in the Spanish oral production task

Participants in all three groups produced a variety of forms to express futurity including the conditional, subjunctive, future progressive, preterite, lexical futures, and even some infinitives and verbless utterances. The three most produced forms in this task by all three groups were the MF, PF, and PI. The groups showed differential patterns of production: the control produced the MF at the highest rate (40.2%) followed by the PF and PI with similar rates (30.3% and 29.4%, respectively). The instruction group produced the PI and PF at similar rates (43.5% and 42.2%, respectively) followed by the PI (14.3%). The instruction plus spiraling activities group also produced the PF and PI at similar rates (38.2% and 36.5%, respectively) and the PI at a rate of 25.3%. The control produced the MF at significantly higher rates than the instruction groups ($p<.001$ for both comparisons with a medium and a small effect size, respectively), as did the

instruction plus spiraling activities group when compared to the instruction group ($p<.001$ with a small effect size). The control produced the PF at significantly lower rates than both instruction groups ($p=.004$ and $p=.016$, respectively with a small effect size in both comparisons) and also produced the PI at significantly lower rates than the instruction groups ($p<.001$ and $p=.030$, respectively, with a small effect size in both comparisons). The instruction groups did not show significant differences in PF and PI production in the oral task.

When the production rates are examined according to test time, some patterns can be noted: all three groups produced the MF at the lowest rates at Time 1 (8.3%, 15.1%, and 16.0%, respectively) when compared to the other two variants. The control group produced the PF at the highest rates (58.3%) while the two instruction groups produced the PF (38.7% and 40.4%, respectively) and the PI (46.2% and 43.6%, respectively) at similar rates. Whereas all three groups showed an increase in MF production at Time 2, the instruction groups increased it between 3% and 5% from Time 1, whereas the control group increased MF production from 8.3% at Time 1 to 62.8% at Time 2. Between Time 2 and Time 3 two groups decreased their production of the MF (62.8% vs. 38.8% for the control group, 18.8% vs. 16.5% for the instruction group) except for the instruction plus spiraling activities group that increased MF production by a small percentage (21.6% vs. 22.9%); however, the control group still maintained this variant as the most produced one when compared to the other two variants. At Time 3, for all groups, the PF and the PI were produced at similar rates within each group (28.2% vs. 33.0% for the control group, 40.7% vs. 42.9% for the instruction group, and 39.0% vs. 38.1% for the instruction plus spiraling activities group). For the delayed posttests (Times 3 and 4), the control group maintained similar rates of production for all three variants (38.8% vs. 39.5% for the MF, 28.2% vs. 28.1% for the PF, and 33.0% vs. 32.5% for the PI). The instruction group presented a decrease in MF production between

Times 3 and 4 and an increase of the other two variants (16.5% vs. 6.7% for the MF, 40.7% vs. 43.3% for the PF, and 42.9% vs. 50.0% for the PI), hence the PI was the most produced form for the instruction group in the delayed posttests. For the instruction plus spiraling activities group, the two delayed posttests presented some differences: the MF increased from 22.9% to 40.4%, while the other two variants decreased (from 39.0% to 33.3% for the PF and from 38.1% to 26.3% for the PI), thus it was the MF that became the most produced form at Time 4 for this group.

The multivariate analyses revealed which independent variables had a significant effect on the dependent variable. Starting with the control group, presence of temporal adverbials (p=0.00519) and formality of interlocutor (p=0.0126) were selected as significant predictors by the regression model just for the PF vs. PI comparison when considering Times 1 and 2. The PF was favored over the PI in the absence of an adverbial and with the more informal interlocutor. No variables were selected as significant by the model for the PF vs. MF comparison at Times 1 and 2, nor for any comparison at Times 3 and 4. As for the instruction group, three variables were selected as significant predictors by the model for the PF vs. MF comparison at Times 1 and 2: temporal distance (p=1.81e-08), formality of the interlocutor (p=0.0398), and test time (p=0.00205). The PF was favored over the MF in near contexts, with an informal interlocutor, and at Time 2. No variables were selected as significant for the PF vs. PI comparison at these times. At Times 3 and 4, for the PF vs. MF comparison, temporal distance (p=0.0275) and presence of temporal adverbials (p=0.0252) were selected as significant predictors by the model. As at Times 1 and 2, the PF was favored over the MF in near contexts. The PF was favored in the presence of an adverb. For the PF vs. PI comparison, presence of temporal adverbials (p=0.0425) and task version (p=0.0424) were significant predictors: the PF was favored over the PI in the presence of an adverb and in task version B (formal interlocutor first). Lastly, for the instruction plus spiraling

activities group, temporal distance (p=5.14e-08), presence of temporal adverbials (p=0.0163), formality of the interlocutor (p=0.0265), and test time (p=0.0347) were selected as significant predictors by the model for the comparison PF vs. MF at Times 1 and 2. The PF was favored over the MF in near and intermediate contexts, in the presence of an adverbial, with the formal interlocutor, and at Time 1. No variables were selected as significant by the model for the PF vs. PI comparison at these times. As for Times 3 and 4, temporal distance (p=6.14e-14), presence of temporal adverbials (p=0.0419), and test time (p=0.0258) were selected as significant predictors for the PF vs. MF comparison. The PF was favored in near contexts, in the presence of an adverbial, and at Time 3. Only grammar score was significant for the PF vs. PI comparison at these times (p=0.0111): the PF was favored over the PI by the low proficiency group. All in all, the instruction groups developed sensitivity to the linguistic independent variables of temporal distance, presence of a temporal adverbial, and formality of the interlocutor mostly in the PF vs. MF comparison at Times 1 and 2 and was maintained at Times 3 and 4, whereas the control group only demonstrated sensibility to presence of temporal adverbial for the PF vs. PI comparison at Times 1 and 2 that was not maintained at Times 3-4.

5.3 Spanish oral production task (Instructors)

Before presenting the instructors' results, it is important to remind the reader the origin of the two instructors for each group: the instructors of the control group were from Cuba and the United States, the instructors of the instruction group were from Mexico and Puerto Rico, and the instructors of the instruction plus spiraling activities group were from Colombia and South Korea.

The instructors from the United States and South Korea had learned Spanish as a second language (i.e., were not heritage speakers of the language).

5.3.1 Frequencies of use

The six instructors produced a total of 59 tokens in the oral production task. The instructors in the control group only produced tokens for three future forms: they produced 52.4% of the tokens as periphrastic future, 28.6% as lexical futures, and 19.0% as morphological future. This distribution was different from that displayed by the participants in the control group for this task since the participants produced the MF at higher rates, followed by the PF and the PI, but did not produce any lexical futures. The instructors of the instruction group produced four types of future forms: periphrastic future (50.0%), morphological future (27.3%), lexical futures (13.6%), and subjunctive (9.1%). The participants in the instruction group also produced PF and MF, although the most produced form in the oral production task was the PI. The instructors of the instruction plus spiraling activities group also produced four types of future forms: periphrastic future (68.8%), future progressive (*estaré hablando* 'I will be talking') (12.5%), morphological future (12.5%), and present indicative (6.3%). For this last group, the MF production was lower than for the instructors of the other two groups (control and instruction) due to the fact that this group also used another form (future progressive) that contained a conjugated verb in the MF and a participle, which helps explain why some MF production was classified under another form and took from the MF production as a whole. When compared to the participants in the instruction plus spiraling activities group, the participants also produced the PF at the highest rates, but followed by the PI and the MF seeing that the participants did not produce any future progressive forms.

For all instructors, the periphrastic future was the most produced form in the oral task. A chi-square test revealed that the differences between the groups were not significant $X^2(10, N=59) = 18.022$, $p=.055$. Table 5-14 presents the distribution of all the forms produced by the instructors for the Spanish oral production task.

Table 5-14 Distribution of all produced forms by the instructors in the Spanish oral production task

Group	**PF**		**MF**		**LF**		**Future Progr.**		**Subjunct.**		**PI**		**Total**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Control	11	52.4	4	19.0	6	28.6	0	0.0	0	0.0	0	0.0	21	100
Instruction	11	50.0	6	27.3	3	13.6	0	0.0	2	9.1	0	0.0	22	100
Instruction plus spir. act.	11	68.8	2	12.5	0	0.0	2	12.5	0	0.0	1	6.3	16	100

5.4 English oral production task (Participants)

5.4.1 Frequencies of use

All groups together produced a total of 281 future tokens in the oral production task. Table 5-15 provides the distribution of all attempts at expressing futurity produced by all participants in this task. All participants were listed together in reporting the results for the English tasks because the participants completed these tasks once at Time 1 prior to any training on the future in Spanish.

Presenting the results for the participants as a whole and not divided among the three groups helps in providing more robust token counts.

For English, the 'will' future as in 'I will study' corresponds with the Spanish MF,[14] and the PF is the 'going to' form as in 'I am going to study'. The participants produced the PF at the highest rates when compared to the other future forms (28.8%), followed by "will" (18.9%), the present progressive (15.3%), the LF (14.6%), and the future progressive (12.5%). The PI was produced at a rate of 8.2%. The 'other' category included the conditional progressive at a rate of 0.7%, and the progressive, infinitive, and conditional at a rate of 0.4% each. For all participants, the three most commonly produced variants were the periphrastic future, "will", and the present progressive.[15]

Table 5-15 Distribution of all future tokens in the English oral production task

	PF		**"will"**		**Present Progr.**		**LF**		**Future Progr.**		**PI**		**Other**		**Total**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
All part.	81	28.8	53	18.9	43	15.3	41	14.6	35	12.5	23	8.2	5	1.9	281	100

[14] The *will* future is not a set of morphological endings in English, but it is the translational equivalent of the Spanish MF, therefore some comparisons will be established between these two forms in the present dissertation.

[15] The other most produced future form was the LF at similar rates to the present progressive; however, to make the results comparable to those of the written production task, the present progressive was selected as the third most produced form to be included in the analyses.

Table 5-16 presents the number of tokens and the percentages of use of these three forms. For the rest of the results of the English oral production task, I will only consider these three most used forms. By considering only the three most common forms the number of tokens decreased from 281 to 177. Similar to the trends presented in Table 5-15, the PF was produced at the highest rate (45.8%) followed by "will" (29.9%) and the present progressive (24.3%).

Table 5-16 Distribution of the most common future forms across groups in the English oral production task

Group	**PF**		**"will"**		**Pres. Progr.**		**Total**	
	N	%	N	%	N	%	N	%
All participants	81	45.8	53	29.9	43	24.3	177	100

5.4.2 Multivariate analyses

A multivariate regression was run with four independent variables (temporal distance, presence of temporal adverbials, formality of the interlocutor, and task version) considering all groups together and both comparisons (PF vs. "will" and PF vs. Present Progressive). Grammar score was not run for the English model since it was a measure of Spanish proficiency. The results of the regression are presented in Table 5-17. No variables were selected as significant predictors for any of the two comparisons, although there were some similarities in the directionality of the effects across comparisons. As for temporal distance, the PF was produced at higher rates over "will" and the present progressive in near contexts similar to the Spanish oral production task.

Table 5-17 Factors contributing to the use of periphrastic future over "will" and present progressive in the English oral production task for all participants

	PF vs. "will"			**PF vs. Present Progressive**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	62	71.0	[0.678]	62	71.0	[0.712]
Intermediate	40	52.5	[0.576]	34	58.8	[0.393]
Distant	32	50.0	[0.259]	24	62.5	[0.385]
			p=0.15			p=0.324
Presence of temporal adverbials						
Yes	88	67.0	[0.590]	88	65.9	[0.504]
No	46	47.8	[0.410]	32	65.6	[0.496]
			p=0.367			p=0.825
Formality of interlocutor						
Professor	65	63.1	[0.500]	61	67.2	[0.624]
Classmate	69	58.0	[0.500]	59	64.4	[0.376]
			p=0.996			p=0.311
Task version						
A (inf. first)	60	63.3	[0.453]	56	64.3	[0.347]
B (formal first)	74	58.1	[0.547]	64	67.2	[0.653]
			p=0.802			p=0.4
N=134		Relative rate 60.4% PF		N=120	Relative rate 65.8% PF	
Participant (random)						
Rand. St. Dev.		3.333		3.284		
Verb (random)						
Rand. St. Dev.		1.744		4.469		
Fixed R^2		0.043		0.038		
Random R^2		0.776		0.869		
Total R^2		0.819		0.907		
Log likelihood		-66.22		-57.886		

As for the presence of temporal adverbials, the PF was produced at higher rates over "will" in the presence of an adverbial, although no difference was observed for the present progressive in terms of presence or absence of an adverbial. For formality of the interlocutor, there was no

effect for the PF vs. “will” comparison nor for the PF vs. present progressive comparison. Lastly, the PF was produced at slightly higher rates in task version A (informal interlocutor first) for the PF vs. “will” comparison, whereas the PF was produced at slightly higher rates in task version B (formal interlocutor first) for the PF vs. present progressive comparison.

5.4.3 Crosstabulations of Independent Variables

Crosstabulations were run for the independent variables included in the multivariate analysis but separated by group. The independent variables included in the analyses were temporal distance, presence of temporal adverbials, formality of interlocutor, and task version.[16] We start with temporal distance.

5.4.3.1 Temporal distance

“Will” was favored in intermediate and distant contexts (34.5% and 38.1%, respectively) when compared to the baseline (29.9%). The PF was favored in near contexts (55.0%) when compared to the baseline (45.8%), similar to the trends observed in the Spanish tasks. Finally, the present progressive was slightly favored in the intermediate contexts (27.3%) when compared to the baseline (24.3%).

[16] Similar to the Spanish tasks, clause type, person and number, and participant gender were coded as independent variables but were not included in the analyses due to small token counts for some cells. The crosstabulations for these variables for the English oral production task are included in Appendix Q.

5.4.3.2 Presence of temporal adverbial

"Will" was favored in the absence of an adverbial (42.1%) whereas the PF and the present progressive were favored by the presence of an adverbial (49.2% and 26.7%, respectively), similar to the trends observed for the Spanish oral task at Time 1.

Table 5-18 Crosstabulation with temporal distance for the English oral production task

	Response	**Temporal distance**						**Form Total and Baseline %**	
		Near		**Intermediate**		**Distant**			
		N	%	N	%	N	%	N	%
All participants	"Will"	18	22.5	19	34.5	16	38.1	53	29.9
	PF	44	55.0	21	38.2	16	38.1	81	45.8
	Pres. Progr.	18	22.5	15	27.3	10	23.8	43	24.3
	Total	80	100	55	100	42	100	177	100

Table 5-19 Crosstabulation with presence of adverbial for the English oral production task

	Response	**Presence of adverb**				**Form Total and Baseline %**	
		Yes		**No**			
		N	%	N	%	N	%
All participants	"Will"	29	24.2	24	42.1	53	29.9
	PF	59	49.2	22	38.6	81	45.8
	Pres. Progr.	32	26.7	11	19.3	43	24.3
	Total	120	100	57	100	177	100

5.4.3.3 Formality of the interlocutor

Neither informal nor formal interlocutor favored or disfavored any of the three future forms when compared to their respective baseline rates, similar to the instruction plus spiraling activities

group in the Spanish oral task at Time 1: “will” (32.2% vs. 27.6%) when compared to the baseline (29.9%), PF (44.4% vs. 47.1%) when compared to the baseline (45.8%), and present progressive (23.3% vs. 25.3%) when compared to the baseline (24.3%).

Table 5-20 Crosstabulation with formality of interlocutor for the English oral production task

	Response	**Formality of interlocutor**				**Form Total and Baseline %**	
		Classmate		**Professor**			
		N	%	N	%	N	%
All participants	“Will”	29	32.2	24	27.6	53	29.9
	PF	40	44.4	41	47.1	81	45.8
	Pres. Progr.	21	23.3	22	25.3	43	24.3
	Total	90	100	87	100	177	100

5.4.3.4 Task version

Again, neither task version A nor task version B favored or disfavored the production of any of the three future forms: “will” (26.8% vs. 32.6% compared to the baseline of 29.9%), PF (46.3% vs. 45.3% compared to the baseline of 45.8%), and present progressive (26.8% vs. 22.1% compared to the baseline of 24.3%). In comparison, the trends of the Spanish oral task at Time 1 were mixed as for the control and instruction plus spiraling activities groups the PF was favored in task version A, whereas for the instruction group the PF was favored in task version B.

Table 5-21 Crosstabulation with task version for the English oral production task

	Response	Task version				Form Total and Baseline %	
		A (inf. first)		B (formal first)			
		N	%	N	%	N	%
All participants	"Will"	22	26.8	31	32.6	53	29.9
	PF	38	46.3	43	45.3	81	45.8
	Pres. Progr.	22	26.8	21	22.1	43	24.3
	Total	82	100	95	100	177	100

5.4.4 Summary of English oral production task

All participants produced a total of 281 future tokens in the oral production task. The PF was the most produced form at a rate of 28.8%, followed by "will" (18.9%), the present progressive (15.3%), the LF (14.6%), and the future progressive (12.5%). The least produced forms there the PI (8.2%), and the 'other' category (1.9%) which included conditional progressive at a rate of 0.7%, and the progressive, infinitive, and conditional at a rate of 0.4% each. The three more produced forms were the PF, "will", and the present progressive. In order to make the comparison similar to the written preference task, the present progressive was selected over the lexical future for the comparisons with the PF. When considering only the three most produced variants, the tokens produced summed to 177. The PF was produced at the highest rate (45.8%) followed by "will" (29.9%) and the present progressive (24.3%). The PF was also the form produced at the highest rate by the instruction plus spiraling activities group in the Spanish oral task; however, the three most common forms for all groups in the Spanish oral task were the PF, the MF, and the PI, instead of the present progressive. Turning our attention to the linguistic and extralinguistic variables, similar to the control group in the Spanish oral task at Time 1 for the PF vs. MF

comparison, none of them were selected as significant by the model for the PF vs. "will" comparison nor for the PF vs. present progressive comparison.

5.5 Spanish Written Production task (Participants)

The second task completed by participants asked them to respond to two prompts. In these prompts, participants were asked to write an email to their classmate about their plans for three different times, after class, next summer (three months away), and spring 2019 (one year away) and write another email to their boss about their best friend's plans for three times, tonight, fall break (nine months away), and summer 2019 (one year and three months away) or vice versa depending on the type of version they had, they first wrote to their classmate or their boss.

5.5.1 Frequencies of use

The present section illustrates the overall frequencies of use of all the forms in future-time contexts for the three participant groups in the Spanish written production task. We begin with the least produced forms before then focusing on the three most produced forms for the remainder of this section (MF, PF, and PI). Table 5-22a presents the distribution of all the produced forms in the written production task.

Participants produced a total of 1,647 future tokens in the written task considering all forms (most and least produced). The control group used a number of different forms to express the future when compared to the instruction plus spiraling activities group: the three most common ones were the MF (33.1%), the PI (29.1%), and the PF (28.7%), followed by lexical futures (2.5%), infinitive

(2.1%), verbless (1.0%), conditional at a rate of 0.8%, invented and subjunctive at a rate of 0.4% each, preterite at a rate of 0.2%, and progressive forms which included the progressive (0.2%), the present progressive (0.3%), and the future progressive (0.1%). Continuing with the instruction group, the more common variants this group produced were PI (38.5%), PF (33.8%), and MF (15.7%). The less commonly produced variants were lexical futures (5.3%), infinitives (2.2%), verbless, subjunctive, and preterite at a rate of 1.0% each, conditional (0.4%), invented at a rate of 0.3% each, and the progressive forms that included the present progressive at a rate of 0.3% and the progressive and the future progressive at a rate of 0.1% each, For the last group, instruction plus spiraling activities, the most produced variants were the PF (36.4%), the PI (33.5%), and the MF (26.1%). The least produced variants were lexical futures and infinitives at a rate of 1.1% each, subjunctive, and preterite at a rate of 0.4% each, verbless and invented forms at a rate of 0.2% each, and the progressive, which included the present progressive, at a rate of 0.4%.

As with the oral production task, three sets of between-group chi-square comparisons were run between the MF, the PF, and the PI versus all other future variants produced, respectively. These comparisons are summarized in Tables 5-22b, 5-22c, and 5-22d and are described below. For each comparison that was significant according to the chi-square, Cohen's *d* values are also reported to indicate the effect sizes of differences between groups (Plonsky & Oswald, 2014). Note that a Cohen's *d* value of around 0.2 represents a small effect size, around 0.5 a medium effect size, and around 0.8 a large effect size. All comparisons reported are 2 x 2 comparisons that isolate the form in question against all other forms from one group to another. Comparisons were performed for each of the three most commonly produced forms (i.e., MF, PF, and PI).

Table 5-22a Distribution of all produced forms in the Spanish written production task

Group	MF		PI		PF		LF		Inf.		Verbless		Cond.		Invented		Subj.		Pret.		Progr. forms		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Control	172	33.1	151	29.1	149	28.7	13	2.5	11	2.1	5	1.0	4	0.8	2	0.4	2	0.4	1	0.2	9	1.8	519	100
Instr.	107	15.7	262	38.5	230	33.8	36	5.3	15	2.2	7	1.0	3	0.4	2	0.3	7	1.0	7	1.0	4	0.5	680	100
Instr. plus spir. act.	117	26.1	150	33.5	163	36.4	5	1.1	5	1.1	1	0.2	0	0.0	1	0.2	2	0.4	2	0.4	2	0.4	448	100

Beginning with the MF (Table 5-22b), similar to the oral task, the control group produced the written MF at a significantly higher rate than the instruction group, with a small-to-medium effect size, and than the instruction plus spiraling activities group, with a small effect size. The written MF was produced significantly more in the instruction plus spiraling activities group than the instruction group, with a small effect size, which was similar to the oral task.

Table 5-22b Chi-Square comparisons (2x2) of written production of morphological future versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
*Control vs. instruction	1199	49.9	1	<.001	0.42
*Control vs. instruction plus spir. act.	967	5.66	1	.0173	0.15
***Instruction vs. instruction plus spir. act.	1128	18.3	1	<.001	0.26

Note: * p<.05, ** p<.01, *** p<.001

As for the PF (Table 5-22c), the control group did not show significant differences with the instruction group (with a *p*-value slightly above .05), but did produce this variant significantly less than the instruction plus spiraling activities group, with a small effect size. Significantly less use of the PF by the control group than the instruction plus spiraling group is thus a common finding across both production tasks, whereas the control group used significantly less PF than the instruction group in the oral task but not in written production. The written PF was not produced at significantly different rates between the instruction and the instruction plus spiraling activities group, which was also the case in the oral task.

Table 5-22c Chi-Square comparisons (2x2) of written production of periphrastic future versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
Control vs. instruction	1199	3.56	1	.059	--
*Control vs. instruction plus spir. act.	967	6.48	1	.011	0.16
Instruction vs. instruction plus spir. act.	1128	.780	1	.377	--

Note: * p<.05, ** p<.01, *** p<.001

Lastly, for the written PI comparison (Table 5-22d), the control group produced this variant at a significantly lower rate than the instruction group, with a small effect size, but PI production was not significantly different between the control and the instruction plus spiraling activities group. Recall that the control group also produced significantly less PI than the instruction group in the oral task. The control produced the PI significantly less than the instruction plus spiraling group in the oral task, so the written task offers a difference in that respect. The instruction groups did not produce the written PI at a significantly different rate from each other, which was also true for the oral task.

Table 5-22d Chi-Square comparisons (2x2) of written production of present indicative versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
***Control vs. instruction	1199	11.6	1	<.001	0.20
Control vs. instruction plus spir. act.	967	2.16	1	.142	--
Instruction vs. instruction plus spir. act.	1128	2.97	1	.085	--

Note: * p<.05, ** p<.01, *** p<.001

For all the groups, the three most commonly produced variants were the morphological future, the periphrastic future, and the present indicative. Table 5-23 presents the number of tokens and the percentages of use of these three forms. For the rest of the results of the written production task, I will focus on these three most used forms. By considering only the three most common variants the number of tokens decreased to 1,500 tokens.

Table 5-23 Distribution of most common variants in the Spanish written production task

Group	**MF**		**PF**		**PI**		**Total**	
	N	%	N	%	N	%	N	%
Control	172	36.4	149	31.6	151	32.0	472	100
Instruction	107	17.9	229	38.3	262	43.8	598	100
Instruction plus spir.act.	117	27.2	163	37.9	150	34.9	430	100

The three groups demonstrated differentiated patterns of use: while the control group produced the morphological future at the highest rates (36.4%) followed by similar rates of the periphrastic future (31.6%) and the present indicative (32.0%), the instruction group used the present indicative the most (43.8%) followed by the periphrastic future (38.3%) and showed a low rate of use of the morphological future (17.9%). The instruction plus spiraling activities group showed a different pattern to that of the instruction group: this last group used the periphrastic and the present indicative at similar rates (37.9% vs 34.9%, respectively), followed by the morphological future (27.2%). This distribution of variant production in the written task shared the same patterns to that of the oral production task as the groups produced the variants at similar rates and with the same preference across the two tasks. As Figure 5-2 shows, the control and the instruction and spiraling activities groups displayed the same distribution at Time 1: while the MF

was produced at low rates the PF was produced at high rates and was the most produced variant followed by the PI. The instruction group also produced the MF at low rates, with the PI as the most produced variant followed by the PF. At Time 2, the two instruction groups displayed the same behavior: the PF was the most produced variant followed by the PI and by the MF as the least produced form of the three. For the instruction group there was a big decrease of PI production from Time 1 to Time 2. For the control group, as we noted in the oral production task, there was a very noticeable increase in MF production from Time 1 to Time 2, thus becoming the most produced form by far. There was a decrease of the PF and the PI, and the PF became the least produced form. For the control group, the distribution and production rates of all three variants were very similar across Times 3 and 4: while at Time 3 the MF was still the most produced form (showing a decrease from Time 2), at Time 4 the PI was the most produced form. The instruction group showed the same behavior at Times 2 and 3: there was a slight decrease of MF production while the PF was the most produced form. At Time 4, the MF decreased yet more while PI production increased, surpassing the PF. For the instruction plus spiraling activities group the distributions across Times 2 and 3 were similar except for the PI becoming the most produced form at Time 3 as opposed to the PF at Time 2. At Time 4 the pattern switched as there was an increase of MF production, which became the most produced form while PF and PI production decreased.

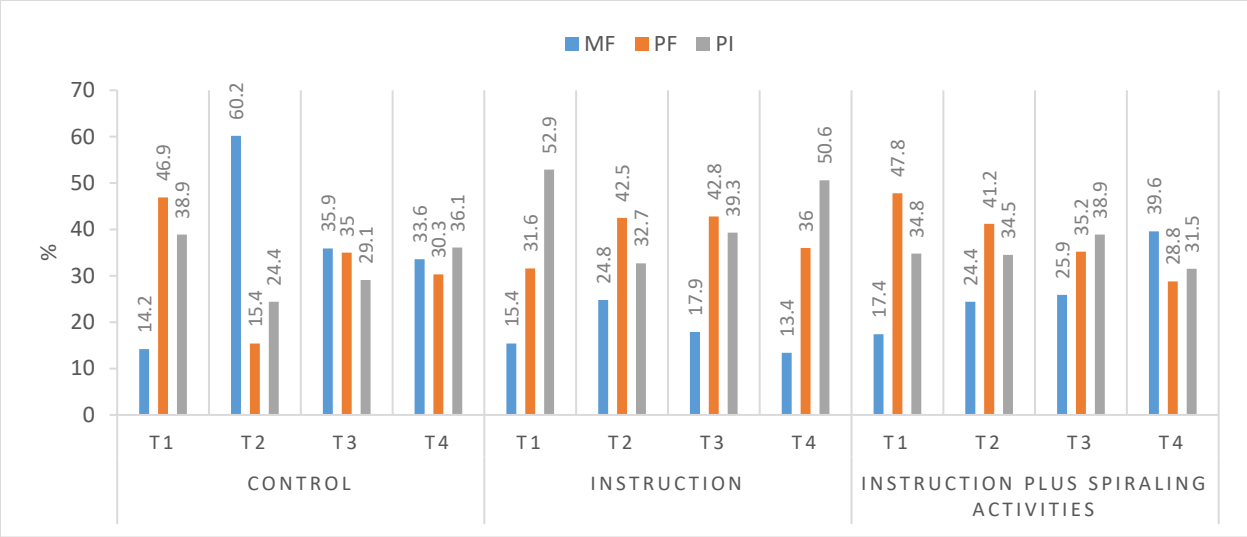


Figure 5-2 Distribution of future forms by test time and group for the Spanish written production task

5.5.2 Multivariate analyses

When all test times are considered together, the significance of the predictors as indicated by the multivariate analyses is summarized in Table 5-24.[17] For the control group only three variables were significant predictors for the comparison between the PF and the MF: presence of temporal adverbial, task version, and test time. Note that test time was also significant for the PF vs. MF comparison for the control group in the oral production task. The PF was favored over the MF in the presence of an adverbial, in task version A (informal interlocutor first), and at Time 1. No significant predictors were selected as significant by the model for the comparison between the PF and the PI similar to the oral task for this comparison. For the instruction group, similar to the

[17] The complete table with the results of the multivariate analyses and factor weights for all test times together can be found in Appendix R.

oral production task, temporal distance and test time were significant variables for the comparison between the PF and the MF in addition to formality of interlocutor. The PF was favored over the MF in near contexts, with an informal interlocutor, and at Time 3. However, for the comparison between the PF and the PI only presence of adverbial and test time were selected as significant predictors by the model, thus this group developed sensitivity to these factors that they did not show in the oral task. The PF was favored over the PI in the presence of an adverbial and at Time 2. Finally, for the instruction plus spiraling activities group, the significant predictors for the comparison between the PF and the MF were temporal distance and test time similar to the oral production task. The PF was favored over the MF in near contexts and at Times 1 and 2. Only temporal distance and grammar score were selected as significant by the model for the comparison between the PF and the PI for this group similar to the oral task. The PF was favored over the PI in intermediate contexts and by lower grammar score groups.

Table 5-24 Significant predictors in the multivariate analysis for the Spanish written production task when all test times are considered

	Control		**Instruction**		**Instruction plus spiral.act.**	
Independent variables	PF vs. MF	PF vs. PI	PF vs. MF	PF vs. PI	PF vs. MF	PF vs. PI
Temporal distance	--	--	X***	--	X***	X***
Presence of adverbial	X*	--	--	X*	--	--
Formality of interlocutor	--	--	X**	--	--	--
Task version	X*	--	--	--	--	--
Grammar score	--	--	--	--	--	X*
Test time	X***	--	X*	X**	X***	--

Note: * p=0.05, ** p=0.01, *** p≤0.001, -- not significant

Now that the general significance of the factors in the multivariate analyses has been presented, we move on to present the results of the multivariate analyses by test time. The four test times were first considered independently, and a regression was run for each time separately for each of the participant groups; however, due to the small token counts for some cells, there were some errors and a different approach was considered.[18] Accordingly, Times 1 and 2 were combined into one model and Times 3 and 4 were combined into another model, while still maintaining test time as an independent variable in both cases. First, the significance of the independent variables is summarized across test times in Table 5-25.

Starting with the control group, the only variable selected as significant by the regression model was test time for the PF vs. MF comparison at Times 1 and 2, while no other variable reached significance for any comparison across times. Contrary to the oral production task, the control group did not become sensitive to presence of temporal adverbial in the written production task. For the instruction group, temporal distance was significant for the PF vs. MF comparison at Times 1 and 2 as observed for the oral production task; however, this significance was not observed at Times 3 and 4 for the written task contrary to the oral production task. Instead, formality of the interlocutor was significant for the PF vs. MF comparison at Times 3 and 4 for the written task. At Time 1 and 2, the instruction group became sensitive to test time for the PF vs. PI comparison. Similar to the oral production task, the instruction group also became sensitive to presence of temporal adverbials at Times 3 and 4 for the PF vs. PI comparison for the written task. The instruction plus spiraling activities group was sensitive to temporal distance for the PF vs. MF

[18] The tables of the regressions with test time considered separately can be found in Appendix S for the Spanish written production task.

comparison at Times 1 and 2 and Times 3 and 4 similar to the oral production task, but for the written task, this sensitivity was also observed for the PF vs. PI comparison across times which did not happen in the oral task. In addition, for the instruction plus spiraling activities group, task version was significant for the PF vs. MF comparison at Times 3 and 4, and for the PF vs. PI comparison only for Times 1 and 2.

Table 5-25 Significant predictors in the multivariate analysis for the Spanish written production task for Times 1-2 and Times 3-4

	Control				**Instruction**				**Instruction plus spiral. act.**			
Independent variables	PF vs. MF		PF vs. PI		PF vs. MF		PF vs. PI		PF vs. MF		PF vs. PI	
	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4
Temporal distance	--	--	--	--	X***	--	--	--	X***	X*	X***	X***
Presence of adverbial	--	--	--	--	--	--	--	X*	--	--	--	--
Formality of Interlocutor	--	--	--	--	--	X*	--	--	--	--	--	--
Task version	--	--	--	--	--	--	--	--	--	X*	X*	--
Grammar score	--	--	--	--	--	--	--	--	--	--	--	--
Test time	X***	--	--	--	--	--	X*	--	--	--	--	--

Note: * p=0.05, ** p=0.01, *** p≤0.001, -- not significant

The directionality of the effects of the independent variables will be explored next when the results of the regressions are presented. Tables 5-26a and 5-26b include the results for the combination of Times 1 and 2 and Times 3 and 4 for the control group, respectively, Tables 5-26c

and 5-26d present the results for the combination of Times 1 and 2 and Times 3 and 4 for the instruction group, respectively, and Tables 5-26e and 5-26f present the results for the combination of Times 1 and 2 and Times 3 and 4 for the instruction plus spiraling activities group, respectively. We start by discussing the results of the regression for the control group.

Table 5-26a Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the control group at Times 1-2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	75	44.0	[0.453]	59	55.9	[0.706]
Intermediate	43	48.8	[0.562]	50	42.0	[0.205]
Distant	44	40.9	[0.486]	37	48.6	[0.618]
			p=0.854			*p*=0.177
Presence of temporal adverbials						
Yes	128	44.5	[0.617]	122	46.7	[0.423]
No	34	44.1	[0.383]	24	62.5	[0.577]
			p=0.227			*p*=0.814
Formality of interlocutor						
Classmate	78	47.4	[0.568]	84	44.0	[0.319]
Boss	84	41.7	[0.432]	62	56.5	[0.681]
			p=0.387			*p*=0.144
Task version						
A (inf. first)	80	37.5	[0.409]	65	46.2	[0.396]
B (formal first)	82	51.2	[0.591]	81	51.9	[0.604]
			p=0.657			*p*=0.729
Test time						
1	69	76.8	0.935	97	54.6	[0.546]
2	93	20.4	0.065	49	38.8	[0.454]
			Range 87			
			p=6.32e-19			*p*=0.722
Grammar score						
Lower	84	41.7	[0.479]	81	43.2	[0.353]
Higher	78	47.4	[0.521]	65	56.9	[0.647]
			p=0.905			*p*=0.862

Table 5-26a (continued)

N= 162	Relative rate 44.4% PF	N=146	Relative rate 49.3% PF
Participant (random)			
Rand. St. Dev.	3.101	4.217	
Verb (random)			
Rand. St. Dev.	0.904	4.517	
Fixed R^2	0.354	0.052	
Random R^2	0.491	0.873	
Total R^2	0.845	0.925	
Log likelihood	-59.553	-53.185	

Starting with the PF vs. MF comparison for the control group, the regression model only selected test time as a significant predictor: the PF was favored at Time 1. Other trends were observed: higher rates of PF were yielded in intermediate temporal contexts, with an informal interlocutor, in task version B (formal interlocutor first), and by the higher grammar score group. For the same comparison, the PF was produced at similar rates regardless of the presence or absence of an adverbial in the utterance. For the PF vs. PI comparison, no variables were chosen as significant by the model: higher rates of the PF were yielded in near and distant (as opposed to intermediate) contexts, in the absence of an adverbial, with a formal interlocutor, in task version B (formal interlocutor first), at Time 1, and by the higher grammar score group.

The regression model did not select any variables as significant predictors for any of the comparisons for the control group at Times 3 and 4. Some trends can be observed: for the PF vs. MF comparison, higher rates of the PF were yielded in near contexts, in the absence of an adverb, with a formal interlocutor, in task version A (informal interlocutor first), and by the lower grammar score group. No preference of PF over the MF was observed for test time. As for the PF vs. PI comparison, the PF was produced at higher rates in near contexts, in the absence of an adverbial,

with an informal interlocutor, in task version A (informal interlocutor first), at Time 3, and by the lower grammar score group.

Table 5-26b Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the control group at Times 3-4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	61	54.1	[0.566]	61	54.1	[0.775]
Intermediate	48	47.9	[0.499]	50	46.0	[0.341]
Distant	50	42.0	[0.435]	43	48.8	[0.359]
			p=0.691			*p*=0.786
Presence of temporal adverbials						
Yes	133	48.1	[0.612]	132	48.5	[0.677]
No	26	50.0	[0.388]	22	59.2	[0.323]
			p=0.201			*p*=0.485
Formality of interlocutor						
Classmate	82	46.3	[0.456]	73	52.1	[0.549]
Boss	77	50.6	[0.544]	81	48.1	[0.451]
			p=0.503			*p*=0.212
Task version						
A (inf. first)	83	51.8	[0.304]	71	60.6	[0.533]
B (formal first)	76	44.7	[0.696]	83	41.0	[0.467]
			p=0.483			*p*=0.605
Test time						
3	83	49.4	[0.500]	75	54.7	[0.603]
4	76	47.4	[0.500]	79	45.6	[0.397]
			p=0.997			*p*=0.258
Grammar score						
Lower	89	58.4	[0.732]	98	53.1	[0.785]
Higher	70	35.7	[0.268]	56	44.6	[0.215]
			p=0.398			*p*=0.326
N=159		Relative rate 48.4% PF		N=154	Relative rate 50.0% PF	
Participant (random)						
Rand. St. Dev.		3.869		4.086		
Verb (random)						
Rand. St. Dev.		0.002		6.485		

Table 5-26b (continued)

Fixed R^2	0.06	0.042
Random R^2	0.771	0.907
Total R^2	0.831	0.949
Log likelihood	-67.511	-44.611

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some differences regarding the variables' effects. For the control group, test time was the only variable selected as significant by the regression model for Times 1 and 2 whereas no variable was significant at Times 3 and 4. The PF was favored at Time 1 while PF was produced at similar rates across Times 3 and 4. PF was produced at higher rates in intermediate contexts at Times 1 and 2 and in near contexts at Times 3 and 4. PF was produced at similar rates regardless of presence or absence of adverbial at Times 1 and 2, but only in the absence of an adverbial at Times 3 and 4. While the PF was produced at higher rates with an informal interlocutor at Times 1 and 2, it was with formal interlocutor at Times 3 and 4. The PF was more favorable in task version B at Times 1 and 2 and in task version A at Time 3 and 4. Lastly, the PF was favorable by the higher grammar score group at Time 1 and 2 but by the lower grammar score group at Times 3 and 4. Regarding the PF vs. PI comparison for the control group, no variables were selected as significant for either test combination (Times 1-2 and Times 3-4). In the PF vs. PI comparison, some similarities were observed: the PF was produced at higher rates in near contexts and in the absence of an adverbial across times. For the rest of the variables, we noted some differences across time: higher rates of PF were produced with a formal interlocutor, in task version B (formal interlocutor first), at Time 1 and by higher grammar score group at Times 1 and 2, whereas higher PF production was observed with an informal interlocutor, in task version A (informal interlocutor first), Time 3, and lower grammar score group at Times 3

and 4. We continue with the results of the regression for the instruction group for the Spanish written production task at Times 1 and 2.

Table 5-26c Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the instruction group at Times 1-2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	70	82.9	0.858	110	52.7	[0.467]
Intermediate	49	59.2	0.395	64	45.3	[0.619]
Distant	48	43.8	0.202	56	37.5	[0.412]
			Range 66			
			p=7.34e-08			*p*=0.516
Presence of temporal adverbials						
Yes	102	61.8	[0.510]	156	40.4	[0.554]
No	65	69.2	[0.490]	74	60.8	[0.446]
			p=0.878			*p*=0.519
Formality of interlocutor						
Classmate	82	70.7	[0.601]	119	48.7	[0.511]
Boss	85	58.8	[0.399]	111	45.0	[0.489]
			p=0.058			*p*=0.891
Task version						
A (inf. first)	109	67.9	[0.692]	144	51.4	[0.796]
B (formal first)	58	58.6	[0.308]	86	39.5	[0.204]
			p=0.272			*p*=0.173
Test time						
1	64	67.2	[0.490]	115	37.4	0.339
2	103	63.1	[0.510]	115	56.5	0.661
						Range 32
			p=0.858			*p*=0.0179
Grammar score						
Lower	48	70.8	[0.565]	80	42.5	[0.364]
Higher	119	62.2	[0.435]	150	49.3	[0.636]
			p=0.711			*p*=0.573
N=167		Relative rate 64.7% PF		N=230	Relative rate 47.0% PF	
Participant (random)						
Rand. St. Dev.		1.986		2.945		

Table 5-26c (continued)

Verb (random)		
Rand. St. Dev.	0.001	2.68
Fixed R^2	0.276	0.099
Random R^2	0.395	0.746
Total R^2	0.671	0.845
Log likelihood	-82.89	-92.438

Only one variable was selected as a significant predictor for each of the comparisons: temporal distance for the PF vs. MF comparison and test time for the PF vs. PI comparison. For the former, the PF was favored over the MF by the near context and for the latter, the PF was favored over the PI at Time 2, as opposed to Time 1. There were some similarities between the trends for the rest of the non-significant variables across comparisons: the PF was produced at higher rates in the absence of an adverbial, with an informal interlocutor, and in task version A (informal interlocutor first). For the PF vs. MF comparison, the PF was produced at higher rates at Time 1 and by the lower grammar score group. For the PF vs. PI comparison, the PF was produced at higher rates in near contexts and by the higher grammar score group.

For Times 3 and 4, only formality of interlocutor was selected as significant by the regression model for the PF vs. MF comparison and presence of temporal adverbials for the PF vs. PI comparison: the PF was favored with an informal interlocutor and in the absence of an adverb, respectively. These same trends were observed for the other comparisons, respectively. Again, there were some similarities across comparisons: PF was produced at higher rates in task version A (informal interlocutor first). While the PF was produced at higher rates by the lower grammar score group for the PF vs. MF comparison, it was produced at higher rates by the higher grammar score group for the PF vs. PI comparison.

Table 5-26d Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the instruction group at Times 3-4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	65	80.0	[0.682]	116	44.8	[0.415]
Intermediate	56	69.6	[0.394]	75	52.0	[0.564]
Distant	48	62.5	[0.417]	70	42.9	[0.521]
			p=0.189			*p*=0.761
Presence of temporal adverbials						
Yes	112	75.0	[0.644]	186	45.2	0.704
No	57	64.9	[0.356]	75	49.3	0.296
						Range 41
			p=0.052			*p*=0.0355
Formality of interlocutor						
Classmate	85	78.8	0.657	141	47.5	[0.505]
Boss	84	64.3	0.343	120	45.0	[0.495]
			Range 31			
			p=0.0287			*p*=0.97
Task version						
A (inf. first)	100	84.0	[0.886]	173	48.6	[0.704]
B (formal first)	69	53.6	[0.114]	88	42.0	[0.296]
			p=0.122			*p*=0.623
Test time						
3	88	70.5	[0.585]	119	52.1	[0.627]
4	81	72.8	[0.415]	142	41.5	[0.373]
			p=0.24			*p*=0.123
Grammar score						
Lower	48	75.0	[0.227]	93	38.7	[0.200]
Higher	121	70.2	[0.773]	168	50.6	[0.800]
			p=0.337			*p*=0.44
N=169		Relative rate 71.6% PF		N=261	Relative rate 46.4 % PF	
Participant (random)						
Rand. St. Dev.		3.246		5.32		
Verb (random)						
Rand. St. Dev.		0.643		3.799		
Fixed R^2		0.259		0.046		
Random R^2		0.57		0.886		
Total R^2		0.829		0.932		
Log likelihood		-62.459		-83.602		

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some differences and similarities regarding the variables' effects. Starting with the PF vs. MF comparison, while temporal distance was significant at Times 1 and 2, only formality of the interlocutor was significant at Times 3 and 4. The PF was favored by the near contexts at Times 1 and 2, while higher rates of the PF were produced in the intermediate contexts at Times 3 and 4. As for formality of the interlocutor, the PF was produced at higher rates with an informal interlocutor across both time combinations.

As for the non-significant variables, the PF was produced at higher rates in task version A (informal interlocutor first) and by the lower grammar score group across both time combinations. A difference should be noted as for presence of temporal adverbials: while the PF was produced at higher rates in the absence of an adverbial at Times 1 and 2, the PF was produced at higher rates in the presence of an adverb at Times 3 and 4.

Regarding the PF vs. PI comparison, while test time was significant at Times 1 and 2, only presence of an adverbial was significant at Times 3 and 4. The directionality of the effect of temporal distance changed from Times 1 and 2 to Times 3 and 4: for the first time combination the PF was produced at higher rates in near contexts while it was produced at higher rates in intermediate contexts for the second time combination. For the rest of the variables, the effects were the same across times: the PF was produced at higher rates in the absence of the adverbials, with an informal interlocutor, in task version A (informal interlocutor first), and by the higher grammar score group.

We finish with the results of the regression for the instruction plus spiraling activities group.

Table 5-26e Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the instruction plus spiraling activities group Times 1-2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	37	97.3	0.991	80	45.0	0.306
Intermediate	48	70.8	0.524	50	68.0	0.656
Distant	53	43.4	0.008	36	63.9	0.543
			Range 98			*Range 35*
			p=2.07e-10			*p*=0.0113
Presence of temporal adverbials						
Yes	121	67.8	[0.722]	143	57.3	[0.639]
No	17	64.7	[0.278]	23	47.8	[0.361]
			p=0.166			*p*=0.0706
Formality of interlocutor						
Classmate	69	69.6	[0.544]	84	57.1	[0.516]
Boss	69	65.2	[0.456]	82	54.9	[0.484]
			p=0.716			*p*=0.776
Task version						
A (inf. first)	43	83.7	[0.895]	52	69.2	0.664
B (formal first)	95	60.0	[0.105]	114	50.0	0.336
						Range 33
			p=0.0535			*p*=0.0324
Test time						
1	60	73.3	[0.486]	76	57.9	[0.589]
2	78	62.8	[0.514]	90	54.4	[0.411]
			p=0.926			*p*=0.105
Grammar score						
Lower	101	63.4	[0.310]	110	58.2	[0.591]
Higher	37	78.4	[0.690]	56	51.8	[0.409]
			p=0.417			*p*=0.192
N=138		Relative rate 67.4% PF		N=166	Relative rate 56.0% PF	
Participant (random)						
Rand. St. Dev.		2.989		0.604		
Verb (random)						
Rand. St. Dev.		2.51		1.188		
Fixed R^2		0.51		0.186		
Random R^2		0.403		0.285		
Total R^2		0.913		0.471		
Log likelihood		-43.861		-94.556		

For both comparisons, temporal distance was selected as a significant predictor by the regression model: for temporal distance, the PF was favored in near and intermediate contexts in the PF vs. MF comparison and in intermediate and distant contexts in the PF vs. PI comparison following native-like trends for both comparisons. For the PF vs. PI, task version was significant for Times 1 and 2: the PF was favored in task version A (informal interlocutor first) also following native-like trends seeing that the PF is the most colloquial and informal variant. For both comparisons, the PF was produced at higher rates in the presence of an adverbial and with an informal interlocutor. While for the PF vs. MF comparison the PF was produced at higher rates at Time 1 and by the higher grammar score group, for the PF vs. PI comparison, the PF was produced at higher rates also at Time 1 but by the lower grammar score group.

