The acquisition of variable past-time expression in L2 Spanish: combining concept-oriented, form-oriented, and variationist research traditions within functionalism

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The current dissertation contributes a comprehensive picture of the emergence and development of L2 Spanish past-time expression in a classroom setting (i.e., a large database corresponding to eight different proficiency levels from 1st semester to 7th/8th semester and a control group of near-native-speaker and native-speaker instructors). Such a comprehensive view was reached by the consideration of a plethora of past forms and the adoption of the most popular research traditions in the study of TA morphology: the concept-oriented, form-oriented, and the variationist research frameworks. According to the concept-oriented approach, our results showed that language complexity (i.e., embedding or syntactization) increased simultaneously with proficiency level, as did a number of non-morphological devices such as infinitive forms and verbal omission. The form-oriented approach in this dissertation yielded results that confirmed previous research: the present preceded the preterit as a default form, the preterit emerged as a default past form in the 1st semester prior to the imperfect, and both forms emerged and developed in combination with their prototypical meanings of perfectivity and imperfectivity, respectively. The other past forms (i.e., imperfect-progressive, preterit progressive, and the perfect) emerged after the preterit and imperfect but were minimally used even at higher levels, including the instructors' group, confirming their status as peripheral gram types (Dahl, 1985). An analysis of formal accuracy indicated that both the present indicative and the preterit followed a U-shaped curve of development, with the 3rd and 4th semester levels exhibiting the highest rates of inaccurate

well-formedness (e.g., overregularization, paradigm overgeneralization, etc.), whereas the imperfect showed a decreasing trend toward fewer formal errors. Lastly, the results pertaining to the variationist approach indicated that acquisition of past morphology is driven by multiple factors (i.e., lexical aspect, discourse grounding, adverbial modification, aspectual meaning, temporal reference, text type, and frequency), which have an increasing effect with increasing proficiency. Specifically, the results of mixed-effects binomial logistic regressions showed that as the learners' verbal systems reorganized and restructured, past form usage rates became more native-like and past forms were increasingly predicted by a larger number of significant factors.

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Preface

To Matt, for being the best advisor and mentor one could ever aspire to have. He became my role model in Academia teaching me the importance to combine not only research methodologies but serious scholarship and goodness.

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To time and aspect. To time, for giving me the experiences that I lived and teaching me that happiness cannot exist without aspect, a good perspective on life situations.

1.0 Introduction

"The past is a place of reference, not a place of residence."

By Roy T. Bennett

This dissertation examines what is well-known as the long and complex process of the acquisition of the expression of tense-aspect (TA) morphology. In particular, the study focuses on the acquisition of past temporality by adult native-speakers (NSs) of English learning Spanish as a second language (L2) in a classroom environment at a US university and provides a detailed account of the learners' developmental sequences from the initial state (e.g., beginning proficiency level) toward the final state or ultimate attainment (e.g., most advanced proficiency level).

This research assembles a complete description of the learners' developmental stages regarding their repertoire of means of expression of L2 Spanish past temporality across course levels, from 1st semester to 7th /8th semesters. Such a description particularly aims at describing the learners' "interlanguage" (IL) (Selinker, 1972, p. 214), defined as each linguistic system constructed at a certain developmental point (Ortega, 2009). Importantly, the IL is a separate language system different from the learners' L1 (L1) and target language (TL) but associated with both by the learners' "interlingual identifications" (Selinker, 1972, p. 211) such as treating certain linguistic units in their native language (NL) as the same as in the TL or the IL. Furthermore, the IL is the result of five psycholinguistic processes, (i.e., "language transfer", "overgeneralizations of target language (TL) linguistic material", "transfer-of-training", "strategies of second-language communication", and "strategies of second-language learning") within the "latent psychological structure" underlying L2 acquisition, pre-wired and latent in the brain (Selinker, 1972, pp. 212, 215), and activated when the learners try to express meaning in the TL through linguistic behavior.

The first process (i.e., L1 transfer) may be illustrated by the L2 Spanish learner's mapping of the L1 English 'table' and all its possible meanings with the Spanish TL *mesa*. Therefore, the expression 'table of contents' (i.e., *tabla de contenidos* in Spanish) may be erroneously translated by the learners *as mesa de contenidos* (Tarone, 2006, pp. 748-749). An example of the 2nd process (i.e., overgeneralizations of TL rules**)** is the regularization of irregular verbs (e.g., *poner-ponido* "put" (infinitive)-"puted" (regularized past participle form)), indicative of TL rule-internalization and a learning gap. Transfer of training (i.e., 3rd process) can affect the learners' IL when TL rules received through instruction are applied in incorrect contexts (e.g., a lesson on the historic present can influence the learner to overuse the present for past-time reference). The 4th process involved in the IL is related to the learner's communication strategies to solve communication issues, which can sometimes cause further confusion to the interlocutor. For example, the learner's lack of knowledge of the L2 English word "heater" may cause him to borrow the L1 Spanish word *calefactor* [kalefac'tor], a non-existent lexical item in the English TL and pronounce it with the TL phonetic properties [kalə'fʌktər]. The 5th process describes the learning strategies that may influence the IL positively or negatively. Mnemonics, a learning technique that assists in information retention or retrieval in the human memory can be a positive influence in the IL. For example, the memorization of the uses of the prepositions *por* and *para* in Spanish may be helped by the acronyms ATTRACTED (around a place, through a place, transportation, reason, after, cost, thanks, exchange, duration) and PERFECTO (purpose, effect, recipient, future dates, employment, comparison, toward, opinion). In conclusion, the learners' IL grammars are dynamic and systematic inasmuch as they consistently develop and change in similar ways as learners from different L2s reach successive proficiency levels.

This dissertation embraces a comprehensive functionalist perspective with a focus on the central roles of meaning and function in influencing language structure and language acquisition and expands the extensive body of research (e.g., Bardovi-Harlig, 2000, 2015; Salaberry, 2011; Shirai, 1991; von Stutterheim & Klein, 1987) on the L1 and L2 emergence and development of the form-meaning associations and their distinct discourse-pragmatic motivations (Andersen & Shirai, 1994). First, and with the purpose to analyze the role of discourse-pragmatics in meaning transmission before and after linguistic encoding, we will consider a comprehensive envelope of variation with the traditionally-investigated past forms in Spanish (i.e., preterit, imperfect), "the core gram types", but also those "in the periphery of tense-aspect systems" (Dahl, 2000, pp. 16-18), which have received less attention (e.g., imperfect progressive, preterit progressive, and the present perfect). Second, those forms are tracked in terms of their functional distribution across proficiency levels (Sato, 1990) and their change from monosemy to polysemy. Additionally, our lens of analysis also focuses on how the simple present is used to express past across proficiency levels, with beginning learners overusing the form (Bardovi-Harlig, 2002) and higher proficiency ones using it particularly in conversational style (i.e., "conversational historical present"; Bonilla, 2011). Another layer of analysis researches the meanings associated to the present perfect, how form-meaning combinations are established and how they shift across proficiency, and whether meanings change according to task type, yielding evidence in favor or not of aoristic grammaticalization.

Whereas Kanwit (2017) advocated for a two-way combined methodology to the study of TA morphology (i.e., concept-oriented and variationist approaches) that would provide a "more detailed microanalysis of morphosyntactic development" (p., 3), this dissertation uniquely used a three-way combined methodological approach integrating the three most popular analytical

frameworks in the acquisition of past morphology (i.e., concept-oriented, form-oriented, and variationist).

The *concept/meaning-oriented analysis* or CoA (also known as function-to-form analysis; Bardovi-Harlig, 2015, 2017; Sato, 1990) starts with the learner's need to express a certain concept, such as time, space, reference, modality, or a meaning within a wider concept (e.g., past temporality within the broader concept of time) and examines the use of lexico-pragmatic means of temporal expression at early stages (e.g., chronological order and adverbial use to indicate time) and the morphological means at higher proficiency levels (Bardovi-Harlig, 2017). Following this approach, language acquisition is thus largely viewed as "the permanent reorganization of the balance among means of expression" (p. 29). *The form-oriented analysis* or FoA (also known as form-to-function analysis; Bardovi-Harlig, 2015; Long & Sato, 1984) starts with one or two tense-aspect (TA) morphemes tracking each across their functions, meanings and uses in order to identify their roles and development in the IL grammars (Bardovi-Harlig, 2017). Despite their shared functional perspective, these two types of analysis vary in terms of their foci on developing ILs, that is, multiple expressive devices and one form or very few forms, respectively. More precisely, the former analysis type (i.e., CoA) examines the interplay of the learner's expressive devices within a conceptual space and the latter analyzes the emergence of one form or a set of forms and their path from monosemy to polysemy (i.e., one form-multiple meanings and one meaning-multiple forms; Andersen, 1984a; Bardovi-Harlig, 2017). The third framework of analysis, i.e., variationism, has yielded substantial empirical research in English and Spanish (e.g., Bayley, 2005; Bayley & Preston, 1996; Geeslin & Long, 2014; Tarone, 1985; Young, 1991) on "the underlying systematicity of variable learner production" (Bayley, 2005). Drawing on the sociolinguistic variationist Labovian research tradition (e.g., Lavob, 1972a), variationist SLA assumes that

interlanguage variation is subject to a multilevel type of influence or to what Young and Bayley (1996) have called the "principle of multiple causes" (p. 253). According to Bayley (2005), variability is expected to be probabilistically regulated by linguistic and social environmental features and by speaker attributes. Accordingly, the variationist framework uses multivariate analyses that include numerous linguistic and social variables, which are not always considered in traditional concept-oriented studies, demonstrating "which factors best predict the preference of one form over others" (Kanwit, 2017, p. 466).

While previous works have highlighted the importance of a fine-grained multifactorial analysis that accounts for language learning "by the simultaneous interaction of multiple forces" (e.g., Bayley, 2005; Ortega, 2009, p. 141; Shirai, 2004), this dissertation is unique in using an integrative analytical approach with the purpose to unravel atomized one-factor approaches to SLA, and more specifically to the development of TA morphology, by addressing its complex nature. In this vein, this dissertation considers the consistent linguistic predictors of past form use (e.g., lexical aspect, discourse grounding, temporal reference, temporal adverbial, type-token frequency) in written and oral production that have been separately investigated in previous research. This extensive analysis is achieved through the innovative application of a single quantitative and probabilistic model of statistical analysis (i.e., mixed effects binomial logistic regressions, see chapter 3 for details) which considers all of these possible predictors in order to tease apart the significant linguistic constraining of each past form across course levels and across task type. Therefore, Chapter 4 shows that such an integrated multi-methodological approach is crucial for a better understanding of the development of IL grammars. A tripartite analytical framework warrants an all-inclusive look at how the expression of past temporality proceeds from the first to the last course levels.

The rest of the chapter is organized as follows: section 1.1 discusses the main concepts of time, tense and aspect as well as tense-aspect morphology cross-linguistically with a special focus on English and Spanish, section 1.2 summarizes the potential learnability problems that L1 English L2 Spanish learners are likely to encounter throughout the acquisitional process of the expression of past temporality, and section 1.3 presents some concluding remarks.

1.1 Time, tense, aspect and devices in the encoding of temporality in Spanish and English

"To every thing there is a season,
and a time to every purpose under the heaven:
A time to be born, a time to die;
a time to plant, and a time to pluck up that which is planted."
Ecclesiastes 3:1-8

1.1.1 The concept of time

Temporality is tacitly epitomized in the epigraph as the overpowering ruler of human experience: "tempus rerum imperator" 'time, the emperor', as prophesized by the Romans. In consequence, life cannot escape temporality, in fact, it is traversed by it from beginning to end. Our whole human existence is ruled by the temporal: human beings essentially experience the world in a temporal dimension through situations or eventualities that occur in the past, present, or future.

The notion of temporality relates to the universal notional category of time measured along the passage from birth to death and thereby experienced through a sequence of changes that is irreversible or unidirectional (Klein, 2009a). These changing situations can happen along a real temporal axis (i.e., "realis", Bardovi-Harlig, 2000, p. 321), or can be thought of in terms of a hypothetical or imagined time (i.e., "irrealis", Bardovi-Harlig, 2000, p. 321) as in "If I were you, I'd go."

With respect to the theoretical underpinnings of time, there exists a "basic time structure" which is the foundation of the expression of temporality in most natural languages (Klein, 2009a; p. 26). This structure has six basic characteristics:

1. Segmentability: time consists of small segments such as spans or intervals.
2. Inclusion: the possibility that one-time span may be fully or partially included within another time span.
3. Succession: time spans may precede or follow each other (i.e., sequenced vs unsequenced situations).
4. Duration: time intervals may have short or long duration.
5. *Origo* (from Latin "origin"): the present moment, typically referred to linguistically as the "speech time" of a communicative situation. It constitutes the deictic center or anchoring point from where we experience situations as present, past and future. [1] In

[1] Lyons (1977) discusses deixis in the following way:

> "By deixis is meant the location and identification of persons, objects, events, processes and activities being talked about, or referred to, in relation to the spatiotemporal context created and sustained by the act of utterance and the participation in it, typically, of a single speaker and at least one addressee" (p. 637).

addition, this o*rigo* (or the "now") is conceived more as a time interval that includes the moment of speech than as an instantaneous time point.

6. Proximity: time spans might be close or not to each other.
7. Lack of quality: temporal intervals do not have qualitative features. They are conceived as units defined by their temporal relations such as succession, overlap, simultaneity.

In "realis" contexts, time has the major function of locating events somewhere along the timeline. In this sense, Reichenbach (1947) argues that there are three temporal points involved in the expression of eventualities in any given sentence: the point of speech (S) or *origo*, the point of the event (E), and the point of reference (R). Tenses in natural languages are constructs of these temporal points, which feature a direct two-way relationship, one between S and R and the other one between R and E, as well as an indirect relationship between S and E mediated by R. This mediator can be overtly marked through time adverbials or covertly expressed. For example, a sentence like "The bus had left" exhibits the use of the past perfect and clearly shows the interplay of the three time points, with the speaker's speech time (S), the time of the event (E) being the exact moment the bus left the station, and the reference time point (R) being some other implicit past time/event between the speech and event time points (e.g., the time the speaker arrived at the station). Reichenbach's taxonomy is important in showing that E and R are different in the case of the perfect tenses but the same in the case of the past simple/preterit, as shown by the schematization below. However, this taxonomy seems to work better with "single, punctual

situations" (i.e., the simple aspect) since it only accounts for temporal reference as opposed to aspectual contrasts (Dahl, 1985, p. 28).[2]

- E, R -S simple past
- E- S, R present perfect

Time is omnipresent in that it permeates the quotidian human experience. This omnipresence materializes via the human perception of the mutations brought about by time, the ever-changing situations around us. Time also materializes via the oral or written expression of temporality from two standpoints: 1. A pragmatic one, which serves to locate the human-related eventualities in time with respect to our present, as the deictic point, 2. A theoretical standpoint by which time can be conceptualized. In this last sense, the ability to express time "belongs to the most fundamental traits of human communication" and signals a crucial human capacity that implicates cognitive and linguistic processes (Klein & Li, 2009, p. 1). Critically, despite the universality and the centrality of time in our daily lives, the expression of temporal relations differs across natural languages and this fact is evidenced in their distinct use of different means of temporal expression. In other words, time is encoded differently across languages through a number of devices such as tense, (viewpoint) aspect, "Aktionsarten" (lexical aspect), temporal adverbials, particles, and discourse principles (Klein & Li, 2009). For example, whereas almost all Indo-European languages mark temporality grammatically by morphological means, Chinese uses

[2] For a critical discussion of Reichenbach's (1947) temporal points, see Comrie (1976). For a critical assessment of both Reichenbach and Comrie's conceptualizations of tense, and for a new improved theory that aims at overcoming the purported shortcomings of each author's theory, see Declerck (1986).

temporal adverbials to mark time. In this sense, temporal expression is nearly obligatory in most languages "since it is structurally connected to the finite verb" (Klein, 2009b, p. 39).

The discussion below contains a description of the six major linguistic features involved in the expression of time cross-linguistically, (i.e., tense, lexical aspect, viewpoint/grammatical aspect, temporal adverbials, temporal particles, and discourse principles). This discussion aims at an understanding of the similarities and differences between Spanish and English and the impact these may have on the acquisitional process of L2 Spanish past temporality. It is known that adult L2 learners possess complete knowledge of an L1 when they start the L2 learning process. As a result, "previous language knowledge is an important source of influence on L2 acquisition, and this holds universally true of all L2 learners" (Ortega, 2009, p. 31). Knowing the specifics of the target language grammar that can be facilitated or hindered due to L1 influence can help us understand learner errors and predict where these errors might occur in the learning process, and in the case of instructed learners it can help in formulating teaching-learning strategies. However, L1 transfer (positive or negative) cannot be the sole explanation for IL development without consideration of the universal principles that affect natural languages. Finally, it has been argued that L1 influence cannot completely transform the route of L2 acquisition, but it can affect the pace of learners' progress along their natural developmental paths (Ortega, 2009). Conversely, Tarone and Liu's (1995) research on the development of questions in English found that every new stage of question formation appeared first at home, where acquisition was faster, and only later with the teacher. Long (1998) argues that this study is the only one that has shown that social context may affect rate and route of acquisition.

1.1.2 Devices in the expression of time

Temporality is a basal category of human experience and cognition, and all human languages have generated a large range of devices for its expression that involves the interchange of several means as noted by Klein, Dietrich, and Noyau (1993): lexical (e.g., inherent semantics of verbs), morphological (e.g., tense-aspect marking), syntactic (e.g., position of temporal adverbs), and pragmatic (e.g., discourse organization).

This section provides an in-depth discussion of the six major devices that are used in the expression of past temporality cross-linguistically in Spanish and English, discussed in Klein and Li (2009) and Klein et al. (1993). The discussion is deemed necessary due to the centrality that these devices have in this concept-oriented dissertation for the study of how an interacting system of past-time expression, rather than a single past form within an "inflexional paradigm bias" (Klein et al., 1993, p. 74), is acquired. Notably, the authors argue that this bias can yield an incomplete view of past-time expression that ignores the interaction between tense-aspect marking and other expressive means.

It has been shown that the adult second language learners will traverse three basic stages in their trajectory of past morphology acquisition: the pragmatic, the lexical, and finally the morphological (Bardovi-Harlig, 2000; Bardovi-Harlig & Comajoan, 2008). Hence, the first device to be discussed in the encoding of temporality, prior to morphology, is the discourse-pragmatic-one. Both native and second language learners rely on discourse information to express temporal reference. It has been found that L2 learners in their first pragmatic stage, rely on the interlocutor's time frame in order to build their story (i.e., scaffolding; Bardovi-Harlig, 2000; or scaffolded discourse: Meisel, 1987, p. 212). Meisel explains that this stage is signaled by considerable interaction between the learner and the interlocutors, with the latter providing possible

constructions/forms for the former to choose from. The learners may also use constructions or rote learned forms which are put together according to pragmatic principles like “focus last” (Klein et al., 1993). A significant discourse strategy used by adult beginner learners is the “Principle of chronological order” or calendric ordering (Bardovi-Harlig, 2000; Klein, 2009b, p. 72; Klein & Purdue, 1997; Klein et al., 1993; Meisel, 1987; Schumann, 1987), by which the order of reported events corresponds to the order in which they happened.

The next temporal expressive device to be discussed, which follows the pragmatic stage, and one of the most elaborate according to Klein (2009b), is the use of lexical means such as temporal adverbials. The use of temporal adverbials in past-time marking has a two-fold function depending on the IL developmental point at which the learner is. Firstly, within the second lexical and pre-morphological stage, characterized by an absence of morphological marking, temporal adverbials have been observed to be the central device in the encoding of past temporality in beginning developmental ILs and in signaling the “temporal location of an event” (Shirai, 2009, p. 168). In this stage, the lexicon occupies the functional domain that is typical of verb morphology, hence, temporal adverbials have, in this stage, a greater functional load seeing that they receive all the pressure in the expression of past temporality. Secondly, the third stage, (i.e., the morphological per se) has shown differential uses of temporal adverbials: a. guide the learner in the right choice of past form (Izquierdo & Collins, 2008), b. be of crucial importance in emergent morphology, with decreasing reliance by higher proficiency level learners (Bardovi-Harlig, 1992b), and c. complement the use of past morphology with adverbials of incremental complexity as proficiency increases (Baker & Lubbers Quesada, 2011).

Adverbials can be realized through a number of forms such as simple adverbs (e.g., now), compound adverbs (e.g., afterwards), noun phrases (e.g., “last month”), prepositional phrases (e.g.,

"for a long time"), and subordinate clauses (e.g., "when they arrived"). From a functional standpoint, temporal adverbials are classified into sub-types that correspond to the exact roles they play in discourse. One major subtype is "position", which locates a situation on the timeline, signaling a temporal relation of *before, after,* or *simultaneous* between two time periods. For example, in a sentence like "I will call you soon", the adverb soon establishes a relation of "after" between the time of the situation instantiated by the verb *call* and speech time. Another adverb type is "duration", which indicates the length of a situation in either a vague way (e.g., for a long time) or in a rather specific way (e.g., for an hour). A third type of temporal adverbial is frequency, whose main purpose is to "quantify over time spans" (Klein, 2009b, p. 66). These adverb types can express vague frequency (e.g., sometimes) or more specific frequency (e.g., once a week). The last temporal subtype of adverbial is that of contrast (e.g., still, already, again), which has a temporal connotation. For instance, in a sentence such as "Peter was already in Europe", the temporal adverbial adds nuances of meaning: in this case the sentence means that at some specific time Peter was in Europe and at some time immediately before, he was there as well. When adverbial types are considered, adult second language acquisition research has shown that contrast adverbials are acquired last while position, duration and frequency types are acquired earlier (Klein et al., 1993).

The next, and likely one of the most investigated and cardinal devices in the expression of temporality, is *tense*, the linguistic correlate of time in numerous languages worldwide, which designates a grammatical category of the verb that allocates events to some point on the line of time (Bardovi-Harlig, 2000). As "grammaticalized location in time" (Comrie, 1985, p. 9), tense in a large number of languages is usually expressed by morphological means in the finite verb of the utterance/sentence. Furthermore, tense has been defined as a deictic grammatical concept relating

a situation to a reference or vantage point from which events are seen. This point or "deictic center" connects the time of an event to the speaker's *origo* or to some other time or situation. The former type of connection is exemplified by 'absolute tenses' such as the English simple past, whereas the latter type corresponds to 'relative tenses' such as the past perfect (Comrie, 1985). When tense is further analyzed and compared in Spanish and English, a difference stands out. Whereas Spanish identifies three tenses, (i.e., past, present, future), English recognizes only two, (i.e., present and past). Particularly, while Spanish exhibits differing morphological marking for the three tenses (e.g., *amo* "I love", *amé* "I loved", *amaré* "I will love"), English formally marks only the present and past (e.g., loves, loved) and expresses future time through lexical expressions (e.g., "am going to + infinitive") or modal auxiliary verbs (e.g., "I will love you"). In addition, Spanish verbal morphology encodes not only tense but also *person* and *number*; hence, each person in the plural and singular will utilize a different verbal inflection across tenses (e.g., *amé* "I loved"; *amó* "he/she loved"; *amamos* 'we loved'). Finally, the Spanish verbal inflections also vary according to the verbal paradigm i.e., according to the verb endings (i.e., verbs that end in *-ar*, *-er,* or *-ir*). Table (1-1) below shows the distinct verbal inflections of the Spanish preterit across each verbal paradigm, as well as the encoding of person and number, and the corresponding English forms.

Table 1-1. Spanish preterit conjugation across verbal paradigms.

Person/number	**Verbal paradigms: preterite forms**		
Singular	***-ar***	***-er***	***-ir***
1st person	*amé* 'loved'	*sentí* 'felt'	*viví* 'lived'
2nd person	*amaste* 'loved'	*sentiste* 'felt'	*viviste* 'lived'
3rd person	*amó* 'loved'	*sintió* 'felt'	*vivió* 'lived'
Plural	***-ar***	***-er***	***-ir***

1st person	*amamos* 'loved'	*sentimos* 'felt'	*vivimos* 'lived'
2nd person	*amaron* 'loved'	*sintieron* 'felt'	*vivieron* 'lived'
3rd person	*amaron* 'loved'	*sintieron* 'felt'	*vivieron* 'lived'

Another equally important device in the expression of temporality is *aspect*, "a semantic property of sentences which serves to present the situation talked about in a certain perspective" (Smith, 1983, p. 480). This definition describes the concept "sentential aspect", which is a combination of situation aspect (i.e., type of situation or the inherent lexical aspect of verbs, e.g., states versus events) and type of perspective, also known as viewpoint aspect (i.e., complete versus incomplete situation) (Smith, 1983, p. 480). Specifically, sentential aspect conveys the sentence-level point of view of an eventuality and is signaled by either a single verb form (e.g., run) or the verb constellation (i.e., the composite lexical and grammatical forms such as the verb, complements, and adverbs such as "run a marathon") (Smith, 1995, 1997; Verkuyl, 1972). In a similar vein, Klein (1994a) defines aspect as "the different perspectives which a speaker can take and express with regard to the temporal course of some event, action, process, etc." (p. 16). The notion of aspect is thus intimately related to the concepts of time, "situation structure" (e.g., states versus events; Smith, 1991, p. 3) and viewpoint: the speaker's choice of perspective (viewpoint) regarding situations (situation structure) as temporally complete or not (time). In other words, aspect and/or aspectual meaning is the choice of standpoint adopted by the speaker when presenting eventualities, a standpoint that is observable through the choice of the kind of

presentation (i.e., perspective) of the "situation-type" (Smith, 2003, 1983), as either temporally bounded, complete, terminated or temporally unbounded, incomplete, or continuing.[3]

Smith (1997) argues that viewpoints are similar cross-linguistically, yet not identical. Viewpoint aspect (also traditionally called *grammatical aspect* since it is usually encoded in grammatical morphology; Li & Shirai, 2000; Salaberry, 2017; Shirai, 1991) can thus be classified into "perfective" and "imperfective" meanings. The former presents events from an outer perspective, as a whole, spanned in their entirety, and from beginning to end. The latter presents events from an interior perspective (i.e., a focus on "the internal temporal structure of a situation"; Comrie, 1976, p. 24), spanning only a portion of them (Smith, 1991).

Comrie (1976) contends that the imperfective aspect is cross-linguistically polysemous, generally sub-divided into habitual and continuous meanings, the latter sub-divided into progressive/non-progressive, as shown in Figure 1.

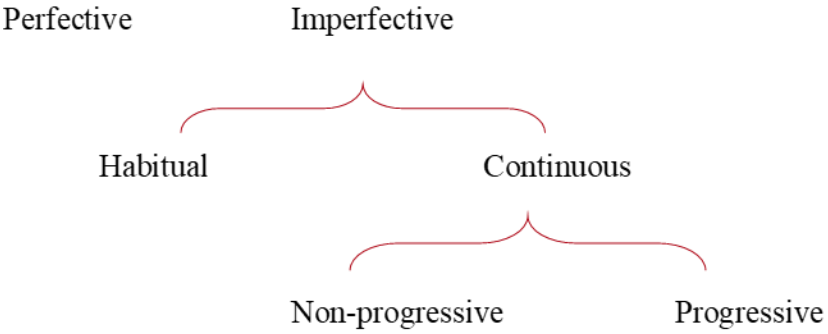

Figure 1-1. Classification of aspectual distinctions (Comrie, 1976, p. 25).

[3] For an alternative discussion that challenges the traditional definitions of time, tense and aspect, see Klein (2009b). For example, the author argues that conceiving aspect as a non-time-relational category is misleading since talking about completion versus incompletion necessarily involves time. When an action is presented as completed, it was completed at a certain time.

Comrie also argues that habituality and continuousness are not two distinct concepts but both "form a single unified concept", as suggested by those languages that have a single category to mark imperfectivity, irrespective of the habitual/continuous sub-division (p. 26). Figure 1-1 illustrates the cross-linguistic taxonomy of aspect.

Bybee, Perkins, and Pagliuca (1994), on the other hand, discuss Comrie's taxonomy of aspect and question its validity regarding the continuous and the progressive (dynamic verbs) and non-progressive (stative verbs) sub-divisions. Based on diachronic cross-linguistic research, the authors claim that a form for each node in Figure 1-1 above does not exist. In addition, they argue that there is no cross-linguistic evidence of a progressive gram-type that is restricted to dynamic verbs and a continuous gram-type which is not.

In the case of Spanish, imperfectivity is classified into three types: 1. "Progressive", an open durative or instantaneous interval of an event that is not initial or final, i.e., (e.g., building a house versus winning a marathon), 2. "Iterative", a series of events that happen over a time period, and 3. "Continuous", a state of affairs that takes place throughout an interval of time where no change of state is reported (*Nueva Gramática de la Lengua Española* 'New Grammar of the Spanish language', 2010, p. 431).

With respect to aspect realization, Comrie (1976) argues that some languages use a single category to convey imperfectivity, other languages use distinct categories and others have a category that partially indicates imperfective meanings. For example, English has a separate habitual aspect (e.g., "he used to study here") and a separate progressive aspect (e.g., "he was studying when I arrived"). However, the simple past in English is as well felicitous in habitual contexts, although less frequently and if aided by contextual cues. Conversely, aspectual differentiation in Spanish can be linguistically encoded through the dyadic gram opposition

preterit-imperfect. The latter form can cover all the sub-meanings of imperfectivity including progressivity, which can alternatively be expressed by the progressive form. The progressive aspect in English (Smith, 1983, 1997) has been oftentimes described in grammar books as a proxy to "imperfectivity", or as an independent aspectual distinction. It is possible that the lack of an imperfect form in English to express imperfective meaning when compared to Spanish, may have led to nuanced classifications of aspect in the literature (e.g., language grammars). Notwithstanding the information in descriptive grammars, some scholars (e.g., Comrie, 1976; de Swart, 2012) claim that the progressive is a sub-type of the imperfective aspect as opposed to an aspect type on its own.

According to Comrie, some languages, like English, distinguish progressive from non-progressive meanings via progressive and non-progressive forms which are not interchangeable. Spanish, on the other hand, can use a progressive form (i.e., imperfect-progressive) or a non-progressive form (i.e., the imperfect) to convey progressivity. Examples (1) and (2) illustrate this contrast:

1. Lucas ***estaba cantando/cantaba*** cuando nosotros llegamos. (Spanish progressivity)

   "Lucas **was singing** when we arrived."

2. Lucas ***was singing/*sang*** when we arrived. (English progressivity)

   "Lucas **was singing** when we arrived."

Additionally, the progressive in English has a wider range of meanings than in other languages (e.g., Spanish), especially with stative verbs for temporary behavior (e.g.," the guests are loving our food") or with event verbs to convey a greater emotive effect (e.g., "he was always watching TV") (Comrie, 1976). Bybee (1985) discusses two-way aspectual distinctions cross-linguistically (i.e., perfective/imperfective and habitual/continuous) and considers the former set

to be more general and the latter to be more specific in meaning. According to grammaticalization theory, the development of grammatical meaning goes from more specific to more general. According to Bybee, "a diachronic source of a general imperfective marker is a periphrastic progressive that has generalized to cover habitual functions as well" (p. 143). With respect to the imperfective sub-division of habituality, Comrie (1976) argues that it should be differentiated from iterativity (i.e., repetition of eventualities; Salaberry, 2013) and further points out that some habitual situations can be iterative or not. The author explains that the mere repetition of the situation does not make it a habitual one. Therefore, in a sentence such as "the lecturer stood up, coughed a few times and apologized", the repeated situation is iterative and non-habitual since its instances can be seen as a single one, with internal structure and can be expressed by a perfective form (Comrie, 1976, p. 27). Within habituality, iterativity is involved when a situation cannot be prolonged in time (Example 3) or when it can (Example 4). On the other hand, no iterativity is involved in a situation which takes place for a period of time without intermission and which can be prolonged indefinitely in time (Example 5). The sub-division of Spanish imperfective aspect into habituality and/or iterativity and continuousness (*Manual de Gramática de la Real Academia Española,* 2010) seemingly corresponds to Comrie's (1976) iterative-habituals and non-iterative-habituals respectively:

3. "The old professor used to always arrive late." (Iterative habitual)
4. "The policeman used to stand in the corner for two hours." (Iterative habitual)
5. "The Temple of Diana used to stand at Ephesus." (Non-iterative habitual) (Comrie, 1976, p. 28)

Shirai (1991) conceptualizes the repetition of situations based on Brinton (1988) and Bybee (1985). Particularly, Shirai considers iterative eventualities as repeated actions on a single occasion

(e.g., “he coughed for a few minutes”, p. 74) and habitual eventualities as repeated situations on multiple occasions over an extended period (e.g., “they walked to school every day”). Moreover, Shirai argues that habituality and iterativity are different dimensions and can thus be combined into an “iterative-habitual” (e.g., “he coughed for a few minutes every day”) (p. 74). Notably, Shirai’s “iterative-habitual” meaning does not correspond to Comrie’s “iterative-habitual”.

On the other hand, the notion of iterativity is also associated with perfective meaning and thus a perfective form (Bertinetto & Lenci, 2012). In Spanish, habituality (imperfective meaning) and iterativity (perfective meaning) are encoded in the famous preterit-imperfect dyad, whereas in English these aspectual notions can both be encoded by the perfective form, i.e., the simple past. Examples (6) and (7) below respectively illustrate the perfective iterative / imperfective habitual opposition through Spanish morphology: in Example (6) the adverbial phrase is “strictly delimiting”; hence, the number of visits is entirely countable and in the second example the adverbial provides a reference time and John’s sporadic/frequent characteristics as a visitor are asserted with respect to that reference point, i.e., the discourse topic is John’s habits (Bertinetto & Lenci, 2012).

6. *El año pasado Juan **visitó** a su madre frecuentemente.*

   “Last year, John **visited** (PFV) his mom frequently.”

7. *El año pasado Juan **visitaba** a su madre frecuentemente.*

   “Last year, John **visited/used to visit** (IMP) his mom frequently.”

In the same vein, Salaberry (2013) explains that iterated eventualities are anchored to specific points in time designating actual, episodic events, whereas habitual eventualities express structural events (not temporally anchored). In other words, “only the habitual allows for the

failure of the event to take place at one particular time during last year (i.e., instances of the event are not anchored to specific times)" (Salaberry, 2013, p. 248).[4]

"Anteriority" (i.e., past situations with current relevance; Bybee, et al., 1994) is another type of aspect, usually expressed by the present perfect (PP) in both English and Spanish consisting of the present form of *haber* "auxiliary have" + V-past participle form. Anteriority is cross-linguistically conveyed by indefinite past eventualities that have no temporal anchoring, unlike perfective situations, and are currently relevant in that they are important to speech time (i.e., o*rigo*; Klein, 2009). Namely, "the perfect indicates the continuing relevance of a past situation" (Comrie, 1976, p. 52). The canonical meanings associated with anteriority in English and Spanish are recent and resultative past (i.e., recent past situations that may have consequences in the present), persistent situation (i.e., past situations that carry over to the present and may continue in the future), and experiential past (i.e., indefinite past situations that constitute the speaker's experiences) (Comrie, 1976; *Nueva Gramática de la Lengua Española*, "New Grammar of the Spanish language", 2010).

Despite the apparent similarities of the present perfect in English and Spanish, the latter can also utilize the present tense in the persistent situation function, found with atelic predicates and inceptive adverbials such as *desde hace (años)* "since x years". This present-PP alternation is explained by the tenets of grammaticalization theory (Hopper & Traugott, 2003), which propose a grammaticalization cline by which the periphrastic past has been evolving from anterior to perfective meaning in the Romance languages (e.g., Sub-Andean Spanish; Terán & Kanwit, 2018;

[4] For a more comprehensive discussion of viewpoint aspect and aspectual meanings, see Comrie (1976) and Smith (1991).

passé compossé in French, which is farthest on this evolutionary process). In this grammaticalization cline, the canonical anterior meanings of the PP are demoted to marginal contexts, which are in turn taken over by the simple present specifically in the persistent situation function as attested in Peninsular Spanish by Howe and Rodríguez Louro (2013). Consider Example (8) below and its corresponding English translation, which shows how the present indicative conveys a perfect aspectual meaning as opposed to English, which does not allow the present in this context:

8. *También **está** (PT) cerrada, desde hace nueve años.*

   "[It] too **has been** (PP) closed for nine years." (Howe & Rodríguez Louro, 2013, p. 42).

Anterior morphology has received rather little attention in traditional functionalist L2 acquisition research (See Bardovi-Harlig, 2005; Liszka, 2002; Terán, 2014; Uno, 2014 for exceptions in L2 English), and has received secondary attention in foreign-language curricula when contrasted to the primordial place occupied by the perfective and imperfective markers. The research and teaching gaps have been possibly due to a number of important but different reasons: 1. late emergence in the IL grammar and complex multifunctional nature, 2. the PP's general low frequency in native-speaker usage in some Spanish varieties (e.g., Mexican Spanish) and in English, 3. perfective meanings seemingly outnumber anterior meanings in daily conversations, 4. the PP has been losing ground to the simple past/preterit (e.g., Rodríguez Louro, 2009 for rioplatense Spanish; Hundt & Smith, 2009 for American and British English; Yao & Collins, 2012 for World Englishes), 5. the attested cross-dialectical variation of the PP and the preterit in Spanish (e.g., Schwenter & Torres-Cacollous, 2008 for Mexican and Peninsular Spanish varieties) as well as in English (e.g., Yao & Collins, 2012), and 6. intra-dialectal variation (e.g., Terán & Kanwit, 2018 for task variation and style-shifting in Tucumán Spanish PP-preterit use). Accordingly, input

frequency and salience can predict the difficulty levels in acquiring aspects of the L2 grammar (Ortega, 2009). Anteriority; however, has been more prolific in variationist L2 Spanish research (e.g., Geeslin, Fafulas, & Kanwit, 2013; Zahler & Whatley, 2017), with a focus on perfective-perfect aspectual variation via morphological means (i.e., preterit versus present perfect) as part of the body of research investigating PP grammaticalization into a perfective meaning marker. This brief discussion on anterior aspect and its expressive means is important insofar as this dissertation seeks to investigate the evolution of past morphology across developmental ILs and how different TA markers emerge and evolve across proficiency levels and what aspectual meanings they convey at different developmental points in the IL. Including the PP in the envelope of variation is of vital importance so as to fill a research gap in terms of the acquisition of the form-meaning pair of PP and anteriority in a classroom setting where the use of this form is highly restricted.

To summarize, aspect is a universal concept that designates the speaker's perspective of eventualities, and which is usually marked morphologically across languages, such as in Spanish via the dyad preterit-imperfective. Despite differences in the encoding of aspect between English and Spanish, the aspectual meaning of sentences and their ensuing classification into the aforementioned sub-types are operative in both languages.

Lexical aspect (also known as *Aktionsart*, situation aspect, event/situation types) is another cross-linguistic level of representation of aspect which pertains to the inherent temporal semantic nature of verbs or verbal predicates. In fact, Verkuyl (1972) maintains that the term lexical aspect is a misnomer and should best be referred to as aspectual class or situation aspect, since this type of aspect should be defined at the level of predicate-argument structure (i.e., the "verb constellation" consisting of the composite of verb plus arguments, Smith 2003, p. 68).

Verbs or verb phrases are primarily differentiated as states or events, which essentially differ in terms of their internal inherent temporal contours or "temporal schemata" (Smith, 1991, p. 27). For instance, events are considered to be dynamic, have endpoints, either natural or arbitrary, and consequently instantiate changes inasmuch as they have successive stages (e.g., they can start, continue, and come to an end). Conversely, states are defined as stable, static situations, with no dynamics, no internal structure and with no inherent change involved. They designate a period of "undifferentiated moments" with no endpoints (Smith, 1983, p. 490).

The intrinsic semantics of the verb/verb phrase embodies an ontological classification into four main classes of verbs (Vendler, 1957, 1967), highly popular in cross-linguistic TA morphology research: achievements (*caerse* "fall"), accomplishments (*leer un libro* "read a book"), activities (*correr* "run"), and states (*estar* "be"). Smith (1983) argues that the first three classes make up events, which involve change. Specifically, achievements and accomplishments are events that have different stages that lead to intrinsic or natural endings. On the other hand, activities are events which can start or end arbitrarily at any stage. Furthermore, verb types (i.e., situation-types) are semantically defined according to three distinctive features: duration, telicity, and dynamism. *Duration* indicates whether an event takes place throughout a period of time or whether or not that event is punctual, i.e., durative versus instantaneous. In this sense, activities, states, and accomplishments are durative situations lasting at least for a moment, whereas achievements are not. *Telicity* indicates whether or not the event has a natural intrinsic endpoint or final stage/point. When the goal is reached, the event is complete and thus considered telic. Atelic events (i.e. activities) are processes realized at the moment they begin, they have no intrinsic final points, but have arbitrary ones and can, as a consequence, stop at any time (Smith, 1991). *Dynamism* expresses the notion of development of an action through consecutive stages or the

absence of movement in a state (i.e., undifferentiated moments; e.g., Bardovi-Harlig, 2000; *Nueva Gramática de la Lengua Española*, "New Grammar of the Spanish language", 2010; Smith, 1983). The characterization of each verb type according to the three features discussed above is summarized in Table 1-2 below. [5]

Table 1-2. Semantic characterization of verbs (Andersen, 1989, 1991).

	States	Activities	Accomplishments	Achievements
Punctual	-	-	-	+
Telic	-	-	+	+
Dynamic	-	+	+	+

Another important characterization of situation-types that conflates the already extant and well-known ones as based on their temporal features is provided by Klein (2009b, p. 60) and is described below:

a. "Qualitative change: does the content which is expressed involve a change of state or not (i.e., non-stative versus stative verb phrases (VPs))?
b. Boundedness: does the content which is expressed have a beginning and an end, or, as is often said, an initial and a final boundary (i.e., "unbounded" versus "bounded", often contrasted as "processes" versus "events")?
c. Duration: in the case of "bounded contents", are they short or long in duration (i.e., "punctual" versus "non-punctual" contents)?

[5] See page 24 for examples of each verb type.

d. Inner quantification: do they involve repeated sub-events or sub-states (i.e., "iterative", "frequentative", "semelfactive")?

e. Phase: do they focus on a sub-phase of the total content, for example the beginning, the middle, the end (i.e., "inchoative", "terminative", "resultative", etc.)?"

It should be noted that there are other verbal classifications in the literature that propose slight changes to the Vendlerian one[6]. For example, Smith (1991) uses the traditional taxonomy by Vendler (1957) but adds a new category namely "semelfactives" (p. 6, 55) such as knock or tap. According to the author, this category designates a type of event that is atelic and instantaneous with no preliminary or resultant stages, which consists of a single stage with "simultaneous initial and final endpoints" (p. 56) and is incompatible with durative adverbials and the imperfect aspect in that both involve an interval. For the purposes of this dissertation research, the decision was made to use the Vendlerian classification, the most widely utilized and a benchmark taxonomy in SLA studies of TA morphology (Salaberry, 2017), which will thus facilitate the interpretation and generalization of results in light of previous research.

One last important consideration about lexical aspect and the ensuing taxonomy of verbs discussed above is the categorization of these verbs or situation types as "basic-level" and "shifted" and "derived" (Smith, 1991, p. 27). The former are the simplest, most direct associations of a situation-type with an idealized one such as the choice of simple aspect to express a stative situation. The other two categories refer to cases which are shifted or derived from other situation types, cases with shifts of focus from the basic-level types of situations, i.e., marked focus. They

[6] See Shirai (2013) for a comprehensive discussion of the major verbal semantics taxonomies in previous SLA studies.

are events that shifted from the basic-level events through a mechanism known as "coercion" (Moens, 1987). According to Smith (1991), all languages possess means to shift the aspectual value of a situation type or verb constellation.

The first case of derived situation types discussed by Smith (1991) is the "super-lexical morphemes" (i.e., lexical morphemes that provide a narrow view of an event with a focus on the beginning, middle, or end of situations, p. 75). Moreover, these morphemes modify the focus of the event without determining the situation type. In other words, they allow for a change of perspective of the basic-level situation type without a significant change in the situation in question: from a perfective event expressed by an atelic situation-type with an arbitrary endpoint (Example 9) to an inceptive (i.e., ingressive) event where the focus has shifted to a narrower view of the situation, that is, the beginnings of the situation (Example 10). Importantly, the latter example uses the super-lexical morpheme "start" for this purpose.

9. *He* ***laughed.***
10. *He* ***started to laugh.***

Another case of shifted focus or coercion can be exemplified by those sentences which present stative verbs as events, known in English as progressive statives or stative progressives. The examples below show the difference between the state presented as a state (11), where there is no implication of a final endpoint and the state presented as an event with an eventual final endpoint (12). Example (11) illustrates a standard association, where the actual situation and the idealized one are associated by means of linguistic forms related to a given situation type. Example (12), on the other hand, shows a non-standard association where the actual situation is expressed through linguistic forms linked with a non-corresponding situation type (i.e., the choice of progressive with a stative verb). Speakers have a choice in how to present the situations in question

by talking about them in more than one way; hence, aspect is a subjective category. The interaction of situation aspect and viewpoint aspect jointly determines the temporal boundedness of a situation (Smith, 1983).

11. *We **lived** in Chicago.*

12. *We **were living** in Chicago.*

Coerced situations are encouraged also by the argument noun phrases of the verb: the object noun phrase affects the type of situation by shifting it from an atelic to a telic verb type. In this vein, a sentence like "I ate" describes an atelic event while "I ate a sandwich" expresses a telic one. [7] However, telicity is also affected by the countability and specificity features of the argument in so far as a singular count noun which has specific reference telicizes an atelic situation type (see Example 13), shifting its basic-level status. Conversely, the indeterminate, non-specific plural noun phrase as object does not produce a telicizing effect (see Example 14).

13. *She **played** a song.*

14. *She **played songs.***

In other words, some cases of coercion from atelic to telic predicates, for example, seem to fall more broadly under the complex, clause-level phenomenon of transitivity. It is best defined as a syntactic feature that encodes the number and type of core arguments which appear in the

[7] Traditionally in the field of SLA, lexical aspect has been considered a value of the verb phrase/verbal predicate, rather than the value of only the verb. Smith's argument of coercion is rooted in the idea that a verb has its own aspectual value. (Personal Communication, Y. Shirai, September 2018). In this sense, lexical aspect seems to be part of a continuum, with more or less telic meanings depending on the verb constellation, rather than on the verb itself. Similarly, a scalar perspective showed that more or less transitivity depends on global context (i.e., clause or argument structure) (Thompson & Hopper, 2001).

clause and which are determined by the verb phrase head. Clearly, Smith (2003) approaches the aforementioned coercion with a focus on the polyvalence of verbs, which allows them to combine with different constituents/arguments, allowing the verb constellation to convey (a)telicity. This combination "is licensed, if it has a plausible conceptual-semantic interpretation" (i.e., if it yields a sensical meaning) (Vogel, 1998). In addition, verbal coercion, as discussed by Smith (2003), is seemingly approached at a more micro-level as an oppositional dyad of intransitivity versus transitivity of the verb. It is worth noting that transitivity has also been considered at a more macro-level, as being scalar or taking place along a continuum (Thompson & Hopper, 2001). Under this view, the authors argue that transitivity relates to the entire clause and not just the verb and its object. They devised ten component parameters of transitivity to classify clauses with a number of scalar values ranging from high to low. An analysis of conversational language by Thompson and Hopper (2001) showed that "low Transitivity" clauses were more frequently used (73%) than "high Transitivity" ones by the participants. The authors explain this finding as a consequence of the type of genre to which face-to-face conversations belong, characterized by a focus on descriptions of states, attitudes, and assessment of situations and behavior rather than on actions or events. Finally, their research also found that "high Transitivity" and not "low Transitivity" clauses were more frequent in foregrounded events in narratives, confirming the association between discourse foreground with completed, punctual, and sequenced events (Reinhart, 1984) realized by transitive telic predicates with two or more participants.

To conclude, Smith (2003) argues that the shifted situation types are usually triggered by the presence of certain material in the context such as adverbs. The external value of the contextual material overrides that of the basic-level situation type under the "Principle of External Override" (p. 72). For example, a telic verb constellation such as ("I wrote a letter"), meaning that I completed

writing a letter, becomes atelic if an adverb of duration, inherently atelic, co-occurs ("I wrote a letter for an hour"), meaning that I was engaged in the activity of letter-writing, but did not actually complete a letter.

The six devices involved in the expression of temporality in English and Spanish discussed in this section are an important introduction to this dissertation, which seeks to discover and analyze the morphological and non-morphological means to express past time that the L2 Spanish learners progressively acquire. A corollary is the examination of the role of restructuring and reorganization of the learners' TA form repertoire on their way to becoming more proficient speakers with a more fully-fledged verbal system.

The following section includes a summary of the most salient difficulties that may arise when comparing English and Spanish TA systems. The section finishes with an account of the potential learnability complexities in the L2 acquisition process of past tense morphology that might present to the L2 Spanish learner.

1.2 A comparative account of past morphology in Spanish and English: learnability issues

"The past is never dead. It's not even past."

By W. Faulkner- Requiem for a Nun

1.2.1 Introduction

Section 1.1.2 above described the paramount devices involved in the expression of temporality in both Spanish and English. Tense and aspect (i.e., viewpoint and lexical aspect) are

pivotal grammatical means of time expression whose combination results in the number of verb tenses described in the major language grammars, typically referred to in L2 research as tense-aspect markers or tense-aspect morphology.

This section aims at pinpointing the key learnability issues potentially faced by the L1 English speaker in the process of acquiring L2 Spanish past morphology, which entails, among other things, the reconfiguration of L1 features which do not have the same morpho-lexical marking in the L2 (Domínguez, Arche, & Myles, 2017). A crucial caveat is that the IL is not the sum of the TL and the L1, but an independent system combining aspects of the L1, L2, both L1 and L2 or neither L1 nor L2 and affected by Cognitive Universal Principles (Selinker, 1972). In other words, the learner's knowledge systems constantly become involved in basically four "processes of building, revising, expanding, and refining L2 representations" (Ortega, 2009, p. 116): 1. simplification, as in Andersen's (1984a) One to One Principle for emergent morphology by which the L2 learner, as much as the L1 learner, moves from a stage of one meaning-one form mappings to a more multifunctional stage where one form can be associated with more than one meaning, 2. overgeneralization (e.g., overregularization), 3. restructuring (i.e., gradual or abrupt knowledge changes of a qualitative nature and related to the acquisitional process but not necessarily involving increased accuracy), and 4. U-shaped behavior (i.e., native-like linguistic behavior at early and final developmental points which differ qualitatively in that only the latter is indicative of native-like production showing acquisition of the fully-fledged form-meaning mapping system, e.g., Kellerman, 1985b; Shirai, 1990).

The following section discusses the L2 learner's challenges in L2 Spanish past morphology development through the lens of L1 and L2 similarities and differences and in light of the aforementioned processes.

1.2.2 L2 Spanish morphology: the learnability problem

Table 1-3 below contains a synopsis of TA morphology correspondences in English and Spanish and illustrates the form-function complexities in each language, which serve to foresee the potential difficulties in L2 Spanish past morphology development.

Table 1-3. Form-meaning mappings in English and Spanish past temporality. Adapted from Table I (Domínguez et al., 2017, p. 435).

Aspectual meaning	Status	English form	Spanish form
Perfective			
• **Completed/terminative**	Finished eventuality/situation	***Past*** Marta was ill last Sunday.	***Preterit*** Marta estuvo enferma el domingo pasado.
• **Iterative**	Iteration of finished events.	***Past*** Marta arrived to work late last year.	***Preterit*** Marta llegó tarde al trabajo el año pasado.
Imperfective			
• **Habitual**	Period unfinished Each instance finished	***Past/other means (used to/would)*** Marta used to sing in a choir.	***Imperfect/ periphrasis (soler + infinitive)*** Marta cantaba/solía cantar en un coro.
• **Continuous**	Unfinished	***Past*** Marta was ill (when I visited her).	***Imperfect*** Marta estaba enferma (cuando la visité).
• **Progressive**	Unfinished	***Periphrasis (copula + V-ing)*** Marta was singing when we arrived.	***Imperfect/imperfect progressive (copula + V-ndo)*** Marta cantaba/estaba cantando cuando llegamos.
Perfect/Anterior			
• **Current relevance**	Past situations are still relevant at speech time	***Present perfect*** I've traveled a lot these past years.	***Complex preterite perfect*** He viajado mucho estos años.
Nuanced aspect meaning			
• **Perfective-progressive mix**	A durative event that came to an end	***-?***	***Preterit progressive*** Marta estuvo estudiando para el examen toda la tarde.

This section provides a discussion of the major problems that learners could experience in their acquisition of past morphology. This discussion is organized around three main themes:

i. The complexity of having to learn an L2 like Spanish, which is highly inflectional and whose verbal declensions mark a range of grammatical categories (e.g., person and number) in addition to tense-aspect. The learner is left with a different past inflection per person-number pair, which in turn varies according to each of the three verbal paradigms,

ii. The problem of a lack of one-to-one correspondence is the way tense and aspect are linguistically expressed in English and Spanish. Consequently, mapping form to function and function to form in the L1 might differ from the TL. Learners have to acquire past forms in the L2, which are non-existent in their L1 (e.g., the preterit-progressive) and whose meanings sometimes may have no correspondence either. That is to say, learners have to map form-function combinations that do not necessarily have a correspondence in their L1, and

iii. Learners have to move from a stage of one form, one meaning to one form, multiple meanings.

The first complexity that the acquisition of L2 Spanish morphology poses is related to the concept discussed in the previous section: tense. Spanish and English differ with respect to the linguistic marking of time, with the former morphologically signaling three tenses (i.e., present, past, and future) and the latter, two (i.e., present and past). The L2 Spanish learner has to learn to map future meaning to both morphology and lexical means. Moreover, Spanish generally marks time via portmanteau morphemes (i.e., via cumulative expression) that encode information of tense, mood, aspect, person and number, and therefore each person in the plural and singular receives a different inflection to signal past tense. In addition, we also discussed that Spanish has

three major verbal paradigms (i.e., *-ar, -er, -ir*), each of which takes a different past inflection. The L2 learner is challenged to move from a more transparent and less complex L1 English verbal system, whose past inflections tend to encode only tense and aspect. The learner is exposed to a sophisticated L2 verbal system with a plethora of past time inflections that mark a larger number of grammatical categories than the English ones. This can be particularly challenging and even more so when the learner is subject to tight syllabi where content is rapidly covered and time for practice is limited. In general, the L2 Spanish learner advances in the development of TA morphology by generally misusing past forms, sometimes due to treating the patterns of the input as being categorical (e.g., using the preterit with a telic verb even when imperfective meaning is conveyed). Input frequency and salience of the past forms can also affect past morphology misuse, especially at more advanced levels (Salaberry, 2011). Specifically, learners can assign a certain past inflection to the wrong person-number pair (e.g., *yo trabajó* "I worked" where the past inflection corresponds to the 3rd person singular). Learners will frequently confuse present and future inflections with past ones rendering non-target-like linguistic behavior, as attested by the learner data of the lower proficiency courses in the dissertation proposal.

A second difficulty for the L2 learner is realizing that there is no one-to-one-correspondence between the L1 and L2 TA systems. From a functional perspective, the L2 learner has to move from the one-to-one principle, i.e., one form- one meaning, to multifunctionality (Andersen, 1984a). Consequently, past morphology acquisition entails a gradual development through which the L2 acquirer moves beyond form-default meaning association (e.g., preterit-perfective) to a form-multifunction mapping (e.g., learning to associate the imperfect beyond continuousness or the preterit with iterativity). When acquiring Spanish aspectual morphology, English speakers have to learn that a form akin to the Simple Past cannot be used to express both

complete and incomplete events in Spanish. To be specific, Spanish marks perfective and imperfective aspectual distinctions and their sub-types by means of two distinct forms (preterit and imperfect). Conversely, English generally uses one single form (i.e., the simple past) to express the default perfective meaning and most of the imperfective sub-meanings (habitual and continuous). When the imperfective sub-meaning of progressivity (i.e., ongoing eventualities) is at work, English expresses it by way of the past progressive but the L2 Spanish acquirer has to learn to map progressivity to the imperfect and imperfect progressive forms (i.e., imperfect form of *estar* + V-ando/endo, "be + "V-ing") which can be used almost interchangeably. In other words, the L2 learner faces the challenge of mapping imperfective aspect to a form that does not exist in English (i.e., the imperfect) by dissociating the English past from its canonical perfective meaning. L2 past morphology acquisition entails a re-arrangement of the L1 English aspectual features that are differentially marked in L2 Spanish (Bardovi-Harlig, 2000; Domínguez et al., 2017; Salaberry, 2008). This TA reconfiguration process involves, according to Lardiere (2008), a sub-process of feature reassembly (FR) by which "L2 acquisition involves the reassembling of specific features into new functional categories and lexical items where mismatches between the L1 and L2 exist" (Domínguez et al., 2017, p. 437). Within a connectionist perspective, Shirai (2019) argues that the "L1 knowledge representation (i.e., the existing representation) always reshapes incoming new L2 information, thus affecting subsequent learning of new L2 patterns." (p. 97).

Another learnability difficulty for the L1 English speaker is learning to map differing iterations (habituality and iterativity) to two distinct past markers in L2 Spanish, i.e., the preterit and imperfect, where English uses only the simple past:

15. *Cuando era niño, Julián* ***llegaba*** *tarde a la escuela.*

    "When he was a child, Julián **arrived** (IMP) late to school."

16. *Durante dos años, Julián **llegó** tarde a la escuela.*

"For two years, Julián **arrived** (PFV) late to school."

Example (15) shows how the imperfective form encodes habituality through the repetition of a series of events that are not temporally anchored, similar to the meanings expressed by generic sentences (Salaberry, 2013). Example (16), on the other hand, expresses iterativity (i.e., the iteration of a perfective situation for a certain period of time) by means of the preterit. Each iterated eventuality has temporal anchoring and thus designates actual, episodic events. Slabakova and Montrul (2007) contend that iterated events are interpreted through pragmatic coercion of the lexical aspectual class of the verb prompted by adverbial clauses. In other words, the authors argue that the temporal adverbial of duration (e.g., "for two years") in Example (16), with a prototypically atelic nature, seems incompatible with telic eventualities that convey perfective meaning. This apparent incompatibility is solved with the adverbial implicitly triggering the atelicization of the telic punctual verb "arrive", enforcing the repetition of the event. Specifically, the durative adverbial assigns an imperfective (i.e., durative and iterative) aspectual meaning to the telicity of the verb and the perfectivity of the verb form (i.e., the preterit) triggering a phenomenon that I would call "iterated perfectivity". The adverbial allows the speaker to count the number of times Juan arrived late during a period of two years (Bertinetto & Lenci, 2011). Finally, these aspectual changes in context evince another level of complexity, that of the interaction between lexical aspect and viewpoint aspect (i.e., local versus broader aspectual levels). Specifically, the learner has to be able to recognize that "write" (activity verb) as inherently atelic can be associated with both imperfective and perfective meanings, and thus with preterit and imperfect morphology in Spanish, as illustrated in Examples (17) and (18):

17. ***Escribía** cuando la alarma sonó.*

"I **was writing** (IMP), when the alarm went off." (the action of writing was in progress when the alarm set off)

18. ***Escribí*** *cuando la alarma sonó.*

"I **wrote** (PFV) when the alarm went off." (the action of writing is seen ingressively, that is, as having started right after the alarm rang)

Perfectivity or boundedness can refer to the beginning and/or end of a situation, thus an event may be inceptive, punctual or completive (Salaberry & Martins, 2015). Example (17) uses an atelic verb to convey perfective meaning, with a focus on the beginning of the event.

Still another challenge, possibly one of the hardest in L2 Spanish TA acquisition, concerns the nuanced aspectual meaning that combines perfectivity and progressivity, expressed by the preterit progressive form. This periphrastic form consists of the preterit form of the auxiliary verb *estar* "be", which provides information concerning tense, person, number and perfective viewpoint plus the present participle (i.e., V-ing), which contributes certain conceptual properties associated with the progressive (Westfall, 2003). The aspectual meaning conveyed indicates that an action, while finished, lasted for/happened through a period of time, which may be specified by adverbials or not (King & Suñer, 1980a; Westfall, 2003). This form-meaning pair is mostly used in colloquial spontaneous language for durative past actions which answer the question "What did you do?" (*Nueva Gramática de la Lengua Española*, 2010). However, the form is not highly frequent cross-dialectically. For instance, our corpus of Buenos Aires Spanish past morphology across personal narratives showed that only 7 tokens out of a total of 481 were preterite-progressive (Terán, 2017). The film retell task, on the other hand, which yielded 297 tokens of past forms showed no preterite-progressive cases (Terán, 2017). Acquiring a form-function dyad that is totally foreign to the English verbal system and infrequent in Spanish emerges as another challenge for the L2 learner

who may associate it with a similar form in English (i.e., the past progressive) by inferring that the perfective-progressive meaning can be accurately mapped to the imperfect progressive in Spanish.

TA marking in any L2, as previously discussed, poses a series of learnability problems regarding two basic types of acquisition that the learner encounters along their developmental IL stages. Firstly, Type I variation (Geeslin & Long, 2014; Kanwit, 2017; Rehner, 2002) entails the developmental type of learner variation between target-like and non-target like forms. A classic example of this variation type is the oscillation between the regularized irregular verb "goed" and the correct irregular form "went". Geeslin and Long (2014) argue that successful learners eventually reach a developmental point in which "'goed' disappears and variation dissipates" (p. 161). Secondly, Type II variation (Geeslin & Long, 2014; Rehner, 2002), or horizontal variation, is the type of native-speaker variability in L2 language use. For example, even when the prescriptive grammatical rule stipulates that perfective iterations in the past are marked by the preterit in Spanish, NSs might decide to use the imperfect form, adopting a different perspective in relation to how the situation in question is perceived. Another example of the acquisition of Type II variation is learning that some past forms have a great deal of variability in NS-use across regions. For instance, Peninsular Spanish as well as some Andean Spanish varieties (Howe, 2006; Schwenter & Torres Cacoullos, 2008) have been attesting a change in progress with respect to past time expression in which perfectivity (i.e., completed past actions/events) is more frequently encoded by the present perfect, as part of a well-known process of grammaticalization or "aoristic drift" in Romance languages (Squartini & Bertinetto, 2000, p. 404). The L2 learner in instructed settings is thus faced with a dual challenge of learning the TL's prescriptive grammar with its canonical form-meaning associations and the ensuing multi-functionality, the formalities of the

verbal paradigm inflections as well as the possible variations in the TL grammar triggered by social and linguistic factors in a given variety.