Table 5-26f Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the instruction plus spiraling activities group Times 3-4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	--	--	--	84	35.7	0.126
Intermediate[19]	86	70.9	0.933	46	67.4	0.802
Distant	56	16.1	0.067	17	52.9	0.632
			Range 87			*Range 68*
			p=2.15e-13			*p*=2.17e-05
Presence of temporal adverbials						
Yes	130	48.5	[0.566]	136	46.3	[0.353]
No	12	58.3	[0.434]	11	63.6	[0.647]
			p=0.646			*p*=0.253
Formality of interlocutor						

[19] Due to low token counts for the MF in near contexts, it was decided to combine the near and intermediate contexts since they shared the same trends regarding PF production.

Table 5-26f (continued)

Boss	73	54.8	[0.564]	74	54.1	[0.595]
Classmate	69	43.5	[0.436]	73	41.1	[0.405]
			p=0.422			*p*=0.156
Task version						
A (inf. first)	34	52.9	[0.650]	53	34.0	[0.274]
B (formal first)	108	48.1	[0.350]	94	55.3	[0.726]
			p=0.345			*p*=0.0523
Test time						
3	66	57.6	0.677	80	47.5	[0.484]
4	76	42.1	0.323	67	47.8	[0.516]
			Range 35			
			p=0.0218			*p*=0.82
Grammar score						
Lower	103	48.5	[0.441]	90	55.6	[0.662]
Higher	39	51.3	[0.559]	57	35.1	[0.339]
			p=0.693			*p*=0.162
N=142		Relative rate 49.3% PF		N=147	Relative rate 47.6% PF	
Participant (random)						
Rand. St. Dev.		1.607		1.297		
Verb (random)						
Rand. St. Dev.		2.84		1.544		
Fixed R^2		0.346		0.365		
Random R^2		0.5		0.351		
Total R^2		0.846		0.716		
Log likelihood		-59.171		-66.523		

For the PF vs. MF comparison, temporal distance and test time were selected as significant by the regression model: the PF was favored by the combination of the near and intermediate contexts and at Time 3. For the non-significant variables, higher rates of the PF were yielded in the absence of an adverbial, with a formal interlocutor, in task version A (informal interlocutor first), and by the higher grammar score group. For the PF vs. PI comparison, temporal distance was the only variable selected as significant by the regression model: the PF was favored by the intermediate and distant contexts. For the non-significant variables, higher rates of the PF were

yielded in the absence of an adverbial, with a formal interlocutor, in task version B (formal interlocutor first), and by the lower grammar score group.

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some differences and similarities regarding the variables' effects for the instruction plus spiraling activities group. Starting with the PF vs. MF comparison, temporal distance was significant across both time combinations: while the PF was favored by only near contexts at Times 1 and 2, the PF was favored by both near and intermediate contexts at Times 3 and 4. Test time was only significant at Times 3 and 4: the PF was favored at Time 3. For the non-significant variables, the directionality of the effects presented some similarities across times: the PF was produced at higher rates in task version A (informal interlocutor first) and by the higher grammar score group across times. Higher rates of PF production were observed in the presence of an adverbial at Times 1 and 2 but in the absence of an adverbial at Times 3 and 4. Regarding formality of the interlocutor, the PF was produced at higher rates with an informal interlocutor at Times 1 and 2 but with a formal interlocutor at Times 3 and 4.

Moving on to the PF vs. PI comparison, temporal distance was selected as a significant variable across both time combinations, whereas task version was only significant at Times 1 and 2 but not at Times 3 and 4. The PF was favored in intermediate contexts at Times 1 and 2 and in intermediate and distance contexts at Times 3 and 4. While the PF was favored in task version A (informal interlocutor first) at Times 1 and 2, higher rates of PF production were yielded in task version B (formal interlocutor first) at Times 3 and 4. For the non-significant variables, only one variable showed the same directionality across time combinations: the PF was produced at higher rates by the lower grammar score group. Presence of a temporal adverbial and formality of

interlocutor showed complementary directionalities: the PF was produced at higher rates in the presence of an adverbial and with an informal interlocutor at Times 1 and 2 but in the absence of an adverbial and with a formal interlocutor at Times 3 and 4.

Now that the regression results have been presented, we move on to present the crosstabulations results for each of the independent variables considered in the analyses in order to show in greater depth how the independent variables affected the dependent variable at each of the test times for the Spanish written task.

5.5.3 Crosstabulations of Independent Variables with Test Time

The present section presents the results of the crosstabulations of the Spanish written production task considering each independent variable individually: temporal distance, presence of temporal adverbial, formality of interlocutor, task version, and grammar score.[20] Recall that for those forms that are favored for a certain variant of the independent variable, the percentage is bolded for ease of identification within each cross-tabulation. We begin with temporal distance.

5.5.3.1 Temporal distance

Participants in the control group showed a pattern that favored the written production of MF with the more distant contexts (i.e., produced it at rates above the baseline) across all four times (16.7%, 63.6%, 37.8%, and 42.9%, respectively) and additionally with intermediate contexts

[20] Clause type, person and number, and participant gender were coded as independent variables but were not included in the analyses due to small token counts for some cells. The crosstabulations for these variables for the Spanish written production task are included in Appendix T.

at Time 1 (16.2%) and with near contexts at Time 2 (67.3%). You can also note that the general surge of the MF in that it was the most produced form in all three temporal contexts at Time 2. As for the PF, this variant was favored by the near contexts at all times (58.7% at Time 1, 38.1% at Time 3, and 36.2% at Time 4) except at Time 2 (10.9%) when the variant was disfavored. While disfavoring the variant at the other times (35.1% at Time 1, 31.6% at Time 3, and 29.7% at Time 4), the intermediate contexts favored the PF at Time 2 (22.9%). The PI was favored in the intermediate contexts at all times (48.6%, 31.4%, 34.2%, and 37.8%, respectively).

Moving on to the instruction group, the MF was favored in the intermediate context at Times 1 (27.0%) and 3 (24.4%) and by distant contexts across all times (19.5%, 45.2%, 20.5%, 20.4%, respectively). The near context favored the PF at Times 1 (41.4%), 2 (53.1%) (similar to the control group), and Time 3 (47.5%) but not for Time 4 (33.8%) when the variant was favored by the intermediate context (20.4%). The intermediate context also favored by the production of the PF at Time 3 (44.4%). As for the PI, this variant was highly produced in the intermediate context at Time 2 (36.2%) similar to the control group, and by the near context at Times 1 (53.4%), 3 (41.0%), and 4 (57.4%). In addition, there was some production of the PI in the more distant context at Time 3 (46.2%).

Lastly, for the instruction plus spiraling activities group, the MF was highly common in the distant context across all times (27.6%, 59.5%, 62.5%, and 84.4%, respectively) similar to the instruction group at Times 2 and 4, and in the intermediate context at Times 1 (24.1%) similar to the instruction group and Time 4 (44.4%). There was no MF production in the near context at Times 2 and 3, which is why this time was combined with the intermediate context in the prior models. The PF was favored by the near context at Times 1 (61.8%), 3 (35.7%), and 4 (34.9%) and by the intermediate context at Times 2 (65.7%), 3 (50.0%), and 4 (38.9%) similar to the control

and the instruction groups. For the PI, near contexts favored this variant across all times (35.3%, 68.1%, 64.3%, and 62.8%, respectively) similar to the instruction group at Time 4, in addition to the intermediate context at Time 1 (37.9%) similar to the control group at Time 1 as well.

Table 5-27 Crosstabulation with temporal distance by group and test time for the Spanish written production task

Group	Time	Response	Temporal distance						Form Total and Baseline %	
			Near		Intermediate		Distant			
			N	%	N	%	N	%	N	%
Control	1	MF	5	10.9	6	16.2	5	16.7	16	14.2
		PF	27	**58.7**	13	35.1	13	43.3	53	46.9
		PI	14	30.4	18	**48.6**	12	40.0	44	38.9
		Total	46	100	37	100	30	100	113	100
	2	MF	3	**67.3**	16	45.7	21	63.6	74	60.2
		PF		10.9	8	**22.9**	5	15.2	19	15.4
		PI	2	21.8	11	**31.4**	7	21.2	30	24.4
		Total	5	100	35	100	33	100	123	100
	3	MF	5	35.7	13	34.2	14	37.8	42	35.9
		PF	6	38.1	12	31.6	13	35.1	41	35.0
		PI	1	26.2	13	**34.2**	10	27.0	34	29.1
		Total	2	100	38	100	37	100	117	100
	4	MF	3	27.7	12	32.4	15	**42.9**	40	33.6
		PF	17	**36.2**	11	29.7	8	22.9	36	30.3
		PI	17	36.2	14	37.8	12	34.3	43	36.1
		Total	47	100	37	100	35	100	119	100
Instruction	1	MF	3	5.2	10	**27.0**	8	19.5	21	15.4
		PF	24	**41.4**	9	24.3	10	24.4	43	31.6
		PI	31	53.4	18	48.6	23	56.1	72	52.9
		Total	58	100	37	100	41	100	136	100
	2	MF	9	14.1	10	21.3	19	**45.2**	38	24.8
		PF	34	**53.1**	20	42.6	11	26.2	65	42.5
		PI	21	32.8	17	**36.2**	12	28.6	50	32.7
		Total	64	100	47	100	42	100	153	100
	3	MF	7	11.5	11	**24.4**	8	20.5	26	17.9
		PF	29	**47.5**	20	44.4	13	33.3	62	42.8
		PI	25	41.0	14	31.1	18	**46.2**	57	39.3
		Total	61	100	45	100	39	100	145	100

Table 5-27 (continued)

	4	MF	6	8.8	6	12.8	10	**20.4**	22	13.4
		PF	23	33.8	19	**40.4**	17	34.7	59	36.0
		PI	39	**57.4**	22	46.8	22	44.9	83	50.6
		Total	68	100	47	100	49	100	164	100
Instruction plus spir. activities	1	MF	1	2.9	7	**24.1**	8	**27.6**	16	17.4
		PF	21	**61.8**	11	37.9	12	41.4	44	47.8
		PI	12	35.3	11	37.9	8	31.0	32	34.8
		Total	34	100	29	100	29	100	92	100
	2	MF	0	0.0	7	20.0	22	**59.5**	29	24.4
		PF	15	31.9	23	**65.7**	11	29.7	49	41.2
		PI	32	**68.1**	5	14.3	4	10.8	41	34.5
		Total	47	100	35	100	37	100	119	100
	3	MF	0	0.0	8	23.5	20	**62.5**	28	25.9
		PF	15	35.7	17	**50.0**	6	18.8	38	35.2
		PI	27	**64.3**	9	26.5	6	18.8	42	38.9
		Total	42	100	34	100	32	100	108	100
	4	MF	1	2.3	16	44.4	27	84.4	44	39.6
		PF	15	**34.9**	14	**38.9**	3	9.4	32	28.8
		PI	27	**62.8**	6	16.7	2	6.3	35	31.5
		Total	43	10	36	100	32	100	111	100

5.5.3.2 Presence of temporal adverbials

For the control group, the written MF was more commonly produced without temporal adverbs especially at Times 1 (15.0%), 2 (69.6%), and 4 (50.0%), but when an adverb was present at Time 3 (38.1%). While the presence of a temporal adverb favored the production of the PF at Times 2 (16.0%) and 4 (31.1%), the absence of a temporal adverb favored the production of this variant at Times 1 (60.0%) and 3 (45.0%). The PI was more commonly produced when a temporal adverb was present and that was the case for Times 1 (41.9%), 2 (26.0%), and 4 (37.9%) except for Time 3 when it was favored in the absence of an adverbial (30.0%).

For the instruction group, the MF was favored in the absence of an adverbial across all times (27.7% at Time 2, 22.0% at Time 3, and 20.8% at Time 4) except for Time 1 when it was

favored by the presence of an adverbial (15.7%). The PF was commonly produced without a temporal adverb across all times (42.6% at Time 1, 53.2% at Time 2, and 43.9% at Time 3) similar to the control group, which would be expected for a default form. At Time 4 the PF was neither favored nor disfavored by the independent variable. The presence of a temporal adverbial was a favorable context for the production of the PI across all four times (58.4% at Time 1, 38.7% at Time 2, 41.3% at Time 3, and 54.1% at Time 4) similar to the control group, which is a native-like trend. Finally, for the instruction plus spiraling activities group, the trends were slightly less straightforward as the ones in the instruction group. The presence of an adverb was favorable for the production of the MF at Times 1 (18.5%) and 4 (41.3%) but the absence of an adverb favored this variant for Times 2 (27.8%) and 3 (44.4%). The PF was commonly produced in the absence of an adverb across Times 2 (44.4%), 3 (44.4%), and 4 (42.9%) but favored by the presence of an adverb at Time 1 (50.6%). The PI was only favored by the presence of a temporal adverbial at Times 2 (35.6%) and 3 (41.4%), and by the absence of one at Times 1 (63.6%) and 4 (42.9%).

Table 5-28 Crosstabulation with presence of temporal adverbial by group and test time for the Spanish written production task

Group	**Time**	**Response**	**Presence of adverb**				**Form Total and Baseline %**	
			Yes		**No**			
			N	%	N	%	N	%
Control	1	MF	13	14.0	3	15.0	16	14.2
		PF	41	44.1	12	**60.0**	53	46.9
		PI	39	41.9	5	25.0	44	38.9
		Total	93	100	20	100	113	100
	2	MF	58	58.0	16	**69.6**	74	60.2
		PF	16	16.0	3	13.0	19	15.4
		PI	26	26.0	4	17.4	30	24.4
		Total	100	100	23	100	123	100
	3	MF	37	38.1	5	25.0	42	35.9

Table 5-28 (continued)

		PF	32	33.0	9	**45.0**	41	35.0
		PI	28	28.9	6	30.0	34	29.1
		Total	97	100	20	100	117	100
	4	MF	32	31.1	8	**50.0**	40	33.6
		PF	32	31.1	4	25.0	36	30.3
		PI	39	37.9	4	25.0	43	36.1
		Total	103	100	16	100	119	100
Instruction	1	MF	14	15.7	7	14.9	21	15.4
		PF	23	25.8	20	**42.6**	43	31.6
		PI	52	**58.4**	20	42.6	72	52.9
		Total	89	100	47	100	136	100
	2	MF	25	23.6	13	27.7	38	24.8
		PF	40	37.7	25	**53.2**	65	42.5
		PI	41	**38.7**	9	19.1	50	32.7
		Total	106	100	47	100	153	100
	3	MF	17	16.3	9	**22.0**	26	17.9
		PF	44	42.3	18	43.9	62	42.8
		PI	43	41.3	14	34.1	57	39.3
		Total	104	100	41	100	145	100
	4	MF	11	9.9	11	**20.8**	22	13.4
		PF	40	36.0	19	35.8	59	36.0
		PI	60	**54.1**	23	43.4	83	50.6
		Total	111	100	53	100	164	100
Instruction plus spir. activities	1	MF	15	18.5	1	9.1	16	17.4
		PF	41	**50.6**	3	27.3	44	47.8
		PI	25	30.9	7	**63.6**	32	34.8
		Total	81	100	11	100	92	100
	2	MF	24	23.8	5	**27.8**	29	24.4
		PF	41	40.6	8	44.4	49	41.2
		PI	36	35.6	5	27.8	41	34.5
		Total	101	100	18	100	119	100
	3	MF	24	24.2	4	**44.4**	28	25.9
		PF	34	34.3	4	**44.4**	38	35.2
		PI	41	**41.4**	1	11.1	42	38.9
		Total	99	100	9	100	108	100
	4	MF	43	41.3	1	14.3	44	39.6
		PF	29	27.9	3	**42.9**	32	28.8
		PI	32	30.8	3	**42.9**	35	31.5
		Total	104	100	7	100	111	100

5.5.3.3 Formality of the interlocutor

Starting with the control group, the written MF was favored with the more formal interlocutor (i.e., appeared above baseline rates) at Times 1 (20.8%) and 2 (65.5%) but with the more informal one at Times 3 (40.7%) and 4 (34.5%). The PF was also more commonly used with the more formal interlocutor at all times (47.2% at Time 1, 17.2% at Time 2, and 36.2% at Time 3) except at Time 4 when it was favored by the less formal interlocutor (31.0%). For the PI, at Times 1 (45.0%) and 2 (30.8%) the less formal interlocutor favored this variant whereas at Times 3 (32.8%) and 4 (37.7%) the variant was favored by the more formal interlocutor.

Following with the instruction group, the MF was more frequent with the more formal interlocutor across all four times (17.6%, 28.6%, 19.7%, and 20.3%, respectively) contrary to the trends observed in the control group as it was only true for Times 1 and 2. The PF was favored by the less formal interlocutor at all times (35.3%, 44.7%, 45.9%, and 38.8%, respectively) contrary to the control group. The PI was favored by the more formal interlocutor at Times 1 (54.4%) and 3 (40.8%) and by the more informal interlocutor at Times 2 (34.2%) and 4 (54.1%).

The trends for the instruction plus spiraling activities group were less straightforward than the trends for the instruction group. While the MF was favored by the most formal interlocutor at Times 1 (18.8%) and 2 (25.4%), it was favored by the informal interlocutor at Times 3 (27.3%) and 4 (42.1%). Regarding the PF, this variant was favored by the most formal interlocutor at Times 1 (50.0%) and 3 (41.5%) and 4 (33.3%), and by the most informal at Time 2 (46.7%). The PI was favored by the more informal interlocutor at Times 1 (38.6%), 3 (43.6%), and 4 (33.3%), and by the more formal interlocutor only at Time 2 (39.0%).

Table 5-29 Crosstabulation with formality of interlocutor by group and test time for the Spanish written production task

Group	Time	Response	Formality of interlocutor				Form Total and Baseline %	
			Boss		Classmate			
			N	%	N	%	N	%
Control	1	MF	11	**20.8**	5	8.3	16	14.2
		PF	25	47.2	28	46.7	53	46.9
		PI	17	32.1	27	**45.0**	44	38.9
		Total	53	100	60	100	113	100
	2	MF	38	**65.5**	36	55.4	74	60.2
		PF	10	17.2	9	13.8	19	15.4
		PI	10	17.2	20	**30.8**	30	24.4
		Total	58	100	65	100	123	100
	3	MF	18	31.0	24	**40.7**	42	35.9
		PF	21	36.2	20	33.9	41	35.0
		PI	19	**32.8**	15	25.4	34	29.1
		Total	58	100	59	100	117	100
	4	MF	20	32.8	20	34.5	40	33.6
		PF	18	29.5	18	31.0	36	30.3
		PI	23	37.7	20	34.5	43	36.1
		Total	61	100	58	100	119	100
Instruction	1	MF	12	17.6	9	13.2	21	15.4
		PF	19	27.9	24	**35.3**	43	31.6
		PI	37	54.4	35	51.5	72	52.9
		Total	68	100	68	100	136	100
	2	MF	22	**28.6**	16	21.1	38	24.8
		PF	31	40.3	34	44.7	65	42.5
		PI	24	31.2	26	34.2	50	32.7
		Total	77	100	76	100	153	100
	3	MF	14	19.7	12	16.2	26	17.9
		PF	28	39.4	34	45.9	62	42.8
		PI	29	40.8	28	37.8	57	39.3
		Total	71	100	74	100	145	100
	4	MF	16	**20.3**	6	7.1	22	13.4
		PF	26	32.9	33	38.8	59	36.0
		PI	37	46.8	46	**54.1**	83	50.6
		Total	79	100	85	100	164	100
Instruction plus spir. activities	1	MF	9	18.8	7	15.9	16	17.4
		PF	24	50.0	20	45.5	44	47.8
		PI	15	31.3	17	**38.6**	32	34.8
		Total	48	100	44	100	92	100
	2	MF	15	25.4	14	23.3	29	24.4
		PF	21	35.6	28	**46.7**	49	41.2

Table 5-29 (continued)

		PI	23	**39.0**	18	30.0	41	34.5
		Total	59	100	60	100	119	100
	3	MF	13	24.5	15	27.3	28	25.9
		PF	22	**41.5**	16	29.1	38	35.2
		PI	18	34.0	24	**43.6**	42	38.9
		Total	53	100	55	100	108	100
	4	MF	20	37.0	24	42.1	44	39.6
		PF	18	**33.3**	14	24.6	32	28.8
		PI	16	29.6	19	33.3	35	31.5
		Total	54	100	57	100	111	100

5.5.3.4 Task version

As a reminder to the reader, task version A featured the more informal interlocutor first and the more formal one second (i.e., classmate and boss) and task B featured the more formal interlocutor first and the more informal one second (i.e., boss and classmate).

For the control group, task version A was favorable for the written production of the MF over baseline rates only at Times 2 (79.3%) and 3 (40.0%), whereas task version B was favorable for this variant at Times 1 (21.4%) and 4 (34.9%). Task A favored the production of the PF at all times (50.9% at Time 1, 41.8% at Time 3, and 35.7% at Time 4) except at Time 2 when task version B was favorable (27.7%). The PI was favored by task version B at all times (29.2% at Time 2, 38.7% at Time 3, and 39.7% at Time 4) except for time 1 when it was favored by task version A (42.1%).

Regarding the instruction group, the more formal MF was expectedly favored by task version B (formal interlocutor first) at all times similar to the control group at Times 1 and 3. For the instruction group the MF was favored by task version A at Time 1 as there were no MF productions in task version B. Similarly, task version A was favorable for the production of the PF at all times except for Time 1 when it was task version B that favored this variant. As for the PI,

task version B favored this variant all times except at Time 3 when it was task version A (informal interlocutor first) that favored the PI.

As for the instruction plus spiraling activities group, it presented some major differences from the trends observed for the instruction group. The only similarity involves the MF, since this variant was favored by task version B (formal interlocutor first) at all times for the instruction plus spiraling activities group (22.9%, 26.8%, 31.1%, and 43.4%, respectively). There were no productions of the MF at Time 1 for task version A (informal interlocutor first). The PF was favored by task version B at Times 2 (41.5%), 3 (37.8%), and 4 (31.6%), while task version A favored the variant at Time 1 (95.5%). Finally, for the PI, task version A was favorable for the production of this variant at all times (40.5% at Time 2, 55.9% at Time 3, and 45.7% at Time 4) except at Time 1 when task version B was favorable (44.3%).

Table 5-30 Crosstabulation with task version by group and test time for the Spanish written production task

Group	**Time**	**Response**	**Task version**				**Form Total and Baseline %**	
			A (informal first)		**B (formal first)**			
			N	%	N	%	N	%
Control	1	MF	4	7.0	12	**21.4**	16	14.2
		PF	29	**50.9**	24	42.9	53	46.9
		PI	24	**42.1**	20	35.7	44	38.9
		Total	57	100	56	100	113	100
	2	MF	46	**79.3**	28	43.1	74	60.2
		PF	1	1.7	18	**27.7**	19	15.4
		PI	11	19.0	19	**29.2**	30	24.4
		Total	58	100	65	100	123	100
	3	MF	22	**40.0**	20	32.3	42	35.9
		PF	23	**41.8**	18	29.0	41	35.0
		PI	10	18.2	24	**38.7**	34	29.1
		Total	55	100	62	100	117	100
	4	MF	18	32.1	22	34.9	40	33.6
		PF	20	**35.7**	16	25.4	36	30.3

Table 5-30 (continued)

		PI	18	32.1	25	39.7	43	36.1
		Total	56	100	63	100	119	100
Instruction	1	MF	21	**23.9**	0	0.0	21	15.4
		PF	26	29.5	17	**35.4**	43	31.6
		PI	41	46.6	31	**64.6**	72	52.9
		Total	88	100	48	100	136	100
	2	MF	14	15.4	24	**38.7**	38	24.8
		PF	48	**52.7**	17	27.4	65	42.5
		PI	29	31.9	21	33.9	50	32.7
		Total	91	100	62	100	153	100
	3	MF	8	9.5	18	**29.5**	26	17.9
		PF	39	**46.4**	23	37.7	62	42.8
		PI	37	**44.0**	20	32.8	57	39.3
		Total	84	100	61	100	145	100
	4	MF	8	7.6	14	**23.7**	22	13.4
		PF	45	**42.9**	14	23.7	59	36.0
		PI	52	49.5	31	52.5	83	50.6
		Total	105	100	59	100	164	100
Instruction plus spir. activities	1	MF	0	0.0	16	**22.9**	16	17.4
		PF	21	**95.5**	23	32.9	44	47.8
		PI	1	4.5	31	**44.3**	32	34.8
		Total	22	100	70	100	92	100
	2	MF	7	18.9	22	26.8	29	24.4
		PF	15	40.5	34	41.5	49	41.2
		PI	15	**40.5**	26	31.7	41	34.5
		Total	37	100	82	100	119	100
	3	MF	5	14.7	23	**31.1**	28	25.9
		PF	10	29.4	28	37.8	38	35.2
		PI	19	**55.9**	23	31.1	42	38.9
		Total	34	100	74	100	108	100
	4	MF	11	31.4	33	**43.4**	44	39.6
		PF	8	22.9	24	31.6	32	28.8
		PI	16	**45.7**	19	25.0	35	31.5
		Total	35	100	76	100	111	100

5.5.3.5 Grammar score

Starting with the control group, the MF and PF showed opposite trends: while the MF was used more by the lower score group at Time 1 (14.8%) and by the higher grammar score group at each time after the form had first been presented (i.e., at Times 2 (63.0%), 3 (42.6%), and 4

(46.3%), the PF was favored by the higher grammar score group at Time 1 (55.8%) and by the lower grammar score group at Times 2 (15.9%), 3 (42.9%), and 4 (33.8%). The PI was used more by the lower grammar score group at all times (45.9%, 26.1%, 43.1%, respectively), except for Time 3 when the variant was used more by the higher grammar score group (34.0%). For the instruction group, the MF and the PI displayed complementary trends: while the MF was used at higher rates by the higher grammar score group at all times (16.5%, 28.8%, 20.6%, and 15.0%, respectively), the PI was used more by the lower grammar score group at all times (64.4%, 34.7%, 50.0%, and 57.9%, respectively). The PF showed slightly more fluctuation in being used more by the higher grammar score group at Times 1 (36.3%), 3 (45.4%), and 4 (38.3%) and by the lower grammar score group at Time 2 (49.0%). Lastly, for the instruction plus spiraling activities group, the MF was used more by the lower grammar score group across all times (23.5%, 26.6%, 33.3%, and 40.8%, respectively), whereas the PI was used more by the higher grammar score group across all times (37.5%, 45.0%, 55.6%, 42.5%, respectively). Similar to the control group, the PF was used more by the higher grammar score group only at Time 1 (62.5%), while it was used more by the lower grammar score group at Times 2 (44.3%), 3 (36.1%), and 4 (33.8%).

Table 5-31 Crosstabulation with grammar score by group and test time for the Spanish written production task

Group	**Time**	**Response**	**Grammar score**				**Form Total and Baseline %**	
			Lower		**Higher**			
			N	%	N	%	N	%
Control	1	MF	9	14.8	7	13.5	16	14.2
		PF	24	39.3	29	**55.8**	53	46.9
		PI	28	**45.9**	16	30.8	44	38.9
		Total	61	100	52	100	113	100
	2	MF	40	58.0	34	63.0	74	60.2

Table 5-31 (continued)

		PF	11	15.9	8	14.8	19	15.4
		PI	18	26.1	12	22.2	30	24.4
		Total	69	100	54	100	123	100
	3	MF	22	31.4	20	**42.6**	42	35.9
		PF	30	**42.9**	11	23.4	41	35.0
		PI	18	25.7	16	**34.0**	34	29.1
		Total	70	100	47	100	117	100
	4	MF	15	23.1	25	**46.3**	40	33.6
		PF	22	33.8	14	25.9	36	30.3
		PI	28	**43.1**	15	27.8	43	36.1
		Total	65	100	54	100	119	100
Instruction	1	MF	6	13.3	15	16.5	21	15.4
		PF	10	22.2	33	**36.3**	43	31.6
		PI	29	**64.4**	43	47.3	72	52.9
		Total	45	100	91	100	136	100
	2	MF	8	16.3	30	**28.8**	38	24.8
		PF	24	**49.0**	41	39.4	65	42.5
		PI	17	34.7	33	31.7	50	32.7
		Total	49	100	104	100	153	100
	3	MF	6	12.5	20	**20.6**	26	17.9
		PF	18	37.5	44	45.4	62	42.8
		PI	24	**50.0**	33	34.0	57	39.3
		Total	48	100	97	100	145	100
	4	MF	6	10.5	16	15.0	22	13.4
		PF	18	31.6	41	38.3	59	36.0
		PI	33	**57.9**	50	46.7	83	50.6
		Total	57	100	107	100	164	100
Instruction plus spir. activities	1	MF	16	**23.5**	0	0.0	16	17.4
		PF	29	42.6	15	**62.5**	44	47.8
		PI	23	33.8	9	37.5	32	34.8
		Total	68	100	24	100	92	100
	2	MF	21	26.6	8	20.0	29	24.4
		PF	35	**44.3**	14	35.0	49	41.2
		PI	23	29.1	18	**45.0**	41	34.5
		Total	79	100	40	100	119	100
	3	MF	24	**33.3**	4	11.1	28	25.9
		PF	26	36.1	12	33.3	38	35.2
		PI	22	30.6	20	**55.6**	42	38.9
		Total	72	100	36	100	108	100
	4	MF	29	40.8	15	37.5	44	39.6
		PF	24	**33.8**	8	20.0	32	28.8
		PI	18	25.4	17	**42.5**	35	31.5
		Total	71	100	40	100	111	100

5.5.4 Summary of results for the Spanish written production task

Participants in all three groups produced a variety of written forms to express futurity including the conditional, subjunctive, future progressive, present progressive, progressive, preterite, lexical futures, and even some infinitives, invented forms, and verbless utterances. The three most produced forms in the written production task by all three groups were the MF, PF, and PI. The groups showed differential patterns of production: the control produced the MF at the highest rate (36.4%) followed by the PI and PF with similar rates (32.0% and 31.6%, respectively). The instruction group produced the PI at the highest rate (43.8%) followed by the PF (38.3%) and by the MF (17.9%). The instruction plus spiraling activities group also produced the PF at the highest rate (37.9%) followed by the PI at a rate of 34.9% and by the MF (27.2%). All three groups produced the most common variants in the same order for the two production tasks. Similar to the oral production task, the control produced the MF at a significantly higher rate than the two instruction groups ($p<001$ for both comparisons, with a medium effect size and a small effect size, respectively) and the instruction plus spiraling activities group also produced the MF at a significantly higher rate than the instruction group ($p<.001$, with a small effect size) similar to the oral task. Contrary to the oral production task, the control did not produce the PF at a significantly different rate than the instruction group in the written production task, but it did so when compared to the instruction plus spiraling activities task ($p=.011$, with a small effect size) similar to the oral production task. The instruction groups did not show significant differences between each other in terms of PF production in the written task, in line with the oral task. As for the PI, the control produced significantly less of this variant only when compared to the instruction group ($p<.001$, with a small effect size), which was also observed in the oral production task. The instruction

groups were not significantly different from each other in PI production in the written task, in line with the oral production task.

When the production rates are examined according to test time, some patterns can be noted: all three groups produced the MF at the lowest rates at Time 1 (14.2%, 15.4%, and 17.4%, respectively) when compared to the other two variants, similar to the oral production task. The control group and the instruction plus spiraling activities group produced the PF at the highest rates (46.9% and 47.8%, respectively) followed by the PI (38.9% and 34.8%, respectively). The instruction group produced the PI at the highest rate (52.9%) followed by the PF (31.6%), similar to the oral production task. Whereas all three groups showed an increase in MF production at Time 2, the instruction groups increased it less than 10% from Time 1, whereas the control group increased MF production from 14.2% at Time 1 to 60.2% at Time 2. This is a clear difference between production tasks seeing that in the oral task only the control group showed a high increase of MF production at Time 2 whereas the other two groups barely showed an increase in MF production. Between Time 2 and Time 3 two groups decreased their production of the MF (60.2% vs. 35.9% for the control group, 24.8% vs. 17.9% for the instruction group) except for the instruction plus spiraling activities group that increased MF production by a small percentage (24.4% vs. 25.9%); however, the control group still maintained this variant as the most produced one when compared to the other two variants, similar to the oral production task. For the two delayed posttests, the control group produced all three variants at similar rates: the MF at a rate of 35.9% at Time 3 vs. 33.6% at Time 4, the PF at a rate of 35.0% at Time 3 vs. 30.3% at Time 4, and the PI at a rate of 29.1% at Time 3 vs. 36.1% at Time 4 as they did in the oral production task. There was a slight decrease of the MF and PF while PI production was increased at Time 4 thus becoming the most produced variant at that time. While the instruction group still maintained a

similar distribution between Times 2 and 3, there were some changes between Times 3 and 4: the MF was still the least commonly produced form in both delayed posttests (17.9% vs. 13.4%), PF production decreased from Time 3 (42.8%) to Time 4 (36.0%), and PI production increased (39.3% at Time 3 vs. 50.6% at Time 4) thus becoming the most produced variant for this group. This group also maintained similar production rates for all three forms between Times 2 and 3 but decreased their MF production at Time 4. For the instruction plus spiraling group some changes were observed between Times 3 and 4 as well: while the PF and the PI decreased from Time 3 to Time 4 (35.2% vs. 28.8% for the PF and 38.9% vs. 31.5% for the PI), MF production increased to become the most produced form at Time 4 for this group (25.9% vs. 39.6%), similar to the trends in the oral production task.

The multivariate analyses revealed which independent variables had a significant effect on the dependent variable. Starting with the control group, only one variable was selected as a significant predictor by the model at Times 1 and 2 for the PF vs. MF comparison: test time (p=6.32e-19). The PF was favored over the MF at Time 1. No variables had a significant effect over the dependent variable for the PF vs. PI comparison. As for Times 3 and 4, no variables were selected as significant predictors for neither comparison similar to the Spanish oral production task. Moving on to the instruction group, for the PF vs. MF comparison at Times 1 and 2, temporal distance (p=7.34e-08) was the only significant predictor selected by the model: the PF was favored over the MF in near contexts, directionality that was also true for this group in the oral task. Test time was the only significant predictor in the PF vs. PI comparison (p=0.0179): the PF was favored over the PI at Time 2. For Times 3 and 4, formality of the interlocutor was significant for the PF vs. MF comparison (p=0.0287), whereas presence of temporal adverbials was significant for the PF vs. PI comparison (p=0.0355) similar to the oral task. The PF was favored over the MF with

an informal interlocutor, and over the PI in the presence of an adverbial. Lastly, for the instruction plus spiraling activities group, at Times 1 and 2, temporal distance was a significant predictor for both comparisons (p=2.07e-10 for PF vs. MF and p=0.0113 for PF vs. PI) (only true for the PF vs. MF comparison in the oral task), while task version was only significant for the PF vs. PI comparison (p=0.0324). The PF was favored over the MF in near and intermediate contexts and over the PI in intermediate and distant contexts. The PF was favored over the PI in task version A (informal interlocutor first). At Times 3 and 4, temporal distance was selected as significant by the model for both comparisons (p=2.152-13 and p=2.17e-05, respectively). The PF was favored over the MF in the combined distances of near and intermediate and over the PI in intermediate and distant contexts. In addition, test time was selected as a significant predictor for the PF vs. MF comparison (p=0.0218): the PF was favored over the MF at Time 3. All in all, the instruction groups became sensitive to temporal distance, the instruction group only at Times 1-2 for the PF vs. MF comparison, but the participants of the instruction plus spiraling activities group became sensitive to temporal distance for both comparisons (PF vs. MF and PF vs. PI) across time. When comparing these trends to the trends displayed in the oral production task, we can note how the control group does not really become sensitive to the linguistic independent variables in the production tasks, except for presence of adverbials in the PF vs. PI comparison at Times 1 and 2 for the oral production task. However, the two instruction groups showed sensitivity to temporal distance, presence of adverbial especially for the PF vs. MF comparison across time for the oral task and the written task in addition to the PF vs. PI comparison in the written task.

5.6 Spanish Written Production Task (Instructors)

5.6.1 Frequencies of use

The six instructors produced a total of 53 tokens in the written production task. The instructors of the control group produced tokens for five future forms: they produced periphrastic future at a rate of 56.3%, morphological future at a rate of 25.0%, and future progressive, future perfect, and lexical futures at a rate of 6.3% each. The participants in the control group showed a different pattern of production since they produced MF at the highest rates (36.4%) followed by the PF (31.6%), contrary to their instructors. The instructors of the instruction group produced six types of future forms: morphological future at a rate of 57.9%, lexical futures at a rate of 15.8%, present indicative at a rate of 10.5% (only two tokens), and subjunctive, future progressive, and periphrastic future at a rate of 5.3% each (only one token per future form). The participants in the instruction group also showed different patterns when compared to their instructors since the participants produced the PI at the highest rates (43.8%), followed by the PF (38.3%), and the MF (17.9%). The instructors in the instruction plus spiraling activities group only produced three types of future forms: periphrastic future (83.3%), future progressive (11.1%), and present indicative (5.6%) (only one token). The participants in this group also produced the PF at the highest rates (37.9%) followed very closely by the PI (34.9%) and by the MF (27.2%).

For the instructors of the control and the instruction plus spiraling activities group the periphrastic future was the most produced form in the written task, whereas for the instructors of the instruction group the most produced variant was the morphological future. Recall that one instructor of the control and another instructor of the instruction plus spiraling activities group were not native Spanish speakers but learned it as a foreign language. This fact could explain the

differences between these two groups and the instruction group that was composed by two native Spanish speakers from Mexico and Puerto Rico. Seeing that this task was formal (written), this is a possible cause for the increase in MF production by the group with only native speakers, whereas the non-native instructors were less constrained by formality differences. A chi-square test revealed that the differences between the groups were indeed significant for this task X^2 (12, N=53) = 32.756, p=.001. Table 5-32 presents the distribution of all the forms produced by the instructors in the Spanish written production task.

Table 5-32 Distribution of all forms produced by the instructors in the Spanish written production task

Group	**PF**		**MF**		**Future Progr.**		**LF**		**PI**		**Future Perfect**		**Subj.**		**Total**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Control	9	56.3	4	25.0	1	6.3	1	6.3	0	0.0	1	6.3	0	0.0	16	100
Instr.	1	5.3	11	57.9	1	5.3	3	15.8	2	10.5	0	0.0	1	5.3	19	100
Instr. plus spir. act.	15	83.3	0	0.0	2	11.1	0	0.0	1	5.6	0	0.0	0	0.0	18	100

5.7 English Written Production Task (Participants)

5.7.1 Frequencies of use

All groups together produced a total of 353 future tokens in the written production task. Table 5-33 provides the distribution of all attempts at expressing futurity produced by all participants in this task.

Table 5-33 Distribution of all future tokens in the English written production task

	"Will"		**Present Progr.**		**PF**		**PI**		**Future Progr.**		**LF**		**Other**		**Total**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
All part.	95	26.9	85	24.1	65	18.4	42	11.9	32	9.1	28	7.9	6	1.7	353	100

For all participants, "will" was the form produced at the highest rates (26.9%), followed closely by the present progressive (24.1%). These variants were followed by the PF at a rate of 18.4% and by the PI at a rate of 11.9%. The future progressive was produced at a rate of 9.1% and the LF at a rate of 7.9%. Finally, the "other" category included the progressive at 0.8%, the conditional at 0.6% and the future perfect at 0.3%. The three most common forms produced in the written production task were "will", present progressive, and the PF, similar to the oral production task.

Table 5-34 presents the number of tokens and the percentages of use of these three forms. For the rest of the results of the written production task, I will only take into account these three

most used forms. By considering only the three most common forms the number of tokens decreased from 353 to 245 tokens.

Table 5-34 Distribution of the three most commons future forms in the Engish written production task

	"Will"		**Present Progr.**		**PF**		**Total**	
	N	%	N	%	N	%	N	%
All participants	95	38.8	85	34.7	65	26.5	245	100

Participants produced "will" at the highest rate (38.8%) followed by the present progressive (34.7%), and by the PF (26.5%). This distribution was different from the one displayed in the oral task given that in the oral task the PF was the most produced form followed by "will" and by the present progressive.

5.7.2 Multivariate analyses

A regression was run with four independent variables (temporal distance, presence of temporal adverbials, formality of the interlocutor, and task version) considering all groups together and the two comparisons (PF vs. "will" and PF vs. Present Progressive). The results of the regression are presented in Table 5-35.

Table 5-35 Factors contributing to the use of periphrastic future over "will" and present progressive in the English written production task for all participants

	PF vs. "will"			**PF vs. Present Progr.**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	74	51.4	0.791	71	53.5	0.798
Intermediate	44	29.5	0.314	45	28.9	0.281
Distant	42	33.3	0.366	34	41.2	0.393
			Range 48			*Range 52*
			p=0.0056			p=0.00355
Presence of temporal adverbials						
Yes	137	43.1	[0.654]	141	41.8	[0.380]
No	23	26.1	[0.346]	9	66.7	[0.620]
			p=0.136			p=0.429
Formality of interlocutor						
Boss	79	44.3	[0.455]	73	47.9	[0.516]
Classmate	81	37.0	[0.545]	77	39.0	[0.484]
			p=0.514			p=0.827
Task version						
A (inf. first)	58	31.0	[0.375]	62	29.0	0.298
B (formal first)	102	46.1	[0.625]	88	53.4	0.702
						Range 40
			p=0.28			p=0.0378
N=160		Relative rate 40.6% PF		N=150	Relative rate 43.3% PF	
Participant (random)						
Rand. St. Dev.		2.299		1.757		
Verb (random)						
Rand. St. Dev.		1.111		2.099		
Fixed R^2		0.117		0.144		
Random R^2		0.587		0.595		
Total R^2		0.704		0.739		
Log likelihood		-86.261		-83.849		

Starting with temporal distance, this variable was selected as significant by the model for both comparisons similar to the instruction plus spiraling activities group in the Spanish written

production task. The PF was favored over "will" and present progressive in the near contexts also true for the Spanish written production task for the PF vs. "will" comparison. Presence of temporal adverbials was not selected as significant by the model in neither comparison, similar to the Spanish written production task, as this variable was only significant for the PF vs. PI comparison at Times 3 and 4 for the instruction group but never for Time 1. For the PF vs. "will" comparison the PF was produced at higher rates in the presence of an adverb while the opposite trend was true for the PF vs. present progressive for which the PF was produced at higher rates in the absence of an adverbial. Formality of interlocutor was not selected as a significant predictor by the model for any of the two comparisons: the PF was produced at higher rates over the present progressive with a formal interlocutor and over the "will" with an informal interlocutor. Task version was selected as significant by the model in only the PF vs. present progressive comparison but the directionality of the effect was the same in both comparisons: the PF was favored over the other variants in task version B (formal interlocutor first).

5.7.3 Crosstabulations of independent variables

Crosstabulations were run for the independent variables included in the multivariate analysis but separated by group. The independent variables included in the analyses were temporal distance, presence of temporal adverbials, formality of interlocutor, and task version.[21] Recall that

[21] Similar to the Spanish tasks, clause type, person and number, and participant gender were coded as independent variables but were not included in the analyses due to small token counts for some cells. The crosstabulations for these variables for the English written production task are included in Appendix U.

for those forms that are favored for a certain variant of the independent variable, the percentage is bolded for ease of identification within each crosstabulation.

5.7.3.1 Temporal distance

"Will" was favored in distant contexts (45.2%), the PF was favored in near contexts (35.5%) similar to the trends for all three participant groups at Time 1 for the Spanish written production task, whereas the present progressive was favored in intermediate contexts (42.1%).

Table 5-36 Crosstabulation with temporal distance for the English written production task

	Response	**Temporal distance**						**Form Total and Baseline %**	
		Near		**Intermediate**		**Distant**			
		N	%	N	%	N	%	N	%
All participants	"Will"	36	33.6	31	40.8	28	45.2	95	38.8
	PF	38	35.5	13	17.1	14	22.6	65	26.5
	Pres. Progr.	33	30.8	32	42.1	20	32.3	85	34.7
	Total	107	100	76	100	62	100	245	100

5.7.3.2 Presence of temporal adverbials

"Will" was favored in the absence of an adverbial (65.4%) similar to the directionality observed for all groups in the Spanish written production task. The PF was neither favored nor disfavored by the absence or presence of an adverbial (26.9% vs. 23.1% when compared to the baseline 26.5%). The present progressive was favored in the presence of an adverbial (37.4%).

Table 5-37 Crosstabulation with presence of temporal adverbials for the English written production task

	Response	Presence of adverb				Form Total and Baseline %	
		Yes		No			
		N	%	N	%	N	%
All participants	"Will"	78	35.6	17	65.4	95	38.8
	PF	59	26.9	6	23.1	65	26.5
	Pres. Progr.	82	37.4	3	11.5	85	34.7
	Total	219	100	26	100	245	100

5.7.3.3 Formality of the interlocutor

Contrary to the Spanish written production task at Time 1, none of the variants was favored nor disfavored by the formality of the interlocutor: for "will" (37.6% vs. 39.8% when compared to the baseline 38.8%), for the PF (29.9% vs. 23.4% when compared to the baseline 26.5%), and for the present progressive (32.5% vs. 36.7% when compared to the baseline 34.7%).

Table 5-38 Crosstabulation with formality of the interlocutor for the English written production task

	Response	Formality of interlocutor				Form Total and Baseline %	
		Boss		Classmate			
		N	%	N	%	N	%
All participants	"Will"	44	37.6	51	39.8	95	38.8
	PF	35	29.9	30	23.4	65	26.5
	Pres. Progr.	38	32.5	47	36.7	85	34.7
	Total	117	100	128	100	245	100

5.7.3.4 Task version

"Will" was not favored nor disfavored in any of the task versions: 39.2% vs. 38.5% when compared to the baseline 38.8%. Similar to the instruction group at Time 1 in the Spanish written

production task, the PF was favored in task version B (formal interlocutor first). The present progressive was favored in task version A (informal interlocutor first).

Table 5-39 Crosstabulation with task version for the English written production task

	Response	**Task version**				**Form Total and Baseline %**	
		A (inf. first)		**B (formal first)**			
		N	%	N	%	N	%
All participants	"Will"	40	39.2	55	38.5	95	38.8
	PF	18	17.6	47	32.9	65	26.5
	Pres. Progr.	44	43.1	41	28.7	85	34.7
	Total	102	100	143	100	245	100

5.7.4 Summary of English written production task

The three groups combined produced a total of 353 future tokens in the written production task. "Will" and the present progressive were the forms produced at the highest rates (26.9% and 24.1%, respectively) followed by the PF (18.4%) and the PI (11.9%). The next two forms were the future progressive (9.1%) and the LF (7.9%). The 'other' category (1.7%) included the progressive at 0.8%, the conditional at 0.6% and the future perfect at 0.3%. The three most produced forms were "will", the present progressive, and the PF. When considering only the three most produced variants, the tokens produced summed to 245. As for "will", this variant was produced at a rate of 38.8%. The present progressive was produced at a rate of 34.7% and the PF was produced at a rate of 26.5%. Turning our attention to the linguistic and extralinguistic variables, temporal distance was selected as significant by the model for both comparisons (p=0.0056 for the PF vs. "will" and

p=0.00355 for the PF vs. present progressive comparison). The PF was favored in near contexts similar to the directionality observed in both the Spanish oral and written production tasks. None of the other variables were selected as significant by the regression model but some trends were observed: the PF vs. "will" and the PF vs. present progressive comparisons displayed complementary trends as for presence of temporal adverbials, whereas the PF was produced at slightly higher rates in the presence of an adverb in the former comparison, it was produced at slightly higher rates in the absence of an adverb in the latter comparison. In both comparisons the PF was produced at slightly higher rates with a formal interlocutor contrary to the trend observed for the PF vs. "will" comparison at Times 3 and 4 for the instruction group in the Spanish written production task. In line with this directionality, the PF was produced at slightly higher rates in task version B (formal interlocutor first) for both comparisons in the English written production task.

5.8 Spanish Contextualized Preference Task (Participants)

The third task completed by participants contained a contextualized story and asked them to choose from a series of three responses for each of the items in the story. These three responses were the same for each item except for the future variant illustrated in each: MF, PF, or PI. Participants were prompted to choose the response they preferred.

5.8.1 Frequencies of selection

The present section illustrates the overall frequencies of use of all three forms in future-time contexts for the three participant groups in the Spanish contextualized preference task (Table 5-40a).

Table 5-40a Distribution of the three variants in the Spanish contextualized preference task

Group	**MF**		**PF**		**PI**		**Total**	
	N	%	N	%	N	%	N	%
Control	404	46.8	365	42.2	95	11.0	864	100
Instruction	246	27.0	561	61.5	105	11.5	912	100
Instruction plus spir.act.	306	37.5	347	42.5	163	20.0	816	100

Given that the contextualized preference task contained 18 items (12 experimental and 6 distractors) and that 54 participants completed the task, the total tokens amounted to 2592 for all three groups. Similar to the other two tasks described above, the control group preferred the MF with the highest percentage within its group (46.8%) while the two instruction groups preferred the PF (61.5% and 42.5%, respectively). For the control group, the PF followed the MF as the second most preferred variant at a rate of 42.2% and ending with the PI at a rate of 11.0%. The instruction groups followed the same pattern: the PF was the most preferred variant (61.5% and 42.5%, respectively) followed by the MF (27.0% and 37.5%, respectively) and the PI (11.5% and 20.0%, respectively).

As with the two production tasks, between-group chi-square comparisons were run for the MF, the PF, and the PI. These comparisons are summarized in Tables 5-40b, 5-40c, and 5-40d and

are described below. For each comparison that was significant according to the chi-square, Cohen's *d* values are also reported to indicate the effect sizes of differences between groups (Plonsky & Oswald, 2014). Note that a Cohen's *d* value of around 0.2 represents a small effect size, around 0.5 a medium effect size, and around 0.8 a large effect size. All comparisons reported are 2 x 2 comparisons that isolate the form in question against all other forms from one group to another. Comparisons were performed for the three response options on the preference task (i.e., MF, PF, and PI). Beginning with the MF (Table 5-40b), the control group selected the MF at significantly higher rates than the instruction group and the instruction plus spiraling activities group with medium and small effect sizes, respectively. The MF selection rates were also significantly different between the instruction and the instruction plus spiraling activities, with a small effect size, based on the instruction plus spiraling activities group's selecting the MF at a significantly higher rate than the instruction group. In sum, the ordering of significantly more preference for the MF by the control group over the instruction plus spiraling group, who in turn selected the form significantly more than the instruction group matches the same pattern as the two production tasks.

Table 5-40b Chi-square comparisons (2x2) of contextualized selection of morphological future versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
***Control vs. instruction	1776	74.9	1	<.001	0.42
***Control vs. instruction plus spir. act.	1680	14.7	1	<.001	0.19
***Instruction vs. instruction plus spir. act.	1728	22.0	1	<.001	0.23

Note: * p<.05, ** p<.01, *** p<.001

As for the PF (Table 5-40c), the control group selected this variant significantly less than the instruction group, with a medium effect size. However, the selection rates for the PF were not

significantly different between the control group and the instruction plus spiraling activities group. Thus, the written preference task was more similar to written production, as opposed to oral production, in that there was significantly more preference for the PF in the written tasks for the instruction plus spiraling group over the control group but not for the instruction group over the control, whereas in the oral task both instruction groups used significantly more PF than the control. The PF was selected at significantly higher rates in the instruction group than the instruction plus spiraling activities group, with a medium effect size. Thus, the preference task differed from the two production tasks, for which the two instruction groups did not significantly differ for PF use.

Table 5-40c Chi-square comparisons (2x2) of contextualized selection of periphrastic future versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
***Control vs. instruction	1776	66.0	1	<.001	0.40
Control vs. instruction plus spir. act.	1680	0.0134	1	.908	--
***Instruction vs. instruction plus spir. act.	1728	62.3	1	<.001	0.39

Note: * p<.05, ** p<.01, *** p<.001

Lastly, for the PI comparison (Table 5-40d), the control group did not select this variant at significantly different rates from the instruction group, although they selected the PI significantly less than the instruction plus spiraling activities group, with a small effect size. The instruction group also selected the PI significantly less than the instruction plus spiraling activities group, and also with a small effect size. Thus, selection of the PI in the preference task presents more differences when considering the other tasks than the other forms did. Namely, on the preference

task the control and instruction group were not significantly different for PI selection, although the control used significantly less PI than the instruction group on both of the production tasks. The control group's significantly lower selection of the PI than the instruction plus spiraling group on the preference task is similar to the oral production task, but not the written production task. Finally, the two instruction groups also demonstrate that the preference task was especially different from the production tasks, as the instruction group selected significantly less PI than the instruction plus spiraling group, whereas differences were not significant in either production task.

Table 5-40d Chi-square comparisons (2x2) of contextualized selection of present indicative versus all other forms across groups

Comparison	**N**	χ^2	***df***	***p***	**Cohen's *d***
Control vs. instruction	1776	0.119	1	.730	--
***Control vs. instruction plus spir. act.	1680	26.0	1	<.001	0.25
***Instruction vs. instruction plus spir. act.	1728	23.5	1	<.001	0.23

Note: * p<.05, ** p<.01, *** p<.001

As Figure 5-3 shows, all three groups displayed a similar pattern and similar selection rates across forms at Time 1: the PF was the most selected form followed by the MF and then by the PI at low rates. At Time 2, however, all three groups showed different behaviors: the control group increased MF selection as it became the most selected form and decreased both PF and PI selection (as also observed in the two production tasks explained before); the instruction group increased PF selection drastically while decreasing the selection of the other two forms; and the instruction plus spiraling activities group maintained the selection pattern and distribution across Times 1 and 2, maintaining the PF as the most selected form followed by the MF and the PI. For the two delayed

posttests the control group showed a similar trend: the PI was selected the least, however the MF and PF distributions switched, while the PF was the most selected form at Time 3 followed by the MF, and at Time 4 the MF was the most selected form followed by the PF. The instruction group displayed the same selection pattern across Times 2, 3, and 4: the PF was the most selected form at higher rates, followed by the MF and by the PI at very low rates. The instruction plus spiraling activities group displayed a similar pattern across Times 2 and 3, selecting the PF the most, followed by the MF and by the PI at the lowest rates. At Time 4, this group selected the MF the most so there was an increase between Times 3 and 4, followed by the PF and by the PI.

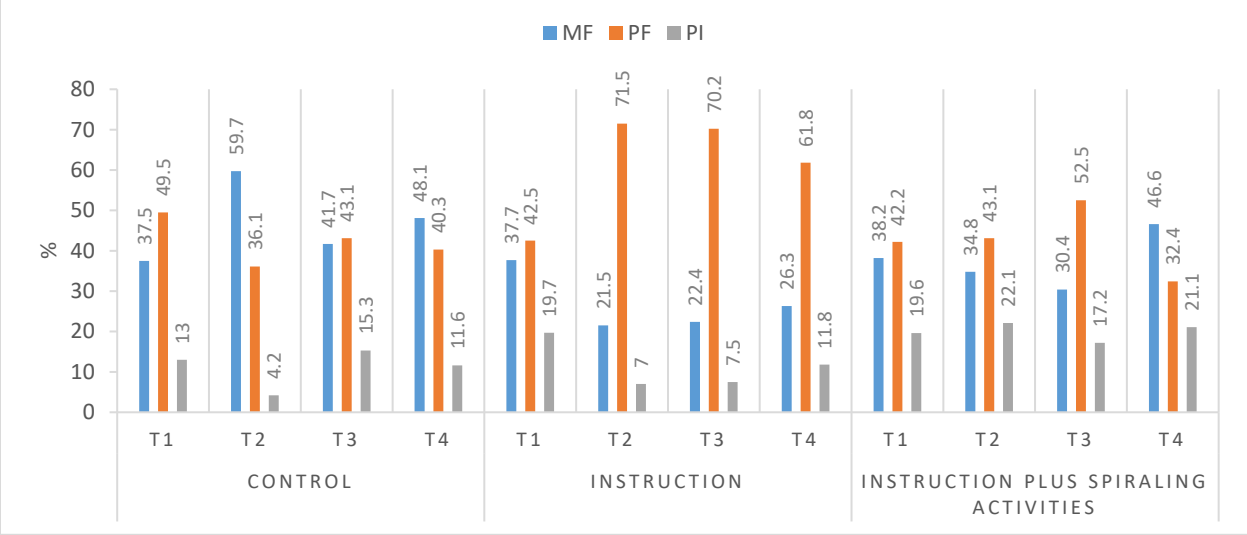


Figure 5-3 Distribution of future forms by test time and group for Spanish contextualized preference task

5.8.2 Multivariate analyses

The significance of the predictors as indicated by the multivariate analyses is summarized in Table 5-41.[22] For the control group, temporal distance was a significant predictor in both the comparison of PF vs. MF and PF vs. PI; however as we will see in Table 5-42 temporal distance was only significant at Times 1 and 2 but not at Times 3 and 4. The PF was favored over the MF and the PI in near contexts. In addition, test time was also significant for both comparisons (PF vs. MF and PF vs. PI) for the control group while it was only significant for the PF vs. MF comparison in the production tasks. The PF was favored over the MF at Time 1 but over the PI at Time 2. For the instruction group, temporal distance and test time were significant variables for the comparison between the PF and the MF similar to the production tasks. The PF was favored over the MF in near contexts and at Time 2. Additionally, for the PF vs. MF comparison in the instruction group presence of an adverbial became significant: the PF was favored over the MF in the absence of an adverbial. For the comparison between the PF and the PI only test time was selected as a significant predictor by the model similar to the written production task: the PF was favored over the PI at Times 2 and 3. Finally, for the instruction plus spiraling activities group, the significant predictors for the comparison between the PF and the MF were temporal distance, presence of adverbial, and test time, similar to the oral production task. The PF was favored over the MF in near contexts, in the absence of a temporal adverbial, and at Time 3. Only grammar score was selected as significant by the model for the comparison between the PF and the PI for this group which was also a

[22] The complete table with the results of the multivariate analyses and factor weights for test times considered together can be found in Appendix V.

significant predictor in the production tasks: the PF was favored over the PI by the lower grammar score group.

Now that the general significance of the factors in the multivariate analyses has been presented, we move on to present the results of the multivariate analyses by test time. The four test times were first considered independently, and a regression was run for each time separately for each of the participants' group; however, due to the small tokens for some cells, there were some errors and a different approach was considered.[23] For such an approach, Times 1 and 2 were combined as were Times 3 and 4 while still maintaining test time as an independent variable.

Table 5-41 Significant predictors in the multivariate analysis for the Spanish contextualized preference task when all times are considered

	Control		**Instruction**		**Instruction plus spiral.act.**	
Independent variables	PF vs. MF	PF vs. PI	PF vs. MF	PF vs. PI	PF vs. MF	PF vs. PI
Temporal distance	X*	X*	X**	--	X***	--
Presence of adverbial	--	--	X**	--	X**	--
Formality of Interlocutor	--	--	--	--	--	--
Task version	--	--	--	--	--	--
Grammar score	--	--	--	--	--	X*
Test time	X***	X*	X***	X***	X***	--

Note: * p=0.05, ** p=0.01, *** p= ≤0.001, -- not significant

[23] The tables of the regressions with test time considered separately can be found in Appendix W for the Spanish contextualized preference task.

First, the significance of the independent variables across test times is summarized in Table 5-42. Starting with the control group, temporal distance and test time were significant predictors for both comparisons (PF vs. MF and PF vs. PI) only at Times 1 and 2 but not at Times 3 and 4. The control group had not been sensitive to temporal distance in the previous production tasks; however, test time was also significant for the PF vs. MF comparison at Times 1 and 2 only for the written production task. Similar to the oral production task, the instruction group became sensitive to temporal distance for the PF vs. MF comparison across time in the contextualized preference task. For the preference task, presence of adverbial was also significant at Times 1 and 2 for the PF vs. MF comparison while it was significant for Times 3 and 4 in the oral production task. In addition, test time was significant in the PF vs. MF comparison at Times 1 and 2 similar to the oral production task, and task version was significant for the PF vs. MF at Times 3 and 4 just for the contextualized preference task. Contrary to the production tasks, the instruction group became sensitive to test time for the PF vs. PI comparison across all times. Lastly, the instruction plus spiraling activities group became sensitive to both temporal distance and presence of temporal adverbials for the PF vs. MF comparison across times similar to the oral production task. Test time was also significant for the PF vs. MF comparison only at Times 3 and 4 similar to the oral production task. As for the PF vs. PI comparison, presence of adverbial together with test time became significant only at Times 3 and 4, while grammar score was only significant at Times 1 and 2 for the instruction plus spiraling activities group in the contextualized preference task.

Table 5-42 Significant predictors in the multivariate analysis for the Spanish contextualized preference task for Times 1-2 and Times 3-4

	Control				**Instruction**				**Instruction plus spiral. act.**			
Independent variables	PF vs. MF		PF vs. PI		PF vs. MF		PF vs. PI		PF vs. MF		PF vs. PI	
	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4	T1-2	T3-4
Temporal distance	X*	--	X*	--	X*	X**	--	--	X***	X***	--	--
Presence of adverbial	--	--	--	--	X**	--	--	--	X***	X*	--	X*
Formality of Interlocutor	--	--	--	--	--	--	--	--	--	--	--	--
Task version	--	--	--	--	--	X*	--	--	--	--	--	--
Grammar score	--	--	--	--	--	--	--	--	--	--	X*	--
Test time	X***	--	X**	--	X***	--	X***	X*	--	X***	--	X*

Note: * p=0.05, ** p=0.01, *** p≤0.001, -- not significant

The directionality of the effects of the independent variables will be explored next when the results of the regressions are presented. The results of the regressions are included in Tables 5-43a and 5-43b for the combination of Times 1 and 2 and Times 3 and 4 for the control group, respectively, Tables 5-43c and 5-43d present the results for the combination of Times 1 and 2 and Times 3 and 4 for the instruction group, respectively, and Tables 5-43e and 5-43f present the results for the combination of Times 1 and 2 and Times 3 and 4 for the instruction plus spiraling activities group, respectively. We start by discussing the results of the regression for the control group.

Table 5-43a Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group at Times 1 and 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	136	57.4	0.645	86	90.7	0.714
Intermediate	129	41.1	0.422	68	77.9	0.370
Distant	130	41.5	0.430	68	79.4	0.406
			Range 23			*Range 34*
			p=0.0382			*p*=0.0206
Presence of temporal adverbials						
Yes	203	43.8	[0.459]	102	87.3	[0.568]
No	192	50.0	[0.541]	120	80.0	[0.432]
			p=0.266			*p*=0.219
Formality of interlocutor						
Advisor	195	47.2	[0.503]	113	81.4	[0.449]
Best friend	200	46.5	[0.497]	109	85.3	[0.551]
			p= 0.922			*p*=0.355
Task version						
A (inf. first)	182	39.0	[0.369]	81	87.7	[0.650]
B (formal first)	213	53.5	[0.631]	141	80.9	[0.350]
			p=0.12			*p*=0.238
Test time						
1	188	56.9	0.630	132	79.4	0.336
2	207	37.7	0.370	87	89.7	0.664
			Range 26			*Range 32*
			p=1.2e-05			*p*=0.005
Grammar score						
Lower	218	49.5	[0.589]	130	83.1	[0.380]
Higher	177	43.5	[0.411]	92	83.7	[0.620]
			p=0.296			*p*=0.339
N= 395		Relative rate 46.8% PF		N=222	Relative rate 83.3% PF	
Participant (random)						
Rand. St. Dev.		1.219		1.605		
Verb (random)						
Rand. St. Dev.		0.274		0.001		
Fixed R^2		0.138		0.18		
Random R^2		0.277		0.36		
Total R^2		0.415		0.54		
Log likelihood		-223.764		-81.534		

For both comparisons, temporal distance and test time were selected as significant factors by the model: the PF was favored in near contexts in both comparisons and at Time 1 for the PF vs. MF comparison and at Time 2 for the PF vs. PI comparison. The comparisons showed opposing trends for the rest of the independent variables. For the PF vs. MF comparison, the PF was produced at higher rates in the absence of an adverb, with a formal interlocutor (though the PF was produced at similar rates across both types of interlocutors), in task version B (formal interlocutor first), and by the lower grammar score group. For the PF vs. PI comparison, the PF was produced at higher rates in the presence of an adverbial, with the informal interlocutor, and in task version A (informal interlocutor first). For this last comparison, the PF was produced at very similar rates across grammar score groups.

Table 5-43b Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group at Times 3 and 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	127	50.4	[0.535]	81	79.0	[0.555]
Intermediate	119	46.2	[0.478]	80	68.8	[0.314]
Distant	128	47.7	[0.487]	77	79.2	[0.637]
			p=0.749			p=0.0555
Presence of temporal adverbials						
Yes	192	46.9	[0.495]	114	78.9	[0.516]
No	182	49.5	[0.505]	124	72.6	[0.484]
			p=0.885			p=0.767
Formality of interlocutor						
Advisor	189	46.6	[0.504]	115	76.5	[0.469]
Best friend	185	49.7	[0.496]	123	74.8	[0.531]
			p=0.897			p=0.581
Task version						
A (inf. first)	173	54.9	[0.582]	114	83.3	[0.803]

Table 5-43b (continued)

B (formal first)	201	42.3	[0.418]	124	68.5	[0.197]
			p=0.567			p=0.119
Test time						
3	183	50.8	[0.534]	126	73.8	[0.482]
4	191	45.5	[0.466]	112	77.7	[0.518]
			p=0.304			p=0.756
Grammar score						
Lower	212	53.3	[0.606]	142	80.3	[0.622]
Higher	162	41.4	[0.394]	96	68.8	[0.378]
			p=0.463			p=0.572
N= 374		Relative rate 48.1% PF		N= 238	Relative rate 75.6% PF	
Participant (random)						
Rand. St. Dev.		2.151		2.961		
Verb (random)						
Rand. St. Dev.		0		0.008		
Fixed R^2		0.049		0.21		
Random R^2		0.556		0.574		
Total R^2		0.605		0.784		
Log likelihood		-198.272		-83.335		

For the control group at Time 3 and 4 no independent variable was selected as significant by the model for either comparison. For the PF vs. MF, higher rates of PF were yielded in near contexts, in the absence of an adverbial, with the informal interlocutor, in task version A (informal interlocutor first), at Time 3, and by the lower grammar score group. For the PF vs. PI comparison, higher rates of PF were yielded in near and distant contexts, in the presence of an adverbial, with the formal interlocutor, in task version A (informal interlocutor first), at Time 4, and by the lower grammar score group.

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some differences and similarities regarding the variables' effects for the control group. For this comparison, temporal distance and test time were selected as significant only at Times 1 and 2 but no variable was significant at Times

3 and 4. Some variables showed the same directionality across times: the PF was selected at higher rates in near contexts, in the absence of an adverbial, and by the lower grammar score group. Formality of the interlocutor, task version, and test time showed complementary directionalities: the PF was yielded at higher rates in task version B (formal interlocutor first) and at Time 1, whereas the PF was selected at higher rates in task version A (informal interlocutor first) and at Time 3 at Times 3 and 4. Lastly, the PF was selected at the same rates regardless of interlocutor at Times 1 and 2, but it was more favorable with the informal interlocutor at Times 3 and 4.

Moving on to the PF vs. PI comparison across times for the control group, temporal distance and test time were significant predictors at Times 1 and 2 while no variable was selected as significant by the regression model at Times 3 and 4 similar to the PF vs. MF comparison. As for the significant variables, whereas the PF was favored in the near contexts at Times 1 and 2, but in near and distant contexts at Times 3 and 4. Regarding test time, the PF was favored at Time 2 but yielded at higher rates Time 4. As for the non-significant variables, two of them showed the same directionality across time and two did not: the PF was selected at higher rates in the presence of an adverb and in task version A (informal interlocutor first) across times while the PF was selected at higher rates with an informal interlocutor and showed no difference between grammar score groups at Times 1 and 2, but at Times 3 and 4, the PF was selected more with formal interlocutors and by the lower grammar score group.

We continue with the results of the regression for the instruction group.

Table 5-43c Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group at Times 1 and 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	130	76.2	0.659	121	81.8	[0.518]
Intermediate	130	58.5	0.391	98	77.6	[0.429]
Distant	135	63.0	0.446	102	83.3	[0.553]
			Range 27			
			p=0.0125			*p*=0.502
Presence of temporal adverbials						
Yes	196	56.1	0.365	142	77.5	[0.418]
No	199	75.4	0.635	179	83.8	[0.582]
			Range 27			
			p=0.00138			*p*=0.0583
Formality of interlocutor						
Advisor	194	67.5	[0.521]	165	79.4	[0.479]
Best friend	201	64.2	[0.479]	156	82.7	[0.521]
			p=0.513			*p*=0.631
Task version						
A (inf. first)	258	69.8	[0.640]	210	85.7	[0.662]
B (formal first)	137	58.4	[0.360]	111	72.1	[0.338]
			p=0.0987			*p*=0.173
Test time						
1	183	53.0	0.334	142	68.3	0.294
2	212	76.9	0.666	179	91.1	0.706
			Range 33			*Range 41*
			p=4.56e-08			*p*=3.62e-07
Grammar score						
Lower	153	65.4	[0.415]	115	87.0	[0.461]
Higher	242	66.1	[0.585]	206	77.7	[0.539]
			p=0.317			*p*=0.763
N= 395		Relative rate 65.8% PF		N= 321	Relative rate 81.0% PF	
Participant (random)						
Rand. St. Dev.		1.002		1.404		
Verb (random)						
Rand. St. Dev.		0.006		0.001		
Fixed R^2		0.225		0.2		
Random R^2		0.182		0.3		
Total R^2		0.407		0.5		
Log likelihood		-206.239		-122.839		

For the comparison PF vs. MF, three independent variables were selected as significant predictors by the model: temporal distance, presence of temporal adverbials, and test time. For these three variables, the PF was favored in near contexts, in the absence of an adverbial, and at Time 2. For the rest of the variables, higher rates of PF were selected with the formal interlocutor, in task version A (informal interlocutor first). The PF was selected at similar scores regardless of grammar score group. As for the PF vs. PI comparison, only test time had a significant effect on the dependent variable: the PF was favored over the PI at Time 2. Higher rates of PF selection were observed in near and distant contexts, in the absence of an adverbial, with an informal interlocutor, in task version A (informal interlocutor first), and by the lower grammar score group.

Table 5-43d Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group at Times 3 and 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	137	81.8	0.664	127	88.2	[0.545]
Intermediate	134	71.6	0.459	114	84.2	[0.420]
Distant	141	66.0	0.374	104	89.4	[0.535]
			Range 29			
			p=0.0048			p=0.48
Presence of temporal adverbials						
Yes	206	69.9	[0.444]	166	86.7	[0.500]
No	206	76.2	[0.556]	179	87.7	[0.500]
			p=0.1			p=0.998
Formality of interlocutor						
Advisor	206	74.3	[0.524]	175	87.4	[0.505]
Best friend	206	71.8	[0.476]	170	87.1	[0.495]
			p=0.482			p=0.915
Task version						
A (inf. first)	263	78.7	0.769	232	89.2	[0.671]
B (formal first)	149	63.1	0.231	113	83.2	[0.329]
			Range 54			

Table 5-43d (continued)

			p=0.0433			*p*=0.312
Test time						
3	211	75.8	[0.553]	177	90.4	0.625
4	201	70.1	[0.447]	168	83.9	0.375
						Range 25
			p=0.117			*p*=0.0103
Grammar score						
Lower	151	72.8	[0.315]	127	86.6	[0.369]
Higher	261	73.2	[0.685]	218	87.6	[0.631]
			p=0.196			*p*=0.454
N= 412		Relative rate 73.1% PF		N=345	Relative rate 87.2% PF	
Participant (random)						
Rand. St. Dev.		1.76		2.017		
Verb (random)						
Rand. St. Dev.		0.001		0		
Fixed R^2		0.165		0.086		
Random R^2		0.405		0.505		
Total R^2		0.57		0.591		
Log likelihood		-185.037		-104.664		

Starting with the PF vs. MF comparison at Times 3 and 4 for the instruction group, temporal distance and task version were selected as significant predictors by the regression model: the PF was favored in near contexts and in task version A (informal interlocutor first). Higher rates of PF were yielded in the absence of an adverbial, with the formal interlocutor, at Time 3. The PF was selected at similar rates regardless of grammar score group. Test time was the only variable selected as significant by the model for the PF vs. PI comparison at Times 3 and 4: the PF was favored over the PI at Time 3. As for the non-significant variables, the PF was selected at higher rates in near and distant contexts, in task version A (informal interlocutor first), and at Time 3. The PF was selected at similar rates regardless of presence or absence of an adverbial, type of interlocutor, and grammar score group.

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some differences and similarities regarding the variables' effects for the instruction group. While at Times 1 and 2, temporal distance, presence of a temporal adverbial and test time were significant predictors for this group, at Times 3 and 4 only task version was significant. Most of the variables displayed the same directionality of their effect across times: the PF was selected at higher rates in near contexts, in the absence of an adverbial, and in task version A (informal interlocutor first). The PF was selected at similar rates by both grammar score groups. As for the PF vs. PI comparison for the instruction group, test time was selected as significant by the regression model for both time combinations (Times 1 -2 and Times 3-4). As for the non-significant variables two variables showed the same directionality across times, whereas for three others there was no effect at Times 3 and 4: the PF was selected at higher rates in near and distant contexts and in task version A (informal interlocutor first) across times, and while at Times 1 and 2 the PF was more favorable in the absence of an adverbial, with an informal interlocutor and by the lower grammar score group, for these variables the PF was selected at similar rates across their variants.

We finish with the results of the regression for the instruction plus spiraling activities group.

Table 5-43e Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group at Times 1 and 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	95	77.9	0.762	115	64.3	[0.463]
Intermediate	110	48.2	0.402	79	67.1	[0.487]
Distant	118	39.8	0.318	65	72.3	[0.550]
			Range 44			
			p=3.02e-05			p=0.71
Presence of temporal adverbials						
Yes	161	45.3	0.413	116	62.9	[0.473]
No	162	62.3	0.587	143	70.6	[0.527]
			Range 17			
			p=0.00995			p=0.549
Formality of interlocutor						
Advisor	167	50.3	[0.450]	121	69.4	[0.522]
Best friend	156	57.7	[0.550]	138	65.2	[0.478]
			p=0.116			p=0.538
Task version						
A (inf. first)	94	61.7	[0.577]	84	69.0	[0.540]
B (formal first)	229	50.7	[0.423]	175	66.3	[0.460]
			p=0.239			p=0.298
Test time						
1	164	52.4	[0.473]	126	68.3	[0.509]
2	159	55.3	[0.527]	133	66.2	[0.491]
			p=0.407			p=0.786
Grammar score						
Lower	215	57.2	[0.584]	172	71.5	0.587
Higher	108	47.2	[0.416]	87	58.6	0.413
						Range 17
			p=0.177			p=0.0221
N= 323		Relative rate 53.9% PF		N= 259	Relative rate 67.2% PF	
Participant (random)						
Rand. St. Dev.		0.738		0		
Verb (random)						
Rand. St. Dev.		0		0.33		
Fixed R^2		0.213		0.043		
Random R^2		0.112		0.031		

Table 5-43e (continued)

Total R^2	0.325	0.074
Log likelihood	-189.594	-159.153

For the instruction plus spiraling activities group at Times 1 and 2, temporal distance and presence of temporal adverbials were the only two variables selected as significant predictors by the regression model for the PF vs. MF comparison: the PF was favored in near contexts and in the absence of an adverbial. As for the non-significant variables, the PF was selected at higher rates with an informal interlocutor, in task version A (informal interlocutor first), at Time 2, and by the lower grammar score group. Regarding the PF vs. PI comparison, only grammar score was selected as significant by the model: the PF was favored over the PI by the lower grammar score group. As for the non-significant variables, the PF was produced at higher rates in distant contexts, in the absence of an adverbial, with a formal interlocutor, in task version A (informal interlocutor first), and at Time 1.

Table 5-43f Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group at Times 3 and 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	90	87.8	0.862	125	63.2	[0.423]
Intermediate	117	49.6	0.396	77	75.3	[0.567]
Distant	123	29.3	0.196	49	73.5	[0.510]
			Range 66			
			p=9.05e-07			*p*=0.229
Presence of temporal adverbials						
Yes	159	42.8	0.399	113	60.2	0.400

Table 5-43f (continued)

No	171	61.4	0.601	138	76.1	0.600
			Range 20			*Range 20*
			p=0.011			*p*=0.0149
Formality of interlocutor						
Advisor	169	49.7	[0.465]	119	70.6	[0.525]
Best friend	161	55.3	[0.535]	132	67.4	[0.475]
			p=0.299			*p*=0.5
Task version						
A (inf. first)	92	59.8	[0.575]	83	66.3	[0.505]
B (formal first)	238	49.6	[0.425]	168	70.2	[0.495]
			p=0.169			*p*=0.925
Test time						
3	169	63.3	0.651	142	75.4	0.584
4	161	41.0	0.349	109	60.6	0.416
			Range 30			*Range 16*
			p=3.77e-06			*p*=0.022
Grammar score						
Lower	222	53.2	[0.548]	160	73.8	[0.593]
Higher	108	50.9	[0.452]	91	60.4	[0.407]
			p=0.351			*p*=0.0705
N= 330		Relative rate 52.4% PF		N=251	Relative rate 68.9% PF	
Participant (random)						
Rand. St. Dev.		0.51		0.443		
Verb (random)						
Rand. St. Dev.		0		0		
Fixed R^2		0.415		0.125		
Random R^2		0.043		0.049		
Total R^2		0.458		0.174		
Log likelihood		-170.208		-143.58		

For both comparisons (PF vs. MF and PF vs. PI) at Times 3 and 4 for the instruction plus spiraling activities group, presence of temporal adverbials and test time were selected as significant predictors by the regression model and these factors showed the same trends across comparisons: the PF was favored in the absence of an adverbial and at Time 3. In addition, temporal distance was a significant factor for the PF vs. MF comparison: the PF was favored over the MF in near

contexts. Examining the effects of the rest of the variables for the PF vs. MF comparison, the PF was selected at higher rates with a formal interlocutor, in task version A (informal interlocutor first), and by the lower grammar score group. For the PF vs. PI comparison, the PF was selected at higher rates in intermediate and distant contexts, with the formal interlocutor, in task version B (formal interlocutor first), and by the lower grammar score group.

When taking all the results of the multivariate regression into consideration for the PF vs. MF across times (Times 1-2 and Times 3-4), we observed some differences and similarities regarding the variables' effects for the instruction plus spiraling activities group. Temporal distance and presence of a temporal adverbial were selected as significant predictors across time combinations (Times 1 -2 and Times 3-4): the PF was favored in near contexts and in the absence of an adverbials across both time combinations. As for the non-significant variables, task version and grammar score showed the same directionality across times respectively: the PF was selected at higher rates in task version A (informal interlocutor first) and by the lower grammar score group. The PF was selected at higher rates with the informal interlocutor at Times 1 and 2 but with the formal interlocutor at Times 3 and 4. Moving on to the PF vs. PI comparison, while grammar score was the only significant variable at Times 1 and 2, presence of a temporal adverbial and test time were significant at Times 3 and 4. Grammar score and presence of a temporal adverbial displayed the same directionality respectively across times: the PF was favored over the PI in the absence of an adverbial and by the lower score group. As for test time, the PF was favored at Time 1 and at Time 3 respectively. Regarding the non-significant variables, the PF was selected at higher rates with the formal interlocutor across times, in distant contexts at Times 1 and 2 but with intermediate and distant contexts at Times 3 and 4, and in task version A (informal interlocutor first) at Times 1 and 2 but in task version B (formal interlocutor first) at Times 3 and 4.

Now that the regression results have been presented we move on to present the crosstabulations results for each of the independent variables considered in the analyses in order to have an in-depth presentation on how the independent variables affected the dependent variable at each of the test times.

5.8.3 Crosstabulations of Independent Variables with Test Time

The present section presents the results of the crosstabulations for the contextualized preference task considering each independent variable individually: temporal distance, presence of temporal adverbial, formality of interlocutor, task version, and grammar score. Clause type and person and number were controlled in this task (i.e., all items contained main-clause future-time verbs with a 1SG subject) and were therefore excluded from the analyses.[24] Recall that for those forms that are favored for a certain variant of the independent variable, the percentage is bolded for ease of identification within each crosstabulation. We begin with temporal distance.

5.8.3.1 Temporal distance

Starting with the control group, the MF was favored in the contextualized preference task in the more distant contexts at Times 1 (43.1%), 2 (62.5%), and 4 (51.4%), while it was only favored in the months away distance at Time 1 (47.2%). For Time 3, the MF was neither favored nor disfavored in any temporal distance (41.7%). The PF was favored in the near context at Times 1 (66.7%), 2 (41.7%), and 3 (48.6%), in addition to the more distant contexts at Time 3 (44.4%).

[24] Participant gender was excluded from the multivariate analysis due to low token counts for some cells but the crosstabulation of this variable can be found in Appendix X.

At Time 4, the PF was neither favored nor disfavored in any temporal distance (40.3%). The PI was favored in the intermediate context across all times (13.9%, 6.9%, 22.2%, and 12.5%, respectively), in the more distant context at Times 1 (13.9%) and 2 (5.6%), and in the near context at Time 4 (13.9%).

For the instruction group, the MF was favored in the more distant context across all times (39.5%, 26.3%, 28.9%, and 34.2%, respectively) and in the intermediate context at all times (47.4% at Time 1, 23.7% at Time 2, and 25.0% at Time 3) except at Time 4 (25.0%). The PF was favored in the near context across all times (53.9%, 76.3%, 78.9%, and 68.4%, respectively), in addition to the distant context at Time 1 (43.4%). As for the PI, this variant was favored in the near context at Time 2 (9.2%) and 3 (7.9%) as this distance neither favored nor disfavored the variant at Times 1 (19.7%) and 4 (11.8%). The intermediate context was also favorable for PI production at Times 1 (22.4%), 3 (7.9%), and 4 (15.8%).

Finally, for the instruction plus spiraling activities group, the MF was favored by the intermediate and the more distant context across all times (42.6% and 45.6% at Time 1, 41.2% and 58.8% at Time 2, 35.3% and 48.5% at Time 3, and 51.5% and 79.4% at Time 4). The PF was favored by the near context across all times (60.3%, 48.5%, 61.8%, and 54.4%, respectively) and by the intermediate context at Times 2 (44.1%) and 3 (54.4%) only. The PI was favored by the near context across Times 2 (47.1%), 3 (30.9%), and 4 (36.8%), while it was favored by the intermediate context and the more distant context at Time 1 (23.5% and 22.1%, respectively).

Table 5-44 Crosstabulation with temporal distance by group and test time for the Spanish contextualized preference task

Group	Time	Response	Temporal distance						Form Total and Baseline %	
			Near		Intermed.		Distant			
			N	%	N	%	N	%	N	%
Control	1	MF	16	22.2	34	**47.2**	31	**43.1**	81	37.5
		PF	48	**66.7**	28	38.9	31	43.1	107	49.5
		PI	8	11.1	10	13.9	10	13.9	28	13.0
		Total	72	100	72	100	72	100	216	100
	2	MF	42	58.3	42	58.3	45	62.5	129	59.7
		PF	30	**41.7**	25	34.7	23	31.9	78	36.1
		PI	0	0.0	5	6.9	4	5.6	9	4.2
		Total	72	100	72	100	72	100	216	100
	3	MF	30	41.7	30	41.7	30	41.7	90	41.7
		PF	35	**48.6**	26	36.1	32	44.4	93	43.1
		PI	7	9.7	16	**22.2**	10	13.9	33	15.3
		Total	72	100	72	100	72	100	216	100
	4	MF	33	45.8	34	47.2	37	51.4	104	48.1
		PF	29	40.3	29	40.3	29	40.3	87	40.3
		PI	10	13.9	9	12.5	6	8.3	25	11.6
		Total	72	100	72	100	72	100	216	100
Instruction	1	MF	20	26.3	36	**47.4**	30	39.5	86	37.7
		PF	41	**53.9**	23	30.3	33	43.4	97	42.5
		PI	15	19.7	17	22.4	13	17.1	45	19.7
		Total	76	100	76	100	76	100	76	100
	2	MF	11	14.5	18	23.7	20	**26.3**	49	21.5
		PF	58	**76.3**	53	69.7	52	68.4	163	71.5
		PI	7	9.2	5	6.6	4	5.3	16	7.0
		Total	76	100	76	100	76	100	76	100
	3	MF	10	13.2	19	25.0	22	**28.9**	51	22.4
		PF	60	**78.9**	51	67.1	49	64.5	160	70.2
		PI	6	7.9	6	7.9	5	6.6	17	7.5
		Total	76	100	76	100	76	100	76	100
	4	MF	15	19.7	19	25.0	26	**34.2**	60	26.3
		PF	52	**68.4**	45	59.2	44	57.9	141	61.8
		PI	9	11.8	12	**15.8**	6	7.9	27	11.8
		Total	76	100	76	100	76	100	76	100
Instruction plus spir. activities	1	MF	18	26.5	29	42.6	31	**45.6**	78	38.2
		PF	41	**60.3**	23	33.8	22	32.4	86	42.2
		PI	9	13.2	16	**23.5**	15	22.1	40	19.6
		Total	68	100	68	100	68	100	204	100
	2	MF	3	4.4	28	41.2	40	**58.8**	71	34.8

Table 5-44 (continued)

		PF	33	**48.5**	30	44.1	25	36.8	88	43.1
		PI	32	**47.1**	10	14.7	3	4.4	45	22.1
		Total	68	100	68	100	68	100	204	100
	3	MF	5	7.4	24	35.3	33	**48.5**	62	30.4
		PF	42	**61.8**	37	54.4	28	41.2	107	52.5
		PI	21	**30.9**	7	10.3	7	10.3	35	17.2
		Total	68	100	68	100	68	100	204	100
	4	MF	6	8.8	35	**51.5**	54	**79.4**	95	46.6
		PF	37	**54.4**	21	30.9	8	11.8	66	32.4
		PI	25	**36.8**	12	17.6	6	8.8	43	21.1
		Total	68	100	68	100	68	100	204	100

5.8.3.2 Presence of temporal adverbial

For the control group, the presence of an adverbial was a favorable context for MF production across all times (46.3% at Time 1, 44.4% at Time 3, and 50.0% at Time 4) except for Time 2 where the absence of an adverb favored the MF (60.2%). The PF was favored in the presence of an adverbial at Times 2 (38.0%) and 3 (43.5%) and when an adverb was absent at Times 1 (54.6%) and 4 (40.7%). The PI was favored when an adverbial was absent from the sentence across all times (16.7%, 5.6%, 18.5%, and 13.0%, respectively).

The instruction group showed more clear trends: while the MF was favored in the presence of an adverbial across all times (44.7%, 30.7%, 27.2%, and 27.2%, respectively), the PF was favored in the absence of an adverbial across all times (49.1%, 82.5%, 75.4%, and 62.3%, respectively). The PI, on the other hand, was favored by a temporal adverbial at Times 2 (8.8%) and 3 (7.9%) but not at Times 1 and 4 when the absence of a temporal adverbial favored the PI (20.2% at Time 1 and 12.3% at Time 4).

The instruction plus spiraling activities group showed similar trends to those displayed by the previous group: the MF was also favored in the presence of an adverbial across all times

(42.2%, 44.1%, 37.3%, and 52.0%, respectively), whereas the PF was only favored by the absence of an adverbial at Times 2 (62.7%), 3 (62.7%), and 4 (40.1%). The PI was favored in the presence of an adverbial only at Times 2 (32.4%), 3 (20.6%), and 4 (23.5%).

Table 5-45 Crosstabulation with presence of temporal adverbial by group and test time for the Spanish contextualized preference task

Group	Time	Response	Presence of adverbial				Form Total and Baseline %	
			Yes		No			
			N	%	N	%	N	%
Control	1	MF	50	**46.3**	31	28.7	81	37.5
		PF	48	44.4	59	**54.6**	107	49.5
		PI	10	9.3	18	16.7	28	13.0
		Total	108	100	108	100	216	100
	2	MF	64	59.3	65	60.2	129	59.7
		PF	41	38.0	37	34.3	78	36.1
		PI	3	2.8	6	5.6	9	4.2
		Total	108	100	108	100	216	100
	3	MF	48	**44.4**	42	38.9	90	41.7
		PF	47	43.5	46	42.6	93	43.1
		PI	13	12.0	20	**18.5**	33	15.3
		Total	108	100	108	100	216	100
	4	MF	54	50.0	50	46.3	104	48.1
		PF	43	39.0	44	40.7	87	40.3
		PI	11	10.2	14	13.0	25	11.6
		Total	108	100	108	100	216	100
Instruction	1	MF	51	**44.7**	35	30.7	86	37.7
		PF	41	36.0	56	**49.1**	97	42.5
		PI	22	19.3	23	20.2	45	19.7
		Total	114	100	114	100	228	100
	2	MF	35	**30.7**	14	12.3	49	21.5
		PF	69	60.5	94	**82.5**	163	71.5
		PI	10	8.8	6	5.3	16	7.0
		Total	114	100	114	100	228	100
	3	MF	31	**27.2**	20	17.5	51	22.4
		PF	74	64.9	86	**75.4**	160	70.2
		PI	9	7.9	8	7.0	17	7.5

Table 5-45 (continued)

		Total	114	100	114	100	228	100
	4	MF	31	27.2	29	25.4	60	26.3
		PF	70	61.4	71	62.3	141	61.8
		PI	13	11.4	14	12.3	27	11.8
		Total	114	100	114	100	228	100
Instruction plus spir. activities	1	MF	43	**42.2**	35	34.3	78	38.2
		PF	49	**48.0**	37	36.3	86	42.2
		PI	10	9.8	30	**29.4**	40	19.6
		Total	102	100	102	100	204	100
	2	MF	45	**44.1**	26	25.5	71	34.8
		PF	24	23.5	64	**62.7**	88	43.1
		PI	33	**32.4**	12	11.8	45	22.1
		Total	102	100	102	100	204	100
	3	MF	38	**37.3**	24	23.5	62	30.4
		PF	43	42.2	64	**62.7**	107	52.5
		PI	21	20.6	14	13.7	35	17.2
		Total	102	100	102	100	204	100
	4	MF	53	**52.0**	42	41.2	95	46.6
		PF	25	24.5	41	**40.1**	66	32.4
		PI	24	23.5	19	18.6	43	21.1
		Total	102	100	102	100	204	100

5.8.3.3 Formality of the interlocutor

Starting with the control group, the MF was favored with a more formal interlocutor at Times 1 (38.0%) and 4 (52.8%) and with a more informal interlocutor at Times 2 (62.0%) and 3 (42.6%). The opposite trend was observed for the PF: while this variant was favored with the more informal interlocutor at Times 1 (50.9%) and 4 (43.5%), it was favored with the more formal interlocutor at Times 2 (37.0%) and 3 (44.4%). However, the PI was favored with the more formal interlocutor at Times 1 (13.9%) and 2 (5.65), it was favored with the more informal interlocutor at Times 3 (15.7%) and 4 (13.0%).

Regarding the instruction group, for the MF and PF this group showed opposite trends to those observed for the control group. The MF was favored with the more informal interlocutor at Times 1 (43.0%) and 4 (28.9%) and with the more formal interlocutor at Times 2 (22.8%) and 3

(22.8%). The PF was favored with the more formal interlocutor at Times 1 (45.6%) and 4 (64.9%) and with the more informal interlocutor at Times 2 (73.7%) and 3 (71.1%). Finally, the PI was favored with the formal interlocutor at Times 1 (21.9%), 2 (7.9%), and 3 (7.9%) and with the informal one at Time 4 (12.3%).

The instruction plus spiraling activities group showed a much more straightforward trend for the MF and PF: the MF was favored with the more formal interlocutor across all times (46.1%, 35.3%, 33.3%, and 50.0%, respectively), whereas the PF was favored by the more informal interlocutor across all times (44.1%, 44.1%, 53.9%, and 33.3%, respectively). The PI was favored by the more informal interlocutor only at Times 1 (25.5%), 3 (18.6%), and 4 (23.5%).

Table 5-46 Crosstabulation with formality of interlocutor by group and test time for the Spanish contextualized preference task

Group	Time	Response	Formality of interlocutor				Form Total and Baseline %	
			Best friend		Advisor			
			N	%	N	%	N	%
Control	1	MF	40	37.0	41	38.0	81	37.5
		PF	55	50.9	52	48.1	107	49.5
		PI	13	12.0	15	13.9	28	13.0
		Total	108	100	108	100	216	100
	2	MF	67	62.0	62	57.4	129	59.7
		PF	38	35.2	40	37.0	78	36.1
		PI	3	2.8	6	5.6	9	4.2
		Total	108	100	108	100	216	100
	3	MF	46	42.6	44	40.7	90	41.7
		PF	45	41.7	48	44.4	93	43.1
		PI	17	15.7	16	14.8	33	15.3
		Total	108	100	108	100	216	100
	4	MF	47	43.5	57	**52.8**	104	48.1
		PF	47	43.5	40	37.0	87	40.3
		PI	14	13.0	11	10.2	25	11.6
		Total	108	100	108	100	216	100

Table 5-46 (continued)

Instruction	1	MF	49	**43.0**	37	32.5	86	37.7
		PF	45	39.5	52	**45.6**	97	42.5
		PI	20	17.5	25	**21.9**	45	19.7
		Total	114	100	114	100	228	100
	2	MF	23	20.2	26	22.8	49	21.5
		PF	84	73.7	79	69.3	163	71.5
		PI	7	6.1	9	7.9	16	7.0
		Total	114	100	114	100	228	100
	3	MF	25	21.9	26	22.8	51	22.4
		PF	81	71.1	79	69.3	160	70.2
		PI	8	7.0	9	7.9	17	7.5
		Total	114	100	114	100	228	100
	4	MF	33	28.9	27	23.7	60	26.3
		PF	67	58.8	74	**64.9**	141	61.8
		PI	14	12.3	13	11.4	27	11.8
		Total	114	100	114	100	228	100
Instruction plus spir. act.	1	MF	31	30.4	47	**46.1**	78	38.2
		PF	45	44.1	41	40.2	86	42.2
		PI	26	**25.5**	14	13.7	40	19.6
		Total	102	100	102	100	204	100
	2	MF	35	34.3	36	35.3	71	34.8
		PF	45	44.1	43	42.2	88	43.1
		PI	22	21.6	23	22.5	45	22.1
		Total	102	100	102	100	204	100
	3	MF	28	27.5	34	33.3	62	30.4
		PF	55	53.9	52	51.0	107	52.5
		PI	19	18.6	16	15.7	35	17.2
		Total	102	100	102	100	204	100
	4	MF	44	43.1	51	**50.0**	95	46.6
		PF	34	33.3	32	31.4	66	32.4
		PI	24	23.5	19	18.6	43	21.1
		Total	102	100	102	100	204	100

5.8.3.4 Task version

As a reminder to the reader, task version A featured the more informal interlocutor first and the more formal one second (best friend and advisor) and task B featured the more formal interlocutor first and the more informal one second (advisor and best friend).

For the control group the MF was favored in task A at Times 1 (46.9%) and 2 (68.8%) and by task B at Time 4 (55.0%). This variant was neither favored nor disfavored by either task type at Time 3 (41.7%). The PF was favored in task B at Times 1 (55.0%) and 2 (40.0%) and in task A at Times 3 (49.0%) and 4 (50.0%). The PI was favored in task B at all times (15.0%, 7.5%, 20.0%, and 12.5%, respectively). There was no PI production for task A at Time 2.

For the instruction group, the MF was favored in task A at Times 1 (41.0%) and 4 (26.4%) and in task B at Times 2 (35.7%) and 3 (39.3%). The PF was favored in task A at times 2 (82.6%), 3 (80.6%), and 4 (63.2%), and in task B at Time 1 (42.9%). The PI was favored in task B across all times (25.0%, 11.9%, 8.3%, and 14.3%, respectively).