The identified contrasts in the English and Spanish TA systems discussed above further pinpoint another source of learnability issue: transfer issues. Specifically, even though both languages share tense and aspect distinctions, their linguistic encoding might be different at times (e.g., perfective and imperfective meaning distinctions are morphologically marked in Spanish but not in English), which adds a challenge to the L2 acquisitional trajectory of past tense morphology. One important issue in the L2 TA morphology acquisition pathway is learning to encode these notions differently, and possibly fight the effects of L1 interference/negative transfer (e.g., equating the Spanish preterit with the prototype of English past simple tense). Central to the analysis of L1 influence is the concept of transferability (i.e., learner's intuitions of how transferable certain linguistic features might be). The more language specific or marked the L1 features are, the less they will transfer to the L2. The overall implication in L2 acquisition is that more marked forms seem to be harder to learn (Ortega, 2009; White, 1987). In a similar vein, Shirai (2019, 1992) argued that the interplay of six conditions can determine the presence of L1 transfer in the IL: a. markedness, that is, unmarked structures in the L1 and L2 have a stronger tendency to transfer, b. interlingual mapping, that is, transfer occurs if the L1-L2 association is simple, c. language distance (i.e., the more typologically similar the L1 and L2 are, the stronger the transfer), d. learner characteristics (e.g., learners exposed to poor language settings tend to show more transfer, e. cognitive load (i.e., the higher the cognitive load, the stronger the transfer is), and f. sociolinguistic context (i.e., when L2 learner and interlocutor share a similar culture, stronger transfer occurs).

The learner's L1 can have differential roles (i.e., positive or negative) on the developmental IL as shown in Izquierdo and Collins (2008). Regarding positive transfer, the Hispanophone learners of L2 French showed a facilitative influence of the L1 by performing better than the Anglophone partners with regard to imperfective morphology. Notably, both the learners' L1 Spanish and the L2 French, which belong to the same genetic and typological family (i.e., Romance, Indo-European) morphologically mark the perfective-imperfective distinction. Conversely, the L1 English learners of L2 French in the same study have shown the effect of the lexical aspect of the verb on their past form choices (e.g., perfective marking was influenced by the telic-atelic distinction and the imperfective was influenced by durativity, which led to less appropriate use of the form). Izquierdo and Collins (2008) explain that since English has an absence of grammatical aspect, learners rely strongly on the semantics of verbs in the acquisition of L2 past morphology. Another result of L1 influence was the Anglophones' overall preference for perfective over imperfective morphology, who showed a tendency to map both perfective and imperfective meanings to a single form, the *passé composséd,* probably ascribed to the fact that the English simple past serves as an encoder of both aspectual meanings.

Another point of complexity for the L2 learner, more related to Type II acquisition of variation is understanding that despite the fact that perfective meaning in Spanish is normally encoded by the preterit, this function is sometimes conveyed by the present indicative, a function known as "Conversational Historical Present" (Bonilla, 2011, p. 429; Schiffrin, 1981). In particular, the learner has to discover that the present can function as a substitute of preterit in certain contexts (formal versus informal) or certain tasks (e.g. a personal narrative versus a movie retell), although not unanimously across all NSs. Learning to identify those cases of tense shifting and the predictors behind its use poses serious challenges.

All in all, the chapter has presented a detailed comparison of the TA systems in both English and Spanish, discussed in light of the potential issues that might arise during L2 development of past morphology. What is undeniable upon the aforementioned comparative analysis and identification of problematic areas is how complex language systems are cross-linguistically and concomitantly, how challenging L2 acquisition in general is as a task for the adult L2 learner, primarily when (s)he already possesses an L1 system.

1.3 Summary and conclusion

This chapter introduced the major purpose of this dissertation, i.e., a comprehensive investigation of the emergence and development of L2 Spanish past temporality (with an inclusive envelope of variation with the inclusion of non-morphological and morphological means) by L1 English speakers at college level and across proficiency levels. This research represents a unique contribution to the repository of research studies in L2 Spanish past morphology by adopting a synergetic methodological approach that combines the best methodological practices of the concept-oriented, form-oriented, and variationist research frameworks.

The chapter also thoroughly defined the core concepts at the heart of past morphology (i.e., time, tense, aspect) according to renowned scholars. Time, or temporality, was analyzed in relation to Klein's (2009a) idea of a basic structure that assigns to it some defining features: segmentability (i.e., time can be segmented into spans), inclusion (i.e., time points or spans can be included within others), succession (i.e., events can be sequenced or not), duration (i.e., eventualities can last or be instantaneous), *origo* (i.e., speech time or deictic center as the vantage point from where situations are perceived as past, present, or future). Tense was defined as a grammatical category associated

with the universal concept of time and which morphologically locates a situation along the timeline (Comrie, 1976). Also related to time and tense, Reichenbach's (1947) three temporal points (i.e., speech time, or *origo* in Klein's (2009a) terminology, reference time, and event time) upon which tenses are built were discussed along with Comrie's (1976, 1985) absolute and relative tenses. The former tenses express eventualities that are experienced with respect to the speaker's utterance/speech time (e.g., the simple past). The latter tenses refer to events regarded as prior to, simultaneous with or later to other time points as illustrated by the future perfect (e.g., "By the end of the month, they will have moved into a new place"), which presents the action of moving relative to some other time (i.e., the end of this month).

The second part of the chapter discussed the devices implicated in the expression of temporality which will occupy a central role in the present research. At beginner stages, it is expected that learners will use the pragmatic-lexical means (e.g., chronological order and adverbial use) and at higher levels, they will start developing past morphology, which this study aims to track. Two other important devices discussed were the inherent semantics of verbs (or lexical aspect) based on the Vendlerian four-way classification (i.e., stative, activity, accomplishment, and achievement) and viewpoint aspect (i.e., the sentential scope of meaning like perfective and imperfective), signaled grammatically in a language like Spanish via the preterit and the imperfect, for example. Lexical aspect has had a principal role in the study of TA morphology since previous work (e.g., Andersen & Shirai, 1994, 1995; Hasbún, 1995; López Ortega, 2000; Robison, 1995a; Shirai, 1991) found that L1 and L2 learners at beginning stages cross-linguistically use past morphology to mark lexical aspect rather than tense due to cognitive principles and prototypicality accounts (Shirai & Andersen, 1995). For example, a telic verb, characterized by the features of dynamicity and inherent endpoint/completion will prototypically associate with the preterit, whose

canonical meaning is perfectivity (i.e., "single event, seen as an unanalyzed whole, with a well-defined result or end-state, located in the past"; Dahl, 1985, p. 78). It is only at higher proficiency levels that learners show use of non-prototypical associations between lexical aspect and morphology (e.g., an atelic verb with the preterit). We concluded that an intricate interplay between lexical aspect and viewpoint aspect will be crucial in the learner's past form choice. The current chapter also discussed Smith's (1991) lexical aspect shifting by which a basic-level situation type may mutate to another type in a specific context, becoming a derived situation. Notwithstanding the importance of Smith's concept of shifting, we understand that Smith's derived situations show a type of shifting operating at the sentential/predicate level, triggered by the perspective that the speaker decides to take on the situation (i.e., viewpoint aspect). Therefore, Smith's shifting process will not be considered in this dissertation as a shift in lexical aspect, but as a change conveyed by the speaker's viewpoint on the situation and realized morphologically (e.g., preterit versus imperfect).

The chapter further discussed the differences and similarities in English and Spanish tense-aspect systems, which led to an account of the challenges that the L2 Spanish learners can potentially face throughout their developing IL. One major difficulty is the highly complex Spanish inflectional system with portmanteau inflectional morphemes (i.e., inflections that cumulatively encode several grammatical categories) as opposed to a simpler verbal system in English. Another important difficulty for the L1 English learner of Spanish lies in the reconfiguration process that they have to traverse since the Spanish perfective and imperfective meanings are encoded in basically two past forms, whereas English can use only one (i.e., the simple past).

All in all, the present research will attempt to fill the existent research gap, namely the examination of L2 past morphology with a methodology that combines three leading TA morphology research traditions (i.e., concept-oriented, form-oriented, and variationism). The former will provide a concept-oriented analysis to the study of L2 Spanish past-time expression development across course levels, tracking all the pragmatic-lexical devices as well as the emerging and developing past form-meaning associations across proficiency. The focus lies on a range of past markers which have not been examined together in a single research study, which in turn sheds light on restructuring and reorganization as part of the universal principles that influence the L2 acquisition process. With regard to the TA forms, they are examined from an acquisitional perspective considering the evolution of their corresponding meaning mappings. Through a single statistical model, the variationist analytical perspective helps to determine the probabilistic weight of multiple factors (e.g., lexical aspect, grounding, adverbial use, etc.) that prior research attested to significantly predict the use of past forms at different developmental points and how these linguistic constraints of use approximate NS norms and how they deviate from it. In addition, the investigation on meaning-to-form mappings takes into consideration task variability by comparing both oral and written data across different task types in order to account for learner variability (i.e., past form variation) when different discourse/text modes are considered. As Kanwit (2018, 2017) argue, this combined methodological design allows for a meticulous analysis of the development of morphology in general, and particularly in our study of past-time expression.

Chapter two provides a fine-grained cross-linguistic description of the approaches to L2 past morphology acquisition, a state-of-the-art account of TA acquisition research, with special attention to past temporality in L2 Spanish.

2.0 Second language acquisition of past-time expression: theoretical approaches and previous empirical research

2.1 Introduction

"To have another language is to possess a second soul."

–Charlemagne

The acquisition of a second language, in naturalistic or formal instruction settings, generally implicates an addition in mere linguistic terms. In this sense, the learner is endowed with a new linguistic system and the corresponding subsystems (i.e., phonetic, phonological, morphosyntactic, and semantic) for the expression of the surrounding world and its notions. This addition has been referred to as "additive bilingualism" by which a person incorporates another language to his/her total linguistic repertoire (McKay, 2005, p. 284). The additional language, as the epithet contends, provides its learners with an extra spirit or psyche through which we speak, hear, learn, think, feel, and live.

Adult second language learners or "late-starting acquirers" (Ortega, 2009, p. 4) have an advantage in comparison to child L1 acquisition since they arrive at the L2 learning process with an earlier acquired language; hence, they are cognitively developed and have so far internalized a range of concepts like person, number, past, present, future, imperfective versus perfective, etc. The task for the adult learner is to learn to map those concepts to new expressive devices in the L2 (e.g., past forms), which are sometimes non-existent or have no absolute correspondence in their L1. Moreover, the prescriptive prototypical form-meaning combinations are taught (von Stutterheim & Carroll, 2013) according to classroom input and instruction (i.e., usually textbook-

oriented, rule-based). Across proficiency levels, learners not only incorporate more past markers into their L2 repository, but they also move from the one-form, one-function principle to a multifunctional stage (one form, multiple meanings/ one meaning multiple forms; Andersen, 1984). This movement from one stage to another entails a complex restructuring of the IL's verbal system, since "integrating new forms to fulfill a function affects variants already in the system. Since some forms are also used across multiple functions, adjustments to form-function relationships can be quite complex" (Kanwit, submitted, p. 1). The most advanced learners (i.e., advanced, superior, and distinguished proficiency levels) discover that the clear-cut functional taxonomies are not categorical in the TL and find that NS variation is highly common cross-dialectically. In other words, the neat form-function classifications taught in the L2 classroom are not invariantly followed by the NS. Consequently, as a byproduct of intra- and inter-native-speaker variation (i.e., individual and cross-dialectal respectively), a larger number of form-meaning associations are added to the TL for the L2 learner to acquire. This ultimately brings about a challenging process of the verbal system reorganization that eventually enhances the learner's verbal repertoire and the meanings that each form within it encodes.

At this point, it is important to link TA morphology development to syntactic complexity within first and second language acquisition, due to its relevance in the discussion of our results in chapter 4. Givón (2009) states that syntactic complexity cannot be analyzed in isolation without pairing it with cognitive complexity. Specifically, Givón lists three possible correlations:

a. Coding: More complex mentally-represented events are coded by more complex linguistic/syntactic structures.
b. Processing-I: More complex mentally-represented events require more complex mental processing operations.

c. Processing-II: More complex syntactic structures require more complex mental processing operations. (p. 12)

There is strong evidence that the developmental trend in the genesis of syntactic complexity, in diachrony, ontogeny, and in evolution is primarily compositional (synthesis), following the general trend:

a. single words > simple clause
b. simple clause > clause chains (parataxis)
c. clause chains > complex/embedded clauses (syntaxis)

In child language development, all three stages are well documented (Bloom 1973; Bowerman 1973; Scollon 1976; Ochs et al. 1979). In language diachrony, trends a and b are logically absent, since adults already use multi-propositional discourse, (clause chains); however, the last stage c is well documented as is its direction — from parataxis to syntaxis (Heine & Kuteva 2007; -Hilpert & Koops 2006; Koops & Hilpert 2008; Pawley 2008). Furthermore, spatio-temporal reference is primarily non-displaced (here-and now, you and-I, this-and-that) and displaced reference develops later. Another important finding is that conversational turns are most typically mono-clausal, and discourse coherence is mono-propositional (Bloom 1973; Scollon 1976) Communication is heavily context-dependent (pragmatic, attended) with well-coded lexicon and rule-governed (automated) syntactic processing develop later (Bates 1976; Givón 1979).

These features of the communicative ecology are strongly correlated, and it is their gradual shift between the ages of 1 and 3–5 years that motivates the rise of adult-like well-coded communication — lexicon (phonology) and morpho-syntax (grammar) — as it must have done in language evolution.

The L2 acquisition of tense-aspect (TA) morphology has been primarily studied as the acquisition of form-meaning combinations (i.e., connections between an L2 form and its corresponding meaning/function). These studies have tried to determine how the connections between form and meaning are established in the IL and how the TA system is constructed across IL development. A form is considered a surface realization of some kind of underlying representation and it thus encodes a type of meaning (VanPatten, Williams, & Rott, 2004). The authors particularly claim that TA forms are mapped to "displaced or abstract semantic referential meaning" (e.g., *-é, -ó* in Spanish and "-ed" in English normally encode perfectivity) (p. 3).

Form-meaning connections are acquired through three processes (VanPatten et al., 2004). The first one consists of making the initial connection between form and meaning, which occurs when the learner registers that a certain form associates with a certain function or when they discover that a new meaning/concept is encoded by a particular form. The initial form-meaning connections are established in terms of prototypes and exemplars (e.g., perfectivity and preterit in Spanish). Subsequent input and increased exposure cause re-adjustment of the initial form-meaning connections as learners add other meanings to an already learned form (e.g. iterativity is mapped to the preterit). Initial form-meaning associations may be characterized as being located on any point on various continuums partial to complete, weak to robust, nontarget-like to target-like (VanPatten et al., 2004). It is possible for a learner to only connect part of a new form to its meaning, or a new form to part of its meaning, in which case the connection is partial. Even if form-meaning connections are complete, they may still be initially weak and thus they might disappear easily if not strengthened by subsequent input. Robust connections in acquisition are correlated with the learner's increased exposure to those connections. Finally, the learner's form-meaning connections can be either native-like or non-native-like, such as in the case of the

overgeneralization of the preterit across all past contexts, even those contexts that prototypically encode imperfectivity.

The second acquisitional process of form-meaning connections is the subsequent processing of the connection in question. The acquisition of form-meaning connections is highly complex due to the typical multifunctionality of a form. That is to say, one form can express one meaning or multiple ones or multiple forms can encode the same meaning and the learners acquire the nuances of the meaning of a form progressively. Therefore, the learner's initial form-meaning mappings tend to be incomplete (i.e., one form encodes an invariant single meaning and one meaning is conveyed by only one form, Andersen, 1984). However, these partial connections may fill in additional elements of either the form or its meaning for a more complete mapping. For example, VanPatten's (1987) reassessment of the 1985 data on the acquisition of the Spanish copulas by beginning L2 learners found a certain acquisition order consisting of five stages:

1. absence of the copula
2. use of only ser where either only *ser* or *estar* was required
3. use of *estar* with the present progressive
4. use of *estar* for location
5. use of *estar* for conditions

Particularly with respect to the development of TA morphology, the beginning learner may map the imperfect in Spanish only onto habitual situations. After several encounters with ensuing form-meaning connections in other linguistic contexts, the learner may fill in the incomplete mappings of the imperfect, for example, by associating it with progressive actions. A fully-fledged TA system is acquired at higher proficiency levels when the learner shows evidence of use of complete (i.e., more native-like) and robust form-meaning associations. For instance, the learner

may initially use the preterit in Spanish with punctual perfectivity, then with durative perfectivity, and finally with a pragmatic softening function, when preterit-meaning connections have been completed. Notably, a form may initially connect with meaning weakly in the input so future input exposure will help form-meaning connections to become stronger, more robust. However, strengthening is correlated with frequency. As a consequence, form-meaning connections can only become stronger if they are highly represented in the input, otherwise the connections may weaken and disappear, such as in the case of subjunctive verb forms. The input often contains forms that are potentially in competition with one another for the expression of meaning, as is the case of the dyad imperfect-imperfect progressive for progressive actions. Particularly, the learner must learn that progressivity can be encoded by the aforementioned forms, and thus remap the form-meaning associations so that progressivity is also associated with an additional form. This adjustment results in the restructuring of the learner's developing IL.

The third process involved in the acquisition of form-meaning connections is their access for use, which "applies to both comprehension and production processes" (VanPatten et al., 2004, p. 10). Once the connection is part of the IL, it is potentially accessible for comprehension and production. Accessing a connection for use entails its strengthening in memory for later use. The authors state that the acquisition of a connection is dependent on input exposure but accessing the connection for use also fosters strengthening and more effective learning.

This complex process of mapping new forms to functions and new functions to a form can result in a type of learning that has been traditionally referred to as U-shaped behavior or "U-shaped behavioral development" (Kellerman, 1985). This acquisition pattern entails that "the L2 learner's performance in some domains is error-free at an early stage, then deviates from the target norm and finally becomes error-free again at a later stage" (Shirai, 1990, p. 685). In other words,

the first encounters with form-meaning pairs result in target-like use (i.e., high rates of correct use) and at a later stage, accuracy decreases precisely when other form-meaning pairs are entering the IL and thus as the verb system makes adjustments. As many form-meaning connections are encountered more frequently in the input, learners' rates of use and accuracy increase again toward NS norms, but only when this use is reflective of more robust or complete form-meaning connections in the learners' IL. For example, at beginner stages learners may use the preterit for pastness across perfective and imperfective aspects, showing evidence of an overgeneralization and thus an overuse of the form. In a later stage, as other forms (e.g., the imperfect and imperfect-progressive in Spanish), are learned and used for certain meanings (e.g., imperfectivity and progressivity), the preterit may decrease in use during this time of adaptation and reach a point of underuse, due to an increase of information about and exposure to the new forms. At advanced proficiency levels, the verbal system reaches a final reorganizational stage, with more complete form-meaning connections. Consequently, the preterit regains importance but in a balanced manner and thus it is used in a target-like way and is mapped to its prototypical meanings.

Second language acquisition involves the interaction of linguistic, cognitive, and social factors (Shirai, 2004). He claims that there are two factor types that principally determine the acquisition process, namely learner internal and external factors (Long & Sato, 1984). The former type includes universal tendencies, individual differences (e.g., aptitude, motivation), and the learner's native language. The latter factors include the roles of input and instruction. VanPatten et al. (2004) suggest that the primary goal of SLA is to determine what is universal in language acquisition and across language learning contexts. However, a consideration of the non-universal factors helps in examining diversity in SLA (Shirai, 2004). With regard to universal predispositions, an important question that has guided previous research is whether there are

aspects in second language acquisition that do not vary or show very little variation. One such universal mechanism is Andersen's (1984) one-to-one principle, considered as a first step in the IL system construction by which "an intended underlying meaning is expressed with one clear invariant surface form or construction" (p. 79). Under this principle, the L2 Spanish beginning learner is expected to use preterit with punctual telic verbs for instantaneous perfective past situations. Only at a later stage, will the learner be able to refer to a perfective durative situation with the preterit. Nevertheless, this attested acquisitional pattern may not show such issues, depending on whether or not the learner's L1 is typologically different from the target language.

Three studies lend support for the importance of the L1 on the acquisition of tense-aspect systems contingent to the TL type. Izquierdo and Collins (2008) showed that L1 Spanish learners of L2 French acquired perfective and imperfective morphology faster and in a more target-like manner than their L1 English peers, due to the morphosyntactic similarities between both Romance languages. Specifically, both French and Spanish use differing past morphemes to encode perfectivity and imperfectivity, although the former meaning is expressed by the passé composséin French, which resembles the Spanish perfect, but by the preterit in Spanish. Secondly, these researchers carried out a retrospective analysis with some of the participants so that they could explain their selection of perfective and imperfective morphemes on the cloze test used to conduct the study. Results indicated that the hispanophone learners made use of the L1-L2 similarities (i.e., the fact that Spanish marks perfective/imperfective distinction), whereas the L1 English learners relied on the lexical aspect of verbs to a greater extent. Therefore, as Thane (2018) explains, there is an undeniable role of the L1, "particularly when it bears structural similarity to the L2 in question" (p. 267).

Another study that provided evidence for L1 influence was Collins's (2002), which studied L2 English past morphology by L1 French speakers. Results pointed to a negative effect of the learner's L1 reflected in their (over)use of the present perfect across the L2 English past perfective contexts containing a telic verb, which required the simple past. Other L1 background learners did not yield these same results.

Rosi (2009) investigated connectionist simulations of verb semantic bias in the acquisition of tense-aspect morphology in L2 Italian, which she compared with actual L1 German and L1 Spanish speakers learning Italian in an academic context. A facilitative role of the L1 was attested among the L1 Spanish learners, who learned the imperfect form faster than the L1 German peers due to Spanish and Italian typological similarities.

With regard to the learner-external factors that may affect language acquisition, input has been of crucial importance in theories of first and second language acquisition and has been widely investigated in previous research. Language learning is considered to be input-driven, and input is language experience, that is to say, the learner's experience with form-meaning connections across various contexts (Gurzynski-Weiss, Geeslin, Daidone, Linford, Long, Michalski, & Solon, 2018).[8] In this sense, and according to usage-based approaches to language (e.g., Bybee, 2010), frequency is a central aspect of input and a key determinant of first and second language acquisition. All linguistic units are extracted from language use in the input, which contains information about the frequency of occurrence of linguistic elements and their associations as well as their most likely contexts of occurrence (Ellis & Larsen-Freeman, 2009). All the rules of language are structural regularities that emerge from the learner's observation of the distributional features of the input

[8] For a discussion on the characteristics of classroom input, see Krashen (1985) and Pienemann (1985).

(Ellis, 2002). The learner extracts from the input the most frequent form-meaning mappings, their regularities, and their ensuing number of exemplars in order to construct his/her IL's grammatical system.

This dissertation investigates the acquisition of past-time expression in L2 Spanish, especially examining learner form-meaning connections in terms of their emergence and development, with special focus on the restructuring and reorganization of the learner's verbal repository. The main goal is to determine the extent to which L2 acquisition of TA morphology is constrained by both universal and learner-external factors, and whether each stage of acquisition is characterized by different sociolinguistic conditioning of past morphology (i.e., independent predictors) and expressive devices. Also, as a concept-oriented study, all means of expression (i.e., pre-morphological and morphological) will be examined in terms of the functions that they convey and how these functions change across levels of competency, leading to a more fully-fledged verbal system consisting of robust and complete form-meaning associations.

2.2 Functionalist form-oriented and concept-oriented analyses in the acquisition of past morphology: an overview across languages

Past morphology has been extensively investigated cross-linguistically among L1 learners (e.g., Comajoan, 2013 for Catalan; Bertinetto, Freiberger, Lenci, Noccetti, and Agonigi, 2015; Noyau, 2002 for French; Shirai, 2012 for Japanese, etc.). L2 past-time marking has also been empirically studied in SLA primarily via a traditional functionalist perspective, following two types of analysis, namely, form-oriented and concept-oriented. Previous research in L2 Spanish includes several form-oriented studies (e.g., Andersen 1991, Cadierno, 2000; Camps, 2002, 2005;

Domínguez, Tracy-Ventura, Arche, Mitchell, & Myles, 2012, 2017; Henderson, 2013; Lafford, 1996; Lubbers-Quesada, 2006, 2013; Salaberry, 1998, 1999, 2003, 2008, 2011; Robison, 1990, 1995). Previous research in L2 English involves numerous form-oriented investigations (e.g., Andersen, 1984a, 2002; Andersen & Shirai, 1994, 1996; Bardovi-Harlig, 1994a, 1992, 1998, 2000; Bardovi-Harlig & Bergström, 1996; Chiravate, 2018, etc.). Concept-oriented research on past morphology has been less prolific cross-linguistically (but see Sato, 1994; Schumann, 1987 for exceptions in L2 English). In L2 Spanish, the only exceptions are Kanwit (2014; 2017) and Solon and Kanwit (2014), who examined the expression of the future in L2 Spanish.

Another major functional framework of research used in the examination of L2 acquisition of TA morphology has been the variationist approach, which follows the Labovian paradigm (Labov, 1972b) and the dynamic paradigm (Preston, 1996), and thus considers a number of sociolinguistic factors that may affect the choice of past forms in learner language. Seminal works have been conducted among classroom L2 English learners (e.g., Adamson, Fonseca-Greber, Kataoka, Scardino & Takano, 1996; Bayley, 1994; Tajika, 1999; Young, 1991; Witton-Davies, 2004; Wolfram, 1985). In L2 Spanish, variationist studies have examined the acquisition of sociolinguistic variation among classroom learners and learners immersed in Spanish-speaking countries (e.g., Geeslin, 2011; Geeslin, Fafulas, & Kanwit, 2013; Geeslin, García-Amaya, Hasler-Barker, Henriksen, & Killam, 2012; Kanwit, Geeslin, & Fafulas, 2015; Zahler & Whatley, 2017). These studies have particularly examined the learner's acquisition of variable past-time expression in perfective contexts (i.e., preterit-perfect variation), as previously attested in NSs from Spain and Andean Spanish varieties (e.g., Jara Yupanqui, 2006, Schwenter & Torres-Cacoullos, 2008 etc.). The Chomskyan generative approach has also investigated tense-aspect acquisition (e.g.,

Slabakova & Montrul, 2002, 2007).[9] Nevertheless, this chapter will emphasize empirical studies conducted separately in each of the two former lines of research due to the dissertation's focus on the developmental expression of the concept of pastness in L2 Spanish combining the aforementioned research traditions.

The functionalist approach to TA acquisition contends that language structure is dependent on language function. In other words, "the way that language is used in actual communication affects the structure of language in non-trivial ways" (Zyzik, 2014, p. 30). The focus on communication makes functionalism compatible with the acquisition process and IL development (Bardovi-Harlig, 2014). She argues that the development of TA morphology (i.e., learners' form-meaning mappings) can be tracked through two traditional frameworks of analysis within the functionalist approach, where each of which adopts a different focus.

The first one, called form-oriented, focuses on one form (sometimes more) in order to document its emergence and development in terms of all the meanings or functions the form expresses over time (e.g., across proficiency levels). Bardovi-Harlig (2017) compares this type of analysis with going on a photo safari in order to follow one animal and photograph his/her moves, the places (s)he frequents, and his/her environments. This is similar to gathering the form distributions in the learner's IL, serving to investigate a major focus of the form-oriented analyses, i.e., the learners' developmental sequences in the path of acquiring a form and its associated meanings. For example, it has been attested that pastness is initially marked referentially to designate perfective, bounded events. On a subsequent stage, the learner marks past perfective actions that are durative, afterwards, the learner incorporates the imperfect for unbounded

[9] For a comprehensive overview, see Salaberry (2008).

situations seen internally at some point of development. Finally, pastness can be marked non-referentially in order to encode pragmatic softening (Andersen, 2002).

The second type of analysis within the functional approach is the concept-oriented one, which starts with a meaning or a sub-meaning within a larger concept and has the goal of examining all the means, devices, and strategies used by the learners to express that concept (e.g., the sub-concept of pastness within the concept of temporality) at different developmental points. Particularly, this type of analysis embraces a multi-level approach that implicates different areas of language: pragmatics, the lexicon, and morphology. Going back to the safari metaphor, a concept-oriented analysis entails positioning yourself at the water hole in order to observe (and photograph) the animals that approach it, the order in which they arrive, and the relationship between them (Bardovi-Harlig, 2014). A concept-oriented analysis enables us to see IL development as the permanent reorganization of the balance among means of expression (Bardovi-Harlig, 2015; Klein, 1987). For instance, the beginner learner of Spanish can express perfectivity through chronologically ordered events and later, during the morphological stage, use a single form such as the preterit as a default past form for such a meaning. In subsequent proficiency levels, this form will be used less frequently, for example when the imperfect form enters the IL.

The first investigations under this second approach have been conducted within the cross-linguistic research project of the European Science Foundation (ESF) directed by Perdue and Klein. These studies were largely longitudinal and examined adult L2 learners of English, German, French, etc., acquiring the language in the host environment in the absence of instruction. Klein and Perdue (1997) is one emblematic longitudinal study that examined the expressive devices used by 40 beginner adult immigrants in five European countries. Results showed that all learners "developed a relatively stable system to express themselves which was simple, versatile and highly

efficient for most communicative purposes" (p. 303). This system of expression was called "the Basic Variety" (henceforth BV) and was devoid of inflectional morphology. The authors argue that this fact distinguishes BV from the learner's IL since the latter is the product of classroom instruction, which greatly focuses on verb inflection. Despite this difference, "classroom learners of different language backgrounds have been observed to create and use outside the classroom – in the playground – a language of functional communication whose characteristics do seem to correspond to the BV" (Klein & Perdue, 1997, p. 303).

According to Sato (1990), form-oriented approaches to SLA are limited since only existent forms in the IL are examined and tracked in terms of their functional distribution along the acquisitional process. Consequently, only a partial and/or incomplete picture of the development of past-time expression is obtained since other expressive devices present at beginner stages are not considered (e.g., lexico-pragmatic ones such as adverbials and chronological order of events). In other words, a form-to-function approach precludes analysis of meanings that have not yet been morphologically encoded by the learners. The concept-oriented approach, on the other hand, has the advantage of investigating the pre-linguistic means used in the expression of meaning in general and pastness in particular, as is the case of this dissertation.

In sum, this section described the functionalist approach traditionally used in the cross-linguistic study of L1 and L2 developmental morphology. In particular, two frameworks of analysis, namely the form-oriented and the concept-oriented, were discussed in detail.

The form-oriented analysis, as the term indicates, examines specific forms (e.g., the preterit and the imperfect in Spanish) within the learner's verb system at one specific developmental point or tracking the forms' trajectories from their emergence through their evolution up to their end-state (e.g., the emergence and development of the L2 English present perfect: Bardovi-Harlig,

1995. Since the main tenet of functionalism contends that forms serve functions, the form-oriented framework centers around form-meaning connections and how the learner gradually makes more meaning connections with a single form, how connections become more robust and complete, and how form-meaning remapping proceeds. In other words, in line with Andersen (1991), this analytical framework studies the gradual movement from the one-to-one-principle at beginner levels to the multifunctionality principle at higher proficiency levels as well as the IL reorganization toward NS norm or target-likeness.