Finally, for the instruction plus spiraling activities group, while the MF was favored in task B across all times (41.0%, 37.5%, 34.7%, and 48.6%, respectively), the PF was favored in task A across all times (51.7%, 45.0%, 58.3%, and 33.3%). The PI was favored in task A at Times 2 (26.7%), 3 (21.7%), and 4 (25.0%) and in task B at Time 1 (20.8%).

Table 5-47 Crosstabulation with task version by group and test time for the Spanish contextualized preference task

Group	**Time**	**Response**	**Task version**				**Form Total and Baseline %**	
			A (inf. first)		**B (formal first)**			
			N	%	N	%	N	%
Control	1	MF	45	**46.9**	36	30.0	81	37.5
		PF	41	42.7	66	**55.0**	107	49.5
		PI	10	10.4	18	15.0	28	13.0
		Total	96	100	120	100	216	100
	2	MF	66	**68.8**	63	52.5	129	59.7
		PF	30	31.3	48	**40.0**	78	36.1
		PI	0	0.0	9	**7.5**	9	4.2
		Total	96	100	120	100	216	100
	3	MF	40	41.7	50	41.7	90	41.7

Table 5-47 (continued)

		PF	47	**49.0**	46	38.3	93	43.1
		PI	9	9.4	24	**20.0**	33	15.3
		Total	96	100	120	100	216	100
	4	MF	38	39.6	66	**55.0**	104	48.1
		PF	48	**50.0**	39	32.5	87	40.3
		PI	10	10.4	15	12.5	25	11.6
		Total	96	100	120	100	216	100
Instruction	1	MF	59	41.0	27	32.1	86	37.7
		PF	61	42.4	36	42.9	97	42.5
		PI	24	16.7	21	**25.0**	45	19.7
		Total	144	100	84	100	228	100
	2	MF	19	13.2	30	**35.7**	49	21.5
		PF	119	**82.6**	44	52.4	163	71.5
		PI	6	4.2	10	**11.9**	16	7.0
		Total	144	100	84	100	228	100
	3	MF	18	12.5	33	**39.3**	51	22.4
		PF	116	**80.6**	44	52.4	160	70.2
		PI	10	6.9	7	8.3	17	7.5
		Total	144	100	84	100	228	100
	4	MF	38	26.4	22	26.2	60	26.3
		PF	91	63.2	50	59.5	141	61.8
		PI	15	10.4	12	14.3	27	11.8
		Total	144	100	84	100	228	100
Instruction plus spir. activities	1	MF	19	31.7	59	41.0	78	38.2
		PF	31	**51.7**	55	38.2	86	42.2
		PI	10	16.7	30	20.8	40	19.6
		Total	60	100	144	100	204	100
	2	MF	17	28.3	54	37.5	71	34.8
		PF	27	45.0	61	42.4	88	43.1
		PI	16	**26.7**	29	20.1	45	22.1
		Total	60	100	144	100	204	100
	3	MF	12	20.0	50	**34.7**	62	30.4
		PF	35	**58.3**	72	50.0	107	52.5
		PI	13	21.7	22	15.3	35	17.2
		Total	60	100	144	100	204	100
	4	MF	25	41.7	70	48.6	95	46.6
		PF	20	33.3	46	31.9	66	32.4
		PI	15	**25.0**	28	19.4	43	21.1
		Total	60	100	144	100	204	100

5.8.3.5 Grammar score

Starting with the control group, the MF and the PI showed the same trends as both variants were favored by the lower grammar score group at Time 1 (41.7% MF and 15.0% PI), and by the higher grammar score group at Times 2 (71.9% MF and 5.2% PI), 3 (45.8% MF and 18.8% PI), and 4 (53.1% MF and 12.5% PI). The PF displayed the opposite trends as this variant was favored by the higher grammar score group at Time 1 (57.3%) and by the lower grammar score group at Times 2, (46.7%) 3 (49.2%), and 4 (45.0%). For the instruction group, the MF was favored by the lower grammar score group at Times 1 (44.0%) and 4 (32.1%), and by the higher grammar score group at Times 2 (22.9%) and 3 (25.7%). The PF was favored by the lower grammar score group at all times (45.2%, 73.8%, and 75.0%) except for Time 4 when the variant was favored by the higher grammar score group (65.3%). The PI was favored by the higher grammar score group only at Time 1 (25.0%), by the lower grammar score group only at Time 3 (8.3%) and neither favored nor disfavored by any group at Time 2 (7.1% for the lower grammar score group and 6.9 % for the higher grammar score group compared to the baseline of 7.0%) and Time 4 (11.9% for the lower grammar score group, 11.8 for the higher grammar score group, compared to 11.8% as the baseline). Lastly, for the instruction plus spiraling activities group, the MF was favored by the higher grammar score group at all times (43.1%, 36.1%, and 31.9%, respectively), except at Time 4 when this variant was favored by the lower grammar score group. The PF and PI showed opposite trends as the PF was favored by the lower grammar score group across all times (47.0%, 46.2%, 55.3%, and 34.1%) and the PI was favored by the higher grammar score group across all times (23.6%, 26.4%, 20.8%, and 29.2%, respectively).

Table 5-48 Crosstabulation with grammar score by group and test time for the Spanish contextualized preference task

Group	Time	Response	Grammar score				Form Total and Baseline %	
			Lower		Higher			
			N	%	N	%	N	%
Control	1	MF	50	**41.7**	31	32.3	81	37.5
		PF	52	43.3	55	**57.3**	107	49.5
		PI	18	15.0	10	10.4	28	13.0
		Total	120	100	96	100	216	100
	2	MF	60	50.0	69	**71.9**	129	59.7
		PF	56	**46.7**	22	22.9	78	36.1
		PI	4	3.3	5	5.2	9	4.2
		Total	120	100	96	100	216	100
	3	MF	46	38.3	44	45.8	90	41.7
		PF	59	**49.2**	34	35.4	93	43.1
		PI	15	12.5	18	18.8	33	15.3
		Total	120	100	96	100	216	100
	4	MF	53	44.2	51	**53.1**	104	48.1
		PF	54	**45.0**	33	34.4	87	40.3
		PI	13	10.8	12	12.5	25	11.6
		Total	120	100	96	100	216	100
Instruction	1	MF	37	**44.0**	49	34.0	86	37.7
		PF	38	45.2	59	41.0	97	42.5
		PI	9	10.7	36	**25.0**	45	19.7
		Total	84	100	144	100	228	100
	2	MF	16	19.0	33	22.9	49	21.5
		PF	62	73.8	101	70.1	163	71.5
		PI	6	7.1	10	6.9	16	7.0
		Total	84	100	144	100	228	100
	3	MF	14	16.7	37	25.7	51	22.4
		PF	63	**75.0**	97	67.4	160	70.2
		PI	7	8.3	10	6.9	17	7.5
		Total	84	100	144	100	228	100
	4	MF	27	**32.1**	33	22.9	60	26.3
		PF	47	56.0	94	**65.3**	141	61.8
		PI	10	11.9	17	11.8	27	11.8
		Total	84	100	144	100	228	100
Instruction plus spir. activities	1	MF	47	35.6	31	43.1	78	38.2
		PF	62	**47.0**	24	33.3	86	42.2
		PI	23	17.4	17	**23.6**	40	19.6
		Total	132	100	72	100	204	100
	2	MF	45	34.1	26	36.1	71	34.8

Table 5-48 (continued)

		PF	61	46.2	27	37.5	88	43.1
		PI	26	19.7	19	**26.4**	45	22.1
		Total	132	100	72	100	204	100
	3	MF	39	29.5	23	31.9	62	30.4
		PF	73	55.3	34	47.2	107	52.5
		PI	20	15.2	15	20.8	35	17.2
		Total	132	100	72	100	204	100
	4	MF	65	49.2	30	41.7	95	46.6
		PF	45	34.1	21	29.2	66	32.4
		PI	22	16.7	21	**29.2**	43	21.1
		Total	132	100	72	100	204	100

5.8.4 Summary of results in the Spanish contextualized preference task

The groups showed differential selection patterns: the control group selected the MF at the highest rates (46.8%), followed by the PF (42.2%) which was a similar pattern to that of the production tasks. Both instruction groups selected the PF at the highest rates (61.5% and 42.5%, respectively), followed by the MF (27.0% and 37.5%, respectively), similar to the production tasks only for the instruction plus spiraling activities group. All three groups selected the PI at the lowest rates (11.0% control, 11.5% instruction, and 20.0% instruction plus spiraling activities). This was a change from the production tasks given that the instruction groups always produced the PI at the highest rates in the oral and written production tasks. The control selected significantly more MF in the preference task than the instruction groups ($p<.001$, with a medium and a small effect size, respectively), similar to the production tasks. Also, in line with the production tasks, the instruction plus spiraling activities group selected significantly more MF than the instruction group ($p<.001$, with a small effect size). As for the PF, the instruction group selected more PF than the control and the instruction plus spiraling activities group ($p<.001$ with a small-to-medium effect size for both comparisons), similar to the production tasks. There were no significant differences in PF

selection between the control and the instruction plus spiraling activities group. Lastly, for the PI, the instruction plus spiraling activities group selected more PI than the control and the instruction group ($p<.001$, with a small effect size for both comparisons) while the former group produced less PI than the other two groups in the production tasks. There were no significant differences in PI selection between the control and the instruction group.

When the selection rates are examined according to test time, some patterns can be noted: at Time 1 all three groups selected the PI at the lowest rates (13.0%, 19.7%, and 19.6%, respectively), while they selected the MF and the PF at similar rates across the groups (MF: 37.5%, 37.7%, and 38.2%, respectively and PF: 49.5%, 42.5%, and 42.2%, respectively). As noted, all groups selected the PF at the highest rates at Time 1, which was also observed for the control group in both production tasks, but only in the written production task for the instruction plus spiraling activities group. At Time 2 the control group showed an increase in MF production from 37.5% at Time 1 to 59.7% at Time 2 thus becoming the most selected form while increasing selection of the other two variants. This pattern was also observed for the control group in both production tasks. The instruction groups increased their production of PF at Time 2 from 42.5% to 71.5% in the instruction group and from 42.2% to 43.1% in the instruction plus spiraling activities group, similar to the production tasks. For the delayed posttests, the control group decreased MF selection from 59.7% at Time 2 to 41.7% and 48.1% at Times 3 and 4 respectively, similar to the production tasks. As for the other two variants, the PF increased from Time 2 to Time 3 (36.1% vs. 43.1%) and then decreased at Time 4 (40.3%), also true for both production tasks. The PI also followed the same pattern as the PF: it increased from Time 2 (4.2%) to Time 3 (15.3%) and decreased at Time 4 (11.6%). The noticeable increase of PF selection observed for the instruction group at Time 2 was maintained at Times 3 and 4 (70.2% and 61.8%) and the other two variants were also selected

at similar rates across Times 2, 3, and 4 (MF 21.5%, 22.4%, and 26.3%, respectively and PI 7.0%, 7.5%, and 11.8%, respectively). This was different from the production tasks seeing that even though the PF was also highly produced by the instruction group, the PI was produced at similar rates as the PF while the MF was the least produced variant. As for the instruction plus spiraling activities group, the difference between the variants was reinforced at Time 3 by increasing PF selection (43.1% at Time 2 vs. 52.5% at Time 3) and decreasing MF and PI selection (MF 38.2% at Time 2 vs. 34.8% at Time 3 and PI 22.1% at Time 2 vs. 17.2% at Time 3), contrary to the decreasing of PF production observed in the production tasks. While the PI was still the least selected form at Time 4 (21.1%), MF production increased surpassing PF production (from 30.4% at Time 3 to 46.6% at Time 4 for the MF and from 52.5% at Time 3 to 32.4% at Time 4 for the PF), similar to the production tasks.

The multivariate analyses considering all times together revealed which independent variables had a significant effect on the dependent variable. Starting with the control group, temporal distance and test time were significant predictors in both comparisons at Times 1 and 2 ($p=0.0382$ and $p=1.2e-05$ for PF vs. MF and $p=0.0206$ and $p=0.005$ for PF vs. PI, respectively). For temporal distance, the PF was favored over the MF and over the PI in near contexts. For test time, the PF was favored over the MF at Time 1 and over the PI at Time 2. Regarding Times 3 and 4, no variables were selected as significant predictors by the regression model for either comparison. For the production tasks, the control group was never sensitive to linguistic independent variables. Moving on to the instruction group, for Times 1 and 2, temporal distance ($p=0.0125$) and presence of temporal adverbials ($p=0.00138$) were significant predictors only for the PF vs. MF comparison: the PF was favored over the MF in near contexts and in the absence of an adverbial. This group was also sensitive for temporal distance in the PF vs. MF comparison in

the production tasks across time in the oral task and only at Times 1 and 2 in the written task. In addition, for both comparisons test time was also a significant predictor (p=4.56e-08 for PF vs. MF and p=3.62e-07 for PF vs. PI). The PF was favored over the MF and over the PI at Time 2. For Times 3 and 4, temporal distance and task version were selected as significant by the model for the PF vs. MF comparison (p=0.0048 and p=0.0433, respectively): the PF was favored over the MF in near contexts and in task version A (informal interlocutor first). In addition, for the PF vs. PI comparison, only test time was selected as significant (p=0.0103): the PF was favored over the PI at Time 3. Lastly, for the instruction plus spiraling activities group, for Times 1 and 2, temporal distance (p=3.02e-05) and presence of temporal adverbials (p=0.00995) were significant predictors for the PF vs. MF comparison: the PF was favored over the MF in near contexts and in the absence of an adverbial, similar to the production tasks. As for the PF vs. PI comparison, only grammar score was selected as a significant predictor (p=0.0221): the PF was favored over the PI by the low proficiency group. For Times 3 and 4, the same two independent variables were significant for both comparisons: presence of temporal adverbials (p=0.011 for PF vs. MF and p=0.0149 for PF vs. PI) and test time (p=3.77e-06 for PF vs. MF and p=0.022 for PF vs. PI). The PF was favored over the MF and the PI in the absence of an adverbial and at Time 3. In addition, temporal distance was significant only for the PF vs. MF comparison (p=9.05e-07): the PF was favored over the MF in near contexts. This last group was the group that became sensitive to the linguistic independent variables (temporal distance and presence of temporal adverbials) for the PF vs. MF comparison across times which was also true for both linguistic variables in the oral task and only for temporal distance in the written task.

5.9 Spanish Contextualized Preference Task (Instructors)

5.9.1 Frequencies of selection

The six instructors produced a total of 72 tokens in the contextualized preference task. The instructors of the control group selected the periphrastic future at a rate of 75.0%, the morphological future at a rate of 16.7%, and the present indicative at a rate of 8.3% (only two tokens). The participants in the control group also selected the PI at the lowest rate (11.0%) but instead the selected the MF at the highest rate (46.8%) followed by the PF (42.2%).

The instructors of the instruction group selected the periphrastic future at a rate of 66.7%, the morphological future at a rate of 29.2%, and the present indicative at a rate of 4.2% (only one token). Similarly, the participants in this group also selected the PF at a rate of 61.5% followed by the MF (27.0%), and the PI (11.5%).

The instructors of the instruction plus spiraling activities group selected the morphological future and the periphrastic future at the same rate (50.0% each). This group did not select any present indicative tokens. Similarly, the participants in this group also selected the PF and the MF at close rates (42.5% and 37.5%, respectively), but they selected the PI at a rate of 20.0%.

For all instructors, the periphrastic future was the most selected form in the preference task, except for the last group which selected MF and PF at the same rate. A chi-square test revealed that the differences between the groups were not significant X^2 (4, N= 72) = 7.478, p=.113. Table 5-49 presents the distribution of the selected forms by the instructors in the Spanish contextualized preference task.

Table 5-49 Distribution of selected forms by the instructors in the Spanish contextualized preference task

Group	PF		MF		PI		Total	
	N	%	N	%	N	%	N	%
Control	18	75.0	4	16.7	2	8.3	24	100
Instruction	16	66.7	7	29.2	1	4.2	24	100
Instruction plus spir. act.	12	50.0	12	50.0	0	0.0	24	100

5.10 English Contextualized Preference Task (Participants)

5.10.1 Frequencies of selection

All groups together selected a total of 648 future tokens in the contextualized preference task. Table 5-50 provides the distribution of the three selected future forms by all participants in this task. The PF was the most selected form at a rate of 76.4%, followed by "will" at a rate of 22.5%. The least selected form by far was the PI at a rate of 1.1%. This trend was similar to the one displayed by the instruction groups in the Spanish preference task.

Table 5-50 Distribution of all future tokens in the English contextualized preference task

	PF		"Will"		PI		Total	
	N	%	N	%	N	%	N	%
All participants	495	76.4	146	22.5	7	1.1	648	100

5.10.2 Multivariate analyses

A regression was run with four independent variables (temporal distance, presence of temporal adverbials, formality of the interlocutor, and task version) considering all groups together and just one comparison (PF vs. "will"). The PF vs. PI comparison was not run in the model given that the PF was selected at a rate of 98.6% over the PI (almost categorically). The results of the regression are presented in Table 5-51.

For the PF vs. "will" comparison, temporal distance and task version were selected as significant predictors by the model: the PF was favored over "will" in near contexts and in task version A (informal interlocutor first). The PF was produced at slightly higher rates in the presence of an adverbial and with the informal interlocutor. This trend is similar to participants in the instruction groups in all three Spanish tasks seeing that for these groups in the PF vs. "will" comparison temporal distance was also a significant predictor and the PF was favored in the near contexts.

Table 5-51 Factors contributing to the selection of periphrastic future over "will" in the English contextualized preference task for all participants

	PF vs. "will"		
Factor	N	% (of PF)	Factor weight
Temporal distance			
Near	214	87.9	0.716
Distant	215	72.6	0.395
Intermdiate	212	71.2	0.378
			Range 34
			p=0.00914
Presence of temporal adverbials			
Yes	321	77.6	[0.515]
No	320	76.9	[0.485]

Table 5-51 (continued)

			p=0.732
Formality of interlocutor			
Best friend	321	77.6	[0.514]
Advisor	320	76.9	[0.486]
			p=0.628
Task version			
A (inf. first)	281	85.8	0.64
B (formal first)	360	70.6	0.36
			Range 28
			p=0.00637
N= 641		Relative rate 77.2% PF	
Participant (random)			
Rand. St. Dev.		1.195	
Verb (random)			
Rand. St. Dev.		0.45	
Fixed R^2		0.134	
Random R^2		0.287	
Total R^2		0.421	
Log likelihood		-297.785	

5.10.3 Crosstabulations of independent variables

Crosstabulations for the independent variables are presented below. The independent variables included in the analyses were temporal distance, presence of temporal adverbials, formality of interlocutor, and task version. Clause type and person and number were controlled for in this task and therefore excluded from the analyses.[25] Recall that for those forms that are favored

[25] Similar to the Spanish tasks, participant gender was coded as an independent variable but was not included in the analyses due to small token counts for some cells. The crosstabulation for this variable for the English contextualized preference task is included in Appendix Y.

for a certain variant of the independent variable, the percentage is bolded for ease of identification within each crosstabulation.

5.10.3.1 Temporal distance

"Will" was favored in intermediate and distant contexts (28.2% and 27.3%, respectively) when compared to the baseline (22.5%), similar to the trend displayed by all groups across all three Spanish tasks at Time 1. The PF was favored in near contexts (87.0%), whereas the PI was neither favored nor disfavored by any distance. The PF was also favored in near contexts across groups and Spanish tasks at Time 1.

Table 5-52 Crosstabulation with temporal distance for the English contextualized preference task

	Response	**Temporal distance**						**Form Total and Baseline %**	
		Near		**Intermediate**		**Distant**			
		N	%	N	%	N	%	N	%
All participants	"Will"	26	12.0	61	28.2	59	27.3	146	22.5
	PF	188	87.0	151	69.9	156	72.2	495	76.4
	PI	2	0.9	4	1.9	1	0.5	7	1.1
	Total	216	100	216	100	216	100	648	100

5.10.3.2 Presence of temporal adverbials

When compared to their respective baselines, none of the three variants were favored or disfavored by either absence or presence of an adverb similar to the instruction group in the Spanish oral task at Time 1. "Will" was neither favored nor disfavored by absence (22.8%) or presence (22.2%) of an adverb when compared to the baseline (22.5%). The PF was neither favored nor disfavored by absence (75.9%) or presence (76.9%) of an adverb when compared to the

baseline (76.4%). Lastly, the PI was produced at very low rates and was neither favored nor disfavored by absence (1.2%) or presence (0.9%) of an adverb when compared to the baseline (1.1%). When compared to the results for the Spanish preference task, the MF was favored in the presence of an adverb while the PF was favored in the absence of an adverb.

Table 5-53 Crosstabulation with presence of temporal adverbial for the English contextualized preference task

	Response	**Presence of adverb**				**Form Total and Baseline %**	
		Absent		**Present**			
		N	%	N	%	N	%
All participants	"Will"	74	22.8	72	22.2	146	22.5
	PF	246	75.9	249	76.9	495	76.4
	PI	4	1.2	3	0.9	7	1.1
	Total	324	100	324	100	648	100

5.10.3.3 Formality of interlocutor

Again, none of the variants was favored nor disfavored by any of the two interlocutors, similar to the instruction plus spiraling activities task in the Spanish oral task at Time 1 and to the control group in the Spanish preference task at Time 1. "Will" was neither favored nor disfavored by the formal interlocutor (22.8%) or by the informal interlocutor (22.2%), the PF was neither favored nor disfavored by the formal interlocutor (75.9%) or by the informal interlocutor (76.9%), and the PI was neither favored nor disfavored by the formal interlocutor (1.2%) or by the informal interlocutor (0.9%). The results from the Spanish preference task at Time 1 were mixed: the MF was favored with an informal interlocutor while the PF was favored with a formal interlocutor for

the instruction group whereas the complementary directionality was true for the instruction plus spiraling activities group.

Table 5-54 Crosstabulation with formality of interlocutor for the English contextualized preference task

Group	Response	Formality of interlocutor				Form Total and Baseline %	
		Advisor		Best friend			
		N	%	N	%	N	%
All participants	"Will"	74	22.8	72	22.2	146	22.5
	PF	246	75.9	249	76.9	495	76.4
	PI	4	1.2	3	0.9	7	1.1
	Total	324	100	324	100	648	100

5.10.3.4 Task version

"Will" was favored by task version B (formal interlocutor first) (29.4%) when compared to the baseline (22.5%). The PF was favored by task version A (informal interlocutor first) (83.7%) when compared to the baseline (76.4%). Finally, no tokens of PI were produced in task version B (formal interlocutor first) so the PI was favored in task version A (informal interlocutor first) (2.4%) when compared to the baseline (1.1%). Results for this independent variable in the Spanish preference task were mixed: the control group favored the MF in task version A while they favored the PF in task version B similar to the instruction group but different from the instruction plus spiraling activities group who favored the PF in task version A as in the English preference task.

Table 5-55 Crosstabulation with task version for the English contextualized preference task

Group	Response	Task version				Form Total and Baseline %	
		A (inf. first)		B (formal first)			
		N	%	N	%	N	%
All participants	"Will"	40	13.9	106	29.4	146	22.5
	PF	241	83.7	254	70.6	495	76.4
	PI	7	2.4	0	0.0	7	1.1
	Total	288	100	360	100	648	100

5.10.4 Summary of the English contextualized preference task

The three groups combined produced a total of 648 future tokens in the oral production task. The PF was the most selected form at a rate of 76.4% similar to the English oral production task where the PF was also the form produced at the highest rates (28.8%) when all the future forms were taken into consideration. The PF was followed by "will" at a rate of 22.5% similar to the English oral production task. Lastly the PI was the least selected form (only 1.1%). The distribution of the future forms just reported for the English preference task was very similar to the distribution observed for both instruction groups in the Spanish preference task.

Turning our attention to the linguistic and extralinguistic variables, temporal distance and task version were selected as significant by the model for the PF vs. "will" comparison (p=0.00914 and p=0.00637, respectively). As noted before, temporal distance was also a significant predictor for all three participant groups in the Spanish preference task. None of the other variables were selected as significant by the regression model. Starting with temporal distance, the PF was favored over "will" in near contexts similar to the all three Spanish tasks. As for task version, the PF was favored over "will" in task version A (informal interlocutor first) similar to the trend observed for the instruction group in the PF vs. MF comparison at Times 3-4 for the Spanish preference task.

5.11 Metalinguistic awareness task

Next, I will present the results of the metalinguistic awareness task by question. As a reminder to the reader, the metalinguistic awareness task was completed by participants at Time 1 (pre-test) and Time 4 (delayed posttest 2).

5.11.1 Question 1

Question 1 asked the students to identify the verb form in bold within the following dialogue:

A: ¿Cuáles son tus planes para el verano?
B: ***Viajaré*** *a Europa con mi familia.*

'A: What are your plans for the summer?
B: **I will travel** to Europe with my family.'

Starting with the control group (18 participants), in the pretest, 12 participants recognized the form as future, two thought it was preterite thus expressing a completed action in the past (similar to *viajé* 'I traveled'), two others had not seen it before and didn't know, and the other two participants though it was either present or a perfect tense. The responses in the delayed posttest 2 were in agreement: all participants agreed that the form was the future and that they had seen the form in class with the researcher. For the instruction group (19 participants), in the pretest, from the total of 19 participants, more than half of the participants (12) reported that the verb form was future, six answered that it was a past form (preterite), while only one said that they hadn't seen this form before. In the delayed posttest 2, all the participants, except for one who said the form was imperfect, agreed that the form was future and that they had seen it during the research

experiment or in the book. Lastly, out of the total of 16 participants in the instruction plus spiraling activities group, [26] 10 reported that the form was future while six reported it was preterite in the pretest. In the delayed posttest 2, all participants agreed that the form was future and that it implied uncertainty, a set expectation, and an action to take place in the distant future.

Table 5-56 Summary of results for Question 1 in the metalinguistic awareness task

	Control (18 participants)		**Instruction (19 participants)**		**Instruction plus spiraling group (16 participants)**	
	Time 1 (pretest)	Time 4 (delayed post-test 2)	Time 1 (pretest)	Time 4 (delayed post-test 2)	Time 1 (pretest)	Time 4 (delayed post-test 2)
Question 1 Identification of MF	12 → future 2 → preterite 2 → present/ perfect 2→ unknown	18 → fut.	12 → future 6 → pret. 1→ unknown	18 → fut. 1→ imperf.	10→ fut. 6→ pret.	16→ future

5.11.2 Question 2

Question 2 asked the participants where they had seen the form in bold in question 1 (morphological future) before. For the control group (18 participants), 11 participants reported that they had not been taught that form before, and the other seven reported they had seen it either in

[26] Although the total number of participants was 17 for this group, one participant did not complete the metalinguistic awareness task in the delayed posttest 2.

high school or in textbooks. For the instruction group (19 participants), 11 participants reported that they either had not seen it before or they could not remember that form, four saw it in high school or in Spanish grammar books, and four reported that they saw it as a preterite in college. Lastly, for the instruction plus spiraling activities group (16 participants), in the pretest, eight participants reported never being taught this form before, six reported having seen it in high school as a preterite, and two had seen it in high school but did not remember the form. In the delayed posttest 2, all of the participants in the three groups reported that they had seen this form during the experiment with the researcher in class.

Table 5-57 Summary of results for Question 2 in the metalinguistic awareness task

	Control (18 participants)		**Instruction (19 participants)**		**Instruction plus spiraling group (16 participants)**	
	Time 1 (pretest)	Time 4 (delayed post-test 2)	Time 1 (pretest)	Time 4 (delayed post-test 2)	Time 1 (pretest)	Time 4 (delayed post-test 2)
Question 2 Where participants had seen the MF	11→ not seen 7→ high school/ textbooks	18→ in experiment	11→ not seen 4→ high school 4→ college (as preterite)	19→ in experiment	8→ not seen 6→ high school/ textbooks 6→ high school (as preterite) 1→ not remember	16→ in experiment

5.11.3 Question 3

Question 3 prompted the students to explain how Spanish speakers expressed the future and what factors affected its use. For the control group (18 participants), in the pretest, the responses were varied: most of the participants (14) either mentioned the "going to" form or the (morphological) future form while only one mentioned all three variants (MF, PF, and PI). Other participants (three) mentioned other futures such as future conditional and future progressive or present progressive. In the delayed posttest 2, participants only mentioned the "going to" form and the (morphological) future tense as the two options to express futurity and added that they either did not know the difference between the two or that the forms were interchangeable. Following with the instruction group (19 participants), in the pretest, participants showed a lot of uncertainty and their answers were quite varied overall. Out of the total, six participants responded that they didn't know as they hadn't learned it yet. Only five participants answered using the *ir+a+* infinitive form (periphrastic future), while four of them responded with the future tense or conjugations. The other four participants' answers were varied as they responded with the future but also added conditional and participle to the options of expressing the future. For the delayed posttest 2 the answers were much more coherent and similar revealing that in general all the participants understood the contents of the instruction. Almost all the participants (16) answered reporting the *ir+a+*infinitive (periphrastic future) as the more common form for informal and oral contexts and for the near future, the future (morphological future) as the least common form, for far future and in writing contexts, and the present indicative for immediate future contexts and for a specific time in the future. Only three participants reported the future together with the conditional or the imperfect and one was unaware of what affected the different future forms. Lastly, for the instruction plus spiraling activities group (16 participants), in the pretest, nine participants reported

that they did not know how to express future in Spanish or that they hadn't learned them yet. From the other seven, five indicated the *ir+a+*infinitive (periphrastic future) and two the (morphological) future. In the delayed posttest 2, all participants agreed that there are three different main ways to express the future: present tense for certain events and near future, the *ir+a+*infinitive for rather certain events used without time specification and for most time frames, and the future for distant and uncertain events.

Table 5-58 Summary of results for Question 3 in the metalinguistic awareness task

	Control (18 participants)		**Instruction (19 participants)**		**Instruction plus spiraling group (16 participants)**	
	Time 1 (pretest)	Time 4 (delayed post-test 2)	Time 1 (pretest)	Time 4 (delayed post-test 2)	Time 1 (pretest)	Time 4 (delayed post-test 2)
Question 3 Spanish future-expression forms	14→ either PF or MF 1→ MF, PF, and PI 3→ future conditional, future progr., present progr.	18→ PF and MF, do not know the difference between them	6→ do not know 5→ PF 4→ future (conjug.) 4→ future and conditional /participle	16 → PF (common, informal, oral) MF (uncommon, far away, written) PI (immediat eand specific time)	9→ do not know 5→ only PF 2→ only MF	16→ 3 forms: PI (certain, near), PF (certain, all time frames, no specification), and MF (distant, uncertain)

5.11.4 Question 4

Question 4 presented participants with three short dialogues each featuring one future variant in bold (morphological future, periphrastic future, and present indicative) and asked them to give an explanation as to why the speakers used each form in each context. Starting with the control group (18 participants), for the periphrastic future (*voy a estudiar* 'I am going to study'), most participants (13) agreed that this form implied intention and the speaker was planning to do something so that the event had not happened yet. The rest of the participants in this group either gave a translation ('I am going to study'), thought it was present, or reported that they had not been taught this form before. Only one reported this form as being in an informal situation. In the delayed posttest 2, the responses did not vary much from the pretest, as most participants agreed that the form was an action in the future (i.e., an intention), while two participants reported this form was present, and one that it "made more sense" than using the MF. Regarding the morphological future (*viajaré* 'I will travel'), in the pretest 16 participants agreed that this form expressed future, while only two thought the form was preterite. Of the participants who correctly identified the form as future, some added that it probably expressed possibility instead of definiteness and a later action in time. In the delayed posttest 2, the responses did not change much, though all participants agreed that the form was future. From the group, four participants commented that this form expressed an action to be completed in the distant future and that there was an air of uncertainty of the exact time when the action would take place. Finally, for the present indicative (*vuelo* 'I fly'), in the pretest four participants identified this form as the present but to indicate a future event, nine identified it as a future (two participants mentioned that it was easier to say and that it worked better than the PF), three provided a translation, and one participant was unfamiliar with this form. In the delayed posttest 2 the answers were similar though a little more

varied: three reported that it implied an immediacy and something in the present, six reported it being a future tense, four reported that it was an action that hadn't happened yet, three provided a translation, one reported being an action that was done regularly, and another participant was unsure of the form.

Continuing with the instruction group (19 participants), for the periphrastic future (*voy a estudiar* 'I am going to study'), all the participants mentioned that the action was to take place in the near future , it was a plan and intention, and that the form was present in the pretest, while in the delayed posttest 2 besides mentioning the time distance factor, participants mentioned that the timing was vague and that the form was informal and used in a casual setting in conversation, thus mentioning another factor introduced in the intervention in class. Regarding the morphological future (*viajaré* 'I will travel'), in the pretest most of the students (11 of them) agreed that that it was a future tense that indicated the action/future plans would happen in the distant future without a set time. Another five participants just offered a translation for the form ('They are going to the beach'). Two participants responded that this form was a past form and one did not know the form. In the delayed posttest 2, all of the participants had grasped the effect of time distance as a factor affecting the future forms and mentioned that the action would take place in the distant future and at a non-specified time. Even one participant mentioned the effect of formality by reporting that this variant was used in a more formal setting. Finally, for the present indicative (*vuelo* 'I fly'), in the pretest the majority of the participants (15) reported that this form expressed future plans in an immediate future and that the time of the flight was set. Only a few participants (four) reported this form being the past or not knowing it. In the delayed posttest 2, most of the participants (15) recognized the form as present and commented on it meaning the event would soon take place.

Only four participants did not recognize the form and said it was the past, the subjunctive, or that they didn't know it.

Lastly, for the instruction plus spiraling activities group (16 participants), for the periphrastic future (*voy a estudiar* 'I am going to study'), in the pretest the majority of participants (13) agreed that this variant express intention to do something in the near future. Out of the total participants for this group, three participants reported that this form meant an action that was currently happening. In the delayed posttest 2, all participants agreed that this variant expressed a certain event that was to happen soon. Regarding the morphological future (*viajaré* 'I will travel'), in the pretest six participants reported this form as being a past form, while the other ten participants reported it expressing a plans and intention to do something in the distant future. In the delayed posttest 2, all the participants mentioned the main factors affecting the form: it was reported that this future form referred to an uncertain event that was to happen in a distant future. Finally, for the present indicative (*vuelo* 'I fly'), in the pretest four participants identified this form as the present or referring to a present event, 10 of the participants identified the form to be future, and for the other two participants in the group it was either the past or an unknown tense. In the delayed posttest 2, all participants identified the form as present indicative and as a form that expressed a concrete and certain event happening in the near future.

Table 5-59 Summary of results for Question 4 in the metalinguistic awareness task

Question 4: explanation for use of forms		**PF** ***voy a estudiar*** **'I am going to study'**	**MF** ***viajaré*** **'I will travel'**	**PI** ***vuelo*** **'I fly'**
Control (18 participants)	Time 1 (pretest)	13 → intentions/plans 1→ informal	16→ future (possibility, later in time)	4→ present (future event) 9→ future

Table 5-59 (continued)

		4→ English translation/ present/not taught	2→ preterite	3→ English translation 1→ unfamiliar
	Time 4 (delayed post-test 2)	15 → intention 2→ present 1→ more sense than MF	18 → future (4 of 18→ distant future, uncertainty)	3→immediacy in present 6→ future 4→ not realized action 3→ English translation 1→ regular action 1→ unsure
Instruction (19 participants)	Time 1 (pretest)	19→ near future, intention, present	11→ future, distant, no set time 5→ English translation 2→ past 1→ unfamiliar	15→ future plans, immediate, set time 4→ past, unsure
	Time 4 (delayed post-test 2)	19→ near future, vague timing, informal	19→ future, distant, non-specified time, formal	15→ present, near 4→ unfamiliar (past, subjunctive, unsure)
Instruction plus spiraling activities (16 participants)	Time 1 (pretest)	13→ intention, near future 3→ currently happening	6→ past 10→ intention, distant future	4→ present 10→ future 2→ past or unkown
	Time 4 (delayed post-test 2)	16→ certain event, near future	16→ future, uncertain, distant	16→ present indicative, concrete, certain, near future

5.11.5 Summary of metalinguistic awareness task

While the responses of identification of variants were more varied in the pretest, almost all of the participants in each group agreed and correctly identified both the form and the effect of the independent variables such as time distance and formality. The answers in general were much more detailed, coherent, and more in agreement in the delayed posttest 2 than in the pretest where the participants showed more variation in their answers, as we would expect. There was a clear difference between the responses in the control group and in the two instruction groups: while in the former the responses were simpler and lacked the information from the more sociolinguistic point of view, the latter groups were able to identify the forms and be more specific about the effects of different factors on the future forms such as the effect of temporal distance and certainty of the future event. This finding provides evidence that even with a small change in the students' lesson by adding some sociolinguistic information they are able to put their new knowledge into practice in a task like this one after eight weeks of the pedagogical intervention.

5.12 Self-reflection task

The self-reflection task prompted students to summarize what they had learned in the instruction given by the researcher in class and to indicate if they still had any doubts about what was taught. This task was completed at Time 2 (immediate posttest) right after the pedagogical intervention. Results are summarized at the end of the section, in Table 5-60.

5.12.1 Control group (18 participants)

All participants in this group reported that they had learned about the basic future tense (i.e., morphological future) and how to use it. They also reported that they learned about the endings of the future and the three separate groups of irregularities the future tense presents. One student summarized what was learned saying that "I learned how to explain what I or others plan to do in the future" and another one said "I learned the future tense which is just another set of endings like the present or preterite". Another participant expanded the previous summaries by adding that they learned "how to properly use the future tense in a sentence". Only eight out of the total of 18 participants in this group reported still having doubts with conjugating the tense, needing more practice, and the most common doubt was how to use this tense versus the *ir*+*a*+infinitive and whether those are interchangeable. One participant reported his doubts saying that they didn't understand "how it is used, are there certain periods of time, is it more appropriate for short periods of time or long or the other way around?".

5.12.2 Instruction group (19 participants)

All participants in this group agreed that they had learned "the different ways to speak about the future" and their "order of commonality or usage". One participant reported the following:

"We learned about the different forms of the future and their various uses:

1) *Ir* +*a*+inf.: most widely used form, most common, adverbs not needed
2) Present indicative: next widely, talk about immediate future, adverbs are needed to indicate time

3) Future form: non-immediate future, least commonly used, sometimes needs adverbs”

Some students (seven) reported that they still had some issues with the conjugations of the future form but that they just needed more practice conjugating.

5.12.3 Instruction plus spiraling activities group (17 participants)

All participants in this group reported that they had learned that the future can be expressed in three different ways and that the choice was affected by some factors such as certainty, temporal distance, and formality. They also reported that they had learned about what forms were more common than the others.

One participant summarized their newly-learned knowledge saying that:

> “There are three different ways to talk about the future in Spanish. The most common is *ir*+*a*+infinitive which can be used with any context. There is also the present simple form which is used for something you know is going to happen and required time expressions. Another is future simple which is the least common form and is for events that are uncertain in the far away future.”

Participants in the instruction plus spiraling activities group had very few doubts: of the 17 participants only three reported that even though they had understood the contents of the intervention, they felt they simply needed to see more examples and have more practice conjugating the tenses.

5.12.4 Summary of self-reflection task results

In general, all participants in the three groups understood the instruction they were given respectively. The participants in the control group reported that they just learned about the way to express the future as they were not taught about the other variants to talk about the future. This group reported the higher number of doubts as they were unsure of when to use the morphological future versus the periphrastic future (*ir*+*a*+infinitive) they had seen in previous classes. From their answers, we can observe how their knowledge about future expression in Spanish is incomplete. The participants in the other two instruction groups grasped all the concepts in the instruction very well, as they were able to report on the independent factors presented such as formality, temporal distance, and presence of temporal adverbials, and on their effects on the choice of future variants. These participants have a more holistic and complete understanding on how native Spanish speakers actually use the most common future tenses. The main findings of the self-reflection task are summarized in Table 5-60.

Table 5-60 Summary of knowledge learned as reported in the self-reflection task by group

	Knowledge learned	**Doubts**
Control	Learned about basic future (MF), its conjugations, and irregularities	Needed more practice Interchangeable with *ir*+*a*+ inf? MF with some periods of time?
Instruction	Different ways to express the future (*ir*+*a*+inf, present indicative, and future form) and their order of usage	Needed more practice conjugating the MF
Instruction plus spir. act.	Future can be expressed in three ways (*ir*+*a*+inf, present indicative, and future simple) and the choice is affected by temporal distance, formality, and certainty	Needed more examples and practice

5.13 Spiraling activities

As a reminder to the reader, the two classes that were part of the instruction plus spiraling activities group completed three additional tasks between the two delayed posttests (Times 3 and 4). These tasks had an interpretation component and a production component and were contextualized according to three different topics as part of the Spanish curriculum of the participant: travel, social changes and role of women, and science and technology. These activities served to review the knowledge about the future-time expression participants in this group had learned in the pedagogical intervention across different tasks and topics to help with their understanding of the differences between the variants and the factors affecting them. The participants in this group were placed in six subgroups (five of three participants each and one group of 2), randomly during the Spanish class time and they completed the tasks on paper while their interactions were recorded. The tasks can be found in Appendix M.

We will begin with the first topic: travel. The interpretation component for this topic presented the participants with two situations in the form of a dialogue. Situation 1 contained two forms in the present indicative and situation 2 contained a form in the morphological future. Participants were asked to provide an explanation as to why the speakers would use those future forms in each case. For situation 1, the dialogue contained the verbs in the present indicative (*voy* 'I go' and *viajo* 'I travel'). All participants identified the verbs as present indicative and gave reasons such as the actions happening soon in the near future and indicating a definite place and time. Situation 2 contained the MF (*visitaré* 'I will visit'). All participants identified the form as future tense and explained its use providing reasoning about temporal distance since the action was set in the distant and far future and it was not entirely certain that the action would take place. As for the production component, situation 1 asked the participants to write about a situation in

which definite plans are already made. All participants used the *ir +a+*infinitive (PF) to express present given that the plans were taking place in the near future and the plans were in fact definite. Situation 2 asked participants to write about their plans for the summer. Participants used the simple future (MF) since the plans were not definite and they would be taking place in the distant future.

The second topic was social changes. For the interpretation component, situation 1 included the MF (*disminuirá* 'it will decrease'). All groups (five) but one identified the variant as the simple (i.e., morphological) future and explained its use to lack of certainty and the action being far in the future. One group identified the form as conditional but did not further explain their reasoning. Situation 2 included the PF (*va a mejorar* 'it is going to improve'). All participants identified the form as the PF (*ir+a+*infinitive) and explained its use to talk about an uncertain event that is to happen in the near future. Regarding the production task, situation 1 asked the students to write about events to happen within the next 10 years: five out of the six groups used the morphological future and explained its use given the uncertainty of the events occurring and that they were to happen in the distant and non-specified future. Only one group used the conditional again. Situation 2 asked the students to write about events that would happen within the coming year. Most of the groups (i.e., five) used the PF given the assumption that the events would happen soon and that there was a higher degree of confidence that the events would happen. One group used the conditional and another used the future tense as they interpreted the events to happen in the far future.

The third topic was science and technology. Situation 1 of the production component asked the participants to explain the use of the MF within a context (*teletransportarán* 'they will teleport'). All participants identified it as a future simple and justified its use due to an action being

far in the future and an even that is uncertain with an indefinite date. Situation 2 included the PF (*van a desparecer* 'they will disappear') and all participants identified it as the *ir*+*a*+infinitive (PF) and its use was justified as being in the near future and being a prediction that was certain. Lastly, for the production component, situation 1 asked the participants to talk about changes that could happen within the next 50 years. Half of the groups (i.e., three) used the PF as the changes would be relatively certain to occur while the other half of the groups (i.e., three) used the MF as the events would take place in a distant future. Situation 2 asked the participants to talk about technological advances in future houses. Half of the groups used the MF given that the events are not certain to occur and there is no specific time frame. Half of the other groups used the PF as the events will likely happen in the near future.

In sum, participants in the spiraling activities were overall able to identify the variants used in the interpretation component and were able to provide reasons for the use of such variants related to certainty, temporal distance, and definiteness. Except for one group that misidentified the morphological future as the conditional. For the production component participants also used the expected variants and gave explanations to justify the use of specific variants as for certainty and temporal distance. The same group that misidentified the morphological future as the conditional in the interpretation component also used the conditional instead of the morphological future in the production component.

6.0 Discussion and conclusions

This chapter contains a discussion of the present longitudinal study's findings in relation to the research questions that guided the project, and afterward an interpretation of the findings in light of the main contributions of this dissertation outlined in Chapter 3: the pedagogical intervention, the role of task-related differences, and the benefits of task triangulation. Finally, the chapter presents concluding statements and offers limitations and future directions of study. We begin with answers to the research questions.

6.1 Research questions

In the present section, the findings are presented in relation to the research questions that guided the study and in relation to previous research. The first of the five research questions that motivated the current study was the following:

1) What are the rates of use and selection of the future forms across tasks (i.e., oral production, written production, contextualized preference) and across groups (i.e., control, instruction, instruction plus spiraling activities)?

The study data were collected from six class sections of second-semester learners of Spanish. The three most commonly produced forms in the Spanish oral production task were the morphological future (MF), the periphrastic future (PF), and the present indicative (PI). The three groups showed differentiated patterns of use. The control group used the MF at higher rates (40.2%) followed by the PF and the PI that were used at similar rates (30.3% and 29.4%, respectively). The instruction group produced the PI at higher rates (43.5%) followed closely by

the PF (42.2%), whereas the MF was the least produced form (14.3%). The instruction plus spiraling activities group produced the PF at the highest rates (38.2%) followed closely by the PI (36.5%), whereas the least produced form was the MF at a rate of 25.3%. When exploring the differences between the groups, the control group produced the MF at significantly higher rates than the instruction groups at a medium and small effect size, respectively, while the instruction plus spiraling activities group produced the MF at significantly higher rates than the instruction group with a small effect size. The instruction groups produced the PF at significantly higher rates than the control with a small effect size for each of the group comparisons. Finally, the instruction groups produced the PI at significantly higher rates than the control group with a small effect size in both comparisons.

The instruction group in this study showed the same pattern reported in the oral tasks of Kanwit (2017) and Solon and Kanwit (2014) for the three first levels (3rd to 5th semester in Kanwit, 2017 and 1st to 3rd semester in Solon & Kanwit, 2014) where the PI was the most produced form, followed by the PF and the MF. The instruction plus spiraling activities group behaved as the upper level participants in Kanwit (2017) (4th year learners and graduate students), in Solon and Kanwit (2014) (3rd year learners) and the highly advanced learners (graduate students and instructors of undergraduate courses in Spanish) in Gudmestad and Geeslin (2011): participants produced the PF at the highest rates, followed by the PI and the MF. This pattern was similar to the native speakers (instructors) in this dissertation and to the native speakers included in Kanwit (2017) and in Gudmestad and Geeslin (2011) given that all native speakers also produced the PF at the highest rates, but followed by the MF and then the PI at the lowest rates. Therefore, it can be noted that the participants in the instruction plus spiraling activities group performed similar to native

speakers in producing the PF at the highest rates, which provides evidence to support the effectiveness of the instruction and the spiraling activities in the participants' development.

In the Spanish written production task, the three most commonly produced forms were also the MF, PF, and PI. All three groups demonstrated very similar patterns of use to the ones reported for the oral production task. The control group produced the three forms at similar rates: the MF was the most produced form (36.4%), followed by the PF (31.6%), and the PI (32.0%). The instruction group produced the PI at the highest rate (43.8%) followed by the PF (38.3%). The least produced form was the MF (17.9%). Finally, the instruction plus spiraling activities group produced the PF at the highest rate (37.9%) followed by the PI (34.9%). The least produced form for this group was also the MF (27.2%). When exploring the differences between the groups, similar to the oral production task, the control group produced the MF at significantly higher rates than the other two instruction groups with a medium and a small effect size, respectively, while the instruction plus spiraling activities group produced the MF at significantly higher rates than the instruction group with a small effect size. The instruction plus spiraling activities group produced the PF at significantly higher rates than the control group with a small effect size. Lastly, the instruction group produced the PI at significantly higher rates than the control group with a small effect size.

The instruction group showed the same patterns as the participants in Levels 1, 2, and 3 (1^{st} to 3^{rd} semesters) in the written task from Solon and Kanwit (2014) in that participants produced the PI at the highest rates, followed by the PF and the MF. The instruction plus spiraling activities group behaved as the higher course level (3^{rd} year learners) in the written task from Solon and Kanwit (2014): these participants produced the PF at the highest rates followed by the PI and the MF.

Taking the similarities of the findings from the oral and written production tasks between this study and previous studies (Gudmestad & Geeslin, 2011; Kanwit, 2014, 2017; Solon & Kanwit, 2014) we can provide evidence that the pedagogical intervention together with the spiraling activities implemented in this study for the instruction plus spiraling activities group were beneficial in more quickly enhancing the participants' competence as observed in how the participants in the instruction plus spiraling activities behaved similar to higher course levels in previous studies (participants who were not in the second semester of Spanish as the ones in the present study but were in their fourth and fifth semesters or were already graduate students).

In the contextualized preference task, the control group selected the MF at the highest rate (46.8%) as also observed in the other two tasks for this group, followed by the PF (42.2%). The PI was the least selected form (11.0%). Recall that the same pattern was observed in the oral production task for the control group. As for the instruction and instruction plus spiraling activities groups, both demonstrated the same selection patterns: both groups selected the PF at the highest rates (61.5% and 42.5%, respectively) followed by the MF (27.0% and 37.5%, respectively). The PI was the least selected form (11.5% and 20.0%, respectively). When exploring the differences between the groups, again the control groups selected significantly more MF than the two instruction groups with a medium and a small effect size, respectively, and the instruction plus spiraling activities group also selected the MF at higher rates than the instruction group with a small effect size. The instruction group selected the PF at significantly higher rates than the control and the instruction plus spiraling activities group with a medium effect size in both comparisons. Lastly, the instruction plus spiraling activities group selected the PI at significantly higher rates than the control and the instruction group with a small effect size in both comparisons.

Comparing these results with those of previous research we can note how the participants in the instruction groups in the present study behaved similarly to the participants in the upper levels (4th semester, 7th semester, and 4th year) in the contextualized preference task in Gudmestad and Geeslin (2013) in that the participants preferred the PF, followed by the MF and the PI (as the least selected form). The participants in both instruction groups in the current study also showed the same trends in the contextualized preference task when compared to the native speakers in Gudmestad and Geeslin (2013) in that natives also preferred the PF, followed by the MF and the PI. This is further evidence that the intervention was effective in approximating the participants in the instruction groups to the preferential patterns of native speakers.

The second research question also considered the differences between groups and tasks, but from a longitudinal perspective:

2) How do rates of use and selection change over time (four points over a semester)?

Past studies (Gudmestad & Geeslin, 2013; Kanwit, 2014, 2017; Solon & Kanwit, 2014) have followed a cross-sectional design by including groups from different course levels in Spanish and have established comparisons across the groups to observe the changes in production and selection rates as proficiency increases. In using cross-sectional data to stand in for what is thought to happen longitudinally, this body of work is forced to make the assumption that the changes displayed across levels would actually occur in the same individuals over time. In light of this, the current study used a longitudinal design by testing the same participants at four different times throughout a semester in order to track their development and changes in rates and predictors of production and selection of future-time forms.

Overall, previous studies (Gudmestad & Geeslin, 2013; Kanwit, 2014, 2017; Solon & Kanwit, 2014) have reported that as proficiency increases the production of the PI decreases and the production of the PF increases, especially for oral production and written preference tasks. Another pattern observed has been the decrease in MF selection especially for the upper level groups. Due to the fact that the participants of the current study were lower level proficiency students (2nd semester) and their progress was tracked only along one semester some differences are bound to be observed between the patterns of use and selection of the current participants and those of cross-sectional studies that have tracked the development of the participants across five levels (numerous semesters or years of difference). Therefore, some of the trends just reported from previous studies are observed in the results of the current study but other results are not supported or show the opposite directionality.

Starting with the oral production task, all three groups produced the MF at the lowest rates and the PF and PI at the highest rates overall similar to the participants in the first four levels (from 1st to 4th semesters) in Solon and Kanwit (2014), and the first three levels (from 3rd to 5th semesters) in Kanwit (2017). As proficiency increased, the groups demonstrated differentiated behaviors: the control group increased MF production at Time 2 (directly after the traditional MF explanation) while decreasing PF and PI production, but at the delayed posttests, PF and PI production increased and MF production decreased (although MF was still the most produced form for this group, which was expected since the traditional explanation this group received featured only the MF in expressing the future). The instruction group increased PF and PI production, which became the most produced forms, and decreased MF production which indicates that participants internalized the contents of the intervention such that they realized the more limited use of the MF across the Spanish-speaking world, thus reducing its production and increasing PF production, which was

presented in the intervention as the most common form overall. The instruction plus spiraling activities group increased MF production across time only surpassing the other two variants at Time 4, while maintaining production rates for the PF and the PI. This peak in MF production at Time 4 was unexpected and could be explained by the fact that participants felt more comfortable using this form after seeing it in the Spanish tasks and in the spiraling activities at the same rate as the other two forms. Contrary to previous cross-sectional work, the participants in this dissertation (at least in the instruction groups), matched their PF production to their PI production in only one semester whereas it was not until the 3rd year of study in Solon and Kanwit (2014) and in the 4th year of study in Kanwit (2017) when participants in these studies produced the PF at the highest rates or rates at least approximating those of the PI.

Moving on to the written production task, the groups performed similarly to the oral production task. Here, comparisons are primarily made with the only other Spanish study that had a written production component (Solon & Kanwit, 2014), along with the written L2 French data of Moses (2002). The control group produced the MF at the highest rates at Time 2 due to the posttest coinciding with the day they learned about the MF in class, but as proficiency increased, MF production decreased, which was contrary to Solon and Kanwit (2014) and to Moses (2002), and PF and PI production increased (as observed in Solon & Kanwit, 2014). The PF and PI production rates were maintained across the delayed posttests in the present study, even slightly surpassing MF production in the case of the PI. At Time 4 the control group produced all three future forms at similar rates. This result is interesting, seeing that more MF was expected from this group having received the traditional instruction about the MF and due to the fact that the task was written and thus might prompt the more formal future form. The instruction group produced the PI at the highest rates at Time 1 and as time progressed, PI production decreased, PF production

increased similar to the more advanced learners of French in Moses (2002), although at Time 4, PI production increased again to become the most produced form. This group showed the expected behavior as they increased PF production, thus becoming more target-like; however, they produced more PI than PF at Time 4, which could be due to the fact that the task prompted more formal language being a written task and the PF was presented as an informal form used more in oral speech. This could also be explained due to a restructuring of their knowledge of the forms and the tasks tracking the first half of the U-shaped development. The instruction plus spiraling activities group maintained production of each of the forms at very similar rates across times, although the participants in this group did eventually increase MF production, which became the most produced form at Time 4, similar to the advanced learners of French in Moses (2002) who also increased MF. The fact that this group produced the three forms at similar rates throughout the four times could be due to presentation of the three forms at similar rates in the spiraling activities that contained all three future forms. This could mean that participants in this group did not retain information about the frequency of use of each form from the intervention, seeing that they were presented with these forms across the three spiraling activities. However, the participants did seem more sensitive to the instruction they had received about formality, given that their MF production increased at Time 4 in this written, more formal task.

Finally, for the contextualized preference task, the trends observed in past studies were observed in this study (Gudmestad & Geeslin, 2013; Kanwit, 2014; Kanwit & Solon, 2013). Overall, all three groups selected the PI at very low rates and this variant was maintained as the least selected form across time, similar to Kanwit (2014) and Kanwit and Solon (2013), but contrary to Gudmestad and Geeslin (2013), who reported their participants only at Level 2 (4th semester) as selecting the PI at the lowest rates. For the control group, as proficiency increased so

did MF selection, and it was maintained as the most selected form for this group, contrary to the trends observed in Kanwit (2014) and Kanwit and Solon (2013) as the MF decreased as proficiency increased in Kanwit (2014) and as time progressed in Kanwit and Solon (2013). There were mixed results for the learners in Gudmestad and Geeslin (2013) since as proficiency increased so did MF selection for Levels 1 (2^{nd} semester), 2 (3^{rd} semester), and 3 (7^{th} semester), but in Levels 4 (4^{th} year) and 5 (graduate students and instructors) MF selection decreased. The patterns of the control group did not become target-like; however, the increase in MF production could be related to the traditional explanation of the MF at Time 2 and to the fact that the preference task was also a written task and therefore participants may have responded more with what they thought was a correct answer, even though they had not learned about formality distinctions in the control group. For the instruction group, PF selection increased drastically at Time 2 and was maintained as proficiency increased, with the PF becoming the most selected variant across the remainder of the test times for this group, similar to Gudmestad and Geeslin (2013) and Kanwit (2014) where it was observed that as proficiency increased so did selection of PF. The instruction group showed target-like patterns by selecting the PF at the highest rates. Lastly, for the instruction plus spiraling activities group, MF selection decreased throughout time but increased again at Time 4 to become the most selected variant, contrary to Gudmestad and Geeslin (2013) where it was observed that as proficiency increased MF selection also generally increased (until the highly advanced groups). Selection of the PF generally increased as time progressed, similar to Gudmestad and Geeslin (2013) and Kanwit (2014) but then decreased at Time 4. This again could be due to the formality of a written task prompting the participants to select more MF (i.e, the more formal variant) or the fact that the participants had been presented with all three forms at similar rates in the spiraling activities.

Overall, participants in the instruction groups in the present study approximated target-like production and selection based on patterns presented in the intervention in that the PF was expected to be the most produced/selected form which it was for the instruction groups, while the MF and the PI became the least produced/selected forms. The approximation to target-like distributions by the instruction groups when compared to the control group provides evidence to the effectiveness of the pedagogical intervention in that these participants were able to demonstrate target-like ordering of the forms in only one semester, whereas it was only the learners in higher level courses (higher than 3rd semester of study) that approximated such target-like rates in previous studies.

The third research question that guided the current study and related to the three main tasks (i.e., oral and written production and contextualized preference) was the following:

3) What are the linguistic and extralinguistic variables that predict use and selection of the future variants? Do the effects of the independent variables on the dependent variable change over time?

This study primarily focused on three linguistic variables: temporal distance, presence of temporal adverbials, and formality of the interlocutor, in addition to two extralinguistic variables: task version and grammar score. Previous studies (e.g., Gudmestad & Geeslin, 2013; Kanwit, 2014, 2017; Kanwit & Solon, 2013; Solon & Kanwit, 2014) have consistently reported temporal distance and presence of temporal adverbials as significant predictors that affect the dependent variable across learner levels, although the latter was only significant for the graduate learner group in Gudmestad and Geeslin (2013) and in Kanwit (2014).

We will begin with the oral production task. For the control group, no variables were selected as significant by the model for the PF vs. MF comparison at either of the two times (Times

1-2 and Times 3-4). Presence of temporal adverbials (p=0.00519) and formality of the interlocutor (p=0.0126) were significant for the PF vs. PI comparison at Times 1 and 2 while no variable was significant for Times 3 and 4. The PF was favored in the absence of an adverbial and with the informal interlocutor, which corresponds to the greater spread in use of the PF overall as the common form to express futurity, demonstrating fewer restrictions in its use. It was expected from this group that participants would not necessarily develop sensitivity to the linguistic variables, as they did not receive any information on the effects of such linguistic variables on future forms and learners at this course level were less sensitive to such variables in prior work.

For the instruction group, temporal distance (p=1.81e-08), formality of interlocutor (p=0.0398), and test time (p=0.00205) were selected as significant predictors by the regression model for the PF vs. MF comparison at Times 1 and 2. The PF was favored in near contexts, with the informal interlocutor, and at Time 2 due to the vast increase of PF production observed in the oral task for this group after the intervention. Temporal distance (p=0.0175) and presence of temporal adverbials (p=0.0252) were also significant for the PF vs. MF comparison at Times 3 and 4, and presence of temporal adverbials (p=0.0425) was also significant for the PF vs. PI comparison at these times, as was task version (p=0.0424). The PF was favored over the MF in near contexts (given that the MF was favored in the distant contexts) and in the presence of an adverb. The PF was favored over the PI in the presence of an adverb and in task version B (formal interlocutor first).

Lastly, for the instruction plus spiraling activities group, temporal distance (p=5.14e-08), presence of temporal adverbials (p=0.0163), formality of the interlocutor (p=0.0265), and test time (p=0.0347) were selected as significant predictors by the regression model for the PF vs. MF comparison at Times 1 and 2. The PF was favored over the MF in near and intermediate contexts,

in the presence of an adverbial, with formal interlocutors, and at Time 1. For Times 3 and 4, temporal distance (p=6.14e-14), presence of temporal adverbials (p=0.0419), and test time (p=0.0258) were also significant predictors for the PF vs. MF comparison. The PF was favored over the MF in near contexts as observed in the control and the instruction groups in this study, in the presence of an adverbial (also following the previously reported trends for the control and the instruction groups), and at Time 3 due to the fact that the MF was the most produced form at Time 4 but not at Time 3. For the PF vs. PI comparison, only grammar score was significant at Times 3 and 4: the PF was favored over the PI by the lower grammar score group.

In previous variationist studies that collected data using an oral production task and reported the role of temporal distance (Gudmestad & Geeslin, 2011; Kanwit, 2014, 2017), temporal distance was also selected as significant for the high level learners in Gudmestad and Geeslin (2011) and in all levels except for Level 2 (4^{th} semester) in Kanwit (2014, 2017), whereas in the present study this variable was significant only in the PF vs. MF comparison and only for the instruction groups, and this result was maintained over time. While presence of temporal adverbials was significant for the instruction groups across time, especially for the PF vs. MF comparison, it was not until Level 5 (graduate students) in previous research that participants became sensitive to this variable in oral production data (Gudmestad & Geeslin, 2011; Kanwit, 2014, 2017). Nevertheless, the directionality of the effect was the opposite in the present study when compared to Kanwit (2014, 2017) but very similar to Gudmestad and Geeslin (2011): the PF was favored over the MF and the PI in the presence of an adverbial in the present study similar to Gudmestad and Geeslin (2011), but contrary to Kanwit (2014, 2017), whereas the PF was favored over the PI in the absence of an adverbial in Kanwit (2014, 2017) but in the presence of an adverbial in Gudmestad and Geeslin (2011).

With respect to the written production task, test time (p=6.32e-19) was the only significant predictor for the PF vs. MF comparison at Times 1 and 2 for the control group, whereas recall that no variables were selected for this group at these times in the oral production task. The PF was favored over the MF at Time 1 given the fact that the MF was highly produced by this group at Time 2 (posttest). No variables were significant predictors at Times 3 and 4 for either comparison of forms, indicating a general lack of sensitivity to linguistic and social variables for the control group. For the instruction group, temporal distance was the only predictor selected by the model as significant for the PF vs. MF comparison at Times 1 and 2 (p=7.34e-08), which was similar to the oral production task, as temporal distance was also significant at Times 1 and 2 for the PF vs. MF comparison. The PF was favored over the MF in near contexts, with the MF being produced at higher rates in distant contexts. Only test time was a significant predictor at Times 1 and 2 for the PF vs. PI comparison: the PF was favored at Time 2 due to a vast increase in production of the PF at that time for the instruction group. For Times 3 and 4, formality of the interlocutor was selected as significant for the PF vs. MF comparison (p=0.0287) and presence of temporal adverbials was significant for the PF vs. PI comparison (p=0.0355), which was similar to the oral production task. The PF was favored over the MF with the informal interlocutor due to the fact that the MF was more produced with the more formal interlocutor, and the PF was favored over the PI in the presence of an adverbial, which was similar to the trends displayed by the instruction group in the oral production task.

Lastly, for the instruction plus spiraling activities group, temporal distance was a significant predictor for the PF vs. MF at Times 1 and 2 (p=2.07e-10). The PF was favored in near contexts, as has been observed for the instruction groups in the oral and written production tasks in the present study. Temporal distance (p=0.0113) and task version (p=0.0324) were the

significant predictors selected by the regression model for the PF vs. PI comparison at Times 1 and 2. The PF was favored over the PI in intermediate and distant contexts, as the PI was highly produced in near-future contexts. For task version, the PF was favored over the PI in task version A (informal interlocutor first) which goes in line with the fact that the PF is considered the default variant (Blas Arroyo, 2008) and is therefore used with informal interlocutors in informal contexts, although both the PF and PI are considered more informal than the MF (Sedano, 2006). For Times 3 and 4, temporal distance was a significant predictor for both comparisons (p=2.15e-13 for PF vs. MF and p=2.17e-05 for PF vs. PI). The PF was favored over the MF in near and intermediate contexts (as with the prior elicitation times) and over the PI in intermediate contexts. For the PF vs. MF comparison, test time was also a significant predictor (p=0.0218): the PF was favored at Time 3, whereas the MF was the most produced form for this group at Time 4. Again, we note that the instruction groups, but not the control group, became sensitive to the most important linguistic variables of temporal distance, presence of temporal adverbials, and formality and show the expected directionality as presented in the pedagogical intervention.

Turning our attention to the contextualized preference task, for the control group, temporal distance and test time were significant predictors for both comparisons (p=0.0382 and p=1.2e-05 for PF vs. MF, respectively, and p=0.0206 and p=0.005 for PF vs. PI, respectively), but only in the model for Times 1 and 2. The PF was favored over the MF in near contexts, and at Time 1 given that the spike in MF production occurred at Time 2, while the PF was also favored over the PI in near contexts and at Time 2, unlike in the other forms' comparison. Selection of the PI decreased at Time 2, which is target-like especially since lower level learners tend to overselect the PI as seen in the second-semester learners in Gudmestad and Geeslin (2013). For Times 3 and 4, no

variables were selected as significant by the regression model for either comparison (PF vs. MF and PF vs. PI) for the control group.

Moving on to the instruction group in the preference task, temporal distance (p=0.0125) and presence of temporal adverbials (p=0.00138) were significant predictors only for the PF vs. MF comparison at Times 1 and 2: the PF was favored over the MF in near-future contexts as previously observed in the other two groups and in the production tasks, and in the absence of an adverbial, which indicates the lifting of restrictions in the selection of the PF as the form gains popularity over time. Test time was significant for both comparisons (p=4.56e-08 for PF vs. MF and p=3.62e-07 for PF vs. PI): the PF was favored over the MF and over the PI at Time 2, given the high increase of the PF in the posttest. As for Times 3 and 4, temporal distance (p=0.0048) and task version (p=0.0433) did become significant predictors for the PF vs. MF comparison. The PF was expectedly favored over the MF both in near contexts and in task version A (informal interlocutor first), which were target-like developments. When comparing the instruction group's selection conditioning to those of the other tasks, we can note how the variables of temporal distance, presence of adverbials, and test time were also significant for the instruction group in the oral production task, whereas only temporal distance and presence of adverbial were significant in the written production task.

Lastly, for the instruction plus spiraling activities group in the preference task, temporal distance and the presence of temporal adverbials were selected as significant predictors by the regression model (p=3.02e-05 and p=0.00995, respectively) for the PF vs. MF comparison at Times 1 and 2, similar to how this group was constrained in the oral production task and to the instruction group in the preference task. The PF was expectedly favored over the MF in near contexts and in the absence of temporal adverbials, which was a native-like development. For the

PF vs. PI, grammar score was a significant predictor (p=0.0221) at Times 1 and 2: the PF was favored over the PI by the lower grammar score group, a trend that was no longer true at Times 3 and 4. As for Times 3 and 4, temporal distance, presence of temporal adverbials, and test time were significant predictors for the PF vs. MF comparison (p=9.05e-07, p=0.011, and p=3.77e-06, respectively), similar to the oral production task for this same group. The PF was favored over the MF in near contexts, in the absence of an adverbial, which is target-like conditioning, and at Time 3 due to a gradual decrease of PI selection at Time 4, which was expected developmentally. As for the PF vs. PI comparison, presence of temporal adverbials and test time were significant predictors (p=00149 and p=0.022): the PF was favored over the PI in the absence of an adverbial, which is a target-like pattern, and at Time 3, given the MF's increase in selection at Time 4. For the preference task, it was not until the upper levels (4th year and graduate students/instructors) when participants in Kanwit (2014) became sensitive to both temporal distance and presence of temporal adverbials.

As mentioned before, previous studies found temporal distance and presence of temporal adverbials as significant predictors as proficiency increased (Gudmestad & Geeslin, 2013; Kanwit, 2014, 2017). For the contextualized preference task, for instance, Gudmestad and Geeslin (2013) reported that temporal distance did not affect their second-semester learners and in Kanwit (2014) none of the linguistic variables included in the present study had a significant effect for Level 2 (4th semester) learners. This is a major difference between prior studies and the current study, in that even when the participants in the current study are equivalent to the second-semester or Level 1 in previous studies, the participants' choice of future variants is affected by the linguistic variables presented in the pedagogical intervention across tasks and in the expected directionality, whereas in previous studies the learners demonstrating these behaviors belonged to higher course levels. This is further evidence that the pedagogical intervention sped up the learning process of

the participants in the instruction groups. Overall, we can observe a preference of the PF in near contexts reserving intermediate and distant contexts for the MF, and in intermediate and distant contexts when compared to the PI, which is reserved for near contexts, which supports previous research on both native speaker and learner future use/selection (Gudmestad & Geeslin, 2011, 2013; Kanwit, 2014, 2017; Kanwit & Solon, 2013; Solon & Kanwit, 2014). As for the presence of temporal adverbials, although in both production tasks more PF tokens were yielded in the presence of an adverbial similar to Gudmestad and Geeslin (2011), in the contextualized preference task, the PF was always favored in the absence of an adverbial, therefore participants selected the MF and PI in the presence of an adverb as indicated in the pedagogical intervention. For the former result, given the fact that the instructions of the production tasks included the temporal adverbials for the participants to know what temporal distance to talk/write about, this could have prompted the participants to use more adverbials in their responses similar to Kanwit (2014, 2017).

Summarizing the directionality of the effects of the other independent variables included in the analyses, formality of the interlocutor was not often selected as a significant predictor. Nevertheless, it could be observed that the PF was commonly used with the informal interlocutor when compared to the MF in the production tasks, but mixed results were obtained for the PF vs. PI comparison across tasks. The use of the PF with the informal interlocutor may be related to the fact that the PF was presented in the intervention as more informal than the MF and therefore used with more informal interlocutors. In the contextualized preference task, mixed results were also found for the PF vs. MF comparison, which could have been due to the formality of this written task and to the informal language used in the task. As a written task, the preference task may have been perceived as more formal, and therefore participants may have assumed that a more formal

response was expected from them. In such a task, more MF selection would be expected for native speakers, who relegate the variant more to formal contexts (Sedano, 2006). However, the contextualized preference task also used informal language that was meant to mirror speech and told a relatable and contextualized story about someone the participants' age. Therefore, it was also likely to elicit more informal responses when compared to, for example, a de-contextualized written task, such as a grammaticality judgment task. In addition, more MF would be expected in preference than in production tasks due to its greater formal complexity compared to the PF (Bardovi-Harlig, 2004). Task version was not commonly selected as a significant predictor, but overall higher tokens of the PF were yielded in task version A when compared to the MF and the PI across all three tasks. We remind the reader that task version A featured the informal interlocutor first and the formal interlocutor second. Since the PF was presented as the most common future variant and the more informal and colloquial, this characteristic was translated into using/selecting it with the informal interlocutor such as a classmate or a best friend. With respect to test time, recall that Times 1 and 2 were combined in one predictive model and Times 3 and 4 in another model. Patterns were not quite straightforward for the control group: the PF was favored at Times 1 and 3 when compared to the PI across oral and written production tasks and at Times 2 and 4 for the preference task; the PF was favored over the MF at Times 1 and 3. The instruction group showed the most cohesive patterns: the PF was favored over the PI at Times 2 and 3 for all comparisons and across tasks. For the instruction plus spiraling activities group, the PF was favored over the MF at Times 1 and 3 in the production tasks and at Times 2 and 3 in the preference task, while there were mixed trends for the PF-PI comparison across tasks. Lastly, for grammar score, for the control group the PF was produced/selected at higher rates by the lower grammar score group over the MF and PI across all three tasks overall, whereas the higher grammar score

group favored the MF, which likely occurred because this variant received more emphasis during the intervention for the control group. An alternate explanation for the higher grammar score group showing a preference for the MF lies in the MF being more difficult to produce as it is multi-syllabic, has its own paradigm, and has a number of irregular forms. That explains the fact that the MF was observed more in the preference task than in the production tasks and for lower grammar score groups (Kanwit, 2014). Bardovi-Harlig (2004) reported a similar effect in L2 English, as the dominant variant in the oral and written tasks was "will" due to "going to + infinitive" being a longer and more complex structure than "will" and invariant "will" for learners being considered more of a lexical marker of future, which emerges prior to the morphological (i.e., grammatical) stage, where "going to + infinitive" is developed and used.

For the instruction group, while the PF was favored over the MF by the lower grammar score group across the three tasks, it was the higher grammar score group that favored the PF over the PI, which is a native-like preference (e.g., Gudmestad & Geeslin, 2011). For the instruction plus spiraling activities group, the PF was favored over the MF and PI by the higher grammar score group across oral and written production tasks, displaying target-like trends; for the preference task it was the lower grammar score group that favored the PF.

The fourth research question was related to the metalinguistic awareness task and aimed at targeting any changes in awareness between the pretest and the delayed posttest 2:

4) Are there any gains in sociolinguistic competence in terms of changes in learners' metalinguistic awareness from Time 1 to Time 4?

We remind the reader that the metalinguistic awareness task contained several components including identification of variants used in context, description of means to express futurity in Spanish, and explanation of the use of specific variants in a given context. The identification component presented an example of the morphological future in different contexts. With the exxception of six participants in each of the three groups who did not recognize the form or misidentified it with another form, the majority of the participants across groups identified it as the MF at Time 1. By Time 4 all 54 participants recognized the form and identified it correctly, adding that they had seen that form in the tasks they had completed during the experiment and, where applicable, in the intervention given that the MF was not again presented as part of the participants' normal curriculum.

As for the description of means to express futurity, responses showed more variation in the pretest in addition to a lack of accuracy, given that some participants did not identify, were not sure, or only mentioned one of the possible variants (e.g., the periphrastic future). For the delayed posttest, the two instruction groups' responses showed less individual variation and were much more detailed: participants correctly identified the three most common future forms and commented on the factors that affected variation, such as temporal distance, certainty, and presence of an adverbial. On the other hand, the control group's responses were limited to the morphological future and participants were not able to comment on the effect of individual variables on conditioning the future forms' use.

For the last component of the metalinguistic awareness task, participants in the instruction groups generally identified the three forms (PF, MF, and PI) in the pretest, except for the present indicative, which some participants were not able to identify as such at Time 1. At Time 4 (delayed posttest 2), all instruction groups' participants identified the variants and provided coherent and

detailed explanations on why the speakers of the dialogue in which the variants were contextualized were using such variants. The explanations included the effects of all three variables (i.e., temporal distance, presence of temporal adverbials, and formality) that were presented in the pedagogical intervention: MF was presented as the more formal variant used in distant contexts, the PF was presented as the more informal variant used across temporal contexts and in the absence of temporal adverbials, while the PI was reserved for near contexts and in the presence of adverbials.

Taking all of these metalinguistic results into consideration, there is compelling evidence that the sociolinguistic competence of participants in fact improved from the beginning of the experiment (pre-intervention) to the end of the experiment (post-intervention). Previous studies such as van Compernolle and Williams (2011) also reported changes in sociolinguistic competence in terms of results in their metalinguistic awareness tasks such that their participants demonstrated wider knowledge of the variation between *ne* presence and absence and were able to verbalize such knowledge. In sum, the pedagogical intervention implemented in the present study was beneficial in enhancing participants' sociolinguistic competence and awareness of the variation that exists in expressing futurity in Spanish and of the effects of independent variables.

The fifth research question that guided the present study targeted the English tasks and aimed at establishing comparisons between the patterns in the participants' native language and Spanish:

5) What are the patterns of production and selection of participants in English? Are these patterns similar to the Spanish ones at Time 1?

Starting with the English oral production task, the three most-produced forms by participants in all groups were: PF ("go"), "will", and present progressive. Recall that because the three participant groups demonstrated similar patterning in English, completed the English tasks only once prior to the Spanish instruction, and produced relatively few tokens, their data were combined together for subsequent analyses. When considering all participants together, the English PF was the most produced form (45.8%), followed by "will" (29.9%) and the present progressive (24.3%).When comparing the English trends with the Spanish trends at Time 1, the PF was also the most produced form for the control group, whereas the PI was the most produced from for the instruction groups at Time 1 in the Spanish oral task, although it was followed closely by the PF in both instruction groups. Comparing the results of the English task with previous research that collected data from native English speakers, while the PF ("go") was the most produced form in this dissertation, "will" was the most produced form by the learners of English as an L2 in Bardovi-Harlig (2004) and by the native English speakers in Kanwit (2014).

For the English written production task, the three most produced forms were "will", PF ("go"), and present progressive: "will" was the most produced written form for the (38.8%), followed by the present progressive (34.7%) and the PF (26.5%). When comparing the English trends with the Spanish trends at Time 1, no parallels could be established: for the control and instruction plus spiraling activities groups, the PF was the most produced form (46.9% and 47.8%, respectively) for the Spanish task, which did not coincide with the English task. For the instruction group the trends were reversed in the Spanish task when compared to the English task: in the Spanish task the PI was the most produced form (52.9%), followed by the PF (31.6%), and the MF (15.4%), whereas for the English tasks the most produced form was "will" followed by the present progressive and the PF. Comparing the results of the English written production task in this

dissertation with previous studies, the findings were different: Kanwit (2014) reported the PF (i.e., "go") as the most produced form in English for his L1 English group which was not a trend demonstrated by the groups in the present study. The behavior of the groups in the present study resembled more the findings reported by Bardovi-Harlig (2004) for L2 English, as "will" was the most produced form followed by the PF.

For the English contextualized preference task, the participants selected the PF at the highest rate (76.4%) followed by "will" (22.5%), whereas the PI was the least selected form by far (1.1%). These trends in the English tasks coincided with the trends of all three groups in the Spanish preference task at Time 1: the PF was the most selected form, followed by the MF, and finally the least selected form was the PI. Thus, participants seemed to start with an English-type system at Time 1 in the Spanish contextualized preference task.

Finally, the overarching and more general question that guided this study was the following:

- Does explicit instruction on sociolinguistic variation in the L2 Spanish classroom have any effects in enhancing the sociolinguistic competence of learners expressing the future in an explicit instruction group or an explicit instruction plus spiraling activities group, as compared to a control group that does not receive such instruction?

Taking into consideration all the findings presented to address the first four research questions, we can provide evidence that the pedagogical intervention was beneficial for the participants in the instruction groups. For research questions one and two, a major pattern was observed: the control group clearly increased their production of the MF after being presented with only this one form to express futurity and maintained this form as the most produced throughout the semester. On the other hand, both instruction groups did not show a drastic increase of MF production at Time 2 given that they were provided with the three most common future forms in

Spanish and with the factors that affect their use. Therefore, the instruction groups increased their PF production, matching the pattern that had been presented for them - that this form is the most common one used by native speakers in the vast majority of dialects throughout the Spanish-speaking world (e.g., Escobar, 1997; Gutiérrez, 1995; Orozco, 2005, 2006; Sedano, 1994; Silva-Corvalán, 1994; Silva-Corvalán & Terrell, 1989).

An additional finding to support the beneficial effects of the pedagogical intervention lies in the trends reported for research question three regarding the directionality of the effects of the significant independent variables on the dependent variable. These effects clearly overlap with the trends presented during the interventions for the instruction and instruction plus spiraling activities groups. Therefore, we can provide preliminary evidence that the pedagogical interventions rooted in sociolinguistic knowledge about the effects of variables on the choice of a future variant had an effect on the participants' behavior in the production, preference, and metalinguistic awareness tasks in that participants demonstrated sensitivity to the linguistic variables' effects in their responses and in the expected directionality (e.g., MF for distant contexts, PI for near contexts and in the presence of adverbials, PF in near and intermediate contexts, in the absence of an adverbial, and with informal interlocutors).

Between-groups chi-square tests revealed further differences between the control group and the instruction groups. Starting with the MF, this variant was produced and selected at significantly higher rates by the control group when compared to the instruction group and the instruction plus spiraling activities group in all three tasks (oral task $p<.001$ for both comparisons with a medium and a small effect size, respectively; written task $p<.05$ with a medium effect size for the instruction group and $p<.05$ with a small effect size for the instruction plus spiraling activities group; and preference task $p<.001$ for both comparisons with a medium and a small

effect sizes, respectively). The instruction and the instruction plus spiraling activities group also displayed significant differences in MF production and selection across the three tasks since the instruction plus spiraling activities group produced/selected the MF at significantly higher rates than the instruction group ($p<.001$, with a small effect size for all three tasks).

As for the PF, the control group produced this variant at significantly lower rates in the production tasks when compared to both instruction groups (oral task: $p<.05$ in each case, both with a small effect size; written task: $p<.001$ for only the instruction plus spiraling activities group also with a small effect size). No significant differences were found in PF *production* between the control and the instruction group. Whereas the control group selected the PF at significantly lower rates than the instruction group ($p<.001$ with a medium effect size), the selection was not significantly different between the control and the instruction plus spiraling activities group. The instruction and instruction plus spiraling activities group only showed significant differences for the PF in the preference task ($p<.001$ with a medium effect size) since the instruction group selected the PF at a significantly higher rate.

Lastly, for the PI, similar patterns were observed in the production tasks: the control produced the PI at significantly lower rates than the instruction group in both production tasks with a small effect size ($p<.001$ in both tasks), but only in the oral task when compared to the instruction plus spiraling activities group ($p<.05$ with a small effect size). The instruction and instruction plus spiraling activities group did not show significant differences in PI production in either of the production tasks. In the preference task, whereas no significant differences were found in PI selection between the control and the instruction group, the instruction plus spiraling activities group selected the PI at significantly higher rates when compared to the control group and the instruction group ($p<.001$ with a small effect size in both comparisons).

Overall, in the production tasks, the instruction groups were different from the control in the comparisons of each of the three future variants, whereas the instruction groups were not significantly different from each other in PF and PI production. On the other hand, in the preference task, the two instruction groups selected each of the variants at significantly different rates from each other. The instruction plus spiraling activities group may have produced and selected more MF due to its practice with this form in the spiraling activities task which the instruction group did not have. In sum, we can note general patterning of the instruction groups apart from the control group.

An additionally important finding relates to research question four: the control group, which did not receive the sociolinguistic intervention, was unable to articulate the different forms of expressing the future in Spanish and was also unable to identify relevant factors that affect the choice of future-time forms in the metalinguistic awareness task. On the other hand, the responses of both instruction groups were rooted in sociolinguistic knowledge and demonstrated awareness of the different forms that are used to express the future and of the ways different factors affect the choice and use of one form over the others (e.g., MF as being more formal, whereas the PF is used in informal contexts and with informal interlocutors). Therefore, the pedagogical intervention was quite successful in enhancing participants' awareness of sociolinguistic variation and in developing learners' sociolinguistic competence, as participants were not only able to demonstrate grammatical knowledge of the future forms but also are able to use and select them appropriately according to linguistic and extralinguistic factors.

We now turn our attention to interpreting the three main contributions of the present dissertation: the pedagogical intervention, the role of task-based differences, and the benefits of task triangulation.

6.2 Pedagogical intervention

As discussed in the previous literature sections (chapters 2 and 3), past research has demonstrated that an explicit focus on specific structures of the target language can improve learners' performance and may even be necessary (Doughty & Williams, 1998; Spada, 1997). Van Compernolle and Williams (2011) provided evidence that "explicitly drawing learners' attention to a particular form and its contexts of use is more effective than simply exposing them to authentic discourse with little or no guidance" (p. 37). This previous knowledge of the benefits of explicit focus on forms and contexts of use served as the basis to the pedagogical intervention implemented in this study. This intervention drew explicit attention to the three most common forms to express futurity in Spanish and the factors that affected such use. The implementation of the pedagogical intervention designed for this dissertation was a necessary step in addressing the call for the inclusion of variation in the foreign language classroom (Etienne & Sax, 2009; Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006; Valdman, 2002). Several researchers have noted the lack of variation in textbooks and in the classroom, which prevents learners from developing a more complete vision of language used in the real world and to have access to the different forms that exist to express a language function such as futurity. In the past, it was believed that learners usually only demonstrated sensitivity to variation and sociolinguistic competence after extensive contact with native speakers, such as in a study abroad program (Dewaele, 2002).

Although we firmly believe that lengthy exposure to the target language is a necessary condition for learners to develop proficiency and that study abroad is a beneficial experience for learners not only to develop language skills but also to deepen their knowledge of the culture of the target language, study abroad is certainly not the only way to enhance learners' sociolinguistic competence and awareness of variation. Moreover, some variation may be below the level of

consciousness, and teachers may need to bring the explicit attention of learners to detect and understand it (similar to focus on form, e.g., Doughty & Williams, 1998; Long, 1991, 1997). As Cohen and Shively (2007) were able to demonstrate, their intervention about variation in the forms used to express the linguistic functions of apology and request in Spanish and French to learners prior to study abroad had a positive impact in that those learners who received the intervention performed better in a speech act performance task, thus showing greater gains in using apology and requests structures after studying abroad than those learners who studied abroad but did not receive the intervention.

Informed by the benefits of a pedagogical intervention before a stay abroad, the present study implemented an explicit intervention that also had benefits for the at-home students who received it, allowing them to develop their knowledge of variation in future-time expression. The intervention not only brought explicit focus on the most common forms to express futurity but also to the different factors that affect their use as observed in research about native Spanish patterns. The current intervention attempted to enhance all instructed learners' sociolinguistic competence regardless of whether they planned on studying abroad: the main objective of this study was to provide all leaners with a common base of knowledge of sociolinguistic variation starting at a relatively low course level and to give all experimental learners the same opportunity to learn about the different ways to express futurity as a native speaker.

Gutiérrez and Fairclough (2006) presented their view on the need to include linguistic variation in the language classrooms from beginning levels of proficiency, seeing that variation is typically absent from language classes, which prevents students from develop a broader knowledge of all the forms used to express a specific meaning and to move from the one-to-one principle to multifunctionality. Moreover, the general absence of classroom language that represents some

level of geographic variation renders most classroom input as a form of standardized pan-Spanish that is not actually spoken in any region (Gutiérrez & Fairclough, 2006). Gutiérrez and Fairclough (2006) present the morphological future as an example of the disconnection of knowledge in the classroom versus in the real world: while the MF is presented in textbooks as the canonical form to express the future in Spanish, a wide body of evidence from native Spanish speakers that the periphrastic future is the most commonly used future variant across the Spanish-speaking world (e.g., Escobar, 1997; Gutiérrez, 1995; Orozco, 2005, 2006; Sedano, 1994; Silva-Corvalán, 1994; Silva-Corvalán & Terrell, 1989). This ties to the need for instruction informed by variation that is based on repeated findings from previous research, which should be implemented in language classrooms in order to teach variation (Geeslin with Long, 2014). The pedagogical intervention implemented in this dissertation was created with these gaps in mind and presented learners with the three most common forms of future in Spanish and with the factors that affect their use as reported in the variationist literature on native speakers' patterns of future use. A benefit of presenting more future forms than the MF was in order to avoid fossilization of the MF as the control group showed overall. The intervention only required 15 minutes to implement in a regular lesson when the future was scheduled to be presented and therefore was easy to integrate as a short intervention in the current Spanish curriculum. Besides presenting the main characteristics of each future form, participants were also presented with examples of sentences that contained these forms in order for the students to see the forms in context. Participants were for the most part engaged in the explanation as they were asked guiding questions by the researcher for them to notice the characteristics of each future form in the sample sentences in a way that participants had to internalize the knowledge with which they were presented and apply it by analyzing the sample sentences. Both instruction groups that received the pedagogical intervention were able to

produce/select the three future forms presented in the intervention in a target-like way across the three Spanish tasks. The directionality of the effect of the independent variables was native-like; however it should be noted that whereas the instruction group showed sensitivity to the main linguistic factors at Time 2 (immediate post-test after the intervention), they were not able to maintain such sensitivity as time progressed as shown by the lack of significance of such linguistic variables in the multivariate regression for Times 3 and 4 for the instruction group in the written production task. On the other hand, the instruction plus spiraling activities group was able to maintain sensitivity to the linguistic factors at Times 3 and 4 as the longitudinal design of the present study that tracked those changes across time was able to show. Since the only difference in instruction between the groups was the spiraling activities, the extra repetition provided by the spiraling activities could be the motivating factor for this difference, as explored in the next paragraph. Overall, instruction in general was helping participants in progressing through the stages of acquisition faster than regular groups analyzed in previous literature (e.g., Kanwit, 2014, 2017).

The spiraling activities were completed by participants in the instruction plus spiraling activities group every two weeks between the two delayed post-tests as a way to reinforce the knowledge presented in the pedagogical intervention. Therefore, participants were given an opportunity to review the future forms through a variety of topics that were part of the Spanish curriculum. These tasks were easy to implement as they served to replace the regular speaking and writing activities from the textbooks as a more engaging way to practice the contents of the pedagogical intervention. The spiraling activities were designed as a group activity, therefore offering the participants an opportunity to interact with their classmates (Lightbown & Spada, 2002) and to negotiate meaning in order to complete the tasks (Ellis, 2003; Long, 1996). In

addition, the spiraling activities focused the participants on the future forms and served as an explicit controlled practice that completed the exposure to the forms in the pedagogical intervention (DeKeyser & Juffs, 2005; Dörnyei, 2009; Doughty & Williams, 1998; Long, 1991, 1997; Spada, 1997).

The participants who received the intervention and completed the three sets of spiraling activities also demonstrated target-like rates of use and selection for the three variants, although they did not show a such a drastic increase in the use of the PF as observed in the instruction group, which could be due to the fact that all three future forms were presented at similar rates in the spiraling activities, which helped participants become familiar with all three forms but which may have diluted the message that was presented in the pedagogical intervention. Overall in the production tasks, the instruction and the instruction plus spiraling activities groups did not produce any of the three most common forms at significantly different rates from each other, whereas the instruction groups did show significantly different rates of production and selection from the control group.

A benefit of the spiraling activities then lies in the fact that participants had to report on the effect of the independent variables on the choice of the future forms used in the dialogues featured in the activities. The additional practice on reporting the effects of the independent variables was observed in the maintenance of the sensitivity to these factors beyond Time 2 (intervention) but also at Times 3 and 4 (delayed post-tests), which again only was maintained by the instruction plus spiraling activities group. The spiraling activities were successful in restructuring the participants' U-shaped development such that participants had more practice and more opportunities to engage with the contents of the intervention whereas the participants in the instruction group did not have such additional practice.

In attempting to determine if either instruction group could be viewed as having demonstrated further holistic development than the other, we now consider the major developments exhibited by both groups, informed by differences with each other, with the control group, and with our predictions from the large body of work on native varieties of Spanish (Table 6-1). The instruction groups did not display significantly different production rates of PF and PI in the production tasks, only MF production was significantly different in both tasks, higher for the spiraling group in both cases. This is an advantage for the instruction group since the participants in this group were producing the PF at significantly higher rates, which was expected following the intervention which presented the PF as the most commonly used form in native speech. The two instruction groups were significantly different from each other in the preference task for all three future variants: again, the instruction group selected the PF at significantly higher rates, which is the native-like form of choice, whereas the instruction plus spiraling activities group comparatively selected the MF and the PI at significantly higher rates, contrary to the expected results. This finding could be explained by the implementation of the spiraling activities since the participants in the instruction plus spiraling activities group were exposed to the three future variants at similar rates in these activities after the intervention and therefore selected the forms at similar rates instead of showing a differential pattern of selection as the instruction group showed. This is a possible advantage for the instruction group in maintaining the target-like trends in production and selection.

In terms of sensitivity to linguistic factors, the instruction group became sensitive to temporal distance after the intervention in all three tasks; however, they only maintained it in the oral task (for both factors) and in the preference task for temporal distance. As for presence of temporal adverbials, the instruction group demonstrated sensitivity to this factor at Time 2 in the

oral and preference tasks but only maintained it in the oral task. This group only displayed sensitivity to formality of the interlocutor at Time 2 in the oral task but did not maintain it in this task, although they developed sensitivity to formality at Times 3 and 4 in the written production task. On the other hand, the instruction plus spiraling activities group became sensitive to temporal distance and presence of temporal adverbials in the oral and preference tasks and maintained it over time. This group also became sensitive to temporal distance in the written task and maintained it over time. They also developed sensitivity to formality of the interlocutor at Time 2 for the oral task but did not maintain it over time. Therefore, we can see a slight advantage for the instruction plus spiraling activities group in maintaining their sensitivity to linguistic factors but, as Table 6-1 demonstrates, the groups overall are marked by more similarities than differences.

Table 6-1 Evidence of development in the instruction groups

Instruction group	- Produced/selected the three future forms presented in the intervention in a target-like way across the three Spanish tasks - More selection of the cross-linguistically dominant PF than instruction plus spiraling activities group - Significant differences in production/selection of three future forms when compared to the control group overall - Sensitivity to temporal distance at Time 2 (posttest) across tasks - Maintenance of sensitivity to temporal distance at Times 3 and 4 only in oral production and preference task - Sensitivity to presence of temporal adverbials at Time 2 but not across time in preference task - Development of sensitivity to presence of temporal adverbials at Times 3 and 4 only in oral production task - Native-like directionality of linguistic variables (more PF in near contexts and in the absence of temporal adverbials) - Correct identification of the MF in the metalinguistic awareness task at Time 4 (question 1) - Detailed and target-like explanation of the uses of the three future forms in metalinguistic awareness task at Time 4 (question 3)

Table 6-1 (continued)

	- Correct description of the reasons for using each of the three future forms mentioning corresponding linguistic factors at Time 4 in metalinguistic awareness task (question 4) - Able to accurately explain the contents of the intervention in the self-reflection task
Instruction plus spiraling activities group	- Produced/selected the three future forms presented in the intervention in a target-like way across the three Spanish tasks - More MF production/selection than instruction group - Significant differences in production/selection of three future forms when compared to the control group overall - Sensitivity to temporal distance and presence of temporal adverbials at Time 2 (posttest) for oral production and preference tasks - Maintenance of sensitivity to temporal distance and presence of temporal adverbials at Times 3 and 4 for oral production and preference tasks - Sensitivity to temporal distance in written production task at Time 2 - Maintenance of sensitivity to temporal distance in written production task at Times 3 and 4 - Native-like directionality of linguistic variables (more PF in near contexts and in the absence of temporal adverbials) - Correct identification of the MF in the metalinguistic awareness task at Time 4 (question 1) - Detailed and target-like explanation of the uses of the three future forms in metalinguistic awareness task at Time 4 (question 3) - Correct description of the reasons for using each of the three future forms mentioning corresponding linguistic factors at Time 4 in metalinguistic awareness task (question 4) - Able to accurately explain the contents of the intervention in the self-reflection task

We conclude that both the instruction and the instruction plus spiraling groups succeeded at producing the variants at target-like rates and in becoming sensitive to the linguistic factors in the expected directionality when compared to the control group.

6.3 The role of task-related differences

This dissertation considered task-related differences and how those affected the results across an oral production task, a written production task, and a contextualized preference task. As Geeslin and Gudmestad (2008a) noted, it is important to recognize the variation resulting from using different tasks as methods of data elicitation given the different cognitive demands that each task places on participants (R. Ellis, 2004).