On the other hand, the concept-oriented analysis adopts a different route to the study of TA morphology acquisition, starting from a certain meaning, and examining all the (non)-morphological means of expression. The scholars employing this framework have suggested that the concentration on one form to express one meaning at a certain point, which is at the core of form-oriented research, provides a partial view of acquisition, since it does not account for other forms and/or devices used by the learner in the expression of such meaning.

This section ended with a discussion on the variationist research framework within functionalism and its main goals. Basically, variationism understands acquisition as being inherently variable and thus the learner's mistakes are considered as a type of IL variation, which is systematic and rule-governed (i.e., some errors stem from rules in the TL, exemplified in the regularization of irregular verbs such as "goed" in L2 English or *poní* "put" past form in L2 Spanish). Tarone (1988) reinforces that "…studying form-meaning mappings in learner's interlanguage can reveal the linguistic system hidden in a learner's apparently unsystematic use" (p. 54). Each developmental stage is characterized by a certain type of learner variety with a variable IL. In other words, the learner's IL at different time points exhibits systematic variability (R. Ellis, 2015). In addition, variationism conceives acquisition as being affected by multiple

factors or causes, and thus uses a research methodology with a quantitative paradigm that accounts for the predictors that significantly condition the use of a certain form at different proficiency levels. This dissertation aims at examining the expression of pastness through a combination of the aforementioned functionalist analytical frameworks: variationism, concept-oriented and form-oriented, in the hope that this methodological blend will provide a comprehensive picture of the acquisition of past-time expression in L2 Spanish.

2.2.1 Functionalist form-oriented analysis on the acquisition of English and Spanish past morphology as L1 and L2

The form-oriented analysis has primarily examined developmental sequences and the effects of verbal lexical aspect (e.g., telic versus atelic) and discourse grounding (i.e., foreground versus background events) on emergent and developing L2 past-time marking. Both of these concepts were operationalized through two leading hypotheses: The Aspect Hypothesis (henceforth AH) (Andersen & Shirai, 1994; Shirai & Andersen, 1995) and the Discourse Hypothesis (henceforth DH) (Bardovi-Harlig, 1994a).

The AH argues that L1 and L2 learners in beginning stages of acquisition will initially be influenced by the inherent semantics of verbs (e.g., inherent endpoint versus non-inherent endpoint) when choosing past tense markers (Shirai & Andersen, 1995). In this respect, the authors believe that grammatical development involves "prototype-based category formation" (Shirai, 2016, p. 16). They maintain that a grammatical category can denote a semantic meaning which involves a prototype structure with prototypical or peripheral members. The AH proposes that emerging past morphology will be restricted to the prototype of the linguistic category (e.g., the preterit, as an encoder of perfectivity, will initially be associated with an achievement verb, since

both form-meaning combination and the semantics of the verb share the features +telic, +punctual, +dynamic). Further, the affinity between verb morphemes (grams) and verbs of a certain lexical aspectual class lies on two cognitive principles: 1) *the congruence principle* (Andersen, 1993; Andersen & Shirai, 1994) and 2) *the relevance principle* (Shirai & Andersen, 1994). The former, also referred to as the redundant marking hypothesis (Shirai, 1993; 1995), contends that the choice of past form is restricted to those forms (e.g., preterit or imperfect) whose meanings are congruent with the aspectual meaning of the verb to which they are attached. For example, since preterit canonically encodes perfectivity (i.e., bounded past actions), it is logically predicted that learners will use that form with telic verbs because both the form and the verb class share a semantic commonality: telicity (i.e., an inherent endpoint after which the action cannot continue). More specifically, punctual telicity will emerge first with preterit and subsequently durative telicity will emerge with the form.[10] The relevance principle argues that aspect is more relevant to the meaning of the verb than tense or mood, especially at beginning proficiency levels. Therefore, when marking a verb with a past form, learners will choose the form with the greatest relevance to the meaning of the verb (e.g., a telic verb will be marked with preterit due to their matched telicity) (Salaberry, 2008).

Furthermore, Andersen and Shirai (1994) claim that relevant morphology is acquired first and as learners move onto higher proficiency levels, the effect of lexical aspect on past-time marking should be lessened, i.e., the higher proficiency level learners should move to non-

[10] It is important to note that the AH as proposed by Andersen and Shirai (1994, 1996) and Shirai (1991) did not make claims on the basis of telicity alone. In fact, they dissected it into punctual and durative telicity with achievement and accomplishment verbs, respectively.

prototypical combinations between past marking and lexical verb type. The authors claim that learners go through stages along the development of past morphology relative to lexical aspect: PRET, which canonically encodes perfectivity, emerges before IMP, which canonically encodes imperfectivity. The AH foretells that the imperfect will be delayed in its emergence because it prototypically encodes imperfectivity or atelicity, and atelic eventualities are marked late for tense and aspect. Moreover, PRET and IMP first emerge in prototypical combinations with semantically congruent verb types. It is thus expected that the PRET will emerge first with achievements and then will spread to accomplishments, before further extending use to less aspectually similar verbs (i.e., atelic: activities and states). Conversely, the developmental trajectory of the IMP follows the opposite direction: emerging with atelic verbs (from states to activities) and then spreading to telic verbs (from accomplishments to achievements) (Andersen, 1991).

Shirai and Andersen (1995) acknowledge that, despite the NSs' capability to use non-prototypical combinations of verb semantics and TA markers (e.g., perfective marker-atelic verb in daily interactions, NSs have a cognitive predisposition towards prototypical combinations (e.g., imperfective marker-atelic verb and perfective marker-telic). The NS tendency to use a prototypical pattern of association becomes the NNSs' input, which serves as the source from which they extract language regularities to construct their IL verb system. According to the Distributional Bias Hypothesis (Andersen, 1993; Andersen & Shirai, 1996), learner language shows the use of prototypical combinations, which is based on the NS linguistic behavior. Housen (2000) explains that learners seem to interpret categorically the prototypical co-occurrence patterns of a TA morpheme with verb semantics, since it is cognitively easier to do so. In other words, general cognitive principles activated during language acquisition cause the learner to notice in the input past morphemes on only semantically-congruent verbs (i.e., those whose lexical aspect most

closely matches the prototypical meaning of the morphemes). As exposure to the TL continues, the learner's distributional bias gradually diminishes until it ultimately reflects the past-time marking distribution in the input.

The second hypothesis extensively investigated in form-oriented studies on developing past morphology is the Discourse Hypothesis, which contends that "learners use emerging verbal morphology to distinguish foreground from background in narratives" (Bardovi-Harlig, 1994a, p. 43). Bardovi-Harlig (2017) claims that neither temporality nor TA morphology exists independently of discourse types. In other words, "discourse modes" have their own character and conventional structure and can be identified by typical bundles of linguistic features (Smith, 2003, p. 8), which trigger different TA profiles. Text types differ in terms of the question that they answer. In this respect, a narrative text, which recapitulates past events guided by the question "what happened next?", is likely to prompt a different choice of past forms from a non-narrative one (e.g., a description, which answers the question "what was it/she/he like?"). Labov and Waletzky (1967) describe the structure of a narrative (Figure 2) and propose six different parts: 1. the abstract, which summarizes the story, 2. the orientation, which discusses information about the characters, their location in narrative time, 3. the complicating action, which is the heart of the narrative containing the main events, 4. the evaluation, which states the reason for telling the narrative, 5. the resolution, which provides an account of what happened eventually and 6. the coda, which represents a transition between the narrative and speech time.

The narrative discourse is characterized by an inherent structure that allows the speaker to organize past events according to his/her perspective on them. In this sense, events can be presented either as belonging to the skeletal structure of the narrative discourse (i.e., the foreground), being chronologically ordered and moving the story forward, or as having no fixed

time frame but an enhancing, supportive effect (i.e., the background) of the foreground (Bardovi-Harlig, 2000; Dry, 1983; Hopper, 1979).

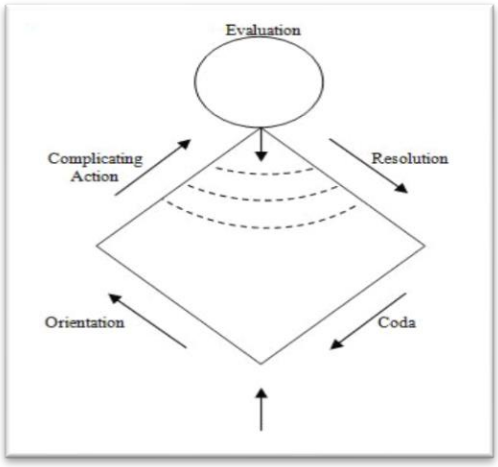

Figure 2-1. Narrative structure (Labov & Waletzky, 1967).

Both grounding types have linguistic correlates (Comajoan, 2013, p. 317): main clauses and telic verbs are more likely to compose the foreground, whereas subordination and atelic verbs are typically found in the background. Nevertheless, the linguistic correlates should not be taken as categorical because the NS may decide to use less prototypical choices, such as an atelic verb in the foreground as in Example 19 below.

19. *Anoche en el karaoke,* ***cantamos*** *como adolescentes.*

"Last night at the karaoke, we **sang** like teenagers."

Grounding can be defined in reference to semantic features, namely, narrativity, punctuality, and completeness (Reinhart, 1984). Thus, sequentially-narrated events that correspond to real, realized, punctual, completed actions most likely serve as the narrative foreground. Due to the matched semantic features between preterit and foreground, on the one

hand, and between imperfect and background, the DH claims that a narrative will show evidence of these associations.

Previous studies (Andersen & Shirai, 1994; Bardovi-Harlig, 1994a, 1995, 1998; Comajoan & Pérez Saldanya, 2005; Housen, 1994; Lafford, 1996; López-Ortega, 2000; Salaberry 1999, 2003) have generally claimed an effect of discourse grounding by which preterit occurs mostly in the foreground of narrative sequences (i.e., events constituting the main story line and advancing the story forward). The imperfect, on the other hand, tends to occur in the background (i.e., events that provide supportive secondary information to the main events of the story). Cross-linguistic studies with NS participants have found that the preterit/simple past is used across the foreground and the findings have suggested that the foreground and the background are regarded as a universal distinction in narrative discourse (Bardovi-Harlig, 2000; Dahl, 1985; Hopper, 1979). For example, cross-linguistic research (e.g., Bardovi-Harlig, 1992; Giacalone Ramat & Banfi, 1990; Liskin-Gasparro, 2000; Salaberry, 2003; Schiffrin, 1981; Véronique, 1987) has shown that personal narratives, which are characterized by a larger number of details that build around the main storyline as the background, have a higher frequency of imperfect tokens. Conversely, impersonal (fictional) narratives do not allow much space for elaboration of information and therefore contain more foregrounded content, which results in a higher use of preterit (Lafford, 1996, Liskin-Gasparro, 2000). These findings support the view that the nature of personal narratives may trigger more opportunities for background as explained by Noyau (1984), “the motivation of the speaker for sharing his own experience gives maximal expression of his repertoire" (p. 115). Overall, Bardovi-Harlig (1998) and Salaberry (2003) confirmed, “text structure determines distribution of morphology” (Bardovi-Harlig, 2017, p. 33) as well as the rate of use for both perfective and imperfective morphology (Bardovi-Harlig, 2005). Finally, Tracy-Ventura and Myles’s (2015)

large-scale study examined the role of task variability on past marking among learners of different proficiency levels (i.e., beginner, intermediate, advanced). Four elicitation instruments were chosen (i.e., interview, and three story-retell tasks) with the purpose to examine the use of past morphology across different task types, and whether these provided more space for the learners to produce (non-)prototypical combinations of lexical and grammatical aspect (e.g., preterit with activities).[11] In sum, the results demonstrated that the task that did not naturally provide learners with opportunities to use non-prototypical combinations (e.g., telic events in the imperfect), obtained no such associations. The authors concluded that without consideration of the other tasks, the learners' knowledge of the target past forms would have been underestimated. The authors argue in favor of "using more than one task type to ensure a representative picture of the learner's ability to use the target structures in all their relevant contexts." (p. 86).

In conclusion, this section discussed the two hypotheses traditionally and widely addressed in form-oriented studies so as to determine the roles of lexical aspect and discourse grounding in developing morphology.

The Aspect Hypothesis (Andersen & Shirai, 1994, 1996) proposed that the acquisition of verbal morphology is influenced by the inherent semantics of verbs with learners associating preterit with telic accomplishment and punctual verbs and imperfect with atelic ones due to their

[11] "Nati y Pancho" narrative was better at creating contexts for the imperfect with non-prototypical pairings, whereas the "Famous People" task was better at creating contexts for the preterit with non-prototypical pairings. "Las Hermanas" narrative was the most controlled task (i.e., presented the learners with pictures and verbal phrases to use) and targeted non-prototypical preterit and non-prototypical imperfect combinations. The interview, which provided different time points, was the most open-ended task.

shared meaning (i.e., punctual/completive and durative/incomplete situations, respectively). This association is assumed to be cognitively easy, based on prototype formation under which the most prototypical exemplar of preterit (+ dynamic, + telic + punctual) is an achievement verb (+ dynamic, + telic + punctual). The AH hypothesizes that prototypical exemplars are acquired at initial stages and non- prototypical ones should follow in subsequent stages. Therefore, the path of development of perfective past morphology in Spanish is predicted to start with achievements, then accomplishments, activities and finally to states.

The Discourse Hypothesis (Bardovi-Harlig, 1994) proposed that past marking is determined by narrative structure: what the speaker wants to foreground and background in a narrative. The former is predicted to contain the main sequenced events of a story and to be expressed by the preterit in main clauses. The background, on the other side, contains the subsidiary information and thus it is hypothesized that it will be expressed by the imperfect form in subordinate clauses. Also important is the fact that text type plays a key role in the choice of past morphology and its distribution. For example, previous research (e.g., Lafford, 1996; Liskin-Gasparro, 2000) found that personal narratives trigger more details and extra information and so imperfective forms are more frequently used than preterit forms. Film retell tasks, conversely, show a preference for the preterit due to the focus on the sequential events of the story (e.g., Ruiz-Debbe, 2005). The following section presents the major findings of the relevant previous studies that centered around both hypotheses.

2.2.1.1 Form-oriented research studies: the Aspect Hypothesis across L1 backgrounds

This section will discuss the first studies that reported findings relevant to the main claims of the AH on emergent and developing child past morphology across different L1s, namely Bronckart and Sinclair (1973) for French, Antinucci and Miller (1976) for Italian and English,

Bloom et al. (1980), Shirai (1991), Shirai and Andersen (1995) for English. Several of these studies found supporting evidence in favor of some effect of lexical aspect on the use of past morphology: perfective marking occurred with achievement and accomplishment verbs and progressive meaning was marked by the past progressive at a later stage. Let us present the overall results of the aforementioned studies for a deeper treatment of the effect of lexical aspect on the use of past morphology in various L1s. However, prior to this, it is important to summarize the tenets of the AH as proposed by Shirai (1991) and Andersen & Shirai (1996):

1. Learners first use (perfective) past marking on achievements and accomplishments, eventually extending use to activities and statives.
2. In languages that encode the perfective/imperfective distinction, imperfective past appears later than perfective past, and imperfect past marking begins with statives, extending next to activities, then to accomplishments, and finally to achievements.
3. In languages that have progressive aspect, progressive marking begins with activities, then extends to accomplishments and achievements.
4. Progressive markings are not incorrectly overextended to statives.

(Bardovi-Harlig, 2000, p. 227)

Bronckart and Sinclair (1973) investigated the use of past inflectional morphology by 74 L1 French children (ages, 2;11 to 8;7). Experimentally elicited production data showed that the children tended to use present forms (present) for inherently durative events, and perfective past forms (*passé composséé*) for telic actions (i.e. achievement and accomplishment verbs). The role of lexical aspect on the use of past morphology decreased with development and approximated adult use. Imperfective past (*imparfait*) was very infrequent among the younger children emerging later than perfective past.

Antinucci and Miller (1976) studied the acquisition of past morphology through the spontaneous oral productions of one L1 English child and seven L1 Italian children and found similar results as Bronckart and Sinclair. Particularly, the participants used the past participle in Italian and simple past in English with change of state verbs with clear end results. Both studies argued in favor of a cognitive limitation in that children at an early age have not developed the concept of temporal deixis and displaced language. Furthermore, the authors stated that children used past morphology to encode the concepts that were more relevant to them, namely, events/situations with observable end results. In other words, the telicity of the situation type allowed the learners to encode such situation in the past (i.e., aspect before tense). Further support for the notion of aspect before tense can be found in Bloom et al.'s (1980) study with L1 English children. Results indicated that the emergence of inflectional forms were determined by the lexical aspect of verbs. Specifically, they argued that TA morphology was guided by the oppositions stative versus non-stative, durative versus non-durative, and completive versus non-completive. The authors concluded that the notion of aspect before tense is a relative one since although aspect seems to have a pivotal role in the acquisition of TA morphology, this does not necessarily mean that tense is relegated until the age of 6. They sustained that aspectual marking co-occurs with the learning of tense relations.

Shirai (1991), one of the most representative works in this vein, analyzed past-tense marking in the longitudinal data of three children acquiring English as an L1 (from the CHILDES database, MacWhinney, 2000). Past-tense morphology was examined in terms of the primacy of aspect hypothesis and frequency effects in the input. His results confirmed previous studies' findings in that verb semantics was a key factor in determining the use of past morphology by the children, who used a past/perfective morpheme with telic verbs, for example. Moreover, the

attested pattern among the mothers' input further confirmed the Distributional Bias Hypothesis in that the learner's use of past forms showed a strong bias to prototypical combinations (e.g., perfective past and telic verbs).

The AH tenets, however, have been questioned by Bertinetto et al. (2015), who analyzed the development of TA morphology and the effect of lexical aspect among three L1 Italian children across three phases: 1. pre-morphology, characterized by rote-learned verb forms; 2.the proto-morphology stage, the moment when morphological productivity initiates; 3. modularized morphology, a stage when established morphological productivity characterizes the children's language. The corpus data consisting of each child-caretaker interaction was analyzed so as to answer whether lexical aspect serves as a universal explanation of first language acquisition of past morphology. To this end, the data were scrutinized by means of a weighted liner regression analysis that compared the correlations of tense and grammatical aspect and lexical aspect-grammatical aspect at each developmental point. Results revealed U-shaped curves in the acquisition of past morphology consisting of a first phase characterized by a strong correlation between grammatical aspect and tense, which declined fast to increase again at a later cycle. Results also indicated an association between grammatical aspect and lexical aspect, which was stronger than the association with tense. The authors argued that this finding was consistent with the AH since perfective aspect was preferred with telic verbs and imperfect aspect was preferred with atelic verbs. A second analysis consisted of the Pointwise Mutual Information (PMI) formula, which calculated the association strength between lexical aspectual class and grammatical aspect. Results showed that stative verbs strongly favored the imperfective aspect whereas telic verbs favored the perfective aspect. Nevertheless, activities differed from stative verbs regarding the imperfect showing no polarization across grammatical aspect types like statives and telics did. The

authors discussed that it is not the semantic feature of (a)telicity that is at the heart of acquisition, for otherwise stative and activity verbs should behave in the same way. A consideration of temporality showed that the present emerged before the past and the future. The present with past reference emerged prior to perfective past in one of the participants but simultaneously in the other two. Finally, the fact that the imperfect form emerged after the past perfective allowed the authors to contend that in temporality-prominent languages (i.e., languages which mark past, present, and future contrasts overtly: Italian and German, for example) temporality contrasts are mastered prior or simultaneous to aspect. The authors proposed a typologically-oriented and morphologically-based approach to the acquisition of past morphology by which acquisition is not universally triggered by verb semantics but language-specific constraints relying on any of the ATAM categories (i.e., actionality, tense, aspect, mood).

In addition, the first empirical studies that found support for the AH in L1 morphology acquisition were rejected by Weist, Wysocka, Witkowska-Stadnik, Buczowska, and Konieczna (1984). They proposed the defective tense hypothesis, arguing that young children are not cognitively capable of envisioning events that are displaced in time and can only encode reference to the here and now. Andersen (1989a) called it the absolute defective tense hypothesis and argued that the evidence actually supports a relative defective tense hypothesis, which is descriptively identical to the Aspect Hypothesis. Weist et al.'s (1984) study was later replicated by Bloom and Harner (1989), which showed that children learning Polish were influenced by lexical aspect in acquiring verb tense. Wagner (2002) investigated the role of agency information in L1 English children's early interpretations of TA morphology, in particular, the progressive and simple past forms. Fifty-nine children (two-, four- and five-year olds) were presented with a forced-choice sentence-to-scene matching task very similar to the one used by Weist and colleagues except that

here the scenes contained only information about the relative completion of the object of the event and no information about the state of the agent of the event. In contrast to previous research, the children here did not succeed at this object-oriented task until as late as age five; moreover, also contra previous work, when they did succeed, their performance tracked the formal entailments of grammatical aspect. Thus, subjects consistently matched the perfective sentence to the completed event (reflecting the perfective's entailment of completion) but never consistently matched the imperfective sentence to either scene (reflecting the imperfective's lack of entailments).

This section discussed two representative studies in favor of and against the tenets of the AH in L1 acquisition of morphology. Shirai (1991) found support for the claim that lexical aspect is a key determinant of past morphology, since children followed the main path predicted by the AH. At the same time, the children's use of past marking and its distribution seemed to align with the tenet of the Distributional Bias Hypothesis, which holds that NSs have a tendency to associate morphology with semantically similar verb classes, and that children extract those probabilities from the input and apply them categorically to their use of morphology. Conversely, Bertinetto et al. (2015) refuted the AH in their study of L1 Italian children and their developing morphology, arguing in favor of temporality constraints and the morphological structure of the L1 as key determinants.

The following section discusses the major empirical research on the role of lexical aspect on the acquisition of past morphology in L2 English and other languages by learners from different L1 backgrounds.

2.2.1.2 Form-oriented research studies: the Aspect Hypothesis across L2 English (and other L2) instructed learners from diverse L1 backgrounds

Research on the effects of lexical aspect on the emergence and development of past-tense marking in second languages, principally on instructed L2ers, are abundant. Many of these studies have also included the role of the L1 in order to determine whether the tenets of the AH are operative across learners from different L1 backgrounds. As was stated in chapter one, one major distinction between L1 and L2 acquisition is that in the latter the learner arrives at the acquisitional process with an already established language (i.e., with an internalized grammar and semantic-conceptual features). The learner tends to learn how to map the new L2 forms to the concepts, functions, or meanings present in the L1. Thus, the learner's cognitive maturation can be considered an advantage in terms of ease of acquisition of a second language, even though it can sometimes be obstacles in learning some aspects of the L2. This section will discuss several seminal and recent studies that investigated the effect of lexical aspect and L1 transfer, some of which support the AH tenets and others which refute them.

Robison (1990) is the first published study about the effect of lexical aspect (i.e., stative versus dynamic and punctual versus telic) on the acquisition of L2 English past morphology in a 30-year-old Salvadoran Spanish speaker, who had lived in the US for 10 years at the time of the study. An analysis of 171 predicates from spontaneous speech revealed that the participant categorically used the past form with dynamic verbs. Results also indicated that morphology depended on punctuality and telicity distinctions significantly more than on the stative-dynamic distinction ($p < .001$). Specific results showed that the participant used the *-ing* progressive past form with durative verbs and the past form with punctual verbs. Moreover, the progressive form was found across a large number of stative verbs and a couple of punctual verbs. Robison

concluded that this last pattern could indicate the participant's shift from prototypical combinations. In sum, TA morphology use was associated with lexical aspect at least at certain stages of L2 acquisition, even if acknowledging the influence of L1, L2 and individual differences. In a later study, Robison (1995) investigated the effect of lexical aspect on the choice of past morphology in a written composition by 26 L1 Spanish Puerto Rican college students across four proficiency levels. Findings indicated that the learners tended to mark telic verbs with the past form and activity verbs with the past progressive form and these associations became stronger at higher proficiency levels. In addition, learners tended to mark achievement verbs with the past form even when they referred to present or future situations.

Bardovi-Harlig and Reynolds (1995), using a cloze test with short passages, investigated the role of lexical aspect in the acquisition of tense and aspect specifically examining the appropriateness of use between combinations of form and lexical aspect class. Their participants were college-level learners of English from a wide range of L1 backgrounds at six levels of proficiency from beginning to advanced. Results showed that the use of past with achievement and accomplishment verbs was similar across proficiency levels revealing increasing rates of appropriateness of use from Levels 2 to 6 (i.e., from 8% to 98%). Consequently, the authors grouped these verbal aspectual classes into "events" on the basis of Mourelatos's (1981) taxonomy. The only exception to this trend was Level 1, which obtained 73% appropriateness with accomplishments and 62.4% accuracy with achievement verbs. The accuracy rate of simple past with activity verbs remained low and only obtained 80% appropriate use in the highest proficiency level (i.e., Level 6). These results provided support for the tenets of the AH regarding the simple past form in prototypical combinations at beginning stages and the appropriate use of non-prototypicality at advanced proficiency. In terms of developmental sequences, results showed that

learners go through three distinct stages in the simple past acquisitional process: 1. telic verbs appear before atelic verbs; 2. states seemed to be used more than activities; and 3. the use of the simple past appears to be undergeneralized.

Housen (2000) studied the development of TA morphology in one L2 English learner (Ema) and found evidence against the role of verb semantics on past marking as an absolute acquisition universal. He claims that lexical aspect constrains morphology, but it is itself constrained by other factors, such as L1-induced predispositions to mark specific temporal categories, the morphophonemic nature of different grammatical categories, and the nature of the processing mechanisms in the learning of grammatical morphology. In particular, the data revealed that in line with the AH, Ema's past marking at Time 1 strongly emerged with regular telic verbs, reaching the highest association at Time 2, at which point the association relaxed. However, perfective marking was also highly associated with states (i.e., against the AH), which were realized by highly frequent irregular verbs in the input. Housen explained the dissociation of regular and irregular morphology by referencing the processing Dual-Mechanism (Pinker & Prince, 1994). This model suggests that irregular morphology is learned through associative memory or rote-learning, whereas regular morphology is acquired through rule-learning. Irregular morphology emerges first due to the verbs' high frequency`, which is the reason for their entrenchment and conservation in language.

A cross-sectional study by Ayoun and Salaberry (2008), which analyzed data from a group of 21 high-school L1 French speakers learning English as a foreign language in France in a formal setting. The purpose of this study was to find evidence that supported the effect of both the AH and L1 transfer in the acquisition of past tense morphology in English. The participants participated in two written elicitation tasks: a personal narrative and a cloze task. For the former

task, participants were asked to write a personal narrative or a fairy tale; for the latter, they were instructed to fill in the blanks with an appropriate tense, given the base form of the verb in parentheses. The blanks mostly included the simple past contexts across the four lexical aspectual classes of verbs. The results of both elicitation tasks revealed a strong lexical aspect effect associated with the use of past tense markers in L2 English. With regard to the cloze task, results showed that learners achieved high consistency scores for both stative and telic predicates. These findings emphasize the effect of lexical aspect on the use of past tense markers, while suggesting a significant departure from the predicted developmental path of past tense marking: states are marked more consistently than telic events in the narrative. These findings are explained in light of task effects.

Upor (2009) examined the development of past morphology and the effects of lexical aspect and L1 influence among L1 Tanzanian learners of L2 English in multilingual settings. The participants attended primary school, secondary school, and university and they varied in terms of proficiency level from beginner to advanced. Participants spoke one Bantu language, which morphologically marks tense and aspect. As an agglutinative language, Bantu has a verb system with several morphemes that mark other grammatical categories. A picture-story-retell and a personal narrative constituted the elicitation tasks used and the major finding was partial adherence to the AH. Particularly, most groups initially marked the past primarily on statives and then on achievements, a result that yielded statistical significance. Moreover, when the production of achievements outnumbered that of the stative verbs, past marking occurred on telic verbs. Support for the tenets of the AH was observed with the progressive, which emerged with activities and spread gradually to the other predicted verb classes. The author concludes that lexical aspect may

represent an incomplete explanation of the development of EFL among L1 speakers of a Bantu language in an instructed setting.

Chivarate (2018) analyzed the effects of verb semantics and L1 background on the acquisition of the simple past and the past progressive in 5 proficiency-level groups of Thai EFL learners. Thai is typologically different from English exhibiting neither morphological encoding of tense nor aspect. Thai makes use of pragmatic devices (e.g., chronological order in narration) and lexical means (e.g., adverbs such as yesterday, last month, the next year) in order to refer to temporal points. It has a number of grammatical aspect markers to express the different viewpoints with regard to events. Cloze test results revealed that as L2 proficiency increased, the learner used past morphology more accurately. A comparison within a proficiency group showed that learners use simple past morphology more appropriately than past progressive morphology. Lexical aspect was also found to have an effect on past marking: in terms of telicity, the simple past was preferred with telic verbs (i.e., achievements and accomplishments) and in terms of the Vendlerian classes, the form was greater with the [+punctual] predicates (i.e., achievement) than the [-punctual] predicates (i.e. accomplishment, activity and state). In contrast, the use of past progressive morphology was greater with the [-punctual] predicates (i.e. accomplishment and activity) than with the [+punctual] predicates and regarding telicity, past progressive morphology was greater with the [-telic] predicates (i.e., activity) than the [+telic] predicates (i.e., achievement and accomplishment). Overall, the prototypical combinations obtained a higher rate of appropriate use of past morphology. The results were consistent with the AH and in agreement with findings from Robison (1995) and Bardovi-Harlig and Reynolds (1995). Finally, the learner's IL showed different L1-influenced forms, suggesting that L2 morphology development is conditioned to a lesser or greater extent by the L1. For example, Thai expresses both definite and indefinite pasts

with the tense-aspect marker *laew*, whereas English does so by means of the simple past-present perfect dyad. This typological difference may explain the low proficiency learner's overuse of PP in definite contexts, where the simple past was required. The author argues that this last result supports previous L1 transfer studies (e.g., Collins, 2002), which also found an overuse of the perfect among her L1 French learners of English but of higher proficiency level than the ones in Chivarate's study. The conclusion is that L2 development is conditioned by L1 influence.

Zhao and Shirai (2018) recently investigated the acquisition of past morphology and the role of lexical aspect by Arabic-speaking learners of English at beginner and intermediate-advanced levels.[12] The AH was examined on the basis of the accuracy of past tense marking by lexical aspectual class calculated on the basis of Suppliance in Obligatory Contexts. In general, across both task types, past tense forms were typically associated with telic verbs. Results from the oral personal narratives show a strong correlation between lexical aspect and accurate past marking, namely past simple with telic verbs, only by the low proficiency learners. This confirms the AH prediction about verb semantics and emerging past morphology. However, high proficiency learners' use of past morphology was also constrained by the semantic properties of the verbs. In the cloze task, both proficiency levels showed high accuracy rates between past and both telic and stative verbs, partially supporting the AH. The authors explained this finding in terms of L1 influence, since the Arabic perfective marker indicates completion of an event when

[12] In this section, I only report the findings related to the role of lexical aspect on L2 English past tense morphology. Nevertheless, the authors also investigated the effects of phonological saliency across task variation and L2 proficiency as well as the interaction between aspect and saliency. These findings are reported in subsequent sections.

co-occurring with telic and stative verbs. Notwithstanding, when the form co-occurs with activities, a neutral viewpoint is rendered.