6.3.1 Task-related differences in overall rates of production and preference

Although there were certain differences reported across tasks in the present study, there was greater consistency overall than had been reported in prior work. Namely, participants, especially in the instructional groups, were very consistent across the oral and written production tasks, although there were some greater differences in the preference task. Nevertheless, these differences were generally less notable than had been reported previously. Contrary to Kanwit (2014), who reported noticeable differences between the performance of his participants in the oral production task and the written preference task, in the present study there were many similarities across tasks, which indicates production than more closely matched preference and likely a greater understanding of rates and predictors of form use and selection that was applied across task types, especially for the instruction groups. One reason for this difference is likely due to the fact that the learners in Kanwit (2014) received no such instructional treatment and only completed tasks on one occasion, meaning that all learners in the present study had a greater opportunity to practice expressing the future orally and in writing, which was amplified for those who received the instructional treatment and for those who also completed spiraling activities. In this chapter, I have

already noted that each of the groups demonstrated very similar patterns of use for the oral and written production tasks. Participants in the control group produced the MF at higher rates (40.2%) followed by the PF (30.3%) and the PI (29.4%) in the oral production task. Similarly, this group produced the MF at higher rates (36.4%) in the written production task; however, the MF was followed by the PI (32.0%) and then the PF (31.6%) instead of the other way around as in the oral production task, although rates were quite similar. The selection patterns in the preference task were the same as the production patterns in the oral task for this group: the MF was the most preferred variant (46.8%) followed by the PF (42.2%) and the PI as the least selected variant (11.0%). As expected, the control group used/selected the MF at the highest rates across tasks, given that this form was the only form to express future provided in their traditional instruction.

Participants in the instruction group showed consistent patterns across the production tasks and at highly similar rates: they produced the PI at the highest rates (43.5% for the oral task and 43.8% for the written task), followed by the PF (42.2% for the oral task and 38.3% for the written task) and the MF (14.3% for the oral task and 17.9% for the written task). The slight differences in rates match the pattern of the findings in Solon and Kanwit (2014), as oral tasks tend to enhance the use of more informal language and more common forms such as the periphrastic future and the present indicative, although participants were more consistent in the present study and showed greater inter-task variability in the earlier study. There were some differences in the preference task when compared to the production tasks as this group preferred the PF (61.5%) followed by the MF (27.0%) and the PI (11.5%), which was selected at the lowest rate. Although the PF is more informal than the MF (Sedano, 2006) and might not otherwise be expected to be selected at higher rates than it is used, the greater control offered to participants in the preference task (i.e., in selecting a pre-provided form rather than having to produce language) and the greater ability to

tap into conscious, explicit knowledge of the popularity of the PF without the pressure of production may have been what elevated PF rates in the preference task (R. Ellis, 2004). In sum, learner knowledge of the PF's general viability may have thus been a greater selection motivator than knowledge that the PF is often considered more informal than the MF. What is more, the contextualized preference task was worded with vernacular language and included a story of a college-aged individual progressing through various connected contexts, so it is thought to elicit more informal language than a preference task that contains disconnected, decontextualized items or items about more formal topics or unrelated themes (Geeslin, 2003). Thus, disfavoring of a formal variant on the contextualized preference task is not completely surprising.

Finally, participants in the instruction plus spiraling activities group also displayed the same patterns across the production tasks and were the most consistent of the groups in this fashion: they produced the PF at the highest rates (38.2% for the oral task and 37.9% for the written task), followed by the PI (36.5% for the oral task and 34.9% for the written task) and the MF (25.3% for the oral task and 27.2% for the written task). For the preference task, this group continued to prioritize the PF (42.5%), but reversed the order of the two other variants: they then selected the MF at (37.5%) and the while PI became the least selected variant (20.0%). The greater consistency of the viability of the native-preferred PF (e.g., Orozco, 2005) across all tasks may be the result of the additional activities performed by this group. Similarly, the MF, which has greater formality restrictions than the PF in native speech (Sedano, 2006), matched the predicted patterns of being selected at higher rates than it was used. Nevertheless, an alternate explanation is possible: this may also reflect the fact that the MF is multi-syllabic and contains a set of frequent irregular verbs, which means that learners may avoid and instead rely more on simpler forms in production (as in Bardovi-Harlig, 2004 for L2 English). The distribution of the PI supports both possible

explanations, as the form is generally considered less formal than the MF, but it is also shorter and easier to produce, so it is not surprising that it appeared more in production than written preference.

6.3.2 Task-related differences for predictive factors

Since overall rates of use and selection are only one piece of the puzzle, variationists also prioritize the effect of independent variables on such use and selection (Bayley & Langman, 2004). Regarding the significance of independent variables, important similarities, but also differences, were observed in the comparisons across tasks. Starting with the control group, for the PF vs. MF comparison at Times 1 and 2 no variables were significant for the oral task, test time was significant for the written task, and test time was also significant in addition to temporal distance in the preference task. For this comparison at Times 3 and 4 no variables were selected as significant by the model in any task. For the PF vs. PI comparison, presence of temporal adverbials and formality of the interlocutor were significant at Times 1 and 2 for the oral task, no variables were significant for the written task, and temporal distance and test time were significant in the preference task. At Times 3 and 4 no variables were significant for any task. Crucially, as noted before, the control group did not become sensitive to the *linguistic* variables considered in the regression models. On the one hand, it is not surprising that the control group did not gain sensitivity to independent linguistic variables for which they had not received instruction. For example, temporal distance and the presence of adverbs did not constrain the oral production of the 4th semester learners of Kanwit (2017) or the written preference of the 4th semester learners of Kanwit (2014) and the presence of adverbs also failed to condition the least proficient learners (i.e., 2nd semester) in the written preference task of Gudmestad and Geeslin (2013), with temporal distance failing to affect the authors' 2nd semester learners in their PF-PI comparison. Thus, prior

research that did not contain interventions supports a lack of sensitivity to independent variables at this level.

Moving on to the instruction group, for the PF vs. MF comparison at Times 1 and 2, temporal distance was significant in all three tasks, formality of interlocutor in the oral task together with test time, and presence of a temporal adverbial and test time in the preference task. At Times 3 and 4 temporal distance was significant in the oral and preference tasks, in addition to presence of temporal adverbials in the oral task and task version in the preference task while only formality of the interlocutor was significant in the written task. As for the PF vs. PI comparison at Times 1 and 2 no variables were selected as significant by the regression model for the production tasks and only test time was significant in the preference task. At Times 3 and 4 for this comparison, presence of a temporal adverbial was a significant predictor for the production tasks in addition to task version for the oral task, while test time was the only significant predictor for the preference task. In sum, participants in the instruction group became sensitive to the linguistic variables regardless of the task they were completing. As noted in the discussion of the research questions, conditioning according to temporal distance and the presence of temporal adverbials is usually demonstrated much later in cross-sectional designs (Gudmestad & Geeslin, 2013; Kanwit, 2014, 2017), meaning that repeated practice with the tasks and the instructional treatment likely accelerated what variationist research has generally shown – that sensitivity to independent predictors often lags behind production and preference for a particular variant (Bayley & Langman, 2004; Geeslin, 2003, 2011; Geeslin & Gudmestad, 2008a, 2008b; Regan, 2004; Rehner, 2002). This finding has been possible to report due to the use of a longitudinal design in the present dissertation since the development of the learners' rates of production and selection and their sensitivity to linguistic factors was tracked across time (one semester).

Lastly, for the instruction plus spiraling activities group, temporal distance was a significant predictor across tasks, presence of a temporal adverbial was significant for the oral and the preference tasks, and formality of the interlocutor and test time were significant for the oral task regarding the PF vs. MF comparison at Times 1 and 2. For the same comparison at Times 3 and 4, temporal distance and test time were significant factors across tasks, while presence of temporal adverbials was significant only in the oral and preference tasks. As for the PF vs. PI comparison, at Times 1 and 2, no significant predictors were chosen by the model in the oral task, temporal distance and task version were significant for the written task, and only grammar score was significant for the preference task. At Times 3 and 4, grammar score was significant for the oral task, temporal distance for the written task, and presence of temporal adverbials and test time for the preference task. Similar to the instruction group, participants in the instruction plus spiraling activities group also became sensitive to the main linguistic variables across tasks. In their case, some combination of completing the tasks throughout the semester, receiving the instructional treatment, and completing spiraling activities helped reinforce the role of independent linguistic variables ahead of what would be expected for this course level (Gudmestad & Geeslin, 2013; Kanwit, 2014, 2017). As with the other instruction group, they demonstrate that the lagging behind of independent variables (Bayley & Langman, 2004; Geeslin, 2003, 2011; Geeslin & Gudmestad, 2008a, 2008b; Regan, 2004; Rehner, 2002) may be ameliorated with additional practice and cognitively-informed explanations of variable processes.

Overall then, it can be noted that tasks presented some similarities in respect to the rates of production and selection and in what factors were significant according to the regression model, especially for the instruction groups. As noted, both instruction groups displayed target-like trends of use and selection and became sensitive to the linguistic variables regardless of task, which can

be explained as a result of the effectiveness of the intervention in teaching the participants about the common trends of use for each of the forms and the effects of the linguistic variables in their use. The main benefit of the pedagogical intervention is that it helped to speed up target-like conditioning according to the independent variables on all tasks only for the instruction groups, which is different from Kanwit (2014) who reported major differences between the oral task and the preference task in that the participants selected future forms that they did not produce in the oral task and they showed sensitivity to linguistic variables in the preference task before the oral production task. Thus, part of the benefit of the interventions seems to be present in minimizing what would otherwise be glaring differences across tasks for learners of this course-experience level.

6.4 Further benefits of task triangulation

Previous studies that have investigated acquisition of the Spanish future-expression by learners have nearly exclusively used either contextualized preference tasks (Gudmestad & Geeslin, 2013; Kanwit & Solon, 2013), written production tasks (Solon & Kanwit, 2014) or oral production tasks (Gudmestad & Geeslin, 2011; Kanwit, 2017). Solon and Kanwit (2014) and Kanwit (2014) moved away from using a single task to investigate this topic by including both oral and written production tasks in the former study, and oral and written preference task in the latter. Although they each included multiple tasks, Solon and Kanwit (2014) did not implement a preference task, whereas Kanwit (2014) did not integrate a written production task. The present study progressed beyond the prior body of work on future-time expression by including all three

types of tasks: oral production, written production, and written contextualized preference tasks in order to offer a more comprehensive understanding of the data collected from participants.

Furthermore, the body of work cited above did not attempt to tap into other components of learner knowledge. Thus, an important contribution of this study regarding triangulation was the inclusion of both metalinguistic awareness tasks and self-reports following van Compernolle and Williams (2011), who included these tasks in order to triangulate the data from the performance tasks with the non-performance tasks. The authors argued that in order to investigate leaners' knowledge of linguistic variation it is not sufficient to only explore participant behavior in performance tasks, which may not be reflective of the full extent of learner knowledge. The authors instead note that it is necessary to include tasks that target competence which is in fact reflective of learners' knowledge. The authors provided evidence to support this claim by reporting that their participants in different conditions did not *perform* differently from each other after their intervention but that the authors observed differences between the groups in the metalinguistic awareness task and self-reports in that participants were able to express the variation between *ne* presence and absence in non-performance tasks. For the present study, the results of the metalinguistic awareness task and the self-reports served as additional support to the results in the performance tasks that the pedagogical intervention was beneficial in developing students' knowledge of future variation, since the control group did not demonstrate such nuanced knowledge in either type of task.

6.5 Conclusions, limitations, and future directions

This dissertation represents a necessary first step in filling the gap in previous literature with respect to the language that is presented in the classroom (that lacked variation overall) and language in the real world (Etienne & Sax, 2009; Geeslin with Long, 2014; Gutiérrez & Fairclough, 2006). This gap has been filled in this dissertation by means of an explicit pedagogical intervention informed by sociolinguistic research on the variation of future-time expression in Spanish. The focus of the intervention was on future expression, given the fact that the structure has been explored in terms of the different forms speakers use and in the factors that constrain their use, but previous research has not addressed the acquisition of future-time expression through the implementation of an explicit pedagogical intervention. This intervention was implemented in lower-intermediate Spanish classes in order to investigate whether it was beneficial in enhancing learners' awareness of variation and in developing their sociolinguistic competence.

Throughout this dissertation, it has become clear that learners of a foreign language need to be provided with information not only about what is grammatical but also about what is appropriate, as in considering the contextual and social aspects of the interaction. Another important factor is the fact that some forms, especially those that show variation, require explicit attention-raising, as without this attention learners would not notice them even, for example, in the L2 host environment during study abroad (van Compernolle & Williams, 2011). Just as Cohen and Shively (2007) prepared their participants with tasks and an intervention before a stay abroad and that intervention had positive effects in learners noticing the variation in apologies and requests, an intervention such as the one used in this study that shows participants acknowledging variation and being able to put into practice the knowledge from the intervention not only in performance tasks but also in metalinguistic tasks would improve the experience abroad if current participants

were to later sojourn. It also will improve the experience of learners in general regardless of whether they study abroad, as their knowledge of the language is more complete by being familiar with how numerous dialects of the language of study use a structure and what factors affect it and in which directionality.

Given the increasing proliferation of research studies based on the variationist framework, it is time to move away from the old tradition of teaching the 'standard' variety of language as an invariant object and include variation in textbooks and classrooms (Gutiérrez & Fairclough, 2006; Geeslin with Long, 2014; van Compernolle & Williams, 2012b). Including variation observed in previous variationist research in the classroom by implementing explicit pedagogical interventions and creating opportunities for learners to use variable structures in contextualized tasks has the potential to result in raising learners' awareness of linguistic variation and enhancing their sociolinguistic competence, as demonstrated presently.

An additional key contribution of the present study is the use of a longitudinal design instead of cross-sectional design used in the body of previous studies that have tracked the acquisition of future-time expression in learners. Another contribution is the inclusion of metalinguistic awareness tasks and self-reports as means to triangulate the performance data (van Compernolle & Williams, 2011). These additional tasks provide further insight in evaluating the knowledge of the learners, as performance data do not target the metalinguistic knowledge the leaners may have developed after the pedagogical intervention. The present study has also collected data in English from the same participants in order to establish parallelisms and connections between the patterns in their L1 and their foreign language to see how their L1 affects their L2 (Fafulas, 2013; Geeslin, 2003; Gudmestad, 2012; Kanwit 2014; Killam, 2011). This study also improved the methodology of the prior body of work by collecting data from the instructors

of the participants, which allowed for an analysis of the possible influence of instructors' patterns on learners' patterns (Sax, 2003).

The present dissertation is not one without limitations: there was major participant attrition as more than half of the original participants had to be excluded from the study due to lack of attendance to at least one data-collection or instructional session of the experiment. The loss of more than 60 participants gave way to an uneven distribution of gender and low token counts which required combinations in portions of the statistical analysis of the data. In addition, the present study only included participants from one lower-intermediate level group, which resulted in the simplification of the study's design in terms of excluding some independent variables from the analysis such as clause type, participant gender, person and number of the subject, and certainty, which would be analyzable for more proficient learner groups who produced a greater range of syntactic structures such as subordination. Verb was included as a random effect in the multivariate analyses since the participants did not use all lexemes at the same rates but future work may analyze the role of verb lexeme in terms of when they are integrated in the learners' grammars and whether there is a relationship between future form and verb lexeme used.

Future studies will benefit from including more participants from different proficiency levels and including the above-mentioned independent variables in related analyses. Given the success of the present pedagogical intervention in the enhancement of participants' sociolinguistic competence and knowledge about language variation of future-expression, subsequent studies will benefit from the application of similar interventions about other variable structures in Spanish such as perfective variation (present perfect vs. preterite), aspectual variation (present indicative vs. present progressive), forms of address, and intensification of adjectives, among others which have been shown in the sociolinguistic body of research to be constrained sociolinguistically (Blas

Arroyo, 1994, 1994-1995; Brown & Cortés-Torres, 2013; Geeslin, Fafulas, & Kanwit, 2013; Kanwit, Terán, & Pisabarro Sarrió, 2017; Schwenter, 1993; Schwenter & Torres Cacoullos, 2008).

Portions of the present dissertation will provide rich data sources for further analyses in follow-up analyses: the spiraling activities implemented together with the pedagogical intervention for the instruction plus spiraling activities group could be magnified in publication of the pedagogical benefits of the activities (e.g., targeted at a more curriculum-oriented reader population), which would provide extensive analysis not only of the written component but of the recorded interactions participants had when completing the written activities. This analysis will undoubtedly offer valuable information regarding participants' mental representations and conceptualizations of the knowledge acquired during the pedagogical intervention. Future spiraling activities should represent usage-based approaches in terms of frequency of use of the variable forms in the input that approximate target-like rates of use (e.g., present MF and PI at lower rates and MF at higher rates instead of all three forms presented at the same rates in the input of the spiraling activities).

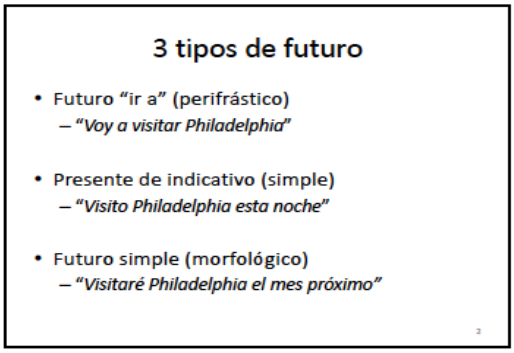
Although the comparison between patterns in English and in Spanish by the same participants was presented as a point of comparison, subsequent publications from this dissertation could be especially centered around an in-depth comparison of both the patterns of use/selection and the effects of the independent variables on future forms between the two languages. Subsequent studies could also analyze instructors' linguistic performance on the tasks not only in terms of use/selection but also in terms of the role of independent variables, either by extending the number of items on the tasks or by recruiting more instructors, since the present group of six instructors did not produce enough data to perform more than descriptive cross-tabulations of the independent variables, as opposed to predictive models. A further comparison of instructors and

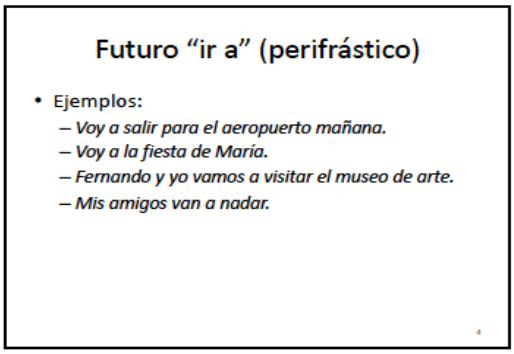
participants would be provided in such study, which could also record classroom sessions in order to determine the extent to which instructor language use in the classroom matched instructor performance on the tasks.

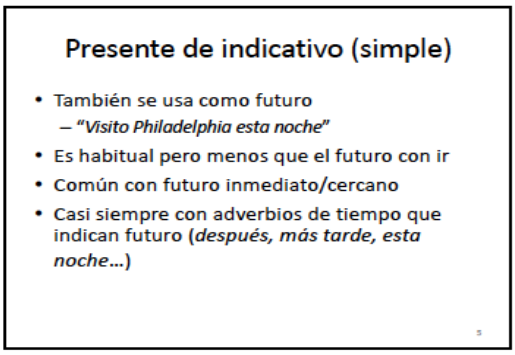
In sum, the present dissertation represents a necessary contribution to addressing the lack of consideration of sociolinguistic variation in the classroom that often hinders students from developing sociolinguistic competence or an ability to integrate multiple forms into learner grammars in a relatively short period. The study provides evidence that students are able to develop this competence even at lower levels of proficiency with a relatively brief intervention during a semester and without having studied abroad. Future work will undoubtedly build upon the present findings across different structures, learner levels, and task designs.

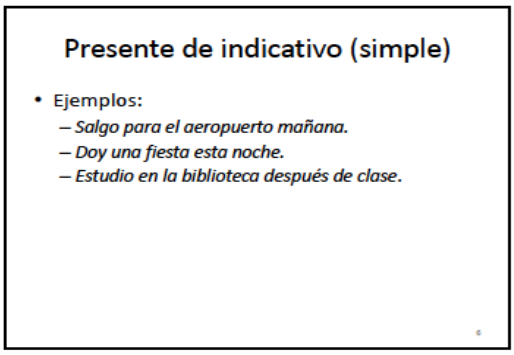
Appendix A Pedagogical interventions

A.1 Instruction group pedagogical intervention









Futuro simple (morfológico)

- Añadir terminación al verbo en infinitivo
  - *"Visitaré Philadelphia el mes próximo"*
- Se usa con menos frecuencia que el futuro con ir
- En general, futuro lejano/distante
- Común usar adverbio de tiempo
- Contextos formales y en el registro escrito

7

Futuro simple (morfológico)

- Ejemplos:
  - *Rafael visitará Ecuador el mes próximo.*
  - *Mis amigos volverán después de dos semanas.*
  - *Viajaré a Europa el año próximo.*

8

A.2 Instruction plus spiraling activities group pedagogical intervention

El futuro en español

Span 0002

1

– *"Voy a visitar Philadelphia"*

– *"Visito Philadelphia esta noche"*

– *"Visitaré Philadelphia el mes próximo"*

2

3 tipos de futuro

- Futuro "ir a" (perifrástico)
  – *"Voy a visitar Philadelphia"*
- Presente de indicativo (simple)
  – *"Visito Philadelphia esta noche"*
- Futuro simple (morfológico)
  – *"Visitaré Philadelphia el mes próximo"*

3

Futuro "ir a" (perifrástico)

- Ir a + infinitivo
  – *"Voy a visitar Philadelphia"*
- Forma más común
- Estilos coloquiales e informales
- Registro oral
- Describe cualquier momento del futuro
- Contextos temporales diferentes
- Sin adverbios (expresiones de tiempo)
- Some certainty (desire and intention)

4

Futuro "ir a" (perifrástico)

- Ejemplos:
  – *Voy a salir para el aeropuerto mañana.*
  – *Voy a la fiesta de María.*
  – *Fernando y yo vamos a visitar el museo de arte.*
  – *Mis amigos van a nadar.*

5

Presente de indicativo (simple)

- También se usa como futuro
  – *"Visito Philadelphia esta noche"*
- Es habitual pero menos que el futuro con ir
- Común con futuro inmediato/cercano
- Casi siempre con adverbios de tiempo que indican futuro (*después, más tarde, esta noche…*)
- More certainty, clear in speaker's mind, more control

6

Presente de indicativo (simple)

- Ejemplos:
  - *Salgo para el aeropuerto mañana.*
  - *Doy una fiesta esta noche.*
  - *Estudio en la biblioteca después de clase.*

7

Futuro simple (morfológico)

- Añadir terminación al verbo en infinitivo
  - *"Visitaré Philadelphia el mes próximo"*
- Se usa con menos frecuencia que el futuro con ir
- En general, futuro lejano/distante
- Común usar adverbio de tiempo
- Contextos formales y en el registro escrito
- Not so certain, distant events less clear and less control

8

Futuro simple (morfológico)

- Ejemplos:
  - *Rafael visitará Ecuador el mes próximo.*
  - *Mis amigos volverán después de dos semanas.*
  - *Viajaré a Europa el año próximo.*

9

+ certainty ←----------→ - certainty

Pres simple going to simple future

Viajo al Caribe mañana.

Voy a viajar al Caribe.

Viajaré al Caribe el año próximo.

10

Appendix B Language Background Questionnaire

Please complete this brief questionnaire for research purposes. Participants' responses will remain anonymous when reporting the results of the study.

Age: _____ Gender: ☐Male ☐Female ☐_____

1. What year of college are you in?
   ☐ Freshman☐Sophomore☐Junior☐Senior☐_____
2. What is/are your native language(s):
   ☐ English ☐Spanish ☐Other: _____
3. Growing up, was Spanish spoken in your home?
   ☐NO ☐YES If Yes, by whom? _____ And what dialect?_____
4. Have you taken any other Spanish courses at university?
   ☐NO ☐YES If Yes, which courses? _____

   If yes, what countries were your instructors from?/what dialect did they speak?
5. How many years of Spanish instruction did you receive in high school? _____
6. If you took Spanish in high school, what countries were your professors from? If American, what dialect of Spanish did they speak? _____

   Do you know any other languages besides Spanish and English? ☐NO ☐YES

   Language(s):_____

   Length of time studied/spoken:_____
7. Do you speak Spanish outside of class?
   ☐NO ☐YES If yes, how often and with whom:
8. Have you ever spent time abroad in a Spanish-speaking country?
   ☐NO ☐YES If yes: City/Country: _____

   Time spent: _____

   Reasons for trip(s):_____

10. Do you want to study abroad in a Spanish-speaking country during college?

    ☐NO ☐YES

    If yes, What Country/countries: _____

    Reasons for choice of country/countries: _____

11. What are your reasons to study Spanish in college?

    _____

12. Are you planning on taking more Spanish classes at university?
    ☐NO ☐YES If Yes, why? _____
13. Are you planning on minoring or majoring in Spanish?
    ☐NO ☐YES If Yes, why? _____

Appendix C Verb conjugation test

Lee las instrucciones y completa las siguientes tres actividades.

1. Conjuga los verbos entre paréntesis en presente de indicativo.

Yo _____ (comer) en Panera el jueves.
Él _____ (comer) en Panera el jueves.
Ellos _____ (comer) en Panera el jueves.
Ella _____ (practicar) español antes del examen.
Los estudiantes _____ (practicar) español antes del examen.
Mis amigos y yo _____ (practicar) español antes del examen.

2. Conjuga los verbos entre paréntesis con la estructura ir+a+infinitivo.

Tú _____ (ir a estudiar) a la biblioteca mañana.
Mi amiga _____ (ir a estudiar) a la biblioteca mañana.
Mis amigos _____ (ir a estudiar) a la biblioteca mañana.
Yo _____ (ir a bailar) esta noche en mi club favorito.
Nosotros _____ (ir a bailar) esta noche en mi club favorito.
Ellos _____ (ir a bailar) esta noche en mi club favorito.

3. Conjuga los verbos entre paréntesis con futuro simple.

Yo _____ (viajar) a Canadá este verano.
Tú _____ (viajar) a Canadá este verano.
Mi hermano _____ (viajar) a Canadá este verano.
Yo _____ (acabar) mis estudios el año próximo.
Mi mejor amiga _____ (acabar) sus estudios el año próximo.
Nosotras _____ (acabar) nuestros estudios el año próximo.

Appendix D Spanish Oral Production Task A

For each situation read the instructions aloud and give a spoken answer. You may say as much as you would like. If you are not sure how to answer, you can make an educated guess. Please respond in complete sentences in Spanish.

1) Habla a tu compañera de clase sobre tus planes para inmediatamente después de esta clase y para esta tarde.

_____
_____
_____

2) Habla a tu compañera de clase sobre tus planes para este verano.

_____
_____
_____

3) Habla a tu compañera de clase sobre tus planes para la primavera de 2019.

_____
_____
_____

4) Habla a tu profesora sobre los planes de tu mejor amigo/a para esta noche.

_____
_____
_____

5) Habla a tu profesora sobre los planes de tu mejor amigo/a para las vacaciones de otoño.

_____
_____
_____

6) Habla a tu profesora sobre los planes de tu mejor amigo/a para el verano de 2019.

_____
_____
_____

Appendix E Spanish Written Production task A

Read the instructions and write your answers for each situation. You may write as much as you would like. If you are not sure how to answer, you can make an educated guess. Please respond in complete sentences in Spanish.

Escribe un correo electrónico **a tu compañera de clase**. En este correo debes describir **tus** planes para estos contextos:

- para inmediatamente después de esta clase y para esta tarde.
- Para este verano
- Para la primavera de 2019.

Escribe un correo electrónico **a tu jefa**. En este correo debes describir los planes de **tu mejor amigo/a** para estos contextos:

- para esta noche.
- Para las vacaciones de otoño
- Para el verano de 2019

Appendix F Spanish Contextualized Preference Task A

The following story includes a series of related events. Read each context with the three sentences that follow it and choose the sentence you prefer.

1. Tu mejor amiga y tú se encuentran en la universidad en la mañana. Tú le dices a ella:
    a. Esta tarde estudiaré en la biblioteca.
    b. Esta tarde voy a estudiar en la biblioteca.
    c. Esta tarde estudio en la biblioteca.

2. Ella piensa que es una buena idea. Tú sigues pensando en tus planes y dices:
    a. Voy a cenar en Five Guys.
    b. Ceno en Five Guys.
    c. Cenaré en Five Guys.

3. Le dices a tu amiga que te gusta Five Guys porque:
    a. El restaurante es en el campus.
    b. El restaurante está en el campus.
    c. El restaurante parece en el campus.

4. Durante la cena, ustedes hablan sobre destinos para las vacaciones y tú le dices a tu amiga:
    a. Para las vacaciones de invierno viajo a Hawaii con mi familia.
    b. Para las vacaciones de invierno viajaré a Hawaii con mi familia.
    c. Para las vacaciones de invierno voy a viajar a Hawaii con mi familia.

5. Tu amiga te pregunta sobre las actividades en tu viaje y tú le dices:
    a. En Hawaii, yo nadaré con los delfines.
    b. En Hawaii, yo nado con los delfines.
    c. En Hawaii, yo voy a nadar con los delfines.

6. Le explicas a tu amiga que no es tu primera visita a Hawaii:
    a. Ya fui a Hawaii antes.
    b. Ya iba a Hawaii antes.
    c. Ya he ido a Hawaii antes.

7. Ustedes hablan sobre planes futuros y tú dices:
    a. En el año 2019 voy a vivir en otro país.
    b. En el año 2019 viviré en otro país.
    c. En el año 2019 vivo en otro país.

8. Tu amiga quiere saber más sobre tus planes de trabajo en otro país y le contestas:
    a. Trabajo con las Naciones Unidas.
    b. Voy a trabajar con las Naciones Unidas.
    c. Trabajaré con las Naciones Unidas.

9. Tú le explicas la razón y le dices a tu amiga:
    a. Me gusta ayudar a personas.
    b. Le gusta ayudar a personas.
    c. Me gustan ayudar a personas.

Consider the next series of events and select the response you prefer for each of the contexts.

10. Al día siguiente, por la tarde hablas con tu tutora. Necesitas una mochila nueva y tú dices:
    a. Esta noche voy a comprar la mochila.
    b. Esta noche compro la mochila.
    c. Esta noche compraré la mochila.

11. Ella te recuerda que también necesitas comida energética para los exámenes. Tú contestas:
    a. Paso por el supermercado.
    b. Pasaré por el supermercado.
    c. Voy a pasar por el supermercado.

12. Tu tutora te pregunta qué supermercado es mejor y tú dices:
    a. Lo mejor es Giant Eagle.
    b. La mejor es Giant Eagle.
    c. El mejor es Giant Eagle.

13. Durante la conversación, tu tutora y tú hablan sobre las vacaciones de primavera y tú dices:
    a. Durante las vacaciones de primavera esquiaré en las montañas.
    b. Durante las vacaciones de primavera esquío en las montañas.
    c. Durante las vacaciones de primavera voy a esquiar en las montañas.

14. Tu tutora no sabe dónde hay montañas para esquiar y le explicas:
    a. Vuelo a Colorado.
    b. Voy a volar a Colorado.
    c. Volaré a Colorado.

15. Sigues hablando de Colorado y dices:
    a. A mis hermanos nos encanta esquiar.
    b. A mis hermanos le encanta esquiar.
    c. A mis hermanos les encanta esquiar.

16. Tu tutora te pregunta sobre tus planes para el verano del 2019 y tú respondes:
    a. El verano del 2019 asistiré a un curso de inmersión de español.
    b. El verano del 2019 voy a asistir a un curso de inmersión de español.
    c. El verano del 2019 asisto a un curso de inmersión de español.

17. Ella te pregunta sobre la localización del curso y tú le dices:
    a. Tomo el curso en la Universidad de Salamanca.
    b. Tomaré el curso en la Universidad de Salamanca.
    c. Voy a tomar el curso en la Universidad de Salamanca.

18. Tu tutora quiere saber la localización de Salamanca y tú le explicas:
    a. Salamanca parece en España.

b. Salamanca está en España.
c. Salamanca es en España.

Appendix G English Oral Production Task A

For each situation read the instructions aloud and give a spoken answer for each situation. You may say as much as you would like. If you are not sure how to answer, you can make an educated guess. Please respond in complete sentences in English.

Talk to **your classmate** about **your plans** for immediately after this class and for this afternoon.

_____

_____

_____

Talk to **your classmate** about **your plans** for this summer.

_____

_____

_____

Talk to **your classmate** about **your plans** for spring 2019.

_____

_____

_____

Talk to **your professor** about **your best friend's plans** for tonight.

_____

_____

_____

Talk to **your professor** about **your best friend's plans** for Fall break.

_____

_____

_____

Talk to **your professor** about **your best friend's plans** for summer 2019.

_____

_____

_____

Appendix H English Written Production Task A

Read the instructions and write your answer. You may write as much as you would like. If you are not sure how to answer, you can make an educated guess. Please respond in complete sentences in English.

Write an email to your classmate that describes your plans for the following contexts:

- For immediately after this class and for this afternoon.
- For this summer.
- For spring of 2019.

_____
_____
_____
_____
_____
_____
_____
_____

Write an email to your boss that describes your best friend's plans for the following contexts:

- For tonight.
- For Fall Break.
- For summer of 2019.

_____
_____
_____
_____
_____
_____
_____
_____

Appendix I English Contextualized Preference Task A

The following story includes a series of related events. Read each context with the three sentences that follow it and choose the sentence you prefer.

1. You meet your best friend on a Thursday and you talk about your plans for the rest of the day:
    a. This afternoon I will stay home.
    b. This afternoon I am going to stay home.
    c. This afternoon I stay home.

2. She doesn't understand why you want to stay home. You tell her:
    a. I am going to do my Spanish homework.
    b. I do my Spanish homework.
    c. I will do my Spanish homework.

3. She looks surprised and you explain:
    a. Last year I forgot to do most of my homework for that class.
    b. Last year I had forgotten to do most of my homework for that class.
    c. Last year I was forgetting to do most of my homework for that class.

4. She asks you if you could get more practice somehow and you tell your friend:
    a. During winter break I watch every Spanish show on Netflix.
    b. During winter break I will watch every Spanish show on Netflix.
    c. During winter break I am going to watch every Spanish show on Netflix.

5. Your friend asks you about your other plans for the break. You respond:
    a. I will read Don Quixote.
    b. I read Don Quixote.
    c. I am going to read Don Quixote.

6. She asks you about that book and you say:
    a. I have read it in English before.
    b. I read it in English before.
    c. I was reading it in English before.

7. Your friend says you seem really interested in Spanish and asks you where you see yourself in 2 years:
    a. In 2 years I am going to move to Spain.
    b. In 2 years I will move to Spain.
    c. In 2 years I move to Spain.

8. She wants to know more about your plans to move and you say:
    a. I teach English in a high school.
    b. I am going to teach English in a high school.
    c. I will teach English in a high school.

9. You tell her about your experience with teaching this semester. You say:
    a. Right now, I tutor a high school student for math.
    b. Right now, I am tutoring a high school student for math.
    c. Right now, I have been tutoring a high school student for math.

10. The next day during your meeting with your advisor, she asks you what your plans are for that night. You say:
    a. Tonight I am going to have dinner with some friends.
    b. Tonight I have dinner with some friends.
    c. Tonight I will have dinner with some friends.

11. She asks you what your plans are for after dinner. You answer:
    a. I dance in my favorite club, Cavo.
    b. I will dance in my favorite club, Cavo.
    c. I am going to dance in my favorite club, Cavo.

12. She wants to know your opinion of another club all the students talk about, Room 16. You say:
    a. Usually I prefer Bootleggers.
    b. Usually I have preferred Bootleggers.
    c. Usually I am preferring Bootleggers.

13. You start talking to your advisor about the spring party your residence hall is already preparing and you say:
    a. At the party in April I will participate in the karaoke contest.
    b. At the party in April I participate in the karaoke contest.
    c. At the party in April I am going to participate in the karaoke contest.

14. Your advisor wants to know the song for your performance. You respond:
    a. I sing Uptown Funk by Bruno Mars.
    b. I am going to sing Uptown Funk by Bruno Mars.
    c. I will sing Uptown Funk by Bruno Mars.

15. You love that song. You tell your advisor:
    a. I have been singing it in the shower every day.
    b. I have sung it in the shower every day.
    c. I sing it in the shower every day.

16. Your advisor asks you about your plans for summer 2019 and you say:
    a. In the summer of 2019 I will take a trip to Cuba.
    b. In the summer of 2019 I am going to take a trip to Cuba

c. In the summer of 2019 I take a trip to Cuba.

17. She wants to know more about that trip to Cuba and you tell her:
    a. I learn salsa dancing there.
    b. I will learn salsa dancing there.
    c. I am going to learn salsa dancing there.

18. She didn't know you liked to dance and you answer:
    a. I always wanted to be a good dancer.
    b. I have always wanted to be a good dancer.
    c. I always want to be a good dancer.

Appendix J Metalinguistic awareness task

Please answer the following questions in English. You may write as much as you like.

1. What is the tense of the verb in bold? Where have you seen it before?
   Example:
   A: ¿Cuáles son tus planes para el verano?
   B: **Viajaré** a Europa con mi familia.

   _____
   _____

2. Were you taught this form in high school and /or at university? How did the instructor and the textbook present this form? Can you describe its use/s?

   _____
   _____
   _____

3. How to Spanish speakers express the future? Give example of form/s. Explain in what occasions speakers may use the form/s you describe and what factors may affect the use of the form/s.

   _____
   _____
   _____

4. Why do you think each person responded using the tense in bold for each of the following situations?
   A: Tengo que estudiar para un examen para mañana.
   B: ¿Has estudiado ya?
   A: Aún no. **Voy a estudiar** en la biblioteca.

   _____
   _____

   A: No sé qué hacer este verano.
   B: Yo tengo un plan!
   A: ¿Y qué plan tienes para el verano?
   B: **Viajaré** a la playa con mis amigas el verano próximo.

   _____
   _____

   A: ¿Cuándo es tu conferencia?
   B: El viernes. Vuelo a Chicago el jueves por la noche.

   _____
   _____

Appendix K Language grammar test

Read the story below about a Hispanic female college student and select the answer that best completes each sentence.

Creo que es muy interesante _____ de los hábitos alimenticios de la gente. Yo, por mi parte, _____

a. hablo
b. hablar
c. hablando

a. soy
b. estoy
c. tengo

vegetariana. Cuando voy a eventos sociales, como por ejemplo fiestas, bodas o bailes, espero que _____ comida vegetariana allí. Algunas personas dicen que _____ representa un inconveniente

a. hay
b. haya
c.sea

a. le
b. los
c. les

proveer _____, pero yo creo que no _____ que ser así. De hecho, la comida vegetariana

a. lo
b. la
c. le

a. tiene
b. tenga
c. tengo

es muy fácil _____ preparar. Y cuando no _____ ofrece, puede ser _____ gran problema.

a. en
b. a
c. de

a. la
b. le
c.se

a. un
b. una
c. el

Yo recuerdo una vez que _____ a una fiesta de cumpleaños y _____ ser todo un desastre.

a. fui
b. iba
c. voy

a. resultó
b. resultaba
c. resulté

La fiesta ____ en la casa de un amigo, y él había invitado a mucha gente.

a. estaba
b. era
c. fue

Me sorprendió porque _____ ser un estudiante de postgrado con poco dinero,

a. entre
b. por
c. para

_____ una gran variedad de comida para los invitados. Yo creo que si me _____ tocado a mí

a. tuvo
b. tenía
c. tuviera

a. hubiera
b. habría
c. había

dar la fiesta, no_____ dado ni la mitad de lo que _____ allí. Pero pronto me _____ cuenta que él

a. hubiera
b. habría
c. había

a. era
b. había
c. hubiera

a. doy
b. daba
c. di

no había preparado nada vegetariano. Yo no pongo problemas por ese tipo de cosas, pero una amiga _____ __sí _____ hace. _____ a quejarse en frente de todo el mundo, mientras el

a. mía	a. le	a. Empezó
b. mi	b. se	b. Empezaba
c. de mí	c. lo	c. Empezado

anfitrión sólo _____ la escena con _____ boca abierta. Yo le dije a mi amiga que _____ de causar

a. miró	a. su	a. dejaba
b. miraba	b. una	b. deje
c. miraría	c. la	c. dejara

tanto escándalo, pero no me puso atención. Por fin, el anfitrión dijo: “La próxima vez que tenga una fiesta, _____ algo vegetariano.” Yo le dije después a mi amiga: “Mejor tarde que nunca”.

a. prepararé
b. prepararía
c. preparara

Appendix L Self-reflection task

After today's class, in English, summarize briefly what you learned in your own words:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

After today's class, do you still have questions about what was presented?

____ NO, I understood everything presented today.

____ YES, I still have a problem understanding

_____

_____

_____

_____

_____

Appendix M Spiraling activities

1)Viajar

Interpretation: Explain why the people in the dialogues use the future forms in bold. All these forms express the future (present simple, ir a, future simple) so explain why the form of the future was used (beyond stating because the action is in the future).

Situation 1

A: ¿A dónde vas de viaje, Sonia?
*B: Me **voy** a Phoenix.*
A: ¿Y cuándo vas?
*B: **Viajo** en avión mañana a las 10.*

Explain:

_____
_____

Situation 2

A: ¿Juan, tienes planes para el verano de 2019?
*B: Sí, **visitaré** a mi hermana en España.*

Explain:

_____
_____

Production:

- You ask your friend Julia if she wants to go out tonight but she has definite plans to go out to dinner with her boyfriend. Write a short dialog of four lines to represent this situation using the forms for future we learned in class.
  You:
  Julia:
  You:
  Julia:

  Explain:

  _____
  _____

- Your mom asks you about your plans for the summer. Your intention is to go to Costa Rica with your friends. Write a short dialogue of four lines that represents this situation using the forms for future we learned in class.

Mom:
You:
Mom:
You:

Explain:
_____
_____

2)Cambios sociales, jóvenes emigración

Interpretation: Explain why the people in the dialogues use the future forms in bold. All these forms express future (present simple, ir a, future simple) so explain why the form of the future was used (beyond stating because the action is in the future!).

Situation 1

A: La tasa de desempleo está muy alta en los países hispanohablantes.
B: Es verdad. De todas formas, los gobiernos están trabajando para solucionarlo.
A: Los gobiernos dicen que el desempleo ***disminuirá*** *en los próximos cinco años.*

Explain:
_____
_____

Situation 2

A: En algunos países las mujeres no tienen acceso a algunos trabajos.
B: Es verdad, pero la situación de la mujer ***va a mejorar*** *debido a los cambios de los gobiernos.*

Explain:
_____
_____

Production:

- You are writing a paper for a class about the migration patterns in Latin America and their changes. Write three sentences (in Spanish) describing the changes in migration patterns you expect to happen within the next 10 years. Use the future forms that we learned in class and explain briefly (in English) why you selected these forms.

1. _____

2. _____

3. _____

Explain:

_____

_____

- You are talking to your friend about what country in Latin America to move when you graduate next year. Write (in Spanish) about the changes in regards of the women's role in those countries that you expect to happen for next year in three-sentences using the future forms we learned in class. Then, in English explain briefly why you selected these future forms

1. _____

2. _____

3. _____

Explain:

_____

_____

3)Que nos trae el futuro (ciencia/tecnología)

Interpretation: Explain why the people in the dialogues use the future forms in bold. All these forms express future (present simple, ir a, future simple) so explain why the form of the future was used (beyond stating because the action is in the future!).

Situation 1

A: ¡Me gustaría viajar de manera más rápida!

B: Creo que en unos años los humanos se ***teletransportarán*** *como en las películas de ciencia ficción.*

Explain:

_____

_____

Situation 2

A: Hay tantos animales en peligro de extinción, ¡es una pena!
B: Sí, es verdad. Por ejemplo, los osos polares ***van a desaparecer*** *pronto.*

Explain:
_____
_____

Production:

- You are a science professor at the University of Pittsburgh. You are asked to give a lecture about some future changes you expect to happen within the next 50 years. Write three sentences of that lecture (in Spanish) using the future forms that we learned in class. In English, explain your choice of form for expressing the future.

1. _____

2. _____

3. _____

Explain:
_____
_____

- You are talking to your friend about some changes you think will happen to houses regarding technological advances. Write three sentences (in Spanish) describing those changes using the future forms that we learned in class. In English, explain your choice of form for expressing the future.

1. _____

2. _____

3. _____

Explain:
_____
_____

Appendix N Multivariate analyses for all groups considering all times together for the Spanish oral production task

Table A-1 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the control group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	98	43.9	[0.548]	86	50.0	[0.504]
Intermediate	70	44.3	[0.463]	63	49.2	[0.546]
Distant	74	40.5	[0.489]	56	53.6	[0.450]
			p=0.727			*p*=0.915
Presence of temporal adverbials						
Yes	157	42.0	[0.496]	132	50.0	[0.622]
No	85	44.7	[0.504]	73	52.1	[0.378]
			p=0.921			*p*=0.191
Formality of interlocutor						
Professor	118	43.2	[0.495]	105	48.6	[0.436]
Classmate	124	42.7	[0.505]	100	53.0	[0.564]
			p=0.898			*p*=0.471
Task version						
A (inf. first)	114	36.8	[0.442]	75	56.0	[0.758]
B (formal first)	128	43.2	[0.558]	130	47.7	[0.242]
			p=0.194			*p*=0.306
Test time						
1	32	87.5	0.921	44	63.6	[0.450]
2	64	23.4	0.191	29	51.7	[0.477]
3	69	42.0	0.378	63	46.0	[0.718]
4	77	41.6	0.374	69	46.4	[0.345]
			Range 73			
			p=9.45e-10			*p*=0.385
Grammar score						
Lower	121	51.2	0.650	137	45.3	[0.306]
Higher	121	34.7	0.350	68	61.8	[0.694]
			Range 30			
			p=0.000434			*p*=0.478

Table A-1 (continued)

N=242	Relative rate 43.0% PF	N= 205	Relative rate 50.7% PF
Participant (random)			
Rand. St. Dev.	0.495	3.898	
Verb (random)			
Rand. St. Dev.	1.022	2.774	
Fixed R^2	0.276	0.086	
Random R^2	0.204	0.799	
Total R^2	0.48	0.885	
Log likelihood	-134.825	-62.699	

Table A-2 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the instruction group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	136	86.0	0.922	234	50.0	[0.390]
Intermediate	108	69.4	0.308	156	48.1	[0.557]
Distant	95	64.2	0.160	124	49.2	[0.555]
			Range 76			
			p=3.18e-08			*p*=0.275
Presence of temporal adverbials						
Yes	182	79.1	[0.614]	268	53.7	[0.563]
No	157	69.4	[0.386]	246	44.3	[0.437]
			p=0.059			*p*=0.231
Formality of interlocutor						
Classmate	153	80.4	[0.564]	266	46.2	[0.446]
Professor	186	69.9	[0.436]	248	52.4	[0.554]
			p=0.242			*p*=0.266
Task version						
A (inf. first)	199	76.9	[0.679]	309	49.5	[0.855]
B (formal first)	140	71.4	[0.321]	205	48.8	[0.145]
			p=0.612			*p*=0.221
Test time						
1	64	71.9	0.132	101	45.5	[0.378]
2	96	70.8	0.518	121	56.2	[0.615]
3	104	71.2	0.718	152	48.7	[0.511]
4	75	86.7	0.705	140	46.4	[0.497]

Table A-2 (continued)

			Range 59			
			p=0.000208			*p*=0.499
Grammar score						
Lower	86	74.4	[0.402]	173	37.0	[0.166]
Higher	253	74.7	[0.598]	341	55.4	[0.834]
			p=0.776			*p*=0.262
N=339		Relative rate 74.6% PF		N=514	Relative rate 49.2% PF	
Participant (random)						
Rand. St. Dev.		4.132		4.242		
Verb (random)						
Rand. St. Dev.		0.377		1.265		
Fixed R^2		0.207		0.096		
Random R^2		0.666		0.774		
Total R^2		0.873		0.87		
Log likelihood		-98.138		-132.584		

Table A-3 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish oral production task for the instruction plus spiraling activities group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	68	95.6	0.941	145	44.8	0.359
Intermediate	90	63.3	0.509	96	59.4	0.613
Distant	93	31.2	0.057	54	53.7	0.530
			Range 88			*Range 25*
			p=4.34e-17			*p*=0.0154
Presence of temporal adverbials						
Yes	190	63.7	0.642	230	52.6	[0.515]
No	61	49.2	0.358	65	46.2	[0.485]
			Range 28			
			p=0.0376			*p*=0.746
Formality of interlocutor						
Professor	126	61.1	[0.544]	148	52.0	[0.493]
Classmate	125	59.2	[0.456]	147	50.3	[0.507]
			p=0.426			*p*=0.842
Task version						
A (inf; first)	77	76.6	0.697	111	53.2	[0.566]

Table A-3 (continued)

B (formal first)	174	52.9	0.303	184	50.0	[0.434]
			Range 39			
			p=0.0352			*p*=0.242
Test time						
1	53	71.7	0.659	79	48.1	[0.508]
2	60	65.0	0.707	76	51.3	[0.432]
3	65	63.1	0.466	81	50.6	[0.503]
4	73	45.2	0.197	59	55.9	[0.556]
			Range 51			
			p=0.000609			*p*=0.72
Grammar score						
Lower	172	55.8	[0.356]	165	58.2	0.641
Higher	79	69.6	[0.644]	130	42.3	0.359
						Range 28
			p=0.12			*p*=0.0134
N=251		Relative rate 60.2% PF		N=295	Relative rate 51.2% PF	
Participant (random)						
Rand. St. Dev.		0.886		0.502		
Verb (random)						
Rand. St. Dev.		1.677		1.25		
Fixed R^2		0.512		0.099		
Random R^2		0.255		0.32		
Total R^2		0.767		0.419		
Log likelihood		-89.745		-167.754		

Appendix O Multivariate analyses for all groups considering all times separately for the Spanish oral production task

Table A-4 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the control group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	13	92.3	[>0.999] >20	19	63.2	[0.592]
Distant	10	90.0	[>0.999] >20	11	63.6	[0.476]
Intermediate	9	77.8	[<0.001] >20	14	64.3	[0.432]
			p=0.219			*p*=0.921
Presence of temporal adverbials						
Yes	19	94.7	[>0.999] >20	27	66.7	[0.397]
No	13	76.9	[<0.001] >20	17	58.8	[0.603]
			p =0.0726			*p* =0.701
Formality of interlocutor						
Classmate	17	100	>0.999 >20	21	81.0	[0.775]
Professor	15	73.3	<0.001 >20	23	47.8	[0.225]
			Range 98			
			p=0.047			*p*=0.0692
Task version						
B (formal first)	18	83.3	[>0.999] >20	27	55.6	[0.336] >2.5
A (inf. first)	14	92.9	[<0.001] >20	17	76.5	[0.664] >2.5
			p=0.0815			*p*=0.603
Grammar score						
Lower	12	91.7	[0.981] >20	21	52.4	[0.008] >20
Higher	20	85.0	[0.019] >20	23	73.9	[0.992] >20
			p=0.0806			*p*=[error]
Participant gender						
Men	20	90.0	[>0.999] >20	19	94.7	0.998 >20
Women	12	83.3	[<0.001] >20	25	40.0	0.002 >20
			p=0.0802			*p*=0.00159
N=32		Relative rate 87.5% PF		N=44		Relative rate 63.6% PF
Participant (random)						
Rand. St. Dev.		5.604		0.254		
Verb (random)						

Table A-4 (continued)

Rand. St. Dev.	0	1.413
Fixed R^2	0.993	0.902
Random R^2	0.006	0.038
Total R^2	0.999	0.94
Log likelihood	-3.577	-10.495

Table A-5 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the control group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Intermediate	18	33.3	>0.999 >7.5	11	54.5	[0.999] >5
Near	28	21.4	0.17 >7.5	11	54.5	[0.002] >5
Distant	18	16.7	<0.001 >7.5	7	42.9	[0.33] >5
			Range 98			
			p=0.046			p=0.0958
Presence of temporal adverbials						
Yes	40	22.5	>0.999 >20	13	69.2	[0.887] >10
No	24	25.0	<0.001 >20	16	37.5	[0.113] >10
			Range 98			
			p=0.0193			p=0.217
Formality of interlocutor						
Classmate	33	24.2	0.999 >5	16	50.0	[0.002]
Professor	31	22.6	0.001 >5	13	53.8	[0.998]
			Range 98			
			p=0.019			p=0.217
Task version						
B (formal first)	34	41.2	>0.999 >20	27	51.9	[>0.999] >10
A (inf. first)	30	3.3	<0.001 >20	2	50.0	[<0.001] >10
			Range 98			
			p=0.0287			p=0.448
Grammar score						
Lower	30	33.3	[>0.999] >20	22	50.0	[0.947]
Higher	34	14.7	[<0.001] >20	7	57.1	[0.053]
			p=0.53			p=0.216
Participant gender						
Men	34	44.1	[>0.999]	25	6.0	[>0.999]
Women	30	0.0	[<0.001]	4	0.0	[<0.001]

Table A-5 (continued)

	p=0.643		*p*=0.191
N=64	Relative rate 23.4% PF	N=29	Relative rate 51.7% PF
Participant (random)			
Rand. St. Dev.	17.689	37.311	
Verb (random)			
Rand. St. Dev.	0	17.092	
Fixed R^2	0.997	0.975	
Random R^2	0.003	0.025	
Total R^2	1	1	
Log likelihood	-8.168	-2.817	

Table A-6 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the control group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Distant	19	47.4	[0.593]	19	47.4	[0.743]
Near	31	45.2	[0.555]	25	56.0	[0.345]
Intermediate	19	31.6	[0.354]	19	31.6	[0.395]
			p=0.568			*p*=0.661
Presence of temporal adverbials						
No	26	53.8	[0.614]	22	63.6	0.740
Yes	43	34.9	[0.386]	41	36.6	0.260
						Range 48
			p=0.284			*p*=0.0185
Formality of interlocutor						
Professor	33	45.5	[0.573]	32	46.9	[0.648]
Classmate	36	38.9	[0.427]	31	45.2	[0.352]
			p=0.467			*p*=0.464
Task version						
B (formal first)	34	55.9	[0.784]	43	44.2	[<0.001] >2.5
A (inf. first)	35	28.6	[0.216]	20	50.0	[>0.999] >2.5
			p=0.0846			*p*=0.0674
Grammar score						
Lower	39	53.8	[0.812]	48	43.8	[0.511]
Higher	30	26.7	[0.188]	15	53.3	[0.489]
			p=0.0636			*p*=0.375

Table A-6 (continued)

Participant gender						
Women	30	36.7	[0.613]	24	45.8	[0.526] >2.5
Men	39	46.2	[0.387]	39	46.2	[0.474] >2.5
			p=0.534			*p*=0.176
N=69		Relative rate 42.0% PF		N=63	Relative rate 46.0% PF	
Participant (random)						
Rand. St. Dev.		1.935		28.418		
Verb (random)						
Rand. St. Dev.		0.515		81.575		
Fixed R^2		0.303		0.01		
Random R^2		0.383		0.99		
Total R^2		0.686		1		
Log likelihood		-33.308		-14.455		

Table A-7 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the control group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Intermediate	24	50.0	[0.641]	22	54.5	[0.728]
Near	26	42.3	[0.577]	31	35.5	[0.160]
Distant	27	33.3	[0.291]	16	56.2	[0.661]
			p=0.228			*p*=0.0718
Presence of temporal adverbials						
No	22	36.4	[0.531]	18	44.4	[0.246]
Yes	55	43.6	[0.469]	51	47.1	[0.754]
			p=0.778			*p*=0.102
Formality of interlocutor						
Professor	39	46.2	[0.600]	37	48.6	[0.590]
Classmate	38	36.8	[0.400]	32	43.8	[0.410]
			p=0.267			*p*=0.538
Task version						
A (inf. first)	35	51.4	[0.765]	36	50.0	[0.999]
B (formal first)	42	33.3	[0.235]	33	42.4	[0.001]
			p=0.232			*p*=0.498
Grammar score						
Lower	40	50.0	[0.743]	47	42.6	[0.218]

Table A-7 (continued)

Higher	37	32.4	[0.257]	22	54.5	[0.782]
			p=0.276			*p*=0.248
Participant gender						
Women	33	45.5	[0.620]	31	48.4	[0.284]
Men	44	38.6	[0.380]	38	44.7	[0.716]
			p=0.631			*p*=0.952
N=77		Relative rate 41.6% PF		N=69	Relative rate 46.4% PF	
Participant (random)						
Rand. St. Dev.		2.712		11.328		
Verb (random)						
Rand. St. Dev.		0.756		0.567		
Fixed R^2		0.238		0.294		
Random R^2		0.539		0.688		
Total R^2		0.777		0.982		
Log likelihood		-38.853		-25.123		

Table A-8 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	29	93.1	>0.999 >20	54	50.0	[0.643]
Intermediate	20	50.0	<0.001 >20	26	38.5	[0.687]
Distant	15	60.0	<0.001 >20	21	42.9	[0.202]
			Range 98			
			p=8.09e-09			*p*=0.333
Presence of temporal adverbials						
Yes	26	76.9	[>0.999]	44	45.5	[0.44]
No	38	68.4	[<0.001]	57	45.6	[0.56]
			p=0.132			*p*=0.651
Formality of interlocutor						
Professor	36	72.2	[>0.999] >2.5	53	49.1	[0.672]
Classmate	28	71.4	[<0.001] >2.5	48	41.7	[0.328]
			p=0.143			*p*=0.4
Task version						
B (formal first)	29	100	>0.999	53	54.7	<0.001 >20
A (inf. first)	35	48.6	<0.001	48	35.4	>0.999 >20

Table A-8 (continued)

			Range 98			*Range* 98
			p=0.0459			*p*=0.0257
Grammar score						
Lower	11	63.6	[0.526]	27	25.9	[<0.001] >20
Higher	53	73.6	[0.474]	74	52.7	[>0.999] >20
			p=0.99			*p*=0.11
Participant gender						
Women	58	77.6	[>0.999] >20	70	64.3	[>0.999] >20
Men	6	16.7	[<0.001] >20	31	3.2	[<0.001] >20
			p=0.0709			*p*=0.489
N=64		Relative rate 71.9% PF		N=101	Relative rate 45.5% PF	
Participant (random)						
Rand. St. Dev.		170.317		9.478		
Verb (random)						
Rand. St. Dev.		27.995		1.803		
Fixed R^2		0.999		0.551		
Random R^2		0.001		0.434		
Total R^2		1		0.985		
Log likelihood		-2.054		-14.222		

Table A-9 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	36	88.9	>0.999	56	57.1	[0.435]
Intermediate	28	71.4	0.407	38	52.6	[0.545]
Distant	32	50.0	<0.001	27	59.3	[0.520]
			Range 98			
			p=1.02e-06			*p*=0.809
Presence of temporal adverbials						
Yes	52	75.0	0.932	72	54.2	[0.401]
No	44	65.9	0.068	49	59.2	[0.599]
			Range 86			
			p=0.0429			*p*=0.257
Formality of interlocutor						
Classmate	45	84.4	>0.999	66	57.6	[0.489]
Professor	51	58.8	<0.001	55	54.5	[0.511]

Table A-9 (continued)

			Range 98			
			p=5.55e-05			*p*=0.885
Task version						
A (inf. first)	58	81.0	[>0.999]	66	71.2	[0.870]
B (formal first)	38	55.3	[<0.001]	55	38.2	[0.130]
			p=0.136			*p*=0.0527
Grammar score						
Lower	29	79.3	>0.999	36	63.9	[0.412]
Higher	67	67.2	<0.001	85	52.9	[0.588]
			Range 98			
			p=0.0174			*p*=0.706
Participant gender						
Women	64	70.3	[>0.999] >2.5	68	66.2	[0.701]
Men	32	71.9	[<0.001] >2.5	53	43.4	[0.299]
			p= [error]			*p*=0.259
N=96		Relative rate 70.8% PF		N=121	Relative rate 56.2% PF	
Participant (random)						
Rand. St. Dev.		153.276		2.338		
Verb (random)						
Rand. St. Dev.		33.553		0.639		
Fixed R^2		0.164		0.271		
Random R^2		0.836		0.467		
Total R^2		1		0.738		
Log likelihood		-23.229		-53.115		

Table A-10 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	43	74.4	[0.932] >2.5	65	49.2	[0.076] >2.5
Intermediate	33	69.7	[0.415] >2.5	48	47.9	[0.686] >2.5
Distant	28	67.9	[0.093] >2.5	39	48.7	[0.847] >2.5
			p=0.302			*p*=0.372
Presence of temporal adverbials						
Yes	47	78.7	0.925 >2.5	75	54.7	0.584
No	49	67.3	0.127 >2.5	77	42.9	0.416

Table A-10 (continued)

			Range 78			*Range 16*
			p=0.0373			*p*=0.0128
Formality of interlocutor						
Classmate	47	78.7	0.925 >2.5	81	45.7	0.416
Professor	57	64.9	0.075 >2.5	71	52.1	0.732
			Range 85			*Range* 31
			p=0.0118			*p*=0.0326
Task version						
A (inf. first)	57	77.2	>0.999 >2.5	99	44.4	[0.947] >2.5
B (formal first)	47	63.8	<0.001 >2.5	53	56.6	[0.053] >2.5
			Range 98			
			p=0.0206			*p*=0.331
Grammar score						
Higher	79	73.4	0.972 >2.5	93	62.4	[0.958] >2.5
Lower	25	64.0	0.028 >2.5	59	27.1	[0.042] >2.5
			Range 94			
			p=0.0295			*p*=0.486
Participant gender						
Women	75	76.0	0.972 >2.5	73	78.1	>0.999 >2.5
Men	29	64.0	0.028 >2.5	79	21.5	<0.001 >2.5
			Range 94			*Range* 98
			p=0.0442			*p*=0.00372
N=104		Relative rate 71.2% PF		N= 152	Relative rate 48.7% PF	
Participant (random)						
Rand. St. Dev.		9.322		10.551		
Verb (random)						
Rand. St. Dev.		0.352		6.238		
Fixed R^2		0.47		0.44		
Random R^2		0.511		0.548		
Total R^2		0.981		0.988		
Log likelihood		-18.7		-19.242		

Table A-11Factors contributing to the use of periphrastic future over the morphological future and present indicative in the oral production task for the instruction group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	28	92.9	>0.999>20	59	44.1	[0.328]
Intermediate	27	81.5	0.002 >20	44	50.0	[0.504]
Distant	20	85.0	<0.001 >20	37	45.9	[0.668]
			Range 98			
			p=0.0148			*p*=0.826
Presence of temporal adverbials						
Yes	48	91.7	>0.999 >5	77	57.1	[0.637]
No	27	77.8	<0.001 >5	63	33.3	[0.363]
			Range 98			
			p=0.00179			*p*=0.651
Formality of interlocutor						
Professor	42	88.1	>0.999	69	53.6	0.689
Classmate	33	84.8	<0.001	71	39.4	0.311
			Range 98			*Range* 37
			p=9.01e-05			*p*=0.0488
Task version						
A (inf. first)	49	91.8	[>0.999]	96	46.9	[0.776]
B (formal first)	26	76.9	[<0.001]	44	45.5	[0.224]
			p=0.206			*p*=0.77
Grammar score						
Higher	54	87.0	[>0.999] >2.5	89	52.8	[0.610]
Lower	26	85.7	[<0001] >2.5	51	35.3	[0.390]
			p=0.167			*p*=0.645
Participant gender						
Men	19	89.5	[>0.999] >15	74	23.0	<0.001
Women	56	85.7	[<0.001] >15	66	72.7	>0.999
						Range 98
			p=0.455			*p*=0.00103
N=75		Relative rate 86.7% PF		N=140	Relative rate 46.4% PF	
Participant (random)						
Rand. St. Dev.		109.22		18.293		
Verb (random)						
Rand. St. Dev.		29.116		5.518		
Fixed R^2		0.114		0.291		
Random R^2		0.886		0.703		
Total R^2		1		0.994		
Log likelihood		-12.519		-28.719		

Table A-12 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction plus spiraling activities group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	20	90.0	>0.999	34	52.9	[0.475]
Intermediate	18	66.7	<0.001	26	46.2	[0.542]
Distant	15	53.3	<0.001	19	42.1	[0.483]
			Range 98			
			p=0.0188			p=0.953
Presence of temporal adverbials						
Yes	37	75.7	[>0.999]	56	50.0	[0.527]
No	16	62.5	[<0.001]	23	43.5	[0.473]
			p=0.139			p=0.84
Formality of interlocutor						
Professor	25	76.0	>0.999	38	50.0	[0.539]
Classmate	28	67.9	<0001	41	46.3	[0.461]
			Range 98			
			p=0.00934			p=0.692
Task version						
A (inf. first)	23	100	>0.999	37	62.2	[0.807]
B (for. first)	30	5.0	<0.001	42	35.7	[0.193]
			Range 98			
			p=0.00726			p=0.121
Grammar score						
Higher	19	89.5	[>0.999]	43	39.5	[0.206]
Lower	34	61.8	[<0.001]	36	58.3	[0.794]
			p=0.0966			p=0.117
Participant gender						
Women	13	100	>0.999	31	41.9	[0.407]
Men	40	62.5	<0.001	48	52.1	[0.593]
			Range 98			
			p=0.00491			p=0.67
N=53		Relative rate 71.7% PF		N=79	Relative rate 48.1% PF	
Participant (random)						
Rand. St. Dev.		0		2.218		
Verb (random)						
Rand. St. Dev.		72.994		2.034		
Fixed R^2		0.995		0.219		
Random R^2		0.004		0.573		
Total R^2		0.999		0.792		
Log likelihood		-1.68		-39.798		

Table A-13 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction plus spiraling activities group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	12	100	>0.999 >5	36	33.3	[0.247]
Intermediate	21	81.0	<0.001 >5	25	68.0	[0.7]
Distant	27	37.0	<0.001 >5	15	66.7	[0.565]
			Range 98			
			p=8.58e-10			*p*=0.0506
Presence of temporal adverbials						
Yes	41	70.7	[0.526]	59	49.2	[0.342]
No	19	52.6	[0.474]	17	58.8	[0.658]
			p= [error]			*p*=0.176
Formality of interlocutor						
Classmate	30	66.7	0.530	36	55.6	[0.570]
Professor	30	63.3	0.470	40	47.5	[0.430]
			Range 60			
			p=0.037			*p*=0.41
Task version						
A (inf. first)	15	73.3	[>0.999]	24	45.8	[0.427]
B (formal first)	45	62.2	[<0.001]	52	53.8	[0.573]
			p=0.841			*p*=0.559
Grammar score						
Higher	22	72.7	[>0.999] >2.5	32	50.0	[0.659]
Lower	38	60.5	[<0.001] >2.5	44	52.3	[0.341]
			p=0.16			*p*=0.2
Participant gender						
Women	26	73.1	[>0.999] >2.5	29	65.5	0.761
Men	34	58.8	[<0.001] >2.5	47	42.6	0.239
						Range 52
			p=0.43			*p*=0.0205
N=60		Relative rate 65.0% PF		N=76	Relative rate 51.3% PF	
Participant (random)						
Rand. St. Dev.		77.611		0.835		
Verb (random)						
Rand. St. Dev.		0.153		1.554		
Fixed R^2		0.999		0.261		
Random R^2		0.001		0.359		
Total R^2		1		0.62		
Log likelihood		-8.344		-39.73		

Table A-14 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction plus spiraling activities group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	20	100	>0.999 >2.5	42	47.6	[0.429]
Intermediate	22	59.1	0.001 >2.5	24	54.2	[0.551]
Distant	23	34.8	<0.001 >2.5	15	53.3	[0.52]
			Range 98			
			p=8.4e-09			*p*=0.829
Presence of temporal adverbials						
Yes	52	73.1	0.999	67	56.7	0.801
No	13	23.1	0.001	14	21.4	0.199
			Range 98			*Range* 60
			p=0.00187			*p*=0.00425
Formality of interlocutor						
Professor	33	66.7	[0.706]	42	52.4	[0.483]
Classmate	32	59.4	[0.294]	39	48.7	[0.517]
			p=0.227			*p*=0.843
Task version						
A (inf. first)	19	73.7	[0.728]	28	50.0	[0.466]
B (formal first)	46	58.7	[0.272]	53	50.9	[0.534]
			p=0.583			*p*=0.75
Grammar score						
Higher	15	86.7	[0.905]	34	38.2	0.271
Lower	50	56.0	[0.095]	47	59.6	0.729
						Range 45
			p=0.153			*p*=0.0158
Participant gender						
Women	20	7.0	[0.885]	32	43.8	[0.37]
Men	45	6.0	[0.115]	49	55.1	[0.63]
			p=0.276			*p*=0.168
N=65		Relative rate 63.1% PF		N=81		Relative rate 50.6% PF
Participant (random)						
Rand. St. Dev.		4.407		0.01		
Verb (random)						
Rand. St. Dev.		0.052		1.554		
Fixed R^2		0.891		0.264		
Random R^2		0.093		0.311		
Total R^2		0.984		0.575		
Log likelihood		-15.775		-37.011		

Table A-15 Factors contributing to the use of the periphrastic future over the morphological future and present indicative in the oral production task for the instruction plus spiraling activities group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	16	93.8	>0.999 >2.5	33	45.5	[0.273]
Intermediate	29	51.7	0.86 >2.5	21	71.4	[0.698]
Distant	28	10.7	<0.001 >2.5	5	60.0	[0.535]
			Range 98			
			p=6.25e-09			*p*=0.057
Presence of temporal adverbials						
Yes	60	43.3	0.880	49	55.1	[0.411]
No	13	53.8	0.120	10	60.0	[0.589]
			*Range 7*6			
			p=0.0419			*p*=0.466
Formality of interlocutor						
Classmate	35	45.7	[0.646]	31	51.6	[0.438]
Professor	38	44.7	[0.354]	28	60.7	[0.562]
			p=0.398			*p*=0.463
Task version						
A (inf. first)	20	55.0	0.954	22	50.0	[0.412]
B (formal first)	53	41.5	0.046	37	59.5	[0.588]
			Range 90			
			p=0.0144			*p*=0.512
Grammar score						
Higher	23	39.1	0.514	21	42.9	[0.428]
Lower	50	48.0	0.486	38	63.2	[0.572]
			Range 28			
			p=0.0418			*p*=0.586
Participant gender						
Women	29	55.2	[0.652]	24	66.7	[0.609]
Men	44	38.6	[0.348]	35	48.6	[0.391]
			p=0.183			*p*=0.39
N= 73		Relative rate 45.2% PF		N=59	Relative rate 55.9% PF	
Participant (random)						
Rand. St. Dev.		7.927		1.227		
Verb (random)						
Rand. St. Dev.		9.119		0.25		
Fixed R^2		0.359		0.225		
Random R^2		0.627		0.25		
Total R^2		0.986		0.475		
Log likelihood		-22.45		-35.223		

Appendix P Crosstabulations for clause type, person and number, and participant gender in the Spanish oral production task

Table A-16 Crosstabulation with clause type per group and test time for the Spanish oral production task

Group	Time	Response	Clause type				Total	
			Main		Subordinate			
			N	%	N	%	N	%
Control	1	MF	4	8.3	--	--	4	8.3
		PF	28	58.3	--	--	28	58.3
		PI	16	33.3	--	--	16	33.3
	2	MF	48	62.3	1	100.0	49	62.8
		PF	15	19.5	0	0.0	15	19.2
		PI	14	18.2	0	0.0	14	17.9
	3	MF	40	39.6	0	0.0	40	38.8
		PF	29	28.7	0	0.0	29	28.2
		PI	32	31.7	2	100.0	34	33.0
	4	MF	45	39.5	--	--	45	39.5
		PF	32	28.1	--	--	32	28.1
		PI	37	32.5	--	--	37	32.5
Instruction	1	MF	18	15.1	--	--	18	15.1
		PF	46	38.7	--	--	46	38.7
		PI	55	46.2	--	--	55	46.2
	2	MF	26	17.8	2	66.7	28	18.8
		PF	67	45.9	1	33.3	68	45.6
		PI	53	36.3	0	0.0	53	35.6
	3	MF	29	16.6	1	14.3	30	16.5
		PF	68	38.9	6	85.7	74	40.7
		PI	78	44.6	0	0.0	78	42.9
	4	MF	10	43.5	0	0.0	10	6.7
		PF	64	43.5	1	33.3	65	43.3
		PI	73	49.7	2	66.7	75	50.0
Instruction plus spiraling activities	1	MF	14	15.2	1	50.0	15	16.0
		PF	38	41.3	0	0.0	38	40.4
		PI	40	43.5	1	50.0	41	43.6
	2	MF	20	20.8	1	100.0	21	21.6
		PF	39	40.6	0	0.0	39	40.2
		PI	37	38.5	0	0.0	37	38.1
	3	MF	24	23.3	0	0.0	24	22.9
		PF	40	38.8	1	50.0	41	39.0
		PI	39	37.9	1	50.0	40	38.1

Table A-16 (continued)

	4	MF	39	39.8	1	100.0	40	40.4
		PF	33	33.7	0	0.0	33	33.3
		PI	26	26.5	0	0.0	26	26.3

Table A-17 Crosstabulation with person and number of the subject by group and test time for the Spanish oral production task

Group	**Time**	**TMA**	**Person and number**										**Total**	
			1st sg		2nd sg		3rd sg		1st pl		3rd pl			
			N	%	N	%	N	%	N	%	N	%	N	%
Contr.	1	MF	3	9.1	-	--	1	7.1	0	0.0	--	--	4	8.3
		PF	19	57.6	-	--	9	64.3	0	0.0	--	--	28	58.3
		PI	11	33.3	-	--	4	28.6	1	100	--	--	16	33.3
	2	MF	33	60.0	-	--	15	68.2	1	100	--	--	49	62.8
		PF	10	18.2	-	--	5	22.7	0	0.0	--	--	15	19.2
		PI	12	21.8	-	--	2	9.1	0	0.0	--	--	14	17.9
	3	MF	30	46.9	-	--	9	25.0	1	33.3	--	--	40	38.8
		PF	14	21.9	-	--	13	36.1	2	66.7	--	--	29	28.2
		PI	20	31.3	-	--	14	38.9	0	0.0	--	--	34	33.0
	4	MF	25	37.9	-	--	20	41.7	--	--	--	--	45	39.5
		PF	17	25.8	-	--	15	31.3	--	--	--	--	32	28.1
		PI	24	36.4	-	--	13	27.1	--	--	--	--	37	32.5
Instr.	1	MF	10	12.3	-	--	8	25.0	0	0.0	0	0.0	18	15.1
		PF	27	33.3	-	--	18	56.3	1	20.0	0	0.0	46	38.7
		PI	44	54.3	-	--	6	18.8	4	80.0	1	100	55	46.2
	2	MF	20	22.0	0	0.0	7	15.2	1	11.1	--	--	28	18.8
		PF	43	47.3	1	33.3	21	45.7	3	33.3	--	--	68	45.6
		PI	28	30.8	2	66.7	18	39.1	5	55.6	--	--	53	35.6
	3	MF	17	15.6	-	--	12	19.0	1	10.0	--	--	30	16.5
		PF	41	37.6	-	--	29	46.0	4	40.0	--	--	74	40.7
		PI	51	46.8	-	--	22	34.9	5	50.0	--	--	78	42.9
	4	MF	5	5.6	-	--	5	9.8	0	0.0	0	0.0	10	6.7
		PF	42	46.7	-	--	21	41.2	2	25.0	0	0.0	65	43.3
		PI	43	47.8	-	--	25	49.0	6	75.0	1	100	75	50.0
Instr. plus spir. act.	1	MF	7	12.1	-	--	8	23.5	0	0.0	--	--	15	16.0
		PF	24	41.4	-	--	13	38.2	1	50.0	--	--	38	40.4
		PI	27	46.6	-	--	13	38.2	1	50.0	--	--	41	43.6
	2	MF	13	23.2	-	--	8	22.2	0	0.0	--	--	21	21.6
		PF	22	39.3	-	--	16	44.4	1	20.0	--	--	39	40.2
		PI	21	37.5	-	--	12	33.3	4	80.0	--	--	37	38.1

Table A-17 (continued)

	3	MF	16	27.1	-	--	8	21.6	0	0.0	--	--	24	22.9
		PF	24	40.7	-	--	16	43.2	1	11.1	--	--	41	39.0
		PI	19	32.2	-	--	13	35.1	8	88.9	--	--	40	38.1
	4	MF	25	39.7	-	--	11	36.7	4	66.7	--	--	40	40.4
		PF	23	36.5	-	--	10	33.3	0	0.0	--	--	33	33.3
		PI	15	23.8	-	--	9	30.0	2	33.3	--	--	26	26.3

Table A-18 Crosstabulation with participant gender by group and test time for the Spanish oral production task

Group	**Time**	**Response**	**Participant gender**				**Total**	
			Women		**Men**			
			N	%	N	%	N	%
Control	1	MF	2	7.4	2	9.5	4	8.3
		PF	10	37.0	18	85.7	28	58.3
		PI	15	55.6	1	4.8	16	33.3
	2	MF	30	88.2	19	43.2	49	62.8
		PF	0	0.0	15	34.1	15	19.2
		PI	4	11.8	10	22.7	14	17.9
	3	MF	19	44.2	21	35.0	40	38.8
		PF	11	25.6	18	30.0	29	28.2
		PI	13	30.2	21	35.0	34	33.0
	4	MF	18	36.7	27	41.5	45	39.5
		PF	15	30.6	17	26.2	32	28.1
		PI	16	32.7	21	32.3	37	32.5
Instr.	1	MF	13	15.7	5	13.9	18	15.1
		PF	45	54.2	1	2.8	46	38.7
		PI	25	30.1	30	83.3	55	46.2
	2	MF	19	21.8	9	14.5	28	18.8
		PF	45	51.7	23	37.1	68	45.6
		PI	23	26.4	30	48.4	53	35.6
	3	MF	18	19.8	12	13.2	30	16.5
		PF	57	62.6	17	18.7	74	40.7
		PI	16	17.6	62	68.1	78	42.9
	4	MF	8	10.8	2	2.6	10	6.7
		PF	48	64.9	17	22.4	65	43.3
		PI	18	24.3	57	75.0	75	50.0
Instr. plus spir. act.	1	MF	0	0.0	15	23.8	15	16.0
		PF	13	41.9	25	39.7	38	40.4
		PI	18	58.1	23	36.5	41	43.6
	2	MF	7	19.4	14	23.0	21	21.6
		PF	19	52.8	20	32.8	39	40.2
		PI	10	27.8	27	44.3	37	38.1
	3	MF	6	15.8	18	26.9	24	22.9

Table A-18 (continued)

		PF	14	36.8	27	40.3	41	39.0
		PI	18	47.4	22	32.8	40	38.1
	4	MF	13	35.1	27	43.5	40	40.4
		PF	16	43.2	17	27.4	33	33.3
		PI	8	21.6	18	29.0	26	26.3

Appendix Q Crosstabulations for clause type, person and number, and participant gender for the English oral production task

Table A-19 Crosstabulation with clause type for the English oral production task

	Response	Clause Type				Total	
		Main		Subordinate			
		N	%	N	%	N	%
All participants	"Will"	51	30.5	2	20.0	53	29.9
	PF	78	46.7	3	30.0	81	45.8
	Pres. Progr.	38	22.8	5	50.0	43	24.3
	Total	167	100	10	100	177	100

Table A-20 Crosstabulation with person and number for the English oral production task

	Response	Person and number								Total	
		1st sg		3rd sg		1st pl		3rd pl			
		N	%	N	%	N	%	N	%	N	%
All participants	"Will"	32	31.7	16	25.4	4	36.4	1	50.0	53	29.9
	PF	49	48.5	26	41.3	5	45.5	1	50.0	81	45.8
	Pres. Progr.	20	19.8	21	33.3	2	18.2	0	0.0	43	24.3
	Total	101	100	63	100	11	100	2	100	177	100

Table A-21 Crosstabulation with participant gender for the English oral production task

	Response	Participant Gender				Total	
		Women		Men			
		N	%	N	%	N	%
All participants	"Will"	32	29.9	21	30.0	53	29.9
	PF	45	42.1	36	51.4	81	45.8
	Pres. Progr.	30	28.0	13	18.6	43	24.3
	Total	107	100	70	100	177	100

Appendix R Multivariate analyses for all groups considering all times together for the Spanish written production task

Table A-22 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the control group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	136	48.5	[0.520]	120	55.0	[0.647]
Intermediate	91	48.4	[0.506]	100	44.0	[0.299]
Distant	94	41.5	[0.474]	80	48.8	[0.562]
			p=0.918			*p*=0.144
Presence of temporal adverbials						
Yes	261	46.4	0.641	254	47.6	[0.520]
No	60	46.7	0.359	46	60.9	[0.480]
			Range 28			
			p=0.0157			*p*=0.822
Formality of interlocutor						
Classmate	160	46.9	[0.499]	157	47.8	[0.425]
Boss	161	46.0	[0.501]	143	51.7	[0.575]
			p=0.971			*p*=0.301
Task version						
A (inf. first)	163	44.8	0.827	136	53.7	[0.474]
B (formal first)	158	48.1	0.173	164	46.3	[0.526]
			Range 65			
			p=0.0207			*p*=0.905
Test time						
1	69	76.8	0.942	97	54.6	[0.442]
2	93	20.4	0.061	49	38.8	[0.322]
3	83	49.4	0.488	75	54.7	[0.798]
4	76	47.4	0.497	79	45.6	[0.403]
			Range 88			
			p=8.49e-22			*p*=0.113
Grammar score						
Lower	173	50.3	[0.500]	179	48.6	[0.505]
Higher	148	41.9	[0.500]	121	51.2	[0.495]
			p=0.952			*p*=0.959

Table A-22 (continued)

N=321	Relative rate 46.4% PF	N=300	Relative rate 49.7% PF
Participant (random)			
Rand. St. Dev.	3.306	3.077	
Verb (random)			
Rand. St. Dev.	0.265	3.623	
Fixed R^2	0.303	0.042	
Random R^2	0.537	0.836	
Total R^2	0.84	0.878	
Log likelihood	-134.37	-94.409	

Table A-23 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the instruction group all times

	PF vs. MF			**PF vs. PI**		
Factor	**N**	**% (of PF)**	**Factor weight**	**N**	**% (of PF)**	**Factor weight**
Temporal distance						
Near	135	81.5	0.805	226	48.7	[0.438]
Intermediate	105	64.8	0.397	139	48.9	[0.545]
Distant	96	53.1	0.269	126	40.5	[0.517]
			Range 54			
			p=5.06e-07			*p*=0.665
Presence of temporal adverbials						
Yes	214	68.7	[0.542]	342	43.0	0.623
No	122	67.2	[0.458]	149	55.0	0.377
						Range 25
			p=0.375			*p*=0.0194
Formality of interlocutor						
Classmate	167	74.9	0.630	260	48.1	[0.517]
Boss	169	61.5	0.370	231	45.0	[0.483]
			Range 26			
			p=0.00151			*p*=0.704
Task version						
A (inf. first)	209	75.6	[0.773]	317	49.8	[0.751]
B (formal first)	127	55.9	[0.227]	174	40.8	[0.249]
			p=0.0732			*p*=0.253
Test time						
1	64	67.2	0.347	115	37.4	0.279
2	103	63.1	0.416	115	56.5	0.704
3	88	70.5	0.649	119	52.1	0.615
4	81	72.8	0.588	142	41.5	0.405

Table A-23 (continued)

			Range 30			*Range 43*
			p=0.0411			*p*=0.00248
Grammar score						
Lower	96	72.9	[0.468]	173	40.5	[0.319]
Higher	240	66.2	[0.532]	318	50.0	[0.681]
			p=0.839			*p*=0.428
N=336		Relative rate 68.2% PF		N=491	Relative rate 46.6% PF	
Participant (random)						
Rand. St. Dev.		1.916		3.017		
Verb (random)						
Rand. St. Dev.		0.599		2.697		
Fixed R^2		0.281		0.076		
Random R^2		0.396		0.77		
Total R^2		0.677		0.846		
Log likelihood		-150.024		-169.862		

Table A-24 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish written production task for the instruction plus spiraling activities group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	68	97.1	0.978	164	40.2	0.271
Intermediate	103	63.1	0.424	96	67.7	0.699
Distant	109	29.4	0.030	53	60.4	0.537
			Range 95			*Range 43*
			p=2.65e-23			*p*=3.69e-06
Presence of temporal adverbials						
Yes	251	57.8	[0.596]	279	52.0	[0.573]
No	29	62.1	[0.404]	34	52.9	[0.427]
			p=0.271			*p*=0.213
Formality of interlocutor						
Boss	142	59.9	[0.523]	156	54.5	[0.524]
Classmate	138	56.5	[0.477]	157	49.7	[0.476]
			p=0.663			*p*=0.511
Task version						
A (inf. first)	77	70.1	[0.696]	105	51.4	[0.5212]
B (formal first)	203	53.7	[0.304]	208	52.4	[0.478]

Table A-24 (continued)

			p=0.104			*p*=0.706
Test time						
1	60	73.3	0.725	76	57.9	[0.610]
2	78	62.8	0.712	90	54.4	[0.478]
3	66	57.6	0.467	80	47.5	[0.434]
4	76	42.1	0.148	67	47.8	[0.476]
			Range 58			
			p=1.46e-05			*p*=0.369
Grammar score						
Lower	204	55.9	[0.398]	200	57.0	0.608
Higher	76	64.5	[0.602]	113	43.4	0.392
						Range 22
			p=0.386			*p*=0.0491
N=280		Relative rate 58.2% PF		N=313	Relative rate 52.1% PF	
Participant (random)						
Rand. St. Dev.		1.406		0.512		
Verb (random)						
Rand. St. Dev.		1.426		1.076		
Fixed R^2		0.574		0.166		
Random R^2		0.234		0.252		
Total R^2		0.808		0.418		
Log likelihood		-101.259		-171.118		

Appendix S Multivariate analyses for all groups considering all times separately for the Spanish written production task

Table A-25 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the control group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	32	84.4	[0.643]	41	65.9	[0.812]
Intermediate	19	68.4	[0.235]	31	41.9	[0.150]
Distant	18	72.2	[0.644]	25	52.0	[0.568]
			p=0.107			*p*=0.0927
Presence of temporal adverbials						
Yes	54	75.9	[0.983]	80	51.2	[0.402]
No	15	80.0	[0.017]	17	70.6	[0.598]
			p=0.424			*p*=0.574
Formality of interlocutor						
Classmate	33	84.8	[0.026]	55	50.9	[0.279]
Boss	36	69.4	[0.974]	42	59.5	[0.721]
			p=0.151			*p*=0.402
Task version						
A (inf. first)	33	87.9	>0.999	53	54.7	[0.660]
B (formal first)	36	66.7	<0.001	44	54.5	[0.340]
			Range 98			
			p=0.0133			*p*=0.684
Grammar score						
Lower	33	72.7	<0.001	52	46.2	[0.092]
Higher	36	80.6	>0.999	45	64.4	[0.908]
			Range 98			
			p=0.0434			*p*=0.247
Participant gender						
Men	39	79.5	0.005	54	57.4	0.873
Women	30	73.3	0.995	43	51.2	0.127
			Range 99			*Range* 74
			p=0.0119			*p*=0.0279
N=69		Relative rate 76.8% PF		N=97	Relative rate 54.6% PF	
Participant (random)						

Table A-25 (continued)

Rand. St. Dev.	80.316	3.779
Verb (random)		
Rand. St. Dev.	108.766	4.936
Fixed R^2	0.022	0.14
Random R^2	0.978	0.793
Total R^2	1	0.933
Log likelihood	-17.813	-39.689

Table A-26 Factors contributing to the use of periphrastic future over morphological future and present indicative future in the written production task for the control group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	43	14.0	[0.234] >2.5	18	33.3	[0.574]
Intermediate	24	33.3	[0.928] >2.5	19	42.1	[0.765]
Distant	26	19.2	[0.202] >2.5	12	41.7	[0.186]
			p=0.201			*p*=0.972
Presence of temporal adverbials						
Yes	74	21.6	0.982 >5	42	38.1	[0.311]
No	19	15.8	0.018 >5	7	42.9	[0.689]
			Range 96			
			p=0.018			*p*=0.658
Formality of interlocutor						
Classmate	45	20.0	[0.767]	29	31.0	[0.166]
Boss	48	20.8	[0.233]	20	50.0	[0.834]
			p=0.235			*p*=0.0977
Task version						
A (inf. first)	47	2.1	[0.004] >7.5	12	8.3	<0.001 >2.5
B (formal first)	46	39.1	[0.996] >7.5	37	48.6	>0.999 >2.5
						Range 98
			p=0.0507			*p*=0.0165
Grammar score						
Lower	51	21.6	[0.397]	29	37.9	[0.833] >2.5
Higher	42	19.0	[0.603]	20	40.0	[0.167] >2.5
			p=0.0777			*p*=0.0991
Participant gender						
Men	46	34.8	[0.989] >7.5	32	50.0	[0.993] >5
Women	47	6.4	[0.011] >7.5	17	17.6	[0.007] >5
			p=0.24			*p*=0.0928

Table A-26 (continued)

N=93	Relative rate 20.4% PF	N=49	Relative rate 38.8% PF
Participant (random)			
Rand. St. Dev.	8.803	5.574	
Verb (random)			
Rand. St. Dev.	0.647	10.376	
Fixed R^2	0.528	0.31	
Random R^2	0.453	0.674	
Total R^2	0.981	0.984	
Log likelihood	019.464	-15.479	

Table A-27 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the control group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	31	51.6	[0.545]	27	59.3	0.710
Intermediate	25	48.0	[0.485]	25	48.0	0.290
Distant	27	48.1	[0.470]	23	56.5	0.500
						Range 42
			p=0.928			*p*=0.0386
Presence of temporal adverbials						
No	14	64.3	[0.486]	15	60.0	[0.248]
Yes	69	46.4	[0.514]	60	53.3	[0.752]
			p=0.906			*p*=0.232
Formality of interlocutor						
Boss	39	53.8	[0.589]	40	52.5	[0.644]
Classmate	44	45.5	[0.411]	35	57.1	[0.356]
			p=0.337			*p*=0.447
Task version						
A (inf. first)	45	51.1	[0.330]	33	69.7	[0.507]
B (formal first)	38	47.4	[0.670]	42	42.9	[0.493]
			p=0.507			*p*=0.497
Grammar score						
Lower	52	57.7	[0.726]	48	62.5	0.919
Higher	31	35.5	[0.274]	27	40.7	0.081
						Range 83
			p=0.383			*p*=0.0195
Participant gender						

Table A-27 (continued)

Women	33	54.5	[0.715]	37	48.6	[0.32]
Men	50	46.0	[0.285]	38	60.5	[0.68]
			p=0.376			*p*=0.747
N=83		Relative rate 49.4% PF		N=75	Relative rate 54.7% PF	
Participant (random)						
Rand. St. Dev.		3.162		4.202		
Verb (random)						
Rand. St. Dev.		0		8.233		
Fixed R^2		0.075		0.087		
Random R^2		0.696		0.879		
Total R^2		0.771		0.966		
Log likelihood		-41.315		-25.666		

Table A-28 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the control group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	30	56.7	[0.650]	34	50.0	>0.999 >7.5
Intermediate	23	47.8	[0.576]	25	44.0	0.055 >7.5
Distant	23	34.8	[0.284]	20	40.0	<0.001 >7.5
						Range 98
			p=0.469			*p*=0.047
Presence of temporal adverbials						
No	12	33.3	[0.158]	8	50.0	<0.001 >15
Yes	64	50.0	[0.842]	71	45.1	>0.999 >15
						Range 98
			p=0.0744			*p*=0.00388
Formality of interlocutor						
Boss	38	47.4	[0.595]	41	43.9	[0.521]
Classmate	38	47.4	[0.405]	38	47.4	[0.479]
			p=0.647			*p*=0.174
Task version						
A (inf. first)	38	52.6	[0.003] >5	38	52.6	[>0.999] >5
B (formal first)	38	42.1	[0.997] >5	41	39.0	[<0.001] >5
			p=0.209			*p*=0.266
Grammar score						
Lower	37	59.5	[>0.999] >2.5	50	44.0	0.001 >10

Table A-28 (continued)

Higher	39	35.9	[<0.001] >2.5	29	48.3	0.999 >10
						Range 98
			p=0.078			*p*=0.0106
Participant gender						
Women	32	53.1	[0.998] >2.5	39	43.6	0.002 >10
Men	44	43.2	[0.002] >2.5	40	47.5	0.998 >10
						Range 96
			p=0.166			*p*=0.00704
N=76		Relative rate % PF		N=79	Relative rate 45.6% PF	
Participant (random)						
Rand. St. Dev.		10.115		48.508		
Verb (random)						
Rand. St. Dev.		0.195		75.83		
Fixed R^2		0.334		0.074		
Random R^2		0.645		0.926		
Total R^2		0.979		1		
Log likelihood		-28.979		-15.537		

Table A-29 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	27	88.9	>0.999	55	43.6	[0.813]
Intermediate	19	47.4	0.013	27	33.3	[0.995]
Distant	18	55.6	0.020	33	30.3	[0.001]
			Range 97			
			p=8.78e-05			*p*=[error]
Presence of temporal adverbials						
Yes	37	62.2	[0.540]	75	30.7	[>0.999]
No	27	74.1	[0.460]	40	50.0	[<0.001]
			p=[error]			*p*=0.167
Formality of interlocutor						
Classmate	33	72.7	0.684	59	40.7	0.014
Boss	31	61.3	0.316	56	33.9	0.986
			Range 36			*Range* 97
			p=0.0365			*p*=0.00861
Task version						
A	47	55.3	[0.097]	67	38.8	>0.999

Table A-29 (continued)

B	17	100	[0.903]	48	35.4	<0.001
						Range 98
			p=0.414			*p*=0.00245
Grammar score						
Lower	16	62.5	0.352	39	25.6	0.992
Higher	48	68.8	0.648	76	43.4	0.008
			Range 29			*Range* 98
			p=0.00331			*p*=0.0133
Participants' gender						
Women	44	77.3	[0.999]	67	50.7	>0.999
Men	20	45.0	[0.001]	48	18.8	<0.001
						Range 98
			p=0.0723			*p*=0.00698
N=64		Relative rate 67.2% PF		N=115	Relative rate 37.4% PF	
Participant (random)						
Rand. St. Dev.		8.602		44.939		
Verb (random)						
Rand. St. Dev.		5.968		41.271		
Fixed R^2		0.474		0.269		
Random R^2		0.511		0.73		
Total R^2		0.985		0.999		
Log likelihood		-12.863		-31.608		

Table A-30 Factors contributing to the use of periphrastic future over morphological future and present indicative future in the written production task for the instruction group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	43	79.1	0.939 >2.5	55	61.8	[0.644]
Intermediate	30	66.7	0.541 >2.5	37	54.1	[0.582]
Distant	30	36.7	0.052 >2.5	23	47.8	[0.285]
			Range 88			
			p=1.19e-06			*p*=0.469
Presence of temporal adverbials						
Yes	65	61.5	[0.603]	81	49.4	[0.502]
No	38	65.8	[0.397]	34	73.5	[0.498]
			p=0.237			*p*=0.918
Formality of interlocutor						
Classmate	50	68.0	[0.640]	60	56.7	[0.545]

Table A-30 (continued)