In the acquisition of Chinese, Tong and Shirai (2016) examined the effect of verb semantics on two aspect markers (i.e., *-le* perfective and *–zai* progressive) in adult English speakers leaning L2 Mandarin and found evidence in favor of Salaberry's (1999) Default Past Tense Aspect Hypothesis (DPTH). In particular, the data showed that lower proficiency learners used the perfective marker *-le* as a default form for past, likely transferring the L1 English simple past. However, the acquisition of the progressive marker *–zai* did conform to the AH's predictions, as it was associated with the semantically congruent activity verbs. Results also showed the absence of prototypical associations at beginner levels and no evidence for the AH's predicted development of past morphology where prototypical associations evolve so that the past forms and lexical aspectual verbs occur in non-prototypical associations (e.g., perfective marker-atelic verbs) at higher proficiency levels. The lack of support for the "association prediction" regarding the perfective form *–le* at early stages resulted in the postulation of the "Lexical Insensitivity Hypothesis" (Tong & Shirai, 2016, p. 19), which the authors regarded as an extension of the DPTH.

In sum, previous empirical research on L2 English acquisition of past morphology (and one other L2: Mandarin Chinese) with instructed learners has found full and/or partial support for the role of lexical aspect as an acquisitional universal. Out of all the studies discussed in this section, it was made apparent that the early studies (e.g., Bardovi-Harlig & Reynolds, 1995; Robison 1990, 1995) as well as a recent study (Chivarate, 2018) found full support for the predicted trajectory of past tense marking made by the AH. Specifically, the learners showed an increasing accuracy in the use of past morphology across proficiency. In addition, the studies have shown the

use of prototypical combinations (e.g., simple past-telic verb) mostly at initial stages and an increasing use of non-prototypical associations with increasing proficiency. Interestingly, several of the studies discussed found full support for the AH only for the progressive form, which indicated emergence first with activity verbs, gradually spreading to telic ones (e.g., Tong & Shirai, 2016; Upor, 2009).

Partial support for the AH was found in Ayoun and Salaberry (2008), Housen (2002), Upor (2009), and Zhao and Shirai (2018): the English past was marked initially with telics and states. Housen concluded, in line with Salaberry (2000b), that the high distribution of past states in learner language can be explained by their high input frequency and high cognitive saliency. In Upor's study, the difference between states and achievements in the simple past reached statistical significance, with the former being more likely to be marked for past. Finally, a strong rejection of the AH was found in Tong and Shirai (2016) for L2 Chinese, confirmed by the use of the perfective marker as the default form, which supported the Lexical Insensitivity Hypothesis at beginning levels of proficiency.

The studies also revealed that language typology may play a pivotal role in the depiction of developmental sequences. In fact, the development of past morphology seems to follow different routes depending on the morphosyntactic features of the L1 and the L2. It is possible to hypothesize that a typological mismatch between the L1 and L2 in terms of tempo-aspectual distinctions and their linguistic implementation may result in a stronger influence of the learner's L1 than lexical aspect in initial L2 morphology. For example, the use of a single default marker of pastness by L1 English learners of L2 Spanish across all past meanings (and thus across all lexical aspectual classes) has been interpreted by Salaberry (1999) as the result of the influence exerted by the verbal system of English. Specifically, the fact that English simple past can refer to both

perfectivity and imperfectivity is hypothesized to play a role in the early acquisition of L2 past morphology with learners establishing an "interlingual mapping" (Shirai, 2019, 1992) between the L1 simple past and the L2 preterit. Given the conditions for transferability to occur, the learner maps the L1's most frequent past form to the L2's most frequent past form (i.e., preterit) assigning to the latter form the functions of the former (i.e., a single form used across perfective and imperfective contexts). Conversely, when there is a typological match (i.e., the L1 and the L2 show a similar linguistic implementation of the tempo-aspectual categories), initial L2 morphology is hypothesized to emerge in line with the L1-L2 similarities and a likely effect of lexical aspect (e.g., perfective marking with telic events and imperfect marking with atelic events). However, although Izquierdo and Collins (2008) found that their L1 Spanish-L2 French learners made effective use of L1–L2 similarities when selecting their preferred past marker, the learners were less influenced by lexical aspect than English L1 learners of French. Moreover, Collins (2004) argued that L1 influence may be stronger when L1 and L2 share similar past forms that have differential functions (e.g. the French *passé composé*, which expresses perfectivity and the English present perfect, which canonically expresses current relevance) than when L1 and L2 share aspectual similarities but differ in their linguistic encoding (e.g. the progressive in English and Japanese). Further research is necessary in order to disentangle the role of lexical aspect on the use of past morphology by considering the learner's L1 and L2 and their typological symmetry or asymmetry with regard to the tense-aspect categories.

The following section discusses the role of lexical semantics of verbs on the acquisition of past morphology in a number of Romance languages as L2, with special focus on L2 Spanish.

2.2.1.3 Form-oriented research studies: the Aspect Hypothesis in L1 Spanish and naturalistic and/or instructed L2 Spanish and other Romance languages

The following sub-section discusses several form-oriented studies investigating the effect of verb semantics on past morphology in Spanish as a foreign and/or second language and in adult native-speaker control groups. To date, research on child acquisition of L1 Spanish past morphology (i.e., verb form-meaning mappings) has not been prolific, except in the area of psycholinguistics, which has examined the mechanisms involved in the processing of (ir)regular morphology (e.g., Bowden, Gelfand, Sanz, & Ullman, 2010). One exception is Krasinski (1995), which studied the development of past marking in L1 English and L1 Spanish by a bilingual child and the effect of Bickerton's (1981) punctual-nonpunctual distinction of verbs. Bickerton's Language Bioprogram Hypothesis was based on his work on pidgin/creole languages and proposed that human beings are born with an innate bioprogram for language "that automatically searches for ways to mark linguistically certain semantic distinctions" (Krasinski, 1995, p. 240). One such distinction is the punctual-nonpunctual one, defined as completive-non-durative vs. completive-durative. The general findings for Spanish showed that most Spanish inherently punctual verbs were used in the past form and most Spanish nonpunctual verbs were used in non-past form.

The emergence, development, and use of past morphology with respect to lexical aspect in L1 and L2 Spanish as proposed by Andersen (1991) is summarized in Andersen and Shirai (1994), as shown in Table 2-1.

Table 2-1. Assumed distribution of past inflections by verb class for learners and native speakers of Spanish and Portuguese (Andersen & Shirai, 1994, p. 136, Table 2).

Verb class	Early acquisition	Late acquisition	Native adult use
State	Uninflected	Imperfective	Imperfective Perfective
Activity	Progressive	Progressive Imperfective	Progressive Imperfective Perfective
Accomplishment/ achievement	Perfective	Perfective	Perfective Imperfective Progressive

Andersen (1991) was one of the first influential studies on the acquisition of past morphology of Spanish as a second language by two English-speaking adolescents in a natural setting (i.e., Puerto Rico). He studied Annette's and Anthony's development in the use of past forms with regard to lexical aspect at two time points i.e., when the girl (Annette) was 8 years old and the boy (Anthony) was 12 and again two years later. His findings showed that preterit (perfective) and past imperfect marking began in opposite corners of the verb semantics continuum. The acquisition process, gradual and progressive in nature, revealed eight distinct stages that the learner traversed along past morphology development, as illustrated I Table 2-2 below.

Table 2-2. Emergence and development of past morphology in L2 Spanish (based on Andersen, 1991).

Stage 1	Present morphology (unmarked, neutral form) and uninflected forms
Stage 2	Perfective morphology emerges with achievements
Stage 3	The imperfect emerges with states
Stage 4	Perfective morphology spreads to accomplishments and the imperfect to activities
Stage 5	The imperfect spreads to accomplishments
Stage 6	Perfective morphology spreads to activities
Stage 7	Imperfect morphology spreads to achievements
Stage 8	Perfective morphology spreads to states

A more recent study, Biehl (2010), examined the constraints on the acquisition of L2 Spanish past morphology by eight older (42-65) and seven younger (18-34) Chinese adult untutored learners living in Ecuador. The author considered multiple factors such as input frequency, learning environment, and L1 influence, with a special focus on testing the Aspect Hypothesis. The older group arrived at the host country as adults and learned Spanish informally through contact with the community. The younger group; however, arrived as children and learned Spanish in formal settings since all attended a Spanish-Chinese bilingual school and had private Spanish tutors, and some attended a private academy after school. The study analyzed a number of devices used in the expression of pastness, including the TL past forms, the present, nonnative-like form-meaning pairs such as participles or the imperative, and ill-formed verbs. In this respect and given the comprehensive consideration of expressive means across the learner data, the study can be described as having a concept-oriented approach. Results of an oral interview revealed that the present functions as the default form for the older speakers. The few perfective tokens revealed

high rates of correctness of subject-verb agreement by person and number. This finding results from the fact that the speakers used three irregular verbs, which are highly frequent in the language. Also, the older group showed a tendency to mark perfective meaning with past participles and imperfective meaning with the present simple and occasionally with the present progressive. The author suggests that the use of alternative forms principally serves to mark aspectual differences (i.e., perfective versus imperfective meanings), and this could be attributed to L1 influence since Chinese does not formally mark tense, but it does mark aspect. Additionally, this finding seems to align with previous research that found an important effect of aspect over tense in Italian (e.g., Giacalone Ramat & Banfi, 1990, discussed below). Results further support Andersen's (1991) proposed developmental stages with older speakers using the present as default and when perfective past morphology is used, it follows the trajectory stipulated by the AH. However, the study leaves one with the question whether the older group shows evidence of a developing verb system or a lethargic, inactive one, which could be a sign of fossilization.

Giacalone Ramat and Banfi (1990) analyzed the conversations among Chinese adults learning Italian as a second language in a natural setting. Results indicated that the present was the most frequent verb form for most of the participants, commonly used across different temporal reference points. With respect to past-time reference, the present form occurred with the aspectual value of imperfectivity (i.e., habituality). The authors contend that "the present is a general-purpose, unmarked, imperfective form in the learners' early interlanguages" (p. 420). Moreover, perfectivity in the learners' emerging verbal system was encoded by the past participle form, which exhibited a lack of gender and number agreement with the subject. The *imperfetto* (i.e., imperfect form) emerges after the formation of the "basic microsystem" that hosts the present, the infinitive, and the past participle forms (p. 422). The authors conclude that at a very early stage the learners

use the aforementioned forms to convey the lexical meaning of the verb but not to differentiate the temporality of the situations.

Experimental research on the acquisition of past morphology with tutored learners lent some support to the developmental trajectory proposed by the AH, in which the perfective past form in Spanish (i.e., preterit) emerges with achievements and accomplishments and the imperfective form (i.e., imperfect) appears at a later stage with states and then with activities. We now turn to empirical investigations on L2 Spanish, L2 Catalan, and L2 French acquisition of past-time marking in a classroom setting.

Ramsay (1990) examined oral story retells in 10 NSs and 30 L2 Spanish college students attending three universities in Oregon divided into five proficiency level groups. The participants were provided with a children's book that contained a story with blank spaces for them to complete with an appropriate form (i.e., a cloze task). The goal was to track the development of perfective and imperfective morphology and the role of lexical aspectual class. Results showed that the acquisition of perfective and imperfective aspects involved a series of distinct developmental stages, which eventually led to the native-like use of the past forms. The acquisition of complete and native-like form-meaning connections occurred at a later developmental stage. The students' use of past morphology showed a U-shaped learning pattern: in the first three stages learners do not produce errors in the choice of inflections, whereas they produce multiple errors at the fourth stage, during which the rules for both preterit and imperfect are acquired. The findings also partially supported the tenets of the AH in that learners in stage three showed a tendency toward prototypical associations between preterit and imperfect to telic and atelic verbs, respectively. In stage four, non-prototypical combinations emerged but many errors were attested (e.g., punctual-

telic verbs with the imperfect in perfective contexts). At stage five, learners arrived at ultimate attainment, showing no mistakes in the use of non-prototypical combinations.

Hasbún (1995) studied 80 written retell narratives of 1st, 2nd, 3rd, and 4th year University L1 English learners and 20 native-speakers of Latin American Spanish. The goal was to examine the influence of lexical aspect on L2 Spanish past morphology development and whether the Distributional Bias Hypothesis (Andersen, 1993) was confirmed. Specifically, the study examined if acquisition is driven by the semantic aspect of verbs (i.e., lexical aspect) and whether learners' past morphology distributions resulted from frequency effects in their caretakers' input. At Level 1, learners used present morphology almost entirely across contexts; hence, there was no association between the present form and lexical aspect. Results showed evidence for the AH proposed stages of acquisition of the preterit and the imperfect emerged with states in the 3rd year and extended to activities in the 4th year. Prototypical associations were weaker in NSs than in L2 learners, whose IL showed stronger associations with increased proficiency, as other studies have found (e.g., Salaberry, 2011).

Nevertheless, some studies have yielded conflicting results, which partially contradict the tenets of the AH, with more advanced learners showing the highest degree of associations between lexical aspectual class and gram and lower-level learners using the preterit across all lexical aspectual classes, which in turn provided support for the default past tense hypothesis (Salaberry, 1999). On a more general note, the existence of a default past-time marker in the IL of beginning-level learners aligns with the developmental path of other morphosyntactic structures, such as copula acquisition of *ser* "be" and *estar* "be", for which the former emerges first and as the default verb form (VanPatten, 1985, 1987). In particular, Salaberry's hypothesis about developmental TA morphology asserts that at beginning levels, the learner uses preterit as the default past marker

regardless of lexical aspectual class and uses the imperfect for making excuses (Salaberry, 2000a). Additionally, it is important to note that Salaberry's (1999) reported findings were based on an across-category analysis, a type of distributional analysis between verb class and past marker association, which answers the question "where do specific morphemes occur?" When Bardovi-Harlig (2002) reanalyzed the data by means of a within-category approach, which focuses on how each of the lexical classes of verbs is morphologically marked by the L2 learners, the results provided evidence for developmental effects: "the imperfect increases in the second level with statives in the lead, activities second and telics lagging behind" (p. 147). Bardovi-Harlig explains that a within-category approach is suitable for developmental studies with imbalances in the number of tokens across categories. Hasbún's (1995) analysis used a within-category approach (i.e., how are the lexical aspectual verbs morphologically marked?): "The different cells in each column show the raw scores as well as the percentages of use of each one of the morpho-syntactic categories with each of the lexical aspectual classes. Therefore, the entries in the columns add up to 100% vertically" (p. 108).

Salaberry (1999) studied the distribution and development of L2 Spanish past tense marking at university level and across three elicitation tasks: movie narratives, cloze and editing tasks, and speak aloud protocols. Four acquisitional stages were attested. In stage 1, 2nd semester students categorically used the preterit as a default past-time marker revealing an under-application of the rules of past marking in Spanish. In stage 2, students started mapping different past-time markers in their L2 Spanish verbal system, and this use was predominantly conditioned by the inherent semantics of verbs. Stage 3 was characterized by overgeneralization whereby the effect of lexical aspect strengthened as more proficient learners preferred to use prototypical combinations (e.g., preterit with telic verb). In stage 4, the advanced learners at Time 2 went

through a state of regression favoring non-prototypical combinations as language-specific and discursive-pragmatic factors gained importance as a determinant of preterit-imperfect use. Eventually, students developed a more fully-fledged verbal system.

A more recent study by Henderson (2013) analyzed story retells and personal narratives from twenty-two university-level intermediate and advanced L2 Spanish learners and examined the relationship between task type and TA morphology. Results showed that both intermediate and advanced learners appear to be using the preterit as a past-time default marker across all lexical aspectual classes, corroborating Salaberry's (1999, 2003) findings with beginning learners, and contradicting the AH. Results also revealed the effect of task type in the distribution of TA morphology: both groups preferred the preterit in both narrative types, but the imperfect was more frequently used in the personal narrative than in the story retell. In addition, the intermediate and advanced groups preferred the present tense in the story retell and the preterit in the personal narrative for overall morphological markers. Advanced learners seemed to be more sensitive to lexical aspect than the intermediate group in the story retell task because of the high association between telic verbs and the preterit on the one hand and the imperfect with states on the other.

Even more recent work by Amenós-Pons, Ahern and Guijarro-Fuentes (2017) investigated how adult L1 French speakers acquired L2 Spanish past morphology in a formal setting. The learners belonged to the A2, B1, B2 and C1 CEFR levels (N= 20-24 per level) and participated in an oral production film retell which they had to tell as if they were one of the characters. Results of the A2 level indicated an important use of the present (71%), which alternated with the present perfect form (17%) across telic and foregrounded contexts as a result of the influence of French *passé composé*. The preterit and the imperfect were very infrequent at this level (i.e., 6% and 3%, respectively), with the latter form being used with atelic verbs in the background of the narrative.

The B1 level still preferred the present form (36%) across the foreground, although the simple past gained popularity (24%). The imperfect dramatically increased to 23% and was used always with atelic verbs in the background. The B2 level showed an increase in the use of the simple past (28%) across telic foregrounded eventualities and a sharp decrease in the use of the perfect (4%). However, the present form was still largely preferred across the foreground (47%). The highest proficiency level (i.e., C1) showed a change in the verbal system with the simple past becoming the most frequent past form (42%), primordially across the foreground. The authors concluded that despite the general trend towards the prototypicality of lexical aspect and past morphology, perfective tenses (i.e. preterit) were employed with all types of predicates at the lowest level (i.e., A2), which was taken as evidence that refutes the tenets of the AH.

One important with tutored learners by Comajoan (2006) aimed at investigating the role of aspect in relation to verbal morphology and appropriateness of use in L2 Catalan. Specifically, the study examined whether the aspectual characteristics of predicates can account for the emergence of morphology and its appropriate/accurate use. Data were collected from three multilingual beginning learners of Catalan as a foreign language (L1 English speakers enrolled at a US University) through four storytelling elicitation tasks (i.e., video narratives, storybook narratives, comic strip narratives, and a folktale). An analysis of the data (i.e., 1318 past markers) provided evidence in favor of Andersen and Shirai's Aspect Hypothesis (1994), as achievement and accomplishment predicates in general were inflected for the perfective past more frequently than were activity and state predicates; the opposite trend was found for the emergence of imperfect morphology. Analysis of the preterit and imperfect in L2 Catalan showed appropriate use in almost all contexts; however, prototypical combinations of past morphology and aspect tended to be used more appropriately than non-prototypical combinations. The author concludes that the learners'

knowledge of Spanish and French must have played a facilitative role in the acquisition of perfective-imperfective Catalan morphology.

The following empirical investigations yielded results which encouraged a different interpretation to the traditional role assigned by the AH to the inherent semantics of verbs/verbal phrases. The studies maintain that verbal aspect is a determining factor in the acquisition of L2 Spanish and French TA morphology; however, this influence is exerted by dynamicity contrast (dynamicity versus stativity) rather than by the triad telicity-durativity-dynamicity. The authors argue that in L2 Spanish and L2 French, dynamicity contrast more appropriately explain the acquisitional process of past morphology rather than telicity. One such work is Bergström (1995), which examined the effect of lexical aspect on the emergence and development of past morphology among L2 French tutored learners. The author specifically tested the AH proposed acquisitional trajectory for *passé composé* (i.e., perfective form) and *imparfait* (the imperfect form) by which the former should emerge first with telic verbs (i.e., first achievements and then accomplishments) and then extend to atelic ones (i.e., first activities and then stative verbs) as proposed by Andersen (1989). Moreover, the imperfect should emerge with stative verbs following the opposite route. Results in favor of the AH indicated that the *passé composé* emerged before the imperfect form and that the latter did emerge with stative verbs and then gradually extended to the other categories. Nevertheless, the perfective form emerged across achievement, accomplishment, and activity verbs showing a constraint by verbal dynamicity, against the AH predictions that match perfective marker with telic verbs.

Domínguez et al. (2013) examined the role of lexical aspect on the acquisition of L2 Spanish past morphology by college-level L1 English speakers (beginners, intermediate and advanced), through the examination of one comprehension task and three oral tasks with varying

degrees of experimental control (personal interview, semi-controlled impersonal narrative, and controlled storytelling task). The data showed that the emergence of TA marking in the first acquisition stages is predominantly influenced by dynamicity constraints (i.e., a state versus an event) instead of telicity. Specifically, for both the production and comprehension tasks, beginner and intermediate learners used preterit with event verbs (achievements, accomplishments, and activities) but the imperfect form with state verbs. The advanced learners used prototypical preterit–telic associations in the least controlled oral tasks, as predicted by the AH, but in more controlled tasks designed to include non-prototypical and infrequent form–meaning contexts, the pattern changed. Beginner and intermediate learners treated telic and atelic dynamic verbs as a single verb class that they associated with perfective morphology. An interesting observation made by the authors is that non-prototypical associations were difficult to investigate since they were not frequently produced in speech or uncontrolled tasks. The authors adhered to an innovative methodological design that considered different narrative types, since they can affect the frequency of use of the target forms, as previous research found (e.g., Bardovi-Harlig, 1992; Salaberry, 2003).

González and Quintana Hernández (2018) examined the roles of verb semantics and L1 transfer in the acquisition of grammatical aspect in L2 Spanish (i.e., preterit and imperfect) by L1 English and L1 Dutch speakers at beginning stages of acquisition. The study, which used a written retell task based on a muted video, showed that the use of Spanish perfective and imperfective morphology was affected by the inherent lexical aspect of the verb but not all learners were influenced by the Vendlerian lexical aspect typology. The study discussed the influence of inherent aspect from different perspectives and authors concluded that refinement of the AH may be necessary. Depending on the learner's L1, this influence can be operative or not. Differences in the grammatical marking of aspect in both the L1 and the L2 predicted that learners would have

difficulties acquiring the TL temporal system. Results from the L1 English speakers provided evidence for the Dynamicity Contrast Effects Hypothesis (Domínguez et al., 2013), with preterit being chosen across dynamic verbs and the imperfect across non-dynamic situations (i.e., states). Furthermore, these learners also showed overuse of preterit, which can be the result of L1 influence from the English simple past tense, canonically used primarily across perfective contexts, although imperfective ones are also possible (e.g., "I lived in the South when I was young").[13] Conversely, the choice of L2 Spanish past morphology by L1 Dutch speakers was influenced by the terminative-durative distinction that characterizes "predicational aspect" (i.e., the verb and its arguments) (González, 2013).[14] Finally, the study found that L1 Dutch speakers preferred the

[13] González and Quintana Hernández (2018) acknowledge that the default status of the preterit by L1 English participants can also be the result of classroom input.

[14] González (2013) sustains that past morphology is more greatly constrained by a two-way intrinsic predicational meaning (i.e., terminative versus durative) than by a four-way one. The author thus proposes two aspect levels: predicational (i.e., with a two-way aspectual distinction as applied to a verb and its arguments, by which situations are characterized as inherently terminative or durative) and grammatical, which is marked morphologically in several languages such as in Spanish, and which distinguishes situations as perfective or imperfective (bounded versus unbounded) according to the speaker's perspective about the eventuality in actual discourse. The author contends that the term "lexical aspect" focuses on the lexical level (i.e., the verb), whereas the predication level is more comprehensive since it considers the verb and its arguments. González, based on Verkuyl's (1993) proposal, used an event semantic framework by which lexical aspect (i.e., predicational) is compositionally formed by two aspectual features (i.e., the [add-to] verbal feature that distinguishes dynamicity from non-dynamicity of verbs and the [sqa] NP feature, which distinguishes between quantified and delimited objects from those that are not). Under this framework, the phrase "write two letters" should be assigned a positive [add-to]-verb feature and a positive [sqa] feature, which characterizes a terminative eventuality. However, all other values to these two features are considered to yield a durative eventuality.

present perfect in perfective contexts in Spanish (rather than the preterit) due to the influence of the learners' L1 grammar.

Salaberry (1998) studied the acquisition of past morphology by 39 L1 English learners of French at college-level (2nd semester) and used a NS control group. Results of a cloze test and a written movie retell task indicated that both participant groups behaved in similar ways with regard to the use and selection of past morphology in prototypical combinations with lexical aspectual classes. The results of a factorial ANOVA indicated that the major component in the selection of perfective versus imperfective morphology was telicity (i.e., achievement verbs were more significantly associated with perfective markers than stative and activity verbs were). On the other hand, differences between NNSs and NSs arose with respect to non-prototypical associations in the cloze task; the narrative task showed limited use of non-prototypicality by the participant groups. Furthermore, there seemingly was evidence in favor of an NNS's higher rate of *passé composé* over the imperfect, indicating its status as a default marker. Interestingly, whereas the NSs increased the perfective-imperfective use ratio from one task to another (i.e., 3:1 to 3:2, respectively), the NNSs maintained the same ration across tasks (i.e., 3:1).

McManus's (2013) study with L1 English and L1 German University learners of L2 French investigated the role of lexical aspect on past morphology across an oral narrative and a sentence interpretation task. Results showed that a larger use of prototypical pairings goes in hand with increasing L2 proficiency. Particularly, the imperfect-atelic verb association seemed to be stronger in the advanced group and this finding was explained as a by-product of form-meaning connections. In other words, the author sustained that prototypicality between past form and lexical aspectual class is hypothesized to occur once the mapping of form to viewpoint meaning has

occurred (i.e., once the *passé composé* has been mapped to perfectivity and the *imparfait* to imperfectivity).

This section attempted to discuss the most relevant previous research on the acquisition of L2 Spanish past morphology and the effect of lexical aspect. The studies by Andersen (1991) and Biehl (2010) showed that L2 Spanish learners in a naturalistic setting use the present as the first perfective morphological marking. General findings indicated that preterit emerged before imperfect and both forms developed according to the predictions of the Aspect Hypothesis. Biehl's (2010) adult participants only used three perfective forms consisting of three highly frequent irregulars in Spanish. Finally, due to the influence of their L1 Chinese, perfective meaning was realized by the past participle. The studies with instructed learners yielded basically similar results:

a. The present is the default verbal form in 1st year/semester students. Therefore, there is no influence of lexical aspect.
b. The preterit becomes the default form to refer to the past after the learners have received instruction on the form, again with no effect of lexical aspect.
c. There is an effect of lexical aspect on past morphology yielding prototypical associations. The preterit and the imperfect form develop according to the AH predicted trajectory.
d. There is an incremental lexical aspect effect with stronger associations with increasing proficiency.

The studies that proposed other semantic constraints on the development of past morphology found that beginner and intermediate groups used past forms according to dynamicity constraints. The advanced level showed preference for prototypical combinations in the oral tasks but non-prototypical ones were more frequent in more controlled tasks.

In sum, it can be argued that based on a great deal of previous research the learner starts with a default form to express pastness across all contexts and hence across all lexical aspectual classes. In subsequent levels, the learners use perfective marking first usually with telic predicates and the imperfect marking emerges later with atelic verbs in line with the AH predictions. Other studies (e.g., Ayoun & Salaberry, 2008; Upor, 2009) have also found that simple past morphology in English is initially marked preferably by telic verbs and stative ones. Among more recent studies, results have yielded an effect of dynamicity on the use of perfective past morphology or an effect of the aspectual meanings of termination versus durativity.

2.2.1.4 Form-oriented research studies: the Discourse Hypothesis in first and second languages

The Discourse Hypothesis (DH; Bardovi-Harlig, 1994a) was proposed to account for the emergence and development of past morphology in IL grammars in terms of information structure and was derived from research on L1 English narrative discourse. The L1 speaker and the L2 learner need to make decisions about how to structure the narrative events (i.e., whether the events reached completion or are in progress and which events will be at the forefront and which ones will provide subsidiary information). The DH holds that a sequence of completed events that form the complicating action of a narrative are paramount in the story, so they will be presented as foreground. In this section, I review the major findings on the use/acquisition of past morphology cross-linguistically and the effect of the discourse structure and grounding on past form choices.

Hopper (1979), a pioneering cross-linguistic work on the interdependence between past form and narrative structure, stated that all languages use different devices (e.g., verb morphology) to realize foreground-background distinctions in text/discourse. On the basis of discourse analysis

of English, Malay, Tagalog, Swahili and the Romance and Slavic languages (e.g., French and Russian), Hopper presented the major linguistic features of both grounds (Table 2-3).

Table 2-3. Main features of discourse grounding types.

Foreground	Background
• Sequentiality (i.e., events succeed one another in the narrative in the same order as in reality)	• Simultaneity (i.e., concurrent with sequential events)
• Chronological narration of events in the story	• Amplify/comment on the main events
• Focus structure: subjects are presuppositional and new information is expressed by the verb and its complements	• Focus structure: topic changes and new information occurs on the preverbal portion of the utterance
• Link to Aktionsart: Punctual dynamic verbs with perfective aspect	• Link to Aktionsart: Durative and/or iterative verbs with imperfective aspect
• Narrated clauses	• Supporting clauses

In sum, Hopper (1979) found that speakers build a narrative with tense-aspect morphology serving this purpose, i.e., the perfective aspect (e.g., the preterit in Spanish) is used to mark the main path and the imperfective aspect (e.g., the imperfect form in Spanish) reroutes narrative parts that are not closely connected to the main path.

Subsequent works examined the effect of discourse grounding in the development of past morphology across oral narratives in L2 English by learners from different L1 backgrounds (e.g., Bardovi-Harlig, 1992b, L1 mixed; Flashner, 1989, L1 Russian; Kumpf, 1984b; Tajika, 1999, L1 Japanese), narratives in L2 French (e.g., L1 Spanish: Noyau, 1990; L1 Arabic: Véronique, 1987), and L2 Italian (Rosi, 2009, L1 Spanish and German). In general, the studies showed that grounding played a key role in the distribution of past morphology, by which perfective markers were used across foregrounded events and imperfective markers across backgrounded events. In English, the pattern revealed a larger number of simple past forms in the foreground than in the background with the use of non-past in the latter ground. Véronique (1987) found that for her L2 French untutored learners the effect of grounding on past marking distribution differed by proficiency level and within level. The intermediate level showed higher use of past form in the foreground and base forms in the background. More recently, Rosi (2009) studied the acquisition of L2 low-intermediate Italian by 24 university students from L1 German and L1 Spanish backgrounds in Italy and 24 adult NSs. The results from three *Modern Times* retell tasks confirmed the effects of both lexical aspect and discourse grounding, although at different proficiency levels. Aspect determines emerging past marking, but grounding has an effect only at later stages, when there is an association of perfectivity with telicity and foreground, and one of imperfectivity with atelicity and background. Due to the similarities between the Spanish and Italian TA systems, the results showed an initial facilitative role of the learners' L1 Spanish in perfective and imperfective past marking. Finally, these findings are consistent with claims across theoretical approaches and empirical research for which structural similarities between the L1 and the L2 should be facilitative at the beginning of the acquisition path (e.g., Izquierdo & Collins, 2008).

In L2 Spanish, Liskin-Gasparro (2000) interviewed eight advanced college level learners, who participated in an oral silent movie recount, a personal oral narrative and in an immediate oral retrospective protocol. The learner's use of tense-aspect morphology differed noticeably according to narrative task: preterit contexts, highly associated with the foreground, constituted 63% of the verbs in all of the film retellings, whereas obligatory imperfect contexts related to backgrounding, constituted 60% of the verbs in the personal narratives. This finding was cross-linguistically confirmed in Bardovi-Harlig (1992), Giacalone Ramat and Banfi (1990), and Salaberry (1999, 2003), among others.