Boss	53	58.5	[0.360]	55	56.4	[0.455]
			p=0.16			*p*=0.615
Task version						
A (inf. first)	62	77.4	0.932 >2.5	77	62.3	[0.754]
B (formal first)	41	41.5	0.068 >2.5	38	44.7	[0.246]
			Range 86			
			p=0.0438			*p*=0.252
Grammar score						
Lower	32	75.0	0.527	41	58.5	[0.464]
Higher	71	57.7	0.473	74	55.4	[0.536]
			Range 54			
			p=0.00161			*p*=0.871
Participant gender						
Women	60	58.3	[0.754]	63	55.6	[0.524]
Men	43	69.8	[0.246]	52	57.7	[0.476]
			p=0.53			*p*=0.911
N=103		Relative rate 63.1% PF		N=115	Relative rate 56.5% PF	
Participant (random)						
Rand. St. Dev.		2.792		2.425		
Verb (random)						
Rand. St. Dev.		1.261		2.156		
Fixed R^2		0.453		0.08		
Random R^2		0.405		0.701		
Total R^2		0.858		0.781		
Log likelihood		-41.706		-57.209		

Table A-31 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	36	80.6	[0.992] >2.5	54	53.7	[0.580]
Intermediate	31	64.5	[0.043] >2.5	34	58.8	[0.431]
Distant	21	61.9	[0.152] >2.5	31	41.9	[0.489]
			p=0.843			*p*=0.181
Presence of temporal adverbials						
Yes	61	72.1	[0.805]	87	50.6	[0.700]
No	27	66.7	[0.195]	32	56.2	[0.300]

Table A-31 (continued)

			p=0.209			*p*=0.285
Formality of interlocutor						
Classmate	46	73.9	[0.748]	62	54.8	[0.674]
Boss	42	66.7	[0.252]	57	49.1	[0.326]
			p=0.191			*p*=0.155
Task version						
A (inf. first)	47	83.0	[0.991] >2.5	76	51.3	[0.655]
B (formal first)	41	56.1	[0.003] >2.5	43	53.5	[0.345]
			p=0.0621			*p*=0.237
Grammar score						
Lower	24	75.0	0.233	42	42.9	0.396
Higher	64	68.8	0.767	77	57.1	0.604
			Range 53			*Range* 20
			p=0.0316			*p*=0.0246
Participant gender						
Women	67	68.7	[0.639]	62	74.2	0.993
Men	21	76.2	[0.361]	57	28.1	0.007
						Range 98
			p=0.517			*p*=0.00165
N=88		Relative rate 70.5% PF		N=119	Relative rate 52.1% PF	
Participant (random)						
Rand. St. Dev.		7.266		4.991		
Verb (random)						
Rand. St. Dev.		3.782		4.573		
Fixed R^2		0.387		0.339		
Random R^2		0.584		0.617		
Total R^2		0.971		0.956		
Log likelihood		-25.121		-39.347		

Table A-32 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	29	79.3	[0.709] >2.5	62	37.1	[0.422]
Intermediate	25	76.0	[0.306] >2.5	41	46.3	[0.577]
Distant	27	63.0	[0.481] >2.5	39	43.6	[0.502]
			p=0.543			*p*=0.967

Table A-32 (continued)

Presence of temporal adverbials						
Yes	51	78.4	0.799 >2.5	100	40.0	[0.734]
No	30	63.3	0.201 >2.5	42	45.2	[0.266]
			Range 59			
			p=0.0469			p=0.0837
Formality of interlocutor						
Classmate	39	84.6	0.900 >2.5	79	41.8	[0.352]
Boss	42	61.9	0.100 >2.5	63	41.3	[0.648]
			Range 80			
			p=0.00129			p=0.188
Task version						
A (inf. first)	53	84.9	[0.988] >2.5	97	46.4	[0.924]
B (formal first)	28	50.0	[0.012] >2.5	45	31.1	[0.076]
			p=0.0755			p=0.19
Grammar score						
Lower	24	75.0	[0.033] >2.5	51	35.3	[0.193]
Higher	57	71.9	[0.967] >2.5	91	45.1	[0.807]
			p=0.155			p=0.472
Participant gender						
Women	52	71.2	0.793	72	51.4	0.954
Men	29	75.9	0.207	70	31.4	0.046
			Range 58			*Range* 90
			p=0.0028			p=0.0406
N= 81		Relative rate 72.8% PF		N=142	Relative rate 41.5% PF	
Participant (random)						
Rand. St. Dev.		5.844		4.418		
Verb (random)						
Rand. St. Dev.		1.163		4.327		
Fixed R^2		0.394		0.214		
Random R^2		0.555		0.724		
Total R^2		0.949		0.938		
Log likelihood		-30.068		-54.521		

Table A-33 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction plus spiraling activities group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	22	95.5	>0.999 >7.5	33	63.6	[0.044]
Intermediate	18	61.1	<0.001 >7.5	22	50.0	[0.999]
Distant	20	60.0	<0.001 >7.5	21	57.1	[0.025]
			Range 98			
			p=0.000353			p=0.177
Presence of temporal adverbials						
Yes	56	73.2	[0.002]	66	62.1	>0.999
No	4	75.0	[0.998]	10	30.0	<0.001
						Range 98
			p=0.394			p=0.00113
Formality of interlocutor						
Boss	33	72.7	0.992 >7.5	39	61.5	>0.999
Classmate	27	74.1	0.008 >7.5	37	54.1	<0.001
			Range 96			*Range* 98
			p=0.042			p=0.0012
Task version						
A (inf. first)	21	100	[>0.999]	22	95.5	>0.999
B (for.first)	39	59.0	[<0.001]	54	42.6	<0.001
						Range 98
			p=0.0809			p=5.21e-05
Grammar score						
Lower	45	64.4	<0.001	52	55.8	[>0.999]
Higher	15	100	>0.999	24	62.5	[<0.001]
			Range 98			
			p=0.0174			p=0.0565
Participant gender						
Women	17	88.2	[0.993]	35	42.9	[<0.001]
Men	43	67.4	[0.007]	41	70.7	[>0.999]
			p=0.518			p=0.0703
N= 60		Relative rate 73.3% PF		N=76	Relative rate 57.9% PF	
Participant (random)						
Rand. St. Dev.		11.676		29.858		
Verb (random)						
Rand. St. Dev.		0.331		124.865		
Fixed R^2		0.783		0.289		
Random R^2		0.212		0.711		
Total R^2		0.995		1		
Log likelihood		-5.368		-22.408		

Table A-34 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction plus spiraling activities group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	15	100	>0.999 >2.5	47	31.9	0.135
Intermediate	30	76.7	0.198 >2.5	28	82.1	0.765
Distant	33	33.3	<0.001 >2.5	15	73.3	0.663
			Range 98			*Range* 63
			p=1.94e-10			*p*=2.27e-05
Presence of temporal adverbials						
Yes	65	63.1	[0.834]	77	53.2	[0.430]
No	13	61.5	[0.166]	13	60.9	[0.601]
			p=[error]			*p*=0.556
Formality of interlocutor						
Classmate	42	66.7	[0.770]	46	60.9	[0.601]
Boss	36	58.3	[0.230]	44	47.7	[0.399]
			p=0.401			*p*=0.169
Task version						
A (inf. first)	22	68.2	[0.991]	30	50.0	[0.468]
B (formal first)	56	60.7	[0.009]	60	56.7	[0.532]
			p=0.32			*p*=0.763
Grammar score						
Lower	56	62.5	[0.671]	58	60.3	[0.599]
Higher	22	63.6	[0.329]	32	43.8	[0.401]
			p=0.768			*p*=0.361
Participant gender						
Women	31	71.0	[0.785]	33	66.7	[0.611]
Men	47	57.4	[0.215]	57	47.4	[0.389]
			p=0.26			*p*=0.273
N= 78		Relative rate 62.8% PF		N=90	Relative rate 54.4% PF	
Participant (random)						
Rand. St. Dev.		7.185		0.842		
Verb (random)						
Rand. St. Dev.		4.139		0.8		
Fixed R^2		0.594		0.381		
Random R^2		0.387		0.18		
Total R^2		0.981		0.561		
Log likelihood		-23.316		-45.623		

Table A-35 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction plus spiraling activities group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	15	100	>0.999 >2.5	42	35.7	0.109
Intermediate	25	68.0	0.255 >2.5	26	65.4	0.753
Distant	26	23.1	<0.001 >2.5	12	50.0	0.729
			Range 98			*Range* 64
			p=1.71e-10			*p*=0.0107
Presence of temporal adverbials						
Yes	58	58.6	0.609	75	45.3	[0.363]
No	8	50.0	0.391	5	80.0	[0.637]
			Range 21			
			p=0.00438			*p*=0.592
Formality of interlocutor						
Boss	35	62.9	[0.642]	40	55.0	[0.612]
Classmate	31	51.6	[0.358]	40	40.0	[0.388]
			p=0.888			*p*=0.266
Task version						
A (inf. first)	15	66.7	0.970 >2.5	51	54.9	[0.770]
B (formal first)	51	54.9	0.030 >2.5	29	34.5	[0.230]
			Range 94			
			p=0.0318			*p*=0.0527
Grammar score						
Lower	50	52.0	0.008 >2.5	48	54.2	[0.719]
Higher	16	75.0	0.992 >2.5	32	37.5	[0.281]
			Range 98			
			p=0.0023			*p*=0.139
Participant gender						
Women	22	68.2	[0.981] >2.5	32	46.9	[0.347]
Men	44	52.3	[0.019] >2.5	48	47.9	[0.653]
			p=0.062			*p*=0.297
N=66		Relative rate 57.6% PF		N=80		Relative rate 47.5% PF
Participant (random)						
Rand. St. Dev.		6.614		1.266		
Verb (random)						
Rand. St. Dev.		5.627		2.227		
Fixed R^2		0.588		0.343		
Random R^2		0.395		0.438		
Total R^2		0.983		0.781		
Log likelihood		-18.532		-35.239		

Table A-36 Factors contributing to the use of periphrastic future over morphological future and present indicative in the written production task for the instruction plus spiraling activities group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	16	93.8	>0.999	42	35.7	0.136
Intermediate	30	46.7	0.201	20	70.0	0.732
Distant	30	10.0	<0.001	5	60.0	0.699
			Range 98			*Range* 59
			p=1.7e-10			*p*=0.0073
Presence of temporal adverbials						
Yes	72	40.3	[0.600]	61	47.5	[0.456]
No	4	75.0	[0.400]	6	52.9	[0.553]
			p=0.074			*p*=0.802
Formality of interlocutor						
Boss	38	47.4	[0.707]	34	52.9	[0.553]
Classmate	38	36.8	[0.293]	33	42.4	[0.447]
			p=0.448			*p*=0.544
Task version						
A	19	42.1	[0.557]	24	33.3	[0.345]
B	57	42.1	[0.443]	43	55.8	[0.655]
			p=0.789			*p*=0.19
Grammar score						
Lower	53	45.3	0.315	42	57.1	[0.597]
Higher	23	34.8	0.685	25	32.0	[0.403]
			Range 37			
			p=0.0271			*p*=0.446
Participants' gender						
Women	30	53.3	[0.794]	27	59.3	[0.582]
Men	46	34.8	[0.206]	40	40.0	[0.418]
			p=0.479			*p*=0.51
N= 76		Relative rate 42.1% PF		N=67	Relative rate 47.8% PF	
Participant (random)						
Rand. St. Dev.		7.613		0.668		
Verb (random)						
Rand. St. Dev.		3.771		1.426		
Fixed R^2		0.426		0.323		
Random R^2		0.549		0.291		
Total R^2		0.975		0.614		
Log likelihood		-20.524		-34.251		

Appendix T Crosstabulations for clause type, person and number, and participant gender in the Spanish written production task

Table A-37 Crosstabulation with clause type per group and test time for the Spanish written production task

Group	Time	Response	Clause type				Total	
			Main		Subordinate			
			N	%	N	%	N	%
Control	1	MF	15	13.6	1	33.3	16	14.2
		PF	51	46.4	2	66.7	53	46.9
		PI	44	40.0	0	0.0	44	38.9
	2	MF	73	59.8	1	100	74	60.2
		PF	19	15.6	0	0.0	19	15.4
		PI	30	24.6	0	0.0	30	24.4
	3	MF	42	36.5	0	0.0	42	35.9
		PF	41	35.7	0	0.0	41	35.0
		PI	32	27.8	2	100	34	29.1
	4	MF	40	33.9	0	0.0	40	33.6
		PF	35	29.7	1	100	36	30.3
		PI	43	36.4	0	0.0	43	36.1
Instr.	1	MF	19	14.8	2	25.0	21	15.4
		PF	40	31.3	3	37.5	43	31.6
		PI	69	53.9	3	37.5	72	52.9
	2	MF	36	24.2	2	50.0	38	24.8
		PF	64	43.0	1	25.0	65	42.5
		PI	49	32.9	1	25.0	50	32.7
	3	MF	22	16.4	4	36.4	26	17.9
		PF	59	44.0	3	27.3	62	42.8
		PI	53	39.6	4	36.4	57	39.3
	4	MF	19	12.9	3	17.6	22	13.4
		PF	53	36.1	6	35.3	59	36.0
		PI	75	51.0	8	47.1	83	50.6
Instr. plus spir. act.	1	MF	15	16.5	1	100	16	17.4
		PF	44	48.4	0	0.0	44	47.8
		PI	32	35.2	0	0.0	32	34.8
	2	MF	28	23.7	1	100	29	24.4
		PF	49	41.5	0	0.0	49	41.2
		PI	41	34.7	0	0.0	41	34.5
	3	MF	28	26.2	0	0.0	28	25.9
		PF	37	34.6	1	100	38	35.2
		PI	42	39.3	0	0.0	42	38.9

Table A-37 (continued)

	4	MF	43	39.1	1	100	44	39.6
		PF	32	29.1	0	0.0	32	28.8
		PI	35	31.8	0	0.0	35	31.5

Table A-38 Crosstabulation with person and number of the subject by group and test time for the Spanish written production task

Group	**Time**	**Response**	**Person and number**						**Total**	
			1st sg		**3rd sg**		**1st pl**			
			N	%	N	%	N	%	N	%
Control	1	MF	13	17.8	3	8.3	0	0.0	16	14.2
		PF	30	41.1	20	55.6	3	75.0	53	46.9
		PI	30	41.1	13	36.1	1	25.0	44	38.9
	2	MF	45	58.4	25	62.5	4	66.7	74	60.2
		PF	13	16.9	4	10.0	2	33.3	19	15.4
		PI	19	24.7	11	27.5	0	0.0	30	24.4
	3	MF	25	36.2	16	36.4	1	25.0	42	35.9
		PF	24	34.8	15	34.1	2	50.0	41	35.0
		PI	20	29.0	13	29.5	1	25.0	34	29.1
	4	MF	22	31.9	18	37.5	0	0.0	40	33.6
		PF	23	33.3	11	22.9	2	100	36	30.3
		PI	24	34.8	19	39.6	0	0.0	43	36.1
Instr.	1	MF	12	14.5	9	19.6	0	0.0	21	15.4
		PF	26	31.3	16	34.8	1	14.3	43	31.6
		PI	45	54.2	21	45.7	6	85.7	72	52.9
	2	MF	26	26.8	11	22.0	1	16.7	38	24.8
		PF	33	34.0	28	56.0	4	66.7	65	42.5
		PI	38	39.2	11	22.0	1	16.7	50	32.7
	3	MF	13	14.9	12	24.0	1	12.5	26	17.9
		PF	36	41.4	22	44.0	4	50.0	62	42.8
		PI	38	43.7	16	32.0	3	37.5	57	39.3
	4	MF	15	13.2	6	14.0	1	14.3	22	13.4
		PF	36	31.6	19	44.2	4	57.1	59	36.0
		PI	63	55.3	18	41.9	2	28.6	83	50.6
Instr. plus spir. act.	1	MF	14	19.2	2	11.1	0	0.0	16	17.4
		PF	32	43.8	11	61.1	1	100	44	47.8
		PI	27	37.0	5	27.8	0	0.0	32	34.8
	2	MF	17	24.6	12	26.1	0	0.0	29	24.4
		PF	27	39.1	21	45.7	1	25.0	49	41.2
		PI	25	36.2	13	28.3	3	75.0	41	34.5
	3	MF	20	29.9	8	25.8	0	0.0	28	25.9
		PF	27	40.3	11	35.5	0	0.0	38	35.2

Table A-38 (continued)

		PI	20	29.9	12	38.7	10	100	42	38.9
	4	MF	28	38.9	13	39.4	3	50.0	44	39.6
		PF	22	30.6	10	30.3	0	0.0	32	28.8
		PI	22	30.6	10	30.3	3	50.0	35	31.5

Table A-39 Crosstabulation with participant gender by group and test time for the Spanish written production task

Group	**Time**	**Response**	**Participant gender**				**Total**	
			Women		**Men**			
			N	%	N	%	N	%
Control	1	MF	8	15.7	8	12.9	16	14.2
		PF	22	43.1	31	50.0	53	46.9
		PI	21	41.2	23	37.1	44	38.9
	2	MF	44	72.1	30	48.4	74	60.2
		PF	3	4.9	16	25.8	19	15.4
		PI	14	23.0	16	25.8	30	24.4
	3	MF	15	28.8	27	41.5	42	35.9
		PF	18	34.6	23	35.4	41	35.0
		PI	19	36.5	15	23.1	34	29.1
	4	MF	15	27.8	25	38.5	40	33.6
		PF	17	31.5	19	29.2	36	30.3
		PI	22	40.7	21	32.3	43	36.1
Instr.	1	MF	10	13.0	11	18.6	21	15.4
		PF	34	44.2	9	15.3	43	31.6
		PI	33	42.9	39	66.1	72	52.9
	2	MF	25	28.4	13	20.0	38	24.8
		PF	35	39.8	30	46.2	65	42.5
		PI	28	31.8	22	33.8	50	32.7
	3	MF	21	25.3	5	8.1	26	17.9
		PF	46	55.4	16	25.8	62	42.8
		PI	16	19.3	41	66.1	57	39.3
	4	MF	15	17.2	7	9.1	22	13.4
		PF	37	42.5	22	28.6	59	36.0
		PI	35	40.2	48	29.3	83	50.6
Instr. plus spir. act.	1	MF	2	5.4	14	25.5	16	17.4
		PF	15	40.5	29	52.7	44	47.8
		PI	20	54.1	12	21.8	32	34.8
	2	MF	9	21.4	20	26.0	29	24.4
		PF	22	52.4	27	35.1	49	41.2
		PI	11	26.2	30	39.0	41	34.5
	3	MF	7	17.9	21	30.4	28	25.9

Table A-39 (continued)

		PF	15	38.5	23	33.3	38	35.2
		PI	17	43.6	25	36.2	42	38.9
	4	MF	14	34.1	30	42.9	44	39.6
		PF	16	39.0	16	22.9	32	28.8
		PI	11	26.8	24	34.3	35	31.5

Appendix U Crosstabulations for clause type, person and number, and participant gender for the English written production task

Table A-40 Crosstabulation with clause type for the English written production task

	Response	Clause Type				Total	
		Main		Subordinate			
		N	%	N	%	N	%
All participants	"Will"	90	38.8	5	38.5	95	38.8
	PF	64	27.6	1	7.7	65	26.5
	Pres. Progr.	78	33.6	7	53.8	85	34.7
	Total	232	100	13	100	245	100

Table A-41 Crosstabulation with person and number for the English written production task

	Response	Person and number								Total	
		1st sg		3rd sg		1st pl		3rd pl			
		N	%	N	%	N	%	N	%	N	%
All participants	"Will"	55	35.9	33	42.3	6	46.2	1	100	95	38.8
	PF	47	30.7	17	21.8	1	7.7	0	0.0	65	26.5
	Pres. Progr.	51	33.3	28	35.9	6	46.2	0	0.0	85	34.7
	Total	153	100	78	100	13	100	1	100	245	100

Table A-42 Crosstabulation with participant gender for the English written production task

	Response	Participant Gender				Total	
		Women		Men			
		N	%	N	%	N	%
All participants	"Will"	41	36.9	54	40.3	95	38.8
	PF	30	27.0	35	26.1	65	26.5
	Pres. progr.	40	36.0	45	33.6	85	34.7
	Total	111	100	134	100	245	100

Appendix V Multivariate analyses for all groups considering all times together for the Spanish contextualized preference task

Table A-43 Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	263	54.0	0.588	167	85.0	0.650
Intermediate	248	43.5	0.450	148	73.0	0.342
Distant	258	44.6	0.461	145	79.3	0.510
			Range 14			*Range 31*
			p=0.0363			p=0.0189
Presence of temporal adverbials						
Yes	395	45.3	[0.474]	216	82.9	[0.545]
No	374	49.7	[0.526]	244	76.2	[0.455]
			p=0.234			p=0.264
Formality of interlocutor						
Advisor	384	46.9	[0.501]	228	78.9	[0.487]
Best friend	385	48.1	[0.499]	232	79.7	[0.513]
			p=0.969			p=0.728
Task version						
A (inf. first)	355	46.8	[0.462]	195	85.1	[0.685]
B (formal first)	414	48.1	[0.538]	265	75.1	[0.315]
			p=0.645			p=0.154
Test time						
1	188	56.9	0.627	135	79.3	0.389
2	207	37.7	0.376	87	89.7	0.748
3	183	50.8	0.529	126	73.8	0.409
4	191	45.5	0.468	112	77.7	0.434
			Range 25			*Range 36*
			p=0.000193			p=0.0102
Grammar score						
Lower	430	51.4	[0.583]	272	81.6	[0.475]
Higher	339	42.5	[0.417]	188	76.1	[0.525]
			p=0.321			p=0.848

Table A-43 (continued)

N= 769	Relative rate 47.5% PF	N=460	Relative rate 79.3% PF
Participant (random)			
Rand. St. Dev.	1.256	1.894	
Verb (random)			
Rand. St. Dev.	0.044	0.144	
Fixed R^2	0.061	0.139	
Random R^2	0.304	0.451	
Total R^2	0.365	0.59	
Log likelihood	-440.3	-166.141	

Table A-44 Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group all times

	PF vs. MF			**PF vs. PI**		
Factor	**N**	**% (of PF)**	**Factor weight**	**N**	**% (of PF)**	**Factor weight**
Temporal distance						
Near	267	79.0	0.655	248	85.1	[0.539]
Intermediate	264	65.2	0.423	212	81.1	[0.417]
Distant	276	64.5	0.418	206	86.4	[0.545]
			Range 24			
			p=0.00361			p=0.172
Presence of temporal adverbials						
Yes	402	63.2	0.404	308	82.5	[0.442]
No	405	75.8	0.596	358	85.8	[0.558]
			Range 19			
			p=0.00267			p=0.0654
Formality of interlocutor						
Advisor	400	71.0	[0.521]	340	83.5	[0.493]
Best friend	407	68.1	[0.479]	326	85.0	[0.507]
			p=0.348			p=0.836
Task version						
A (inf. first)	521	74.3	[0.656]	442	87.6	[0.705]
B (formal first)	286	60.8	[0.344]	224	77.7	[0.295]
			p=0.0706			p=0.125
Test time						
1	183	53.0	0.270	142	68.3	0.238
2	212	76.9	0.634	179	91.1	0.671
3	211	75.8	0.598	177	90.4	0.661
4	201	70.1	0.512	168	83.9	0.446

Table A-44 (continued)

			Range 36			*Range 43*
			p=1.33e-09			*p*=2.72e-08
Grammar score						
Lower	304	69.1	[0.420]	242	86.8	[0.374]
Higher	503	69.8	[0.580]	424	82.8	[0.626]
			p=0.36			*p*=0.368
N= 807		Relative rate 69.5% PF		N=666	Relative rate 84.2% PF	
Participant (random)						
Rand. St. Dev.		1.092		1.712		
Verb (random)						
Rand. St. Dev.		0.148		0		
Fixed R^2		0.178		0.162		
Random R^2		0.222		0.395		
Total R^2		0.4		0.557		
Log likelihood		-399.742		-222.888		

Table A-45 Factors contributing to the selection of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group all times

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	185	82.7	0.811	240	63.8	[0.438]
Intermediate	227	48.9	0.404	156	71.2	[0.525]
Distant	241	34.4	0.256	114	72.8	[0.537]
			Range 56			
			p=3.04e-07			*p*=0.44
Presence of temporal adverbials						
Yes	320	44.1	0.41	229	61.6	[0.449]
No	333	61.9	0.59	281	73.3	[0.551]
			Range 18			
			p=0.0037			*p*=0.209
Formality of interlocutor						
Best friend	317	56.5	[0.541]	270	66.3	[0.482]
Advisor	336	50.0	[0.459]	240	70.0	[0.518]
			p=0.0839			*p*=0.492
Task version						
A (inf. first)	186	60.8	[0.575]	167	67.7	[0.522]

Table A-45 (continued)

B (formal first)	467	50.1	[0.425]	343	68.2	[0.478]
			p=0.139			*p*=0.592
Test time						
1	164	52.4	0.475	126	68.3	[0.481]
2	159	55.3	0.552	133	66.2	[0.482]
3	169	63.3	0.632	142	75.4	[0.599]
4	161	41.0	0.343	109	60.6	[0.437]
			Range 29			
			p=4.49e-05			*p*=0.119
Grammar score						
Lower	437	55.1	[0.566]	332	72.6	0.587
Higher	216	49.1	[0.434]	178	59.6	0.413
						Range 17
			p=0.169			*p*=0.0346
N=653		Relative rate 53.1% PF		N=510	Relative rate 68.0% PF	
Participant (random)						
Rand. St. Dev.		0.589		0.399		
Verb (random)						
Rand. St. Dev.		0.125		0.319		
Fixed R^2		0.306		0.068		
Random R^2		0.068		0.068		
Total R^2		0.374		0.136		
Log likelihood		-363.198		-302.641		

Appendix W Multivariate analyses for all groups considering all times separately for the Spanish contextualized preference task

Table A-46 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	64	75.0	0.778	56	85.7	[0.653]
Intermediate	62	45.2	0.323	38	73.7	[0.410]
Distant	62	50.0	0.374	41	75.6	[0.433]
			Range 45			
			p=0.00161			p=0.2
Presence of temporal adverbials						
Yes	98	49.0	0.377	58	82.8	[0.570]
No	90	65.6	0.623	77	76.6	[0.430]
			Range 24			
			p=0.0126			p=0.291
Formality of interlocutor						
Best friend	95	57.9	[0.526]	68	80.9	[0.536]
Advisor	93	55.9	[0.474]	67	77.6	[0.464]
			p=0.599			p=0.573
Task version						
A (inf. first)	86	47.7	[0.384]	51	80.4	[0.589]
B (formal first)	102	64.7	[0.616]	84	78.6	[0.411]
			p=0.338			p=0.49
Grammar score						
Lower	102	51.0	[0.421]	70	74.3	[0.349]
Higher	86	64.0	[0.579]	65	84.6	[0.651]
			p=0.536			p=0.243
Participant gender						
Men	103	59.2	[0.559]	78	78.2	[0.507]
Women	85	54.1	[0.441]	57	80.7	[0.493]
			p=0.627			p=0.956
N=188		Relative rate 56.9% PF		N= 135	Relative rate 79.3% PF	
Participant (random)						
Rand. St. Dev.		1.669		1.502		

Table A-46 (continued)

Verb (random)		
Rand. St. Dev.	0	0
Fixed R^2	0.203	0.115
Random R^2	0.365	0.36
Total R^2	0.568	0.475
Log likelihood	-97.007	-59.219

Table A-47 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	72	41.7	[0.569]	26	100	>0.999
Intermediate	67	37.3	[0.507]	27	85.2	<0.001
Distant	68	33.8	[0.425]	24	83.3	<0.001
						Range 98
			p=0.578			*p*=0.0122
Presence of temporal adverbials						
Yes	105	39.0	[0.522]	38	92.1	[0.586]
No	102	36.3	[0.478]	39	87.2	[0.414]
			p=0.7			*p*=0.548
Formality of interlocutor						
Best friend	105	36.2	[0.470]	38	92.1	[0.590]
Advisor	102	39.2	[0.530]	39	87.2	[0.410]
			p=0.546			*p*=0.537
Task version						
A (inf. first)	96	31.2	[0.226]	26	100	[>0.999]
B (formal first)	111	43.2	[0.774]	51	84.3	[<0.001]
			p=0.109			*p*=0.281
Grammar score						
Lower	116	48.3	[0.822]	50	94.0	[0.749]
Higher	91	24.2	[0.178]	27	81.5	[0.251]
			p=0.0617			*p*=0.382
Participant gender						
Men	112	44.6	[0.566]	48	85.4	[0.333]
Women	95	29.5	[0.434]	29	96.6	[0.667]
			p=0.709			*p*=0.615
N=207		Relative rate 37.7% PF		N=77	Relative rate 89.6% PF	

Table A-47 (continued)

Participant (random)		
Rand. St. Dev.	2.503	2.456
Verb (random)		
Rand. St. Dev.	0.328	0.037
Fixed R^2	0.236	0.96
Random R^2	0.504	0.026
Total R^2	0.74	0.986
Log likelihood	-94.8	-14.378

Table A-48 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	65	53.8	[0.554]	42	83.3	0.788
Intermediate	56	46.4	[0.446]	42	61.9	0.168
Distant	62	51.6	[0.500]	42	76.2	0.572
						Range 62
			p=0.67			*p*=0.012
Presence of temporal adverbials						
Yes	95	49.5	[0.507]	60	78.3	[0.542]
No	88	52.3	[0.493]	66	69.7	[0.458]
			p=0.888			*p*=0.627
Formality of interlocutor						
Advisor	92	52.2	[0.554]	64	75.0	[0.483]
Best friend	91	49.5	[0.446]	62	72.6	[0.517]
			p=0.275			*p*=0.849
Task version						
A (inf. first)	87	54.0	[0.490]	56	83.9	[0.852]
B (formal first)	96	47.9	[0.510]	70	65.7	[0.148]
			p=0.947			*p*=0.181
Grammar score						
Lower	105	56.2	[0.664]	74	79.7	[0.731]
Higher	78	43.6	[0.336]	52	65.4	[0.269]
			p=0.316			*p*=0.443
Participant gender						
Women	85	51.8	[0.522]	55	80.0	[0.736]
Men	98	50.0	[0.478]	71	69.0	[0.264]

Table A-48 (continued)

	p=0.887		*p*=0.362
N=183	Relative rate 50.8% PF	N= 126	Relative rate 73.8% PF
Participant (random)			
Rand. St. Dev.	2.202	3.623	
Verb (random)			
Rand. St. Dev.	0.001	0	
Fixed R^2	0.055	0.322	
Random R^2	0.563	0.542	
Total R^2	0.618	0.864	
Log likelihood	-97.164	-41.376	

Table A-49 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the control group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	62	46.8	[0.517]	39	74.4	[0.369]
Intermediate	63	46.0	[0.519]	38	76.3	[0.438]
Distant	66	43.9	[0.464]	35	82.9	[0.687]
			p=0.901			*p*=0.257
Presence of temporal adverbials						
No	94	46.8	[0.519]	58	75.9	[0.497]
Yes	97	44.3	[0.481]	54	79.6	[0.503]
			p=0.737			*p*=0.971
Formality of interlocutor						
Best friend	94	50.0	[0.544]	61	77.0	[0.556]
Advisor	97	41.2	[0.456]	51	78.4	[0.444]
			p=0.386			*p*=0.493
Task version						
A (inf. first)	86	55.8	[0.694]	58	82.8	[0.644]
B (formal first)	105	37.1	[0.306]	54	72.2	[0.356]
			p=0.258			*p*=0.562
Grammar score						
Lower	107	50.5	[0.553]	67	80.6	[0.716]
Higher	84	39.3	[0.447]	45	73.3	[0.284]
			p=0.778			*p*=0.422
Participant gender						

Table A-49 (continued)

Women	87	39.1	[0.338]	43	79.1	[0.746]
Men	104	51.0	[0.662]	69	76.8	[0.254]
			p=0.357			*p*=0.335
N= 191		Relative rate 45.5% PF		N=112	Relative rate 77.7% PF	
Participant (random)						
Rand. St. Dev.		2.526		3.065		
Verb (random)						
Rand. St. Dev.		0.341		0.007		
Fixed R^2		0.114		0.149		
Random R^2		0.588		0.63		
Total R^2		0.702		0.779		
Log likelihood		-93.977		-43.322		

Table A-50 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	61	67.2	0.728	56	73.2	[0.570]
Intermediate	59	39.0	0.284	40	57.5	[0.390]
Distant	63	52.4	0.485	46	71.7	[0.541]
			Range 44			
			p=0.00516			*p*=0.487
Presence of temporal adverbials						
No	91	61.5	0.614	79	70.9	[0.580]
Yes	92	44.6	0.386	63	65.1	[0.420]
			Range 22			
			p=0.025			*p*=0.213
Formality of interlocutor						
Advisor	89	58.4	[0.590]	77	67.5	[0.505]
Best friend	94	47.9	[0.410]	65	69.2	[0.495]
			p=0.0592			*p*=0.935
Task version						
A (inf. first)	120	50.8	[0.503]	85	71.8	[0.657]
B (formal first)	63	57.1	[0.497]	57	63.2	[0.343]
			p=0.98			*p*=0.388
Grammar score						
Lower	75	50.7	[0.494]	47	80.9	[0.588]

Table A-50 (continued)

Higher	108	54.6	[0.506]	95	62.1	[0.412]
			p=0.965			*p*=0.644
Participant gender						
Women	89	66.3	[0.697]	78	75.6	0.789
Men	94	40.4	[0.303]	64	59.4	0.211
						Range 57
			p=0.0719			*p*=0.0357
N=183		Relative rate 53.0% PF		N= 142	Relative rate 68.3% PF	
Participant (random)						
Rand. St. Dev.		1.541		1.933		
Verb (random)						
Rand. St. Dev.		0.001		0.002		
Fixed R^2		0.234		0.216		
Random R^2		0.321		0.417		
Total R^2		0.555		0.633		
Log likelihood		-98.174		-63.255		

Table A-51 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	69	84.1	[0.602]	65	89.2	[0.503]
Intermediate	71	74.6	[0.474]	58	91.4	[0.469]
Distant	72	72.2	[0.422]	56	92.9	[0.527]
			p=0.456			*p*=0.958
Presence of temporal adverbials						
No	108	87.0	0.690	100	94.0	[0.638]
Yes	104	66.3	0.310	79	87.3	[0.362]
			Range 38			
			p=0.00334			*p*=0.102
Formality of interlocutor						
Best friend	107	78.5	[0.542]	91	92.3	[0.562]
Advisor	105	75.2	[0.458]	88	89.8	[0.438]
			p=0.399			*p*=0.416
Task version						
A (inf. first)	138	86.2	0.839	125	95.2	>0.999 >20
B (formal first)	74	59.5	0.161	54	81.5	<0.001 >20

Table A-51 (continued)

			Range 67			*Range* 98
			p=0.000342			p=0.000372
Grammar score						
Lower	78	79.5	0.293	68	91.2	<0.001 >20
Higher	134	75.4	0.707	111	91.0	>0.999 >20
			Range 41			*Range* 98
			p=0.0443			p=0.013
Participant gender						
Women	100	77.0	[0.577]	85	90.6	[0.606]
Men	112	76.8	[0.423]	94	91.5	[0.394]
			p=0.35			p=0.286
N= 212		Relative rate 76.9% PF		N= 179	Relative rate 91.1% PF	
Participant (random)						
Rand. St. Dev.		0.87		0.679		
Verb (random)						
Rand. St. Dev.		0.308		0.338		
Fixed R^2		0.366		0.961		
Random R^2		0.131		0.006		
Total R^2		0.497		0.967		
Log likelihood		-88.322		-43.188		

Table A-52 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	66	90.9	0.720	66	90.9	[0.517]
Intermediate	66	77.3	0.411	57	89.5	[0.491]
Distant	67	73.1	0.358	54	90.7	[0.492]
			Range 36			
			p=0.0114			p=0.991
Presence of temporal adverbials						
No	100	86.0	0.610	94	91.5	[0.507]
Yes	99	74.7	0.390	83	89.2	[0.493]
			Range 22			
			p=0.0311			p=0.939
Formality of interlocutor						
Best friend	100	81.0	[0.504]	89	91.0	[0.516]
Advisor	99	79.8	[0.496]	88	89.8	[0.484]

Table A-52 (continued)

			p=0.94			*p*=0.84
Task version						
A (inf. first)	134	86.6	0.813 >2.5	126	92.1	[0.761]
B (formal first)	65	67.7	0.187 >2.5	51	86.3	[0.239]
			Range 62			
			p=0.00177			*p*=0.123
Grammar score						
Lower	77	81.8	[0.344]	70	90.0	[0.400]
Higher	122	79.5	[0.656]	107	90.7	[0.600]
			p=0.146			*p*=0.554
Participant gender						
Women	94	84.0	0.679	81	97.5	0.814
Men	105	77.1	0.321	96	84.4	0.186
			Range 35			*Range* 62
			p=0.042			*p*=0.0273
N= 199		Relative rate 80.4% PF		N=177	Relative rate 90.4% PF	
Participant (random)						
Rand. St. Dev.		0.925		1.502		
Verb (random)						
Rand. St. Dev.		0.001		0.575		
Fixed R^2		0.341		0.293		
Random R^2		0.136		0.311		
Total R^2		0.477		0.604		
Log likelihood		-80.111		-44.823		

Table A-53 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	67	77.6	[0.648]	61	85.2	[0.548]
Intermediate	64	70.3	[0.478]	57	78.9	[0.381]
Distant	70	62.9	[0.372]	50	88.0	[0.573]
			p=0.0765			*p*=0.374
Presence of temporal adverbials						
No	100	71.0	[0.517]	85	83.5	[0.481]
Yes	101	69.3	[0.483]	83	84.3	[0.519]
			p=0.733			*p*=0.763
Formality of interlocutor						
Advisor	101	73.3	[0.561]	87	85.1	[0.510]
Best friend	100	67.0	[0.439]	81	82.7	[0.490]
			p=0.229			*p*=0.87
Task version						
A (inf. first)	129	70.5	[0.752]	106	85.8	[0.725]
B (formal first)	72	69.4	[0.248]	62	80.6	[0.275]
			p=0.128			*p*=0.0662
Grammar score						
Lower	74	63.5	[0.311]	57	82.5	[0.420]
Higher	127	74.0	[0.689]	111	84.7	[0.580]
			p=0.241			*p*=0.532
Participant gender						
Women	103	81.6	[0.761]	89	94.4	0.813
Men	98	58.2	[0.239]	79	72.2	0.187
						Range 62
			p=0.0552			*p*=0.00144
N=201		Relative rate 70.1% PF		N= 168	Relative rate 83.9% PF	
Participant (random)						
Rand. St. Dev.		1.911		1.121		
Verb (random)						
Rand. St. Dev.		0.003		0.001		
Fixed R^2		0.22		0.351		
Random R^2		0.41		0.18		
Total R^2		0.63		0.531		
Log likelihood		-90.658		-59.263		

Table A-54 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group at Time 1

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	59	69.5	0.745	50	82.0	[0.708]
Intermediate	52	44.2	0.360	39	59.0	[0.420]
Distant	53	41.5	0.379	37	59.5	[0.363]
			Range 38			
			p=0.000884			p=0.0807
Presence of temporal adverbials						
No	72	51.4	[0.502]	67	55.2	0.309
Yes	92	53.3	[0.498]	59	83.1	0.691
						Range 38
			p=0.976			p=0.002
Formality of interlocutor						
Best friend	76	59.2	[0.594]	71	63.4	[0.413]
Advisor	88	46.6	[0.406]	55	74.5	[0.587]
			p=0.0535			p=0.117
Task version						
A (inf. first)	50	62.0	[0.623]	41	75.6	[0.594]
B (for. first)	114	48.2	[0.377]	85	64.7	[0.406]
			p=0.307			p=0.205
Grammar score						
Lower	109	56.9	[0.611]	85	72.9	[0.623]
Higher	55	43.6	[0.389]	41	58.5	[0.377]
			p=0.34			p=0.1
Participant gender						
Women	59	55.9	[0.524]	46	71.7	[0.528]
Men	105	50.5	[0.476]	80	66.2	[0.472]
			p=0.828			p=0.699
N=164		Relative rate 52.4% PF		N= 126	Relative rate 68.3% PF	
Participant (random)						
Rand. St. Dev.		1.426		0.476		
Verb (random)						
Rand. St. Dev.		0		0		
Fixed R^2		0.167		0.306		
Random R^2		0.318		0.044		
Total R^2		0.485		0.35		
Log likelihood		-92.569		-64.632		

Table A-55 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group at Time 2

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	36	91.7	0.862	65	50.8	0.259
Intermediate	58	51.7	0.365	40	75.0	0.551
Distant	65	38.5	0.218	28	89.3	0.700
			Range 64			*Range* 44
			p=0.000669			p=0.0138
Presence of temporal adverbials						
No	90	71.1	0.695	76	84.2	0.741
Yes	69	34.8	0.305	57	42.1	0.259
			Range 39			*Range* 48
			p=0.00646			p=0.000556
Formality of interlocutor						
Best friend	80	56.2	[0.518]	67	67.2	[0.525]
Advisor	79	54.4	[0.482]	66	65.2	[0.475]
			p=0.731			p=0.66
Task version						
A (inf. first)	44	61.4	[0.565]	43	62.8	[0.478]
B (for. first)	115	53.0	[0.435]	90	67.8	[0.522]
			p=0.396			p=0.778
Grammar score						
Lower	106	57.5	[0.581]	87	70.1	[0.572]
Higher	53	50.9	[0.419]	46	58.7	[0.428]
			p=0.279			p=0.356
Participant gender						
Men	102	56.9	[0.532]	88	65.9	[0.503]
Women	57	52.6	[0.468]	45	66.7	[0.497]
			p=0.65			p=0.97
N= 159		Relative rate 55.3% PF		N= 133		Relative rate 66.2% PF
Participant (random)						
Rand. St. Dev.		0.693		0.555		
Verb (random)						
Rand. St. Dev.		0.443		0		
Fixed R^2		0.4		0.375		
Random R^2		0.102		0.054		
Total R^2		0.502		0.429		
Log likelihood		-82.9		-64.513		

Table A-56 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group at Time 3

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	47	89.4	0.834	63	66.7	[0.374]
Intermediate	61	60.7	0.398	44	84.1	[0.600]
Distant	61	45.9	0.232	35	80.0	[0.527]
			Range 60			
			p=0.000127			p=0.146
Presence of temporal adverbials						
No	88	72.7	0.621	78	82.1	0.601
Yes	81	53.1	0.379	64	67.2	0.399
			Range 24			*Range* 20
			p=0.0216			p=0.0489
Formality of interlocutor						
Best friend	83	66.3	[0.533]	74	74.3	[0.483]
Advisor	86	60.5	[0.467]	68	76.5	[0.517]
			p=0.495			p=0.74
Task version						
A (inf. first)	47	74.5	[0.634]	48	72.9	[0.491]
B (for. first)	122	59.0	[0.366]	94	76.6	[0.509]
			p=0.12			p=0.886
Grammar score						
Lower	112	65.2	[0.594]	93	78.5	[0.570]
Higher	57	59.6	[0.406]	49	69.4	[0.430]
			p=0.243			p=0.284
Participant gender						
Men	108	64.8	[0.516]	94	74.5	[0.503]
Women	61	60.7	[0.484]	48	77.1	[0.497]
			p=0.843			p=0.964
N=169		Relative rate 63.3% PF		N= 142	Relative rate 75.4% PF	
Participant (random)						
Rand. St. Dev.		0.871		0.312		
Verb (random)						
Rand. St. Dev.		0		0		
Fixed R^2		0.323		0.113		
Random R^2		0.127		0.025		
Total R^2		0.45		0.138		
Log likelihood		-89.616		-74.12		

Table A-57 Factors contributing to the use of periphrastic future over morphological future and present indicative in the Spanish contextualized preference task for the instruction plus spiraling activities group at Time 4

	PF vs. MF			**PF vs. PI**		
Factor	N	% (of PF)	Factor weight	N	% (of PF)	Factor weight
Temporal distance						
Near	43	86.0	0.920	62	59.7	[0.493]
Intermediate	56	37.5	0.408	22	63.6	[0.540]
Distant	62	12.9	0.112	14	57.1	[0.466]
			Range 80			
			p=2.09e-06			*p*=0.885
Presence of temporal adverbials						
No	83	49.4	[0.588]	60	68.3	[0.602]
Yes	78	32.1	[0.412]	49	51.0	[0.398]
			p=0.0995			*p*=0.096
Formality of interlocutor						
Best friend	78	43.6	[0.545]	58	58.6	[0.466]
Advisor	83	38.6	[0.455]	51	62.7	[0.534]
			p=0.4			*p*=0.505
Task version						
A (inf. first)	45	44.4	[0.532]	35	57.1	[0.517]
B (formal first)	116	39.7	[0.468]	74	62.2	[0.483]
			p=0.714			*p*=0.778
Grammar score						
Lower	110	40.9	[0.482]	67	67.2	[0.589]
Higher	51	41.2	[0.518]	42	50.0	[0.411]
			p=0.84			*p*=0.125
Participant gender						
Women	60	43.3	[0.568]	38	68.4	[0.544]
Men	101	39.6	[0.432]	71	56.3	[0.456]
			p=0.421			*p*=0.449
N= 161		Relative rate 41.0% PF		N=109	Relative rate 60.6% PF	
Participant (random)						
Rand. St. Dev.		0.87		0		
Verb (random)						
Rand. St. Dev.		0.001		0		
Fixed R^2		0.471		0.096		
Random R^2		0.099		0		
Total R^2		0.57		0.096		
Log likelihood		-73.905		-68.989		

Appendix X Crosstabulation for participant gender for the Spanish contextualized preference task

Table A-58 Crosstabulation with participant gender by group and test time for the Spanish contextualized preference task

Group	Time	Response	Participant gender				Total	
			Women		Men			
			N	%	N	%	N	%
Control	1	MF	39	40.6	42	35.0	81	37.5
		PF	46	47.9	61	50.8	107	49.5
		PI	11	11.5	17	14.2	28	13.0
	2	MF	67	69.8	62	51.7	129	59.7
		PF	28	29.2	50	41.7	78	36.1
		PI	1	1.0	8	6.7	9	4.2
	3	MF	41	42.7	49	40.8	90	41.7
		PF	44	45.8	49	40.8	93	43.1
		PI	11	11.5	22	18.3	33	15.3
	4	MF	53	55.2	51	42.5	104	48.1
		PF	34	35.4	53	44.2	87	40.3
		PI	9	9.4	16	13.3	25	11.6
Instr.	1	MF	30	27.8	56	46.7	86	37.7
		PF	59	54.6	38	31.7	97	42.5
		PI	19	17.6	26	21.7	45	19.7
	2	MF	23	21.3	26	21.7	49	21.5
		PF	77	71.3	86	71.7	163	71.5
		PI	8	7.4	8	6.7	16	7.0
	3	MF	27	25.0	24	20.0	51	22.4
		PF	79	73.1	81	67.5	160	70.2
		PI	2	1.9	15	12.5	17	7.5
	4	MF	19	17.6	41	34.2	60	26.3
		PF	84	77.8	57	47.5	141	61.8
		PI	5	4.6	22	18.3	27	11.8
Instr. plus spir. act.	1	MF	26	36.1	52	39.4	78	38.2
		PF	33	45.8	53	40.2	86	42.2
		PI	13	18.1	27	20.5	40	19.6
	2	MF	27	37.5	44	33.3	71	34.8
		PF	30	41.7	58	43.9	88	43.1
		PI	15	20.8	30	22.7	45	22.1
	3	MF	24	33.3	38	28.8	62	30.4

Table A-58 (continued)

		PF	37	51.4	70	53.0	107	52.5
		PI	11	15.3	24	18.2	35	17.2
	4	MF	34	47.2	61	46.2	95	46.6
		PF	26	36.1	40	30.3	66	32.4
		PI	12	16.7	31	23.5	43	21.1

Appendix Y Crosstabulations for participant gender for the English contextualized preference task

Table A-59 Crosstabulation with participant gender for the English contextualized preference task

	Response	Participant Gender				Total	
		Women		Men			
		N	%	N	%	N	%
All participants	MF	49	17.8	97	26.1	146	22.5
	PF	226	81.9	269	72.3	495	76.4
	PI	1	0.4	6	1.6	7	1.1
	Total	276	100	372	100	648	100

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