A more recent study by Ruiz-Debbe (2005) examined the effect of discourse grounding on L2 Spanish morphology by beginner, intermediate, and advanced L1 English learners in a classroom setting as well as by an NS control group. The elicitation task consisted of an oral and a written silent film retell task. The first finding revealed that, regardless of proficiency level, all texts followed a similar narrative structure by which events were presented chronologically, in line with the principle of chronological order (von Stutterheim & Klein, 1987). However, beginners, as opposed to the more proficient groups, showed the unsystematic use of past morphology, providing evidence in favor of a lexico-pragmatic pre-morphological initial stage. Regarding discourse grounding, the advanced and NS groups showed high associations between preterit and foreground and imperfect and background in both the written and oral narratives. The beginner group showed the effect of task type, with high preterit rates in the written narrative followed by the imperfect and with similar rates of preterit-present in the oral task. Present morphology was used in the obligatory contexts of the imperfect. The intermediate group showed higher rates of preterit than imperfect in both narrative types as well as relatively high rates of progressive and

perfect tenses. In sum, the study seems to confirm the claim of the Discourse Hypothesis about the distribution of past morphology across the foreground and background of the narratives.

This section discussed empirical studies on the acquisition of past morphology across a number of languages as affected by grounding and task type. All these studies found an effect of grounding (e.g., preterit, foreground-perfectivity), which becomes operative at later acquisition stages and among the NSs. Moreover, all the studies found an effect of task type such that preterit rates of use were higher in movie retells and imperfect morphology was higher in personal narratives.

2.2.1.4.1 Form-oriented research: the interactional effect of the AH and DH

The seminal works on the effect of discourse grounding on the use/acquisition of past morphology in English (Flashner, 1989; Kumpf, 1984; Bardovi-Harlig, 1992b, 1995a, 1998) were followed by influential research on the interaction between lexical aspect and grounding on L2 past morphology development. The AH and DH may conspire in the emergence and development of tense-aspect morphology (Bardovi-Harlig, 1998, 2000). The author argues that when the tenets of the AH and the Interlanguage Discourse Hypothesis are considered, some expectations about how TA marking will proceed seem to be very straightforward, but some are not. Combining the tenets of both hypotheses we can predict that atelic verbs in the background will likely be marked in Spanish with the imperfect form following prototypical combinations: imperfective meaning, atelicity (no inherent endpoint), backgrounded events (supporting information, no sequentially perfective ordered eventualities). However, there might be uncertain expectations with regard to the TA marking in those cases where there is a lack of congruence between the lexical verb type and the ground. The strongest version of the AH regarding the Romance languages hypothesizes that all atelic verbs (i.e., activities and states) will receive imperfective marking regardless of the

narrative ground and the DH would expect the learner to use the preterit when any verb, regardless of telicity, occurs in the foreground (e.g., Howard, 2004). In the case of English, the AH predicts that the progressive aspect will initially emerge with activity verbs first and can later extend to stative verbs under special uses (e.g., live-living). Table 2-4 shows the common predictions and differing ones made by each hypothesis.

Table 2-4. Predictions about past tense marking made by the AH and DH in Romance languages.

Congruent predictions	**Differing predictions**
✓ **The FGD & telic verbs** are associated through a common meaning of completeness= perfective past marker ✓ **The BGD & atelic verbs** associated through incompleteness= encoded by imperfective past markers	✓ **The FGD & atelic verbs** ➢ The AH: imperfective past marker ➢ The DH: perfective past marker ✓ **The BGD & telic verbs** ➢ The AH: perfective past marker ➢ The DH: imperfective past marker

A pivotal study in L2 English is Bardovi-Harlig (1998), which analyzed 37 pairs of oral and written movie retells and found an interactional effect of both predictors. Specifically, achievement verbs were more likely marked by the simple past, regardless of grounding; accomplishments are the next most likely verb class to be inflected with the simple past and foregrounded accomplishments show higher rates than backgrounded ones; activity verbs are the least likely to be marked by the simple past and foreground activities are more frequently found with the simple past than background activities. Emerging morphology has lexical aspect as the

early influence, and as the learner's IL expands, developing morphology becomes more sensitive to discourse structure (i.e., foreground versus background distinctions).

Bada and Genc (2007) investigated the interaction between aspect and grounding and their role in the choice of past markers in an oral film retell task of L1 Turkish leaners of L2 English (17 1st year University students between 21-25 years of age) and L1 English NSs. The analysis yielded similar results across the learner and NS groups. Firstly, the present constituted 71.1% of the total predicates representing the default past-time reference form, whereas the simple past constituted 28.9%. Secondly, a distribution analysis also showed that the present was typically associated with state and accomplishment verbs whereas the simple past was marked on achievements and activities. Thirdly, the background was indicated through states and activities, and the foreground through achievements and accomplishments. Overall, the results indicated that both the learner and NS groups used the present and the simple past in prototypical combinations of aspect and grounding, confirming the predictions that are shared by the AH and DH for emerging morphology.

Howard (2004) examined the interplay of inherent lexical aspect and discourse narrative on the past time marking in Advanced L2 French. The participants were 18 female college-level L1 Irish English learners of French majoring in French, with prior instruction in French (5-6 years). Learners belonged to 3 groups: 1. Two-year classroom instruction at university, 2. Three-year-classroom instruction at University, 3. Two- year-classroom instruction at college-level,

+ college academic year in France (no instruction of the French language). The participants took part in one-hour individual sociolinguistic interviews, with both formal and informal modules, including different topics. Regarding the differing predictions of the AH and DH, results indicated that atelic verbs in the foreground were constrained by discourse ground (i.e., foreground

versus background) whereas telic verbs in the background were conditioned by lexical aspect. The tendency of the *passé composé* across foregrounded and telic contexts increased with proficiency level, providing counterevidence to the main tenets of the AH. Overall, past time marking in L2 French varied between discourse grounds, but also across lexical aspect types within each ground so the conclusion was that lexical aspect & discourse grounding interact when conditioning TA morphology marking.

In L2 Spanish, the examination of the interaction between aspect and grounding has received less attention. Four studies are discussed, one among naturalistic learners and the others with instructed learners. Liskin-Gasparro (2000) used OPI personal narratives and a movie retell task to investigate the effects of aspect and grounding among high superior students. Firstly, the results indicated a prototypical association between states and imperfective markers (e.g., the imperfect and the present) and between achievements and the preterit, confirming an effect of lexical aspect even at high proficiency levels. Secondly, imperfective aspect marks background information significantly more often than foreground information, and, foreground information is expressed significantly more often with perfective marking, showing an interdependence between grounding and past tense marking. Finally, lexical aspectual categories also interact significantly with grounding principles, with background information being predominantly expressed through states more often and then by activities, whereas the foreground is more frequently marked through accomplishments and achievements.

López-Ortega (2000) studied the oral personal narratives of four Moroccan immigrants in Spain in order to examine the interaction of lexical aspect and grounding with respect to grammatical aspect marking in L2 Spanish. Results showed a significant effect of both but revealed that both hypotheses are necessary, complementary frameworks of analysis, which should be used

to obtain a more complete picture of the L2 Spanish acquisition of TA morphology in contact situations.

Lafford (1996) investigated the interactional effects of lexical aspect and discourse grounding on the L2 Spanish use of PRET and IMP across a 10-minute oral retell of a silent video. Participants were 12 intermediate level students sub-grouped into 3 sublevels: intermediate low, mid and high. Lafford found that both telic and atelic verbs were encoded with PRET in the foreground and she thus concluded that her results supported the strong version of the DH, which basically argues that grounding has an overriding role in past marker selection/use.

Salaberry (2011) is the most recent study to compare the relative effect of both predictors on the choice of preterit and imperfect selection in L2 Spanish, and his results support Lafford's findings. The study examined 286 L2 Spanish learners divided into four proficiency levels according to their University course placement (i.e., second, third, fourth, and fifth semesters) as well as a control group of NSs. Results based on a written-forced-choice narrative task showed that lexical aspect and discourse grounding are active predictors of past morphology choice across proficiency levels. Moreover, as learners become more proficient, the effects of lexical aspect and discourse grounding increase, which goes against the AH and DH predictions for developing past morphology. Specific results showed that the NS participants (and the 5th semester group) were the most categorical in marking telic verbs with the preterit in the foreground (prototypical choice: DH and AH hold the same predictions) and with the imperfect in the background (non-prototypical choice: AH and DH have differing predictions). The overriding effect of grounding on the selection of past marking by NSs as well as by the 4th and 5th semester learners, was observed in the use of stative verbs with the preterit in the foreground and with the imperfect in the background. Salaberry

concludes that it is the construct of grounding that more systematically distinguishes 2nd, 3rd, and 4th semester learners from the NSs.

In this section, we discussed both L2 English and L2 Spanish empirical studies on the potential interactional effect of lexical aspect and grounding. These studies generally found support for an interplay of lexical aspect and grounding mostly for prototypical choices (e.g., telic verbs-preterit-foreground), which were stronger as proficiency increased. Grounding was found to be the factor that principally differentiated lower proficiency learner groups from 5th semester learners and NSs. Specifically, the lower levels marked past solely depending on aspect, whereas the advanced levels and NSs showed an overriding effect of grounding to mark situations non-prototypically (i.e., telic, imperfect, background).

2.2.1.4.2 Form-oriented research: the Aspect Hypothesis and the Discourse Hypothesis across the conversational present

This section will discuss two representative studies on L2 English and L2 Spanish which have examined the function of the present tense (i.e., present simple and/or progressive) across learner narratives. This area of inquiry has received major attention in L1 English (e.g., Labov, 1972; Schiffrin, 1981; Wolfson, 1978), but it lags behind in form-oriented studies on the development of past tense marking in learners' interlanguage.

Previous research in L1 English (e.g. Schiffrin, 1981) and L1 Spanish (e.g., Bonilla, 2011; Silva-Corvalán, 1980) has found that NS narratives show a great deal of grammatical variation. This means that they do not show categorical use of the historical present across past contexts (i.e., real realized situations, Dahl, 1985). In fact, the present alternates with other past markers with which it can share commonalities (e.g. introducing sequenced events), but which are also under certain linguistic-semantic-pragmatic conditions. It has long been argued that the past yields to the

present through a process called “tense switching” (Schiffrin, 1981, p. 51), originated in the need to go beyond referential meaning to express nuanced meaning. Traditional grammatical accounts have maintained that the present is “a stylistic device used in narrative to report past events which are vivid and exciting” (Schiffrin, 1981, p. 46). The explanation to such a nuance in meaning lies in the temporal reference movement from past to moment of speaking. A seminal work on the historic present in L1 English was Wolfson (1978), which maintained that the historic present and the past simple work together and together they make up a discourse feature with the purpose of dramatizing the series of past events but much of the important action is recapitulated in the past tense. The author held that the direction of the tense switch was irrelevant. Schiffrin (1981) was the first study that quantified the socio-linguistic factors that condition the historic present mostly across the complicating action, which is where it most frequently occurs (30%). According to the author, the substantial restriction of the HP to the complicating action clauses can be explained by the fact that at this point of the story, tense does not need to indicate a reference time: events in the complicating action introduced in the present can be understood as having occurred prior to the moment of speaking, with or without the past-tense form. The main results showed that the HP occurred in the middle of the complicating action and that the HP and the past simple form tended to cluster together: they were more frequent when the preceding verb(s) were in the same tense. Her results on tense-switching are summarized in Table (2-5).

Table 2-5. Predictors of tense-switching: historic present versus simple past.

	Historic Present	**Simple Past**
1. Prior same tense	62%	82%
2. Co-occurrence within a temporal clause	0%	100%
3. Direct quote	63%	0%
4. Action verbs in the progressive	49%	51%
5. Clausal conjunction	Favors tense-switching	
6. Direction of tense-switch	Temporal conjunction	
✓ **P - HP**	Absence (17%)	Presence (20%)
✓ **HP- P**	Absence (35%)	Presence (59%)

Vraciu (2012) examined the effect of lexical aspect and discourse structure on the L2 advanced English (L1 French), L2 English instructors (L1 French), and L1 American English use of present activities from their oral picture book story retells. Typically, NSs used these present predicates in conversational narratives to express bounded, sequential situations that advance the story line. In the L1 English narratives, activity predicates in the simple present can be added to the skeleton of the story by means of temporal adverbials which indicate temporal progression. Results revealed that: 1. the present tense is the preferred choice among the English NSs and the near native speakers' English L2 professors; yet, this pattern is less consistent in the L2 English student group, 2. There was an association between the verb aspectual class and the distributions of past markers, as accomplishments and achievements were generally encoded in the simple

present, while activities were generally used with the progressive. Moreover, activity verbs in the present yielded much higher rates of use in the NSs and near NSs than in the learner group. The NS and near native speaker data showed that the activity verb-present tense pair can advance the story line with or without temporal adverbials that assist in introducing another sequenced event. The learner group, on the contrary, seemed to be influenced by lexical aspect to a greater extent. For example, the activity predicates did not occur in the present simple, but they did occur with the present progressive in plot-advancing contexts.

To date, the only studies on L1 Spanish tense shifting in conversational oral narratives are Silva-Corvalán (1983) and Bonilla (2011). The former study analyzed 30 narratives, 27 from native speakers from Chile and three from Mexican NSs and found no differences between the groups. A first result indicated that the simple present tense occurred more frequently at certain points in the narrative, which supported the fact that the co-occurrence of form and discourse context largely determines the meaning of the present. With respect to the preterit-historical present alternation, Silva-Corvalán found that 32.7% of the verbs were used in simple narrative events whose reference time was prior to the speakers' "now". A more detailed analysis of this alternation indicated that the historical present was used as an "internal evaluation device" that conveys an immediacy effect and dramatic vividness over the reported events, which are recognized as the most climatic moments of the narrative. The author concluded that the CHP refers to past events although it also includes the moment of speaking within this function.

Bonilla's study analyzed the interaction of the present and other markers with lexical aspectual class, first versus third person, and with verbs such as *decir* "tell" in order to obtain better understanding of the factors that condition the conversational present. The major findings indicated that the CHP is highly preferred in the complicating action of the conversational narrative and is

highly associated with achievements, primarily with the verb *decir* "tell", and verbs of motion (e.g., *llegar* "arrive"). When *decir* "tell" was removed, the CHP was a preferred choice across 3rd person subjects, which assigned a pragmatic meaning to the events such as immediacy and drama. In addition, conversational narratives showed an important effect of interlocutor interruption, which caused the storyteller to resume the story in the preterit if such interruption was actually acknowledged. If interruption was not acknowledged, the narrative continued in the CHP, which further allowed the speaker to keep the conversational turn. A last finding in Bonilla (2011) was the categorical use of the present in the monologic story-retell task, which is in line with previous research in adult L1 Spanish (e.g., Amenós-Pons et al., 2017; Delgado-Díaz, 2018; Ruiz-Debbe, 2005). Some researchers (Liskin-Gasparro, 2000; Salaberry, 1999) have reported instructing the learners to start the retell task with the phrase "once upon a time" to ensure the use of past morphology, but still the adult participants produced historical present.

In this section, we discussed the studies that have investigated the conversational historic present in L1 and L2 English and L1 Spanish. The study on L2 English revealed that the CHP, particularly with activity predicates in plot-advancing contexts, is more frequently used by NSs and near NSs. The learner group used these predicate types with present progressive, influenced by lexical aspect. Bonilla's (2011) study analyzed conversational oral narratives from an NS corpus (Corpus oral de referencia de la lengua española contemporánea: Marin, 1992) as well as story-retells from a Corpus of Learner and NS Language (SPLLOC, 2009). Her results showed that L1 Spanish speakers preferred the CHP in the complicating action of the conversational narrative, with achievement verb *decir* and verbs of motion, and with 3rd person subjects to indicate immediacy and drama. The NSs showed categorical use of the present in the monologic story-retell task.

Finally, no empirical studies on the CHP in L2 Spanish have been conducted, likely due to the challenge in operationalizing the examination of the present form so as to determine whether it is the learners' lack of ability to mark past time or a special stylistic discourse function indexing the dramatic vividness of past events.

2.2.1.5 Meaning and form-oriented research studies on the role of adverbials in the development of past-time expression

The study of TA morphology so far has allowed researchers to obtain a clearer picture of the developmental expression of past time and its linguistic conditioning (Bardovi-Harlig, 2000). As discussed in chapter 1, past-time expression can be implemented via pragmatic, morphological, or lexical devices. Previous research (e.g., Dietrich et al., 1995; Schuman, 1987) has found cross-linguistic evidence for a developmental route of past morphology that starts with pragmatic devices (e.g., chronological ordering), continues onto lexical devices (e.g., temporal adverbials), and finalizes with the morphological stage, with the use of TA marking. Therefore, at the lexical stage, adverbs have a large amount of functional load since they bear the responsibility of expressing tense and/or aspect. In a similar vein, VanPatten (2004) proposed the Lexical Preference Principle by which learners show a tendency to depend on the lexicon rather than on morphology to arrive at meaning when both express the same semantic function.

A seminal meaning-oriented research study on the role of adverbials in developmental L2 German past-time reference is Meisel (1987), which studied adult immigrants from Italy, Portugal, and Spain. Four sequences were attested in his data: 1. No systematic reference to tense; 2. Temporal relations are expressed by discourse principles (e.g., scaffolding, implicit reference, natural order) and/or lexical means (e.g., adverbs/adverbials); 3. No systematic use of verbal morphology: use of invariant forms and omission of forms, drastically reduced redundant marking

of temporal reference (e.g., either by morphology or by the lexicon); 4. Systematic use of morphology. Meisel concluded that adverbials have a major role in initial acquisition stages. In L2 English, Bardovi-Harlig (1992b), examined adverbial use after the emergence of past morphology through a six-month analysis of written L2 English learners' journals based on four narratives. The major result was that the adverb-to-verb-ratio (i.e., the proportion of time adverbials to the total number of finite verbs in a written or oral narrative, Bardovi-Harlig, 2000) at initial levels changed from 0.4 to 0.18 at advanced levels approximating the NS group's ration of 0.20. The reported gradual decrease in adverbials' rates of use as past morphology developed confirmed Meisel's contention about the importance of adverbials only at initial stages.

Previous form-oriented research on the function of adverbials in L2 Spanish past morphology has been principally led by Lubbers Quesada and her advisees. Her 2006 study with 30 L1 English learners of Spanish as a foreign language at beginning, intermediate, and advanced levels and an NS control group offered counterevidence to Bardovi-Harlig's (1992b) main finding about a decreasing adverbial usage rate with increasing proficiency. Specifically, Lubbers Quesada (2006) found that the adverb-to-verb ratio did not decrease as verb morphology increased. In fact, the use of adverbials remained steady across proficiency levels with a respective ration of 0.31, 0.34, and 0.30, quite comparable to the NS group ratio (i.e., 0.39). Moreover, the advanced level showed the use of more complex adverbial forms such as clauses that served the purpose to enhance expression and clarify complex temporal relationships (p. 5). The beginners, on the other hand, used a very low rate of past forms across adverbs, showing that heightened adverbial use occurs in the pre-morphological stage as a lexical substitute for verb morphology. In a later investigation, Baker and Lubbers Quesada (2011) examined whether the presence of a frame adverbial, also known as position adverbial (i.e., the moment or interval of time within which the

described action took place) or a frequency or durative adverbial in ten cloze passages would prompt students to choose the preterit or the imperfect. Results statistically confirmed the hypothesis for the learners, since the absence of adverbial caused an important drop in the rates of the expected responses (i.e., the selection of the expected preterit or imperfect by the learners in the narrative task). Additionally, in those contexts where no adverbial was present, the learners' rates of selection showed a preference for preterit, confirming its role as a default form, which according to Schwenter and Torres-Cacoullos (2008) occurs in the most frequent and least specified contexts. In turn, the preterit as a default form further supports the Default Past Tense Hypothesis (Salaberry, 1999).

In sum, previous studies on the role of adverbials in developmental past expression have yielded different findings:

a. Adverbials are a lexical means of marking temporal relations, having an important functional load at beginning states, mostly in the pre-morphological phase (Bardovi-Harlig, 1992b, Meisel, 1987).
b. As morphology emerges and develops, the learner's reliance on adverbials decreases since they are not essential for the marking of time (e.g., Bardovi-Harlig, 1992b).
c. Adverbials-to-verb-ratios increased with proficiency, showing that the learner relies on them to make a choice between forms (Baker & Lubbers Quesada, 2011; Lubbers Quesada, 2006).
d. Higher proficiency levels show increasing complexity of form for adverbials (e.g., time clauses) (Baker & Lubbers Quesada, 2011; Lubbers Quesada, 2006).

2.2.1.6 Form-oriented research studies on the roles of saliency, morphological regularity, and verb frequency

Several researchers have claimed the importance of a multiple factor approach to the study of TA acquisition in order to examine the influence these factors play in developing paths (Bardovi-Harlig & Comajoan, 2005; Shirai, 2004). In fact, Goldschneider and Dekeyser's (2001) meta-analysis investigated whether a combination of five variables/predictors (perceptual salience, semantic complexity, morphophonological regularity, syntactic category, and frequency) accounts for a large part of the total variance found in order of acquisition of English grammatical morphemes. Multiple regression analysis based on oral production data from L2 studies showed that a very large portion of the total variance in acquisition order is explained by the combination of the five determinants. And they concluded that the common idea among these factors was "salience'.

The importance of perceptual saliency dates back to the 1970s when Hakuta (1974, 1976), following Brown's (1973) L1 acquisition studies, recognized it as one important factor implicated in the morpheme acquisition order research. According to Henrichsen (1984), salience "makes certain features of the input more comprehensible and thus more liable to become intake" (p. 106). Wolfram (1985) proposed "the principle of saliency" (p. 247) subsumed under the Phonological Saliency Hypothesis for L2 English, claiming that phonetic-phonological saliency determines the distribution of past morphology. From a phonetic perspective, the greater the distance between the past form and the present form, the more likely the verb will be marked for past. Tajika (1999) studied the acquisition of past marking in L2 English by L1 Japanese learners and found that the more noticeable the phonetic difference is, the more probable it is that the form will be phonetically realized in the IL. The concomitant prediction in L2 acquisition is that irregular past morphology

should emerge before regular past morphology, with higher proficiency levels using a more balanced rate of irregular and regular verb forms (Salaberry, 2008). Whereas this prediction was confirmed by Wolfram (1985) and Bayley (1994), more recent research in L2 English past morphology has provided contradictory findings (Buck, 2007; Salaberry, 2000b; Zhao & Shirai, 2018). For example, Salaberry (2000b) found that the low proficiency level learners of English marked past tense more frequently with irregular verbs. The explanation was that irregular forms are "more cognitively salient than regular verb forms due to their frequency in the input and their perceptual saliency" (Salaberry, 2008, p. 112). The author concluded that lexical aspect and perceptual saliency have an effect on TA morphology at different developmental points. Conversely, Buck (2007) found an increasing effect of perceptual saliency with increasing proficiency. A more recent study by Zhao and Shirai (2018) with L1 Arabic EFL learners found a weak effect of phonological saliency (i.e., marginal statistical significance) in the oral narrative task, whereas no effect was confirmed for irregular past marking in the cloze task.

The perceptual saliency of the irregular-regular verbal morphology dyad is a much less investigated constraining factor with regard to the acquisition of TA morphology in Spanish. In this language, phonologically noticeable verbs are the regular preterit with final stress and the irregular preterit forms exhibiting internal vowel changes (Salaberry, 2008), although not all the studies that considered morphological irregularity used the same classification. Although the effect of morphological irregularity in L2 Spanish tense-aspect morphology has not been widely investigated, exceptions are found in studies that investigated other morphosyntactic structures. For example, Gallego and Pozzi (2018) examined mood interpretation and the role of morphological (ir)regulrity. Second-semester Spanish learners completed mood selection and production tasks in the written modality as well as mood recognition tasks in the aural modality.

Results indicated that there was a significant interaction between irregular morphology, task type, and modality. Irregularity influenced subjunctive recognition and production in the written and aural modalities, but only in certain tasks. Regarding production, participants were able to produce the subjunctive in subjunctive-triggering contexts, using more irregular verbs than regular verbs. As for recognition, participants recognized the subjunctive in the aural and written modalities, and irregular morphology and input enhancement impacted recognition in the aural modality. For L2 Spanish, Lafford (1996) proposed the saliency-foregrounding hypothesis which stated that "phonologically salient verb forms are used to reflect salient (foregrounded) actions in L2 narrative discourse" (p. 16). Nevertheless, no study in L1 or L2 Spanish has operationalized this variable from a phonetic-phonological standpoint. On the other hand, the acquisitional prediction of an initial past marking with irregular verbs may not be confirmed in the case of instructed learners in classroom setting since regular verbs are usually taught prior to irregular ones.[15] In fact, Fernández Arroyo (2017) investigated the development of morphology by L1 English speakers learning Spanish at college-level, who belonged to three different proficiency levels ranging from beginner to upper-intermediate (i.e., 1st to 6th semester). By means of a written task, the participants had to conjugate a number of regular, irregular, and paronymous verbs in the preterit and present tenses and their answers were analyzed through an accuracy measure (i.e., whether the conjugations were right or wrong). The author concluded that the present was mastered significantly earlier than the

[15] In addition, some irregular preterit verbs in Spanish have a different meaning from their imperfect regular counterparts (e.g., *supe* "got to know" versus *sabía* "used to know/knew"). Instruction on this issue is typically provided once all regular and irregular verbs were introduced with the preterit and the imperfect.

preterit, and regular verbs were mastered earlier than irregular ones, despite the latter's high token frequency.

Kuback (2011) studied frequency effects on Brazilian Portuguese plural formation. She focused on a single singular form that can use three different morphemes to signal plurality, a choice that is dependent on differing etymological sources. Due to the great deal of variation in plural morpheme selection, and an attested NS tendency toward the use of primarily one morpheme (i.e., [-oes]), frequency effects were considered. Token and type frequency analyses showed that the popular plural form had the highest type frequency, accounting for 97.8 of plurals, thus it was considered the prototypical member among the plural forms. The increasing use of [-oes] for pluralization is not random and applies to low frequency singular words. Its competitors "are preserved in one-syllable words that have high token frequency" stored as single units (Kuback, 2011, pp. 255-256).

This section introduced another variable considered, although to a lesser extent, in the study of TA morphology, mostly in English. Based on Wolfram's (1985) and his phonological saliency hypothesis for L2 acquisition, subsequent studies found conflicting results:

a. Irregular morphology should emerge first (Salaberry, 2000b).
b. Regular verbs are mastered before irregulars (Fernández Arroyo, 2017).
c. There is an increasing effect of saliency with increasing morphology (Buck, 2007).
d. There is marginal or no effect of saliency (operationalized as regularity of past inflection) (Zhao & Shirai, 2018).

2.2.1.7 Morphological regularity, semantic bias, and frequency

Further research about morphological regularity and past morphology investigated the interactional effects of semantic bias (lexical aspect) and morphological regularity (i.e., regular vs.

irregular verbal morphology). Some studies on L2 English (e.g., Housen, 2000, 2002; Rohde, 1996; Salaberry, 2000b) found that the regular past was more highly associated with its semantic prototype (i.e., perfective past with telic verbs) occurring very frequently with achievement verbs. The irregular past was associated to a variety of lexical aspectual classes, mostly to atelic verbs (i.e., stative verbs in particular), predicted to be less likely marked with past tense morphology. However, Rocca's (2007) English-Italian bi-directional longitudinal study provides counterevidence having attested no regular-irregular dissociation: both irregular and regular past tense forms strongly correlate with telic verbs, this association relaxing over time to approximate adult norms.

Housen (2002) suggests that an explanation for morphological dissociation could be related to the differential learning types of regular and irregular verbs: rule-learning vs. rote-learning, respectively (Pinker, 1999). The argument is that irregular verbs, which are very frequent in the input, are learned through associative memory and it is the combination of the high frequency of irregular verbs and their rote-memorization that facilitates the frequent production of these verbs. Shirai (2010) further explains that L2 learners have a higher rote-learning capacity when compared to L1 learners and thus they are able to produce rote-learned forms (frequent irregulars) before they acquire the verbs' lexical aspectual representation. According to usage-based approaches (Bybee, 2006; Ellis, 2006), the explanation to morphological dissociation (i.e., why the perfective past yielded a stronger effect of lexical aspect with regular verbs than with irregular verbs) lies in frequency effects. For example, in Housen (2000) the L2 English simple past showed that the form developed according to the AH tenets (i.e., from achievements up to states), largely with regular verbs. Conversely, irregular verbs that initially marked the English past were stative verbs, against the trajectory proposed by the AH. Irregular verbs are argued to have been preserved in NS

language as a result of their very high frequency, which produced a conserving effect that caused these verbs to be entrenched in the language. Therefore, it is possible that those initial irregulars are very high-frequency and that emerging morphology is rather the result of verb frequency or the result of lexical aspect mediated by frequency.

Fratini, Acha, and Laka (2014) analyzed the CREA corpus and found that in Spanish, which has a highly complex morphological system, there was no correlation between morphological irregularity and frequency. Frequencies in the low, middle, and high ranges were similar in all verb forms (regular and irregular). Nevertheless, a correlation between frequency and length was found such that frequency increases as verb length decreases regardless of regularity. However, the forms with greatest frequency and shortest lengths were irregular verbs. They take their findings as evidence against the dual-learning mechanism of rule and memorization learning types. Nevertheless, counterevidence was found by Herce (2016), which reanalyzed the data in Fratini et al.'s (2014) study and analyzed another set of data from a different corpus. The author parted from the notion that (ir)regularity is not a dichotomous dimension but a gradable one. For example, stem-changing verbs in Spanish, analyzed in Fratini et al. (2014) as irregular verbs (e.g., *contar/cuento* "tell/I tell"), are classified by Herce, following Balaguer et al. (2005), as "semi-regular", different from the regular three paradigms in Spanish and different from "more irregular verbs". Herce further sustains that verb diphthongization cannot be a feature that deems a verb irregular only because grammars have traditionally treated them that way. The author argues that these stem-changing verbs occur in predictable slots in the verb paradigms that warrants then regularity. Herce also sustains that on the basis of a very strict definition of regularity, the only regular verb class is the *-ar* verbs. He further claims that most of the irregular verbs in Fratini et al. should be discarded due to some type of classificatory shortcoming such as the aforementioned

diphthongization or the fact that many of the verbs were “defunct”, highly infrequent in the language as a whole. Once shortcomings are overcome, Herce was able to find a strong correlation between frequency and irregularity in Spanish.

According to usage-based approaches, language knowledge involves statistical knowledge so human beings learn more easily and process more fluently high frequency forms and regular patterns with many exemplars and with few competitors (Ellis, 2013). Frequency is a key determinant of acquisition because rules of language emerge from the distributional characteristics of the input and from exemplars. In turn, prototypes are defined as the exemplars most typical of a category and are thereby judged faster and more accurately. A frequency-based approach argues that frequency/prototypicality effects are available from the beginning and determine the sample of language the learner is likely to experience. Andersen (1993) proposed the Distributional Bias Hypothesis for naturalistic/second language learners claiming that the input the learners receive exhibit distributional patterns similar to those observed in learners' productions (see Andersen & Shirai 1996 for a comprehensive review of DBH in TA acquisition). Such input frequency biases should aid the statistical learning of TA constructions.

According to Ellis (2013), the Aspect Hypothesis is an important hypothesis of TA acquisition in terms of cognitive processes of prototype formation: the abstract grammatical schema for perfective past generalizes from the more concrete beginnings close to the prototypic (typical) center in the clear exemplification of telic verbs, whereas the imperfect emerges from the concrete exemplars in the semantics of activities and states. At the end of acquisitional development, the learner is able to break the categorical pairing of one lexical aspectual verb type and one TA form. Nevertheless, several studies (e.g., Salaberry, 1998, 1999, 2011) have shown that the effect of lexical aspect on past morphology development tends to increase with exposure

to the L2, contradicting the prediction that lexical semantics has maximum effect initially until non-prototypical pairings are eventually incorporated in the L2 system.

Salaberry's (2011) findings that correlate higher proficiency level with a higher association of past morphology and verb semantics can be explained by the type and token frequency approach. The former refers to the frequency of occurrence of a construction/linguistic pattern, or to the size of a certain class of words using this schema. Token frequency, on the other hand, shows how many times the learner encounters a certain word, either in self-production or produced by other speakers. The productivity of a linguistic pattern is a function of type frequency: the more forms that exemplify a pattern, the more productive that pattern becomes (Ellis, 2002; 2013). In other words, as proficiency increases, the more prototypical exemplars the learner encounters, and the more semantically restricted their past tense marking becomes. Alternatively, Shirai (2016) argues that "token frequency is important in establishing a linguistic category at the early stages of acquisition, while type frequency is essential in expanding the category" (p. 13), in line with the two-stage model of category formation (Bybee, 2008, 2010). Bybee (2010) sustains that highly frequent words have stronger mental representations that are in turn more easily accessed during production and thus exposure to linguistic tokens strengthens their mental representation. In this regard, token frequency directly bears on emergent linguistic structure. Shirai, relying on Bybee's work, considers the acquisition of past time marking in L1 English and states that the high token frequency of prototypical lexical aspectual verbs in the input (e.g., telic) can help establish a prototypical representation of past perfective morphology. In other words, for a linguistic category to be accurately represented, learners should be exposed to basic items that are prototypical to the category (i.e., exemplars). This model predicts that exposure to less prototypical exemplars (i.e., atelic verbs) can help in strengthening the semantic representation of perfectivity. However, Shirai

concludes that this is an empirical question that warrants future empirical research. Conversely, Shirai (2012) also discusses the projection model (Zobl, 1985), which maintains that "teaching non-basic items facilitates learning of basic items in the same linguistic domain" (p. 329). In this model, the claim is that marked categories should be taught first because this facilitates the acquisition of the unmarked items. Work on relativization of clauses has suggested that learner exposure to various different types of exemplars (i.e., diverse input) may facilitate the acquisition of linguistic categories. The difference between Bybee's and Zobl's models lies in when diverse input should be provided. Whereas the projection model encourages diverse input from the beginning, Bybee's usage-based model proposes high token exposure first to mostly one exemplar (or restricted number) in order for linguistic category to emerge and become more strongly represented in the learner's mind. Only later is it advisable to expose the learners to high type frequency of a category to foster its productivity in the IL.

Frequency effects on the L1 and L2 development of past morphology have been investigated in form-meaning studies that focused on the AH. For example, Shirai (1991) found support for the prototype formation of the linguistic category of tense-aspect marking in the L1 English development of past morphology. He found that, based on the NS biased input frequency in favor of telic verbs, children created the prototype of past perfective marking by categorically associating simple past with achievement verbs.

In L1 acquisition or L2 immersion programs, learners are directly exposed to the TL, where language patterns occur naturally in NS talk. Classroom input can be and usually is different. Instructed L2 acquisition usually exposes the L2 learner to the most frequent vocabulary items. Hence, target language frequencies can be distorted in the types and characteristics of the L2 input provided to the learner by the textbook, the extra material, and the instructor. Gurzynski-Weiss et

al. (2018), a variationist study drawing on usage-based approaches, attempted to address this issue in instructed L2 Spanish classes by examining multifaceted input sources to which students were exposed with respect to subject expression in Spanish, expressed overtly or null. The goal was to determine whether learner subject expression rates and linguistic conditioning "are attributable to patterns in learner-directed-input." The authors reported the following major findings: 1. the two most frequent subject forms in learner production were null and lexical noun phrases, the former being preferred in all three sociolinguistic tasks (interview, narrative retell, Written Contextualized Task) and the latter was preferred in the interview and narrative retell; 2. regardless of mode (oral or written), null forms of subject expression are the most common in the instructor sample; 3. person and TMA significantly constrained subject expression in the oral input and sociolinguistic (spoken) tasks, while it was not significant for the written input. Additionally, number was significant in the oral input data only. For discourse-related factors, in both the oral input and spoken tasks, the presence of cohesive discourse (e.g., another mention of the same referent) favored null subjects. The authors found that constraints on subject form use attested for L2 learners are only partially reflected in the classroom input to which learners are exposed. They concluded that the L2 Spanish classroom should incorporate authentic language material that exposes students to real language use. In this sense, the study contends that students should be exposed to pan-dialectal NS input so that they can gain knowledge on varying usage rates in a wide range of Spanish varieties, which will allow them to shape their language use into more target-like rate.

Wulff, Ellis, Römer, Bardovi-Harlig, & LeBlanc (2009) investigated the distributional properties of L2 learner's input regarding the relation between lexical aspectual class, frequency, and past morphology in L1 English. Particularly, they determined the type-token frequency

distributions and distinctiveness of association between verb and past form (i.e., past simple and past progressive) in two NS corpora: the spoken section of the British National Corpus and the Michigan corpus of Academic Spoken English. The results showed that "the most frequent verb types accounted for the majority of all occurrences of any given TA morpheme" (p. 358), evidence in favor of a Zipfian distribution. Telic verbs were highly associated with the simple past and the perfect whereas continuous actions were distinctively associated with the progressive. The authors concluded that a raw-based frequency measure (i.e., verb token counts) shows the most frequent verbs across TA categories, but at times some verbs frequently occur across several TA forms and thus this measure cannot be the sole predictor of TA acquisition. It is the distinctive verb-TA associations that act as pathbreaking constructions in the acquisition of the TA system.

With regard to token and type frequency of past markers in Spanish, Tracy-Ventura (2007) investigated the distribution of different verb types in a Spanish native speaker corpus from conversations and literature. She found that 1) activities and states had a higher token count in the imperfect, 2) accomplishments and achievements had a higher token count in the preterit, and 3) verbal predicates with an even distribution between preterit and imperfect showed a tendency toward a flexible classification into multiple inherent lexical classes.

A pivotal study on emerging past morphology in L2 Spanish among instructed learners is Camps (2005). He investigated the role of lexical aspect and the effect of verb (ir)regularity on the use of the imperfect in two written personal narratives (i.e., Time 1 and Time 2). Results showed that the imperfect was almost exclusively marked by the state verbs *ser, estar, tener* and followed a developmental trajectory at initial levels in which the form was favored by the most frequent state verbs (1st stage) and then was marked by activity verbs (2nd stage), which had already been used to mark perfective past. The study also found that the learners behaved differently with

respect to frequent and not so frequent states, with the former marking imperfect at higher rates than the latter. The author concluded by arguing that the fact that the imperfect is marked mostly by stative irregulars points to a rote-learning mechanism contradicting the AH.

In their recent publication, Tracy-Ventura and Cuesta Medina (2018) used Wulff et al.'s (2009) analytical approach to investigate the effects of frequency on the use of past morphology by L1 Spanish speakers, based on conversational Spanish data (i.e., face-to-face conversations and sociolinguistic interviews) from *Corpus del Español*. The first findings indicated that the preterit and the imperfect obtained similar rates of use (i.e., 12.92 and 14.36 per 1000 words, respectively). Secondly, the research found that there was a distributional bias between telic verbs and the preterit and atelic verbs and the imperfect (i.e., prototypical combinations of verb class and past form), supporting the Distributional Bias Hypothesis (Andersen, 1993) Third, this distribution, as expected, proved to be Zipfian: "a small number of verbs are extremely highly associated with a particular TA category" (Wulff et al., 2009, p. 360). Specifically, the ten most frequent verbs across the preterit represented 44% of all preterit tokens and the most frequent verbs across imperfect made up 65% of the total imperfect form tokens. Interestingly, six verbs out of the most frequent verbs occurred across both forms (i.e., *ser* "be", *decir* "say", *hacer* "do", *estar* "be", *tener* "have", and *ir* "go"). The results of a distinctive collexeme analysis (Gries & Stefanowitsch, 2004) indicated which verbs were more significantly associated with one form or the other (at $p < 0.001$). Most of the verbs distinctively associated with the preterit were achievements (*empezar* "begin", *nacer* "be born", *entrar* "go into/enter", *llegar* "arrive", *morir* "die"). The verbs that were strongly associated with the imperfect were atelic, and all of the top ten verbs in the imperfect were stative verbs.

Daidone (2019) examined the preterit and imperfect produced by L1 Spanish instructors at a US University and compared their distributions with L1 Spanish large-scale corpora. In general, the distribution of past tense forms in both corpora differed substantially, indicating that classroom input showed distortional use of language. Specific results revealed that imperfect morphology in instructor input yielded a low token frequency (i.e., only 18% of past tense forms) and a low type frequency (i.e., only activity verbs were a significant predictor of imperfect use). In contrast, the NS corpora showed that 60% of past tense tokens of these same verbs were imperfect, and fewer verbs were biased toward use in the preterit.

In summary, the empirical studies reviewed in this section discussed the role of the interaction between morphological regularity and the lexical aspect of verbs as well as frequency effects on the acquisition of past morphology. The main findings are summarized below and are not necessarily in agreement:

a. Regular-irregular dissociation: the regular past is highly associated with perfective past and telic verbs, whereas the irregular past was associated to a variety of lexical aspectual classes, mostly to atelic verbs. (Housen, 2000)
b. Rejection of regular-irregular dissociation: both irregular and regular past tense forms strongly correlate with telic verbs, this association relaxing over time to approximate adult norms (effect of lexical aspect at beginning stages is stronger) (Rocca, 2007; Chan, Costello, Finberg & Shirai, 2010)
c. The effect of lexical aspect on past morphology development tends to increase with exposure to the L2 (Salaberry, 2011). At beginning stages, there is a tendency toward prototypicality (e.g., preterit-telic combinations), which becomes stronger as more exemplars are encountered.

d. Frequency effects: token frequency (i.e., the number of preterit and imperfective tokens) is central in establishing a linguistic category at the early stages of acquisition, while type frequency (i.e., how many verb classes associate with a type of form) is essential in expanding the category (Bybee, 2008; Ellis, 2006a, 2013).
e. Classroom input differs from authentic input and this causes a bias that consists in instructors' frequently using verb forms that may not be frequent in the L1. Daidone's study on instructor's input showed low token and type frequencies of the imperfect with the opposite trend for the preterit. Conversely, the NS corpora showed a high token frequency of the imperfect and a lower token frequency of preterit.

2.2.2 Concept-oriented research studies: the expression of tempo-aspectual concepts and the development of past-time expression

In Section 2, we discussed the main features of the concept-oriented analysis (henceforth CoA) of temporal expression. The focus of CoA studies is to investigate how one concept (e.g., temporality) or sub-concept/meaning (e.g., pastness) is expressed by the learner from a multi-level perspective that combines semantic, lexical, pragmatic, morphological, and syntactic means.

This approach has been mainly adopted by the European Science Foundation Project (ESFP) (e.g., Dietrich et al., 1995; Giacalone-Ramat & Banfi, 1990) with 40 immigrant mine workers in Europe learning English, German, Dutch, French, and Swedish as second languages in a naturalistic setting. Learner language samples were collected along a 2.5-year period at three 10-month cycles. These studies examined the expression of temporality through conversational interviews and film-retell tasks. Results showed that the use of lexical and pragmatic means

constitutes the first expressive devices within the pre-morphological stage. One major finding was the existence of the "Basic Variety" (Klein & Purdue, 1997), a linguistic system developed by the learner, structurally simple but communicatively efficient. Additionally, it lexically derives from the L2 but is structurally independent of both the L1 and L2. Specifically, this variety shows no inflections or morphological marking, and it makes use of nouns and verbs (untensed), has a few adjectives and adverbs, and a rudimentary pronominal system, and all its elements are semantically heavy. Another influential study within the ESF Project was Dietrich et al. (1995), which attested a three-stage acquisitional process. The first one, the pre-basic variety, which includes the learner's first productive uses of the language being picked up. For example, lexical items abound such as nouns, adjectives and simple verbs used pronominally, no functional inflections exist, and they are context-dependent. The second stage, the basic variety, comprises uninflected verbs in the base form with their arguments and sporadic adverbials, there is no copula and no case marking, and it implicitly takes the time of utterance as default, with no marking at all. The third stage, the post-basic variety, shows development of morphology with various forms coexisting without appropriate functions.

An advantage of CoA studies is observing the acquisitional process from the learner's perspective, who relies on different expressive devices from different elements of the L2 linguistic system (i.e., lexis, pragmatics, etc.). This observation, in turn, leads to a comprehensive analysis of the learner's developmental process that provides the researcher with a holistic picture of how the expression of past-time reference gradually proceeds from a non-morphological stage to a morphological one, and how morphology develops as the learner's verbal system gets reorganized.

The same approach was adopted by influential scholars (Bardovi-Harlig, 1992c; Sato, 1990; Schumann, 1987), who investigated L2 English learners in both naturalistic and classroom

settings. The methodology mirrored that of the ESF Project and led to similar results, the most relevant being the stages of acquisition in the expression of temporality in general and of pastness in particular, traversed by L2 learners: the pre-morphological, morphological, and post-morphological ones. In general, the first stage is characterized by the learner's heavy dependence on lexical items, principally adverbials, for the expression of past time. Learners transition into the next stage where morphology appears but is not used systematically. During this stage, restructuring and reorganization of the different form-meaning combinations take place, giving way to a stage where those combinations are more robust and more complete.

To date, concept-oriented studies in L2 Spanish, which have investigated the acquisition of past-time expression, are non-existent. Recent research by Kanwit (2017) has used the CoA in order to examine the acquisition of another sub-concept of temporality (i.e., the future) among instructed L2 Spanish college-level students. Yet, his large-scale study used a combined methodology that, besides CoA, incorporated the variationist research framework to second language acquisition, fully discussed in the next section.

2.2.3 Variationism in L1 and L2 English and Spanish: a theoretical and empirical overview

Overall, pioneering concept-oriented research on tempo-aspectual expression was conducted within the European Science Foundation Project among naturalistic learners of different L2s. Major results revealed a "basic variety" of learner language, devoid of inflections, structurally simple, but communicatively efficient. Later research with instructed learners in Europe (e.g., Klein, 1995; Noyau, 1990; Trévise, 1987) and the US (e.g., Bardovi-Harlig, 1992c; Sato, 1990) found that past expression started off from a pre-morphological stage, where lexical devices were

central, continued to the morphological stage (i.e., no systematic use of morphology), and finished with a post-morphological stage, where morphology gets established in the IL. To my knowledge, no study has yet investigated L2 Spanish past-time expression using the concept-oriented analytical framework.[16] Acquiring L2 TA morphology in typical instructional settings entails a complex bipartite process. First, the learner must acquire the TL's grammar, which comprises a set of canonical form-meaning mappings (e.g., imperfect-progressivity and habituality in the case of L2 Spanish). Secondly, acquisition must continue onto the incorporation of the possible dialectal variations of the TL grammar triggered by social and linguistic factors. The former consists of a gradual path that starts with some exposure to the TL which the learner observes and from which language patterns are extracted. The path proceeds to a period in which forms are discovered and subsequently connected to a particular meaning/function, and ultimately and when necessary/appropriate, to multiple meanings. Production emerges and develops during a period of trial-error, since the connections are not robust. The path further continues to a moment in which the learner encounters several other connections, which makes the learner's verbal system restructure. Once the learner reaches a point in which all connections are generally robust and complete, then the most difficult trajectory of the acquisitional path can be said to have ended. However, the path starts again when the learner encounters some sort of variation in the NS language that conflicts with already acquired knowledge. The second acquisitional process has just started. In the former process, the learner tries to express meaning in ways that are not always native-like. In this sense, Kanwit (2018) explains that lower proficiency level learners usually exhibit Type I variation (e.g., use of non-native like forms resulting from overuse of regularization

[16] See Biehl (2010) for an exception.

verb rules such as “goed” (Ortega, 2009), considered to be developmental, moving the learner onto the next proficiency level. Conversely, advanced learners in the second process aforementioned, exhibit Type II variation, with the use of a form in one social and/or linguistic context and another form in a different context (e.g., the preterit in foregrounded situations and the imperfect in backgrounded ones or the use of the present perfect for perfective situations that took place in the speaker’s today, i.e., hodiernal perfect, if exposed to Madrid Spanish). The attested two-way variation in the interlanguage grammar confirms its dynamicity and variability, which is rule-governed and factor-dependent.[17] In the case of overregularization, as illustrated by Kanwit, an effect of frequency, at the core of sociolinguistic variation and variationist SLA, may explain this phenomenon (Tarone, 2002). The English language patterns of the learner input show that several verbs mark pastness by means of the -ed inflection. The learner extracts the regularities of this frequent pattern and at times can overapply it to a great number of the verbs encountered, such as to those irregular verbs of low frequency, for which the learner does not know the corresponding past forms.[18]

[17] In line with Bayley (2005), the IL is rule-governed due to its underlying variability and the likeliness that it is probabilistically constrained by features of linguistic and social environments.

[18] See Gurzynski-Weiss et al. (2018) for a discussion about how classroom input may distort the L1 frequencies in spontaneous speech. The present study examines the patterns of use of subject forms across various sources of input in Spanish language classrooms in order to determine the degree to which the established patterns in the literature on the SLA of this variable structure are indeed reflected in the input to which learners are exposed. This study also compares the use of this variable structure by NS instructors within and outside of the language classroom, aiming to uncover if, and how, instructors manipulate subject expression when interacting with L2 learners as compared to peers in sociolinguistic tasks.

Seminal research on variationist sociolinguistics (e.g., Labov, 1966), which has focused on explaining NS language variation and the triggering factors, was the steppingstone for the emergence of the field of variationism in second languages. Upon the discovery that ILs are variable, variationist SLA researchers maintained that "interlanguage variation, like variation in any language, is likely to be subject to the influence of not one but multiple contextual influences" (Bayley, 2005, p. 3). Therefore, its goal is to discover the systematicity that underlies learner variability. According to Bayley, the question is not which single factor affects learner variation, "but what the relative strength of the different factors associated with variation is" (p. 3). Variationist SLA has thus investigated whether learners' rates and sociolinguistic constraining of the variants approximate the NS norm, which constitutes the learners' input either in immersion programs or in classroom settings. This research framework and the ensuing quantitative methodology originate from the idea that the learner's interlanguage passively and unconsciously derives from input frequencies, in line with usage-based approaches (Tarone, 2002). Notwithstanding, other factors are also implicated in IL variation, which may be operative at different proficiency levels, depicting each developmental stage. Specifically, a variationist analysis in SLA should provide evidence in favor of restructuring reflected in the possibility that different factors may condition variant use at different proficiency levels or that the same factors may have different effects on learner production at different acquisitional stages (Bayley, 2005). Furthermore, the author argues that if the acquisition process is a gradual one proceeding along a multi-dimensional continuum, then a factor group should represent a single dimension. Consequently, Bayley believes that when a rule enters the IL grammar (e.g., when the learner starts to mark pastness in English), predictors and categories within these predictors should have similar effects on learner production regardless of developmental stage. For example, Bayley (1994)

investigated L2 English past-tense marking among L1 Chinese speakers and found that irrespective of proficiency level, the learners marked perfectivity more frequently than imperfectivity, although the higher levels marked a greater number of verbs. Bayley sustains that the fact that all learners at each level seemed to be constrained by perfectivity to mark verbs in the past provides evidence against the claim that all acquisition entails restructuring of the IL grammar.

The first works in the vein of L2 variationism investigated interlanguage variation in French and English in the context of untutored learners living in the US (Bayley, 1994; Dickerson, 1974; Tarone, 1985; Tarone & Liu, 1995; Wolfram 1985; Young, 1991; Young & Bayley, 1996). An important early study, which served as a basis for subsequent research, is Adamson and Regan (1991), who investigated the acquisition of variable –ing (i.e., with two possible phonetic variants, one with final [g] and the other one with final [n] by Asian immigrants in the US (i.e., 10 Vietnamese and four Cambodian native-speakers ranging from 15 to 40 years of age, having resided in Philadelphia or Washington DC between 12 to 96 months). The study examined the factors that predict the use of [in] and how the NNS variation patterns compared to a reference NS group in the same location. The NS data particularly showed that form usage was favored by verbs in the progressive aspect, by a following apical or labial segment, and by unmonitored speech styles across both men and women. When the NNS data were analyzed, the main findings supported the learner group's partial acquisition of sociolinguistic variation with [in] being favored by males. An analysis of the nonnative speakers' use of these norms showed that [in] was more frequent before anterior segments (reflecting ease of articulation) across both gender types, and by unmonitored speech among women, in line with the NS women results. However, [in] was favored by NNS men across monitored style, contrary to NS behavior. As the authors wonder, "the question

remains of why these speakers do not acknowledge the overt community norm by shifting toward this norm in monitored styles, as do male native speakers" (Adamson & Regan, 1991, p. 20).

With respect to the variation of past time expression, a pioneering study is Wolfram (1985), which showed that past tense marking in the L2 English of Vietnamese immigrants in the US was systematically constrained by saliency (the difference between the base form and past tense forms of a verb), and by the features of the surrounding phonological environment in the case of the regular past. Bayley (1994) examined past tense marking among Chinese learners of English living in California, and multivariate analysis showed that participants were more likely to use past tense forms with perfective (telic) verbs and to use bare forms with imperfective (atelic) verbs. Finally, Tajika (1999) examined variable L2 English past time marking in a group of high-intermediate Japanese adolescents through an examination of seven linguistic factor groups (i.e., discourse type, past adverbial co-occurrence, grounding, sentence structure, lexical aspect, phonological environment and phonetic salience of verbs) across three different oral narratives. Results showed that only discourse type, grounding, and sentence structure (i.e., main versus subordinate clause) significantly affected the use of past tense morphology in higher proficiency learners.

The study of L2 Spanish variation has been pioneered by Geeslin and her advisees on a plethora of variable structures (e.g., subject expression, the subjunctive mood) through a comparison of classroom and study abroad learners in order to examine, for example, the acquisition of Type II variation. Previous research on the acquisition of past-time expression (e.g., Geeslin et al., 2012, 2013; Kanwit et al., 2015; Whatley, 2013; Zahler & Whatley, 2017) has usually investigated the L2 learner in an immersion (i.e., study abroad) program in a Spanish-speaking country at two times, just after arrival and before departure. The goal of these studies has been to examine the learner's variation of use between the preterit and the perfect across perfective

contexts, with special focus on the rates of use or selection of the variants and the factors that constrain their usage. These studies have stemmed from important investigations on the grammaticalization of the perfect into perfective/past maker or "aoristic drift" in Romance languages (e.g., Hopper & Traugott, 2003; Squartini & Bertinetto, 2000) and in L1 Spanish (e.g., Howe, 2006; Schwenter & Torres Cacoullos, 2008). In particular, results have found that the present perfect has been changing into an encoder of perfectivity in competition with the preterit, both in Peninsular Spanish and in some Andean Spanish varieties, in line with data for other Romance languages. In addition, not only have PP rates of use been increasing across perfective contexts but certain socio-linguistic factors have been found to condition the form's use (e.g., hodiernal, indeterminate contexts, women). Schwenter and Torres Cacoullos (2008) found evidence in favor of the perfectivization of the PP in Madrid Spanish, constrained by hodiernal perfective and indeterminate contexts. Conversely, the authors found evidence in Mexican Spanish in favor of differential semantic domains for the PP and preterit, in line with the idea of conservation of canonical form-meaning associations. More recent work (Terán & Kanwit, 2018) has expanded analysis to include other dialectal regions (e.g., Tucumán Spanish, a sub-Andean variety in Northwestern Argentina). The data provided evidence in favor of the perfect-to-perfective grammaticalization process: the PP has reached the highest rate of use among the Spanish varieties (65%) and has shown very high frequencies of use across perfective past-time contexts in (pre)hodiernal and hodiernal contexts. However, this grammaticalization process has been the reverse in rioplatense Spanish (Flϕgstad, 2016; Rodríguez Louro, 2016, 2009; Rodríguez Louro & Jara Yupanqui, 2011), with the preterit encroaching on the semantic realm of the perfect. Flϕgstad (2016) found an increase in the use of preterit with the first-generation group unanimously using the form, which has largely replaced the perfect in all its functions. Rodríguez

Louro (2016) advances experimental research on the PP in rioplatense Spanish and finds that the PP is "statistically predicted by the absence of adverbials and plural objects," and is transitioning as an encoder of indefinite past with aoristic meaning across indeterminate contexts, a use which is pragmatically triggered" (p. 637).

More recent research in L1 Spanish variable-past time expression has expanded the envelope of variation to include a larger number of variants besides the preterit and the present perfect (i.e., imperfect, imperfect progressive, preterit progressive). For example, Delgado-Díaz (2018) examined these forms in Puerto Rican Spanish because although they generally express different meanings (i.e., perfective, progressive, and habitual), sometimes they convey overlapping aspectual notions. Results showed that the preterit and imperfect were the most frequent forms except for one film retell task, in which the simple present was the most frequent form. With respect to aspectual function, results indicated that the progressive domain was more prone to variation. For instance, the imperfect, the preterit, the preterit progressive, and imperfect progressive could all be used to express progressive events in the past. Moreover, the preterit, imperfect, present perfect, the preterit progressive with other auxiliary verbs (e.g., *fue manejando* "went driving"), and simple present could alternate in the perfective semantic space.

The following four studies are discussed within the framework of L2 variable-past time expression, three of which examined study abroad learners and native-speakers, whereas the fourth one did the same but also included an at-home instructed learner group. These studies tried to account for the great deal of variation that exists cross-dialectally in Spanish between PP and PRET and how this variation impacts learner acquisition of TA morphology. If advanced learners spend three or four weeks in two different countries where NSs show differential frequencies of use of

the PP-PRET dyad and different linguistic constraints, will learners be able to acquire such variation?

Kanwit et al.'s (2015) study was conducted in the bilingual city of Valencia, Spain and compared both NS and NNS data (i.e., 46 L1 English high school L2 Spanish learners) in that location to the same kind of data in San Luis de Potosí, Mexico. Results confirmed significantly higher rates of NS selection of the PP in Spain than in Mexico (44% vs 22%), confirming previous findings (Schwenter & Torres Cacoullos, 2008), and also found that the learner's rates of selection of past morphology and its constraints of selection changed from Time 1 (T1) to Time 2 (T2) to better approximate local NS norms. Specifically, both NNS groups increased overall selection rates of PP from T1 to T2, with the NNS group in Spain overshooting NS norm and the NNSs in Mexico selecting significantly less preterit at T2 than at T1. When predictors of selection were considered, temporal reference was a strong predictor of PP selection among the Mexico learners, who moved towards NS norms (from favoring the PP in hodiernal and indeterminate contexts at Time 1 to hesternal and indeterminate at Time 2). A similar trend was found among the learners in Spain, who moved from temporal reference as a non-significant factor at Time 1 to a significant one at Time 2, favoring the PP in hodiernal and indeterminate contexts in the direction of the NS effects. In addition, the study by Geeslin et al. (2012) in León, a monolingual area, found that the rates of preterit selection among 33 English-speaking NNSs at the three test times (i.e., 1st week, 4th week, and 7th week) were higher than for the present perfect, in line with the NS pattern (24 NSs). Nevertheless, the NNSs' rates of selection of the perfect were higher than those of the NS group, at all of the three times. The authors argue that development for the learners entailed a decreasing rate of PP, which was surprising given the high rates of the form in the area. Results showed that NNSs' use of the perfect was significantly constrained by atelic predicates and

additional years of language study at Time 1. At Time 2, grounding and proficiency test reached significance, so the perfect moved toward NS norms, i.e., at both Time 1 and Time 2, the learner's selection of PP was constrained by telic verbs and the background of the narrative whereas at Time 3, similar to the NS data, it was only constrained by 'time of action' (i.e., the perfect was used across situations that occurred the same day or one hour ago).

Recent work by Zahler and Whatley (2017) examined past-time expression via a Written Contextualized Task comparing classroom learners at a US university and their instructors (i.e., 3rd, 4th, 5th semesters, 3rd year, NSs) and study abroad learner groups in Viña del Mar, Chile and in León, Spain (i.e., during a seven-week period). Results showed significantly lower rates of PP selection by NSs in Chile when compared to those in Spain (16% versus 26%). Also, the learners in Chile and Spain moved toward the NS norm at Time 2 by lowering PP rates in both cases. The at-home NS participants (i.e., university instructors) showed similar rates to those of Chile NSs (15%) and the classroom learners showed overall higher rates of PP selection among all groups. In general, the classroom learners showed over selection of the PP across sequenced and non-sequenced contexts. Also, all learners, regardless of proficiency level, decreased their selection of PP across both today and one year-ago contexts. Native speakers in Chile and Spain showed that PP selection was significantly constrained by 'time of action' (i.e., today, yesterday, before yesterday) and 'sequencing' of actions. In particular, both groups showed very low PP selection rates across hodiernal non-sequenced contexts, while the Spanish NSs further showed a higher rate of PP selection overall. With regard to L2 acquisition, only the learners in Chile showed a change in linguistic conditioning, moving from being significantly constrained by time of action and lexical aspectual class at Time 1 to adding another significant predictor "sequencing" at Time 2, showing a drop in PP selection across sequenced contexts. Conversely, NNSs in Spain maintained

the same linguistic conditioning in both data collection times. This study showed that the higher PP rates used by classroom learners may be an influence of their L1 English PP, which may trigger higher acceptance of the form than languages that do not have a PP. Importantly, the study revealed the benefits of immersion in an L1 environment in the acquisition of Type II variation. For example, learners in Chile approximated NS norm after the 6-week-long study abroad experience significantly lowering the PP rates of use across sequenced perfective contexts.

Whatley (2013) examined past time expression in 30 high school students participating in a 7-week-long study abroad program in Valencia, Spain and to my knowledge, it is the only L2 Spanish variationist study that included the imperfect as part of the envelope of variation. Nevertheless, PRET-PP variability was not statistically considered due to the low token counts of the perfect form, which obliged the author to merge both past forms into one. The results of a cloze task showed that the advanced proficiency group and the NSs selected the IMP slightly more frequently than PRET, whereas the mid and low proficiency participants showed a higher frequency of PRET selection. With respect to the PP, both NSs and NNSs exhibited very low rates of selection of the form (i.e., 2.5% in the former group and between 1.6% and 10.7% in the NNS group), which seems surprising given the advanced stage of perfect grammaticalization attested in Peninsular Spanish. However, the low PP frequency could be explained if region is considered. More specifically, the study abroad program took place in Valencia in the region of Catalonia, where the PP-PRET variation has not been widely investigated. In fact, the perfective functions of the PP in Peninsular Spanish are based on data from Madrid. The results of regression analyses showed that the NSs' preterit-perfect use (i.e., both forms combined as a single one) was

significantly favored in hesternal contexts, with telic verbs, and in the foreground of narrations.[19] In the case of the mid and low proficiency groups, PRET-PP selection at Time 1 was favored by 'time of action' and 'lexical aspect', in line with NS trends (i.e., the same constraint hierarchy). At Time 2, (i.e., seven weeks apart), whereas the low-level group showed the same linguistic conditioning of PP-PRET as at Time 1, the mid-level group showed movement toward NS norm by adding 'grounding' as a significant predictor of perfective form selection at Time 2. The high proficiency group trended away from NS norms from Time 1 to Time 2, since past time marker selection lost the predictor 'time of action' (i.e., hesternal contexts) but retained 'lexical aspect' (i.e., telic verbs favored the PP-PRET combination).

The field of variationist research in SLA, particularly in Spanish, has continued to add more variable structures (e.g., acquisition of intensifier variation: Kanwit, Elias & Clay, 2018; variable adjective position: Kanwit & Terán, paper conference presentation, 2018; variable commands: Neumann & Kanwit, 2018) across understudied varieties and through the incorporation of other research approaches in the study of language acquisition. For instance, recent works have paired with the usage-based approaches in order to investigate lexical frequency effects on the acquisition of variable structures. For example, Linford and Shin (2013) examined subject expression among L2 Spanish college-level learners across proficiency levels, investigating to what extent the choice of overt or null subject was conditioned by whether the

[19] Due to the very small numbers of present perfect tokens, Whatley decided to combine those tokens with those of the preterit, considering that both were attested to be used across perfective contexts.

subject's verb was frequent or infrequent.[20] Results yielded an effect of frequency in that Level 1 learners expressed the subject with pronouns with the most frequent verbs, contrary to Level 2, for which verb form frequency was not significant. The authors concluded that frequency becomes a weaker predictor of subject expression as proficiency increases. At the same time, higher proficiency (e.g., Level 2) showed a mediating effect of frequency such that pronoun expression was conditioned by some of the linguistic variables (i.e., TMA and semantic class) with frequent verbs. For instance, pronoun expression was favored by the imperfect form across frequent verbs more than with preterit or simple present forms across frequent verbs.

Another recent work that integrated variationist and usage-based approaches is Kanwit and Geeslin (2018), which examined lexical effects on L2 Spanish subjunctive mood interpretation in adverbial clauses across three high proficiency level groups. A written interpretation task was administered for the participants to select their preferred verbal form (i.e., present indicative, morphological future, or both) in the main clause upon reading an adverbial clause that contained the present indicative or the present subjunctive. Three independent variables were manipulated in the adverbial clause: the mood of the verb, the morphological regularity of the verb, and the adverb used. Results showed that adverb was a significant predictor of interpretation for all proficiency levels and mood was a predictor for all groups except for Level 2, whereas the regularity of verbal morphology was not a significant predictor for any groups. A lexical effect analysis revealed differential patterns across individual adverbs, which the authors interpreted as being in line with

[20] The authors used two measures of frequency. The first measure was a local one that considered the learner corpora. The second one was a repetition measure that took into consideration whether a verb has been used by the student in the elicitation task (i.e., semi-directed sociolinguistic interview).

usage-based theories. Specifically, they sustained that high-frequency adverbs such as *cuando* "when", are likely to be more frequent in learner input than *puesto* "since"; hence, these adverbs are "the first two to show significant patterns of interpretation that are not based on chance" (Kanwit & Geeslin, 2018, p. 19).

The concept-oriented approach has also been combined with the variationist SLA research approach with the purpose to obtain a type of analysis that amalgamates the methodological benefits of both frameworks within a single one. Kanwit (2017) made the original attempts toward a unified analysis adopting typical research practices and analytical methods of each. In his studies, Kanwit examined future-time expression as a whole concept which circumscribed the envelope of variation to all the verbal forms produced by the learner to convey futurity.[21] The expansion to include variants that may not be native-like, but which are produced by the learner allows the researcher to track the development of temporality more comprehensively. This further allows for the examination of all the means of expression of a concept and not just the morphological or native-like ones. Furthermore, variationist SLA has generally considered smaller envelopes of variation containing dichotomous variables. In recent years, with the improvement of statistical tools in variationist sociolinguistics, multinomial logistic regressions allowed for a three-variant option. Moreover, variationist SLA has normally assumed that "group aggregates accurately reflect the interlanguage grammars of the group's members" (Kanwit, 2017, p. 463), consequently, reports about individual production are usually absent. Kanwit (2014; 2017) analyzes and interprets group data but also, in tandem with CoA, reports individual performance in order to

[21] Due to the fact that this dissertation investigates past-time expression, Kanwit's (2014, 2017) results are not discussed here. Alternatively, what is discussed are the benefits of the approach proposed by the author.

confirm that the aggregate results match the individual ones. Kanwit's combined approach included an account of learners' overall use of expressive devices across proficiency levels (CoA) and also applied the variationist analysis by coding a number of sociolinguistic factors that usually function as predictors of variant forms. In addition, multivariate analyses were used (i.e., binomial and multinomial regressions) in order to determine which factors significantly predicted the use of the future expressive devices/forms and whether this conditioning changed across proficiency. Kanwit contends that a combined approach shows how multifunctionality unfolds, how restructuring of the verbal system proceeds in the learner's interlanguage, and the concomitant factors that constrain developmental temporal morphology or temporal expression. The combined approach demonstrates that the so-called "morphological stage" (Dietrich et al., 1995) is more precisely a complex series of stages, and thus a lengthy process that culminates in highly constrained multifunctionality (Kanwit, 2017). Following Andersen's (1991) acquisition stages of past morphology in naturalistic settings, the beginner learner is predicted to start expressing past with the present. However, our knowledge of developing morphology in a concept-oriented approach is enhanced when combined with variationism, which allows for the consideration of significant conditioning predictors of past marking use, which in turn shows IL system restructuring. Specifically, the present simple at beginning stages may be conditioned only by adverbial use, with no effect of lexical aspect. This would indicate that the present is being used as a default marker across all semantic verb classes. At subsequent stages, the preterit emerges, and it is constrained by the factor of lexical aspect showing a significant association with telic verbs. The present is used less frequently at this point but then at higher proficiency levels, lexical aspect significantly conditions its use by telic verbs as well. This interplay of forms and factors helps unveil a more detailed trajectory where the present at initial stages expresses both perfective

and imperfective meaning, at mid-proficiency stages it is used across imperfective contexts as a substitute for the imperfect form, and at higher proficiency stages it is used as an alternative to the preterit with a nuanced meaning such that perfective events in a narrative are presented as immediate and in a more dramatic way (also known as the conversational historic present). In sum, the combined approach enables the researcher to obtain a detailed picture of development of form-meaning combinations, and the factors that affect them at each proficiency level.

This section introduced the variationist approach and discussed its main principles regarding language and language variation. The main tenet of variationism is the contention that language acquisition is the product of multiple causes rather than a single one. Different factors condition variant use and learner production at different acquisitional stages shows differing effects of those same factors, which will further assist in characterizing the restructuring of IL's verb system or lack thereof (Bayley, 2005). Variationism has thus adopted the Labovian approach to language variation and change by examining the relative strength of the sociolinguistic factors affecting the choice of past markers, via a quantitative analysis. Previous research in L1 Spanish has widely studied native-speaker sociolinguistic variation across a plethora of variable structures. Within past-time expression, L1 variationist sociolinguistics focused on investigating the perfect-to-perfective path of the present perfect cross-dialectally in Spanish. Previous research found that different varieties stand on distinct points of the path:

a. The PP aoristic drift is led by Peninsular Spanish, which has shown the highest rate of use (i.e., 54%) occurring in perfective today and indeterminate contexts (Schwenter & Torres Cacoullos, 2008).
b. Mexican Spanish PP exhibits canonical use occurring across its prototypical current relevance functions (Schwenter & Torres Cacoullos, 2008).

c. Rioplatense Spanish, on the other end, has shown a demise of the PP, which has been replaced almost completely by the preterit (Fløgstad, 2016).
d. Andean Spanish yielded usage PP rates that stand in between Peninsular Spanish and Buenos Aires (Howe, 2006).
e. Recent work with Sub-Andean varieties found the highest rates of PP across perfective contexts surpassing those attested in Spain, further confirming the form's status as a default past marker (Terán & Kanwit, 2019).
f. The envelope of variation has recently shifted to include other past forms (Gibran-Delgado, 2018).

L2 Spanish research has examined the PP-Preterit dyad in study abroad programs by advanced learners. Results confirmed the effect of immersion in the NS speech community, since rates and sociolinguistic conditioning approximate NS norms, as revealed by immediate post-tests. For example, Geeslin et al. (2012) and Kanwit et al. (2015) found that the present perfect rates of selection by learners in an immersion program in Spain usually increased approximating the NS norm. Concomitantly, increasing rates are usually complemented with a change in linguistic conditioning with learners adding significant predictors of selection of the form in line with NS norms (e.g., time of action: indeterminate contexts and more recent past events within the speaker's today). Unfortunately, a more expansive envelope of variation has not been examined in L2 Spanish variationism. The only attempt has been Whatley (2013) who investigated the use of past-reference forms (i.e., present perfect, preterit, and imperfect) by study abroad learners in Valencia, Spain. Interestingly, the selection rates of the present perfect revealed a very low frequency of use, so the preterit and the present perfect had to be combined into a single category of perfectivity. Results of regression analysis showed that the beginning level learners did not show a change in

linguistic conditioning from T1 to T2. The middle-group showed movement toward NS norms by adding 'grounding' as a significant predictor. The advanced group moved away from the NS baseline by losing 'time of action' as a significant factor group but gained 'lexical aspect'. Finally, it is important to note that a variationist approach enables researchers to uncover development through changes in past form distribution and in sociolinguistic conditioning, which further helps characterize developmental stages.

2.3 Motivations for current study

The chapter started off with a review of the two leading functionalist analyses that have been at the forefront in the investigation of the expression of temporality and TA morphology. We reviewed major form-oriented studies on the acquisition of past morphology, with a focus on the Aspect Hypothesis and Discourse Hypothesis. Research with instructed L2 Spanish learners yielded two distinct patterns. First, the use of the default preterit form in initial stages, with preterit emerging at a subsequent stage with telic and state verbs and later extending onto atelic activities, and as proficiency increases the role of grounding more significantly constrains the use of past morphology; the second pattern of results consists in the emergence of preterit with semantically congruent verbs and later extending to less semantically similar ones, although other results have found evidence of the preterit lexical aspect insensitivity. The studies reviewed have generally found support for a distributional bias in the learner input, which is usually interpreted categorically by the beginner learners, who associate preterit-telic verbs as a language regularity in the input (e.g., Shirai, 1991; Tracy-Ventura, 2007). This finding has also been explained in terms of frequency effects and prototype theory, which consider that language acquisition is determined

by the frequencies of constructions in the input. The more frequent a construction is, the stronger its mental representation and the easier it is to produce. When the DH is examined, results indicate an association between preterit-foreground and imperfect-background, which is significant either at beginning stages (e.g., Ramsay, 1990) or at advanced levels (Henderson, 2013; Salaberry, 1999). The interactional effects of lexical aspect and grounding have confirmed the overriding role of the latter where the predictions of each hypothesis differed (Salaberry, 2011). Within the form-oriented approach, studies on the relationship between past marking and adverbials were also discussed. General findings showed the learner's use of simple adverbs at initial stages and more complex ones (e.g., adverbial clauses) found in higher proficiency levels (Baker & Lubbers-Quesada, 2011). Type-token frequencies were discussed in relation to the acquisition of language in general. Results support Bybee (2008) and Shirai's (2016) argument that an emergent linguistic category is the result of token frequency whereas productivity of that schema is type frequency dependent. Moreover, when classroom NS input and NS corpora are compared, token-type frequencies differ, with the preterit having a higher token frequency in learner input than in NS corpora of spontaneous speech (Daidone, 2019). Research studies on morphological regularity (regular versus irregular morphology) and semantic bias (i.e., lexical aspect) and whether there exists an association or dissociation between them with respect to past marking were discussed for L2 English, but results have not been conclusive. L2 Spanish acquisition of morphology has not addressed the association-dissociation inquiry. Perceptual saliency has been discussed in terms of regular versus irregular morphology and past marking in L2 English, but results are not conclusive.

Zhao and Shirai (2018) reported no effects of saliency (i.e., morphological regularity) whereas Tajika (1999) did, but of phonological saliency.[22] No research has addressed this issue in Spanish.

The second part of the chapter discussed concept-oriented studies, first that of the ESF research project with naturalistic learners in Europe. Results were based on a comprehensive analysis of the learner's IL, which revealed a three-stage acquisition process consisting of the pre-basic variety, the basic variety, and the post-basic variety. Studies by American scholars attested a similar development from a lexical-pragmatic stage to the morphological one. The chapter finished with an account of variationism and variationist SLA, in particular of Spanish and of studies that examined past-time expression through a dichotomous envelope of variation that included the preterit and the perfect. This research examined study abroad learners in various Spanish-speaking countries where the aoristic drift of the perfect has been taking place. The purpose of these studies is to determine whether learners upon completion of an immersion program use the past forms in a more native-like way by analyzing the strength and magnitude of effect of a number of predictors. Recently, variationist SLA has integrated the usage-based approaches to SLA, thus investigating the role of frequency in language acquisition across a number of variable structures (e.g., Kanwit & Geeslin, 2017; Gurzynski-Weiss et al., 2018; Linford & Shin, 2013). Finally, we stated that variationist SLA has also recently combined with concept-oriented approaches, which has provided a more holistic and detailed view of the acquisitional process. According to Kanwit (2017), the integration of approaches can provide a detailed,

[22] Nevertheless, it is important to note that Martin (2015) found that Arabic speakers were insensitive to vowel changes of past inflections in English, which can explain Zaho and Shirai's (2018) reported lack of morphological regularity effect on their L2 English learners. (Personal Communication, Y. Shirai, July 2019).

intensive analysis of IL variation that combines the best methodological practices of each analytical framework. As it was argued, this amalgamation results in an important research methodology that integrates the advantage of considering individual data analysis as group aggregates data analysis, an extensive envelope of variation that tracks the morphological and non-morphological means of expression of pastness, a quantitative multivariate statistical analysis that allows researchers to track emergence, development and restructuring of verbal forms as well as their significant predictors across proficiency. This end-result is what Kanwit (2017) assessed as embodying a microanalysis that is greater than the sum of only a concept-oriented approach analysis and a variationist one.

This chapter served as an overview of the state-of-the-art of L2 TA morphology cross-linguistically and by learners from different L1 backgrounds. The influential findings of the studies presented have certainly helped in advancing the area of inquiry of developmental morphology of tense and aspect in second/foreign languages. Influential as these findings have been, they have also revealed that the hypotheses proposed for the acquisition of TA morphology have not always yielded the predicted results cross-linguistically, cross-dialectally or even across similar instructed learner groups. Therefore, the field has the job to address the gaps in research left by some of the contradictions attested all through these years. Elucidating the lack of agreement in findings is one of the central goals of the current dissertation. For example, which of the following potential predictors (i.e., lexical aspect/predicational aspect, or viewpoint aspect have the strongest influence in past marking? What is the best taxonomy of verbs to examine the role of aspect, one that focuses on termination versus durativity (González, 2013; González et al., 2012) or one that centers on dynamicity contrast (e.g., Domínguez et al., 2013; Robison, 1990) Are lexical aspect or grounding effects implicated in past time marking? Are these influences the same across

developmental stages? Do factors affecting past morphology choice and use differ across task types and across proficiency levels? Do beginner levels show an initial, categorical use of a default form for past reference? Is there evidence in favor of the DPTH (Salaberry, 1999) supported by the use of a default form at beginning stages of acquisition?

This dissertation is motivated by the need to address the gaps in empirical research with respect to developmental past morphology. To date, there has not been any concept-oriented or variationist study on the acquisition of past temporality in instructed L2 Spanish which has examined the full range of forms and expressive devices. Therefore, a comprehensive analysis of the past expressive devices across proficiency levels is deemed necessary in order to have a more detailed account of the process from the lexical-pragmatic stage to the morphological one. This inclusive envelope of variation, in line with CoAs, benefits from being complemented with a variationist methodology that allows us to examine the sociolinguistic conditioning of each past form. In this respect, the variationist approach, whose tenet is based on the principle of multiple causation, is a good way to overcome the limitations of the one-factor view on language acquisition common among many research frameworks. As Bayley (2005) states, explaining IL variation as a result of a single factor is to ignore the complexities of SLA.

Bardovi-Harlig (2013, 2017) and Geeslin at al. (2008a) agree that the best picture of the concept of past-time expression is obtained through a variety of tasks and task complexities that help target diverse text and discourse types, each of which exhibits different TA profiles. Geeslin (2011) claims that full understanding of the development of the IL can only be gained in multiple elicitation tasks "because this is the only way to see the full variety of occurrences of a given structure and the full range of conditions under which they occur" (p. 506). Different task types lead to different learner production, or an IL systematic variability. The need for data triangulation

can only be addressed by using a number of elicitation methods typically used in both of the research traditions. Since this dissertation seeks to combine the concept-oriented approach with the L2 variationist line of research, we will make use of a combination of the typical methods of data elicitation used by both approaches: movie retell tasks and personal narrations traditionally found in the functionalist approach, and the written contextualized task (Geeslin at al., 2013) often used in variationist SLA.

The specific goals of the current dissertation are listed below and are motivated in each case by conflicting results from previous research or a paucity of data:

a. The traditional form-oriented analytical framework used in the study of L2 Spanish past-time expression has usually adopted an atomized perspective primarily focusing on the preterit and the imperfect. This dissertation adopts a more comprehensive perspective, in tandem with the concept-oriented approach, by examining all the expressive devices (i.e., lexical-pragmatic and morphological) used by learners of different proficiency level in instructed settings to refer to the past. A wide range of past forms (i.e., preterit, imperfect, imperfect progressive, preterit progressive, present perfect, and periphrastic ones) are tracked in terms of their connections with meaning, from the one-to-one stage to multifunctionality (Andersen, 1984, 1990).
b. In line with a multi-factorial approach (Shirai, 2004) and a multi-causal one (Bayley, 2005), this dissertation examines the role of almost all the factors that have been attested to affect past-time marking (i.e., lexical aspect, discourse grounding, adverbials use, temporal reference, verb frequency, type-token schema frequencies, and task type). Previous research has usually studied past morphology and the role of only one or two of these factors. So far, no study of L2 Spanish past-time expression has examined, in a

single multivariate model, the relative strength of effect of each factor. The goal is to account for the multiple causes that significantly influence the acquisition of morphology at different proficiency/course levels and across different tasks.

c. In line with Kanwit's (2014, 2017) belief in a synergetic research approach that fuses the best methodological practices of the concept-oriented approach and variationism, this dissertation sets out to examine past-time expression via an amalgamated methodology. We do so by specifically combining the strength of the concept-oriented approach of accounting for all means of learner expression of pastness (morphological and non-morphological), the form-oriented approach that accounts for their meaning connections, and the strength of the variationist approach through the use of a quantitative statistical model that yields the significant variables implicated in the use/selection of past-reference forms at each developmental stage.

d. Given the conflicting results regarding the conceptualizations of aspect or the coding scheme of some factors such as adverbial use, this dissertation research was designed with the purpose to examine all proposals. The major goal is to go beyond the examination of relative effects of aspect in past marking to address its effect when different verb semantic taxonomies are used. Therefore, lexical aspect was coded into achievements, accomplishments, activities, and states following Andersen and Shirai (1994). In addition, the effect of dynamicity contrast, i.e. dynamic verb types (achievements, accomplishments, and activities) and non-dynamic verb types (i.e., states) was tested, following the proposal by Domínguez et al. (2013), Robison (1990), and Salaberry (1999). Verbs and their arguments were also classified into terminative and durative following González (2013).

e. The interactional effects of lexical aspect and discourse grounding are examined in detail in terms of their shared hypotheses with special attention to their differing ones.

f. Given the recent tradition of variationist approaches combining forces with usage-based ones, this research aims at disentangling frequency effects on past-time marking. To this end, various measures of frequency are used to determine whether verb frequency in an external NS corpus (Davies, 2018) or an internal one (i.e., within the learner's own corpus) significantly predicts the use of certain markers. Moreover, each form will be examined on the basis of their token and type frequency in both learner groups and the NS instructor group. The analysis, as well as involving each group, will also compare the groups across proficiency.

g. To test Bardovi-Harlig's (2013) contention that text type triggers the use of different markers, this research analyzes past marking across oral and written personal narratives. The goal is to examine whether a certain narrative type conditions the choice of past form and its distributions across proficiency levels and whether form-meaning connections differ across tasks.

h. Finally, since the study's envelope of variation is inclusive of a large range of forms, the present perfect is examined particularly in terms of its functions as a perfect and a perfective marker. In order to determine the extent to which NS and NNS usage of the form confirms or refutes the "aoristic drift" (e.g., Squartini & Bertinetto, 2001), a number of variables (e.g., temporal reference, adverbial use, etc.) are examined in detail through a quantitative analysis.

The following chapter discusses the present research in more detail through the presentation of the goals, research questions, hypotheses, and the description of the ensuing methodology.

3.0 Methodology

"Research is not monolithic. That is, there is no single way to go about doing research. The way we approach our understanding of language learning will guide us in how we go about collecting information (data) to answer our questions".

Mackey and Gass (2016, p. 2)

This section presents the methodology of the current dissertation. In particular, the participant groups of the study are described, and the procedure of data collection, data analysis, and data coding is discussed. Specific analyses and their results are discussed in chapter four.

3.1 Research questions and corresponding hypotheses

3.1.1 Introduction

As was discussed in the previous chapter, the present study adopts a synergetic approach to second language research. As such, it combines two leading functionalist approaches to the acquisition of tense-aspect (TA) morphology, namely variationist SLA (Bayley & Tarone, 2013; 2012; Geeslin, 2014; 2011) and the concept-oriented analytical framework (e.g., Bardovi-Harlig, 1992c; Schumann, 1987: L2 English; von Stutterheim, 1991: L2 German). This combination of research approaches to TA acquisition, proposed by Kanwit (2017), is adopted in this dissertation so as to obtain a more elaborate understanding of the developmental stages in the acquisition of

the expression of pastness in L2 Spanish. In this vein, this research considers all the means of expression of pastness (i.e., morphological and non-morphological) produced by the learners, near-native-speakers, and the NSs. Specifically, we consider their emergence and development, as well as their sociolinguistic constraints. Hence, each developmental stage is more comprehensively characterized in terms of usage rates of the past expressive devices as well as of the significant roles that certain factors play in such choice and whether these roles change developmentally.

Following the concept-oriented approach (CoA), learner data collection and the ensuing analysis were guided by the basic tenet that language serves function (Zyzik, 2010); thus, forms are examined in relation to the meanings they express, as form-meaning mappings. The current research takes past meaning as a start and, based on an observational and thus descriptive standpoint, we explore the plethora of devices a learner might use to reference past time (i.e., real realized situations) and to express aspectual/meaning contrasts. The end product is a detailed picture of how forms enter, develop, restructure, and reorganize themselves within the learner's IL as a result of exposure to new incoming forms and their regularities. This picture also informs us of developmental sequences that each proficiency level passes through where non-target-like markers show the learners' ability to apply regular patterns to new language, exhibiting a type of variation which is governed by linguistic principles. This further unveils the cognitive processes that take place in the learners' mind at different developmental points of the acquisitional path, such as noticing, inferencing, overgeneralizing, etc. (Ortega, 2009). For example, at lower proficiency levels, the data showed a number of non-target-like forms (e.g., infinitives, different mood forms such as the subjunctive, those that lack agreement between person and number), which are usually the result of simplification and overgeneralization regarding a certain morpheme. Consider the following utterance produced by a 2nd semester learner:

20. *Lugo (i.e., luego) desayuné,* ***comé*** *mucha comida.*

"After this, I had breakfast, I **ate** a lot."

In this case, the learner assigned a 1st person singular past inflection to the verb *comer* "eat", treating it as a member of Paradigm I instead of Paradigm II. Specifically, this latter verbal paradigm formed by verbs ending in *–er* and *-ir* to which the Spanish verb *comer* "eat" belongs, prescriptively takes the affix *-í* with a 1st-person singular subject (e.g., *comí,* "ate"). Conversely, the learner used the affix *–é,* which is the one for 1st-person singular subjects with verbs ending in *–ar* (i.e., Paradigm I). The learner production exemplified above provides evidence of the rule-governed nature of IL variation: for example, the overgeneralization of a pattern becomes a key process in language acquisition showing the learner's capacity to extract the regularities in the input (i.e., probabilistic pattern-finding) and apply them extensively even in non-target-like ways. [23]

The current work also adopted a variationist perspective, which determined the methodology of the study. The first descriptive section was based on the examination of the frequency of use and selection of the morphological variants of the dependent variable (i.e., present indicative, preterit, imperfect, imperfect progressive, preterit progressive, and present perfect) as well as the non-morphological ones (e.g., verbless clauses, chronological order). Task types were also compared through an analysis of the frequency of use and of selection of past morphology in order to determine whether different modes (e.g., oral and written) had an effect. This first section ended with an examination of individual productions with the purpose to determine whether they

[23] Corder (1967) argued that learner errors were evidence of learner language rules to form an utterance at a given point. This would allow for the identification of how languages are acquired.

mirrored the reported group results. The second part of the data analysis reported the type of learner variation attested at each proficiency level, and the conditions under which it occurs, in line with the contention that the IL is dynamic and systematic.

3.1.2 Research questions, sub-questions, and hypotheses

With the goal of investigating the acquisition of past-time expression, this dissertation postulated the following set of research questions and hypotheses. Since this study aims at considering several predictors of past tense marking, the more specific hypotheses about participant groups in relation to the different variables were included under the description of those variables in section 3.4.

3.1.2.1 Research question 1

1. **What are the non-morphological devices used across the learner groups and NS instructors in order to express pastness across oral personal narrations? Is there a clear developmental sequence regarding past-time expression from the 1st semester level to the highest level? How do both sets of groups compare and/or differ from each other?**

   Hypotheses:

I. Learners are expected to go through a developmental path in their expression of pastness, moving from the pragmatic mode to the syntactic one (e.g., Dittmar, 1984; Sato, 1990). The lowest proficiency level (i.e., 1st semester) is expected to express past-time reference through heavy dependence on context using pragmatic and lexical means. Specifically, this stage is predicted to be characterized by "parataxis", i.e., extensive reliance on

discourse-pragmatic factors, a minimal use of morphosyntactic devices, and a large number of verbless clauses or infinitival ones (Sato, 1990, p. 84). Therefore, as found in previous research, this group is predicted to show higher rates of adverbial and noun/noun-phrase use that compensate for the absence of morphological marking, but which assists the learner in meaningfully referring to the past. However, since the study's population pool consists of instructed learners, as opposed to naturalistic ones, the lowest proficiency group should exhibit a low rate of pragmatic reliance without complete absence of inflectional morphology. Their restricted use of morphology is expected to yield higher usage rates of verbless clauses and infinitival ones, as well as very high rates of present indicative use as a default form for all verbs (e.g., Salaberry, 1999, 2000). The second semester should show a sharp increase in preterit use across perfective contexts as well as the emergence of the imperfect, since this form is taught at this level. This would entail a concomitant drop in the present usage rates, which is expected to keep decreasing at subsequent proficiency levels, when form-meaning connections are completed and become more robust.

II. The NS group, despite having a fully-fledged verbal system, is also predicted to use non-morphological means to express pastness. For example, a series of adverbs followed by a noun may be used to convey a past sequence (or plot-advancing situations, Vraciu, 2012), as is also attested in the present data. However, a structural difference regarding the non-morphological means of expression used by lower proficiency levels and the NSs is expected. Namely, the lower proficiency groups are predicted to use a high rate of non-target-like non-morphological constructions, either structurally or functionally awkward. Conversely, the NSs are predicted to exhibit a non-morphological but complex and

sophisticated system of expression that targets meaning nuances, specific discourse functions, and the speaker's intentions triggered by the communicative act. In other words, the NS uses of these devices are predicted to be complementary to inflectional morphology resulting in highly complex linguistic production.

III. The developmental path is expected to show a differential function of lexico-pragmatic devices, characterized by extensive use of one non-morphological device at beginning levels (e.g., reliance on chronological order), moving to a next stage where chronological order can be complemented with restricted verbal morphology and in which adverbials have a lowered functional load as sole past-time markers, to finalize in an advanced stage where adverbials are realized by more complex constructions such as a clause. The developmental path should provide evidence about the differing functions of lexical-pragmatics in the IL: whereas at beginning stages learners are substantially dependent on discourse, interlocutor, and lexical devices using them in place of morphology, the higher levels should show a near-native-like use of discourse-pragmatic devices in a way that complements the established past morphology in their IL system.

3.1.2.2 Research question 2

2. **What are the rates of use and selection of past time markers across our participant groups (i.e., NS and near-native speaker instructors, elementary, intermediate and advanced L2 learners), across task types (i.e., personal oral narration task and a written contextualized task), and across narrative sub-types within personal oral narratives (i.e., remote past, yesterday, and today activities or emotion-stories versus non-emotion stories)?**

Hypotheses:

I. NSs are expected to produce a larger number of utterances and thus a larger number of past form tokens than the learner groups. A certain number of tokens of the more peripheral past-time markers (imperfect progressive, preterit progressive, and lexical past forms) is expected across the oral task type but not in the written task since such markers were not included in the design of this instrument. When narrative sub-types are considered, we expect a higher number of preterit forms in the non-emotion narratives and a higher number of the imperfect forms in emotion stories. It is also hypothesized that the higher the proficiency level of the group, the larger the token number of past tense markers they will produce.

II. Different task types were predicted to affect past form distribution. The written task was expected to yield higher rates of preterit and imperfect forms than the oral task (mostly at beginning levels), due to the nature of the task as a multiple-choice exercise for which the past form conjugations were provided to the learners. Selecting a form in a given context is assumed to be less cognitively demanding than the actual production of a form. Moreover, as a highly inflectional language, Spanish past morphemes encode person, number, aspect, tense, mood information and thus poses an extra learning challenge.

III. The 1st semester group is predicted to reveal a more restricted and rudimentary verbal system (e.g., 3rd person singular present, infinitival forms), with few finite verbal conjugations. Their IL system is predicted to be characterized by a stage where one form is used as default across diverse past contexts and meanings. In this sense, the learners in this group are predicted to extensively use the present as a default form for present and pastness (e.g., Salaberry, 1999). Furthermore, the 1st semester group is expected to

produce a restricted number of preterit tokens and almost no imperfect forms (taught in the 2nd semester). Past forms at beginning levels should be used with one clearly delimited function (i.e., the most prototypical) in line with the one-to-one principle (Andersen, 1984, 2002). It is also expected that the learners in the 1st semester will exhibit a large number of non-target like forms as well as a higher use of null and infinitive forms. In contrast, it is expected that the highest proficiency level groups should show no occurrence of these forms.[24]

IV. The higher proficiency levels (i.e., 7th/8th semester) should show a more enhanced verbal repertoire with more frequent use of verbal periphrasis and concomitantly a more balanced distribution of past forms. With regard to the present perfect, it is expected to emerge in the higher levels and to be used less frequently than by NSs. The 2nd semester group should show a small rate of use since the form has not been introduced yet, and the 3rd semester should show the first uses of the form as it is presented in class. However, previous language learning in high school or exposure to the TL outside of the classroom may entail an early production of the PP.

V. Task types should trigger different TA distributions (Bardovi-Harlig, 2017; Bonilla, 2013). Emotion stories are expected to yield a high usage rate of present indicative by the NSs, who should use the form with a stylistic function, i.e., the conversational historical present (Schiffrin, 1981). The lowest proficiency level (1st semester) is expected to use the present as a default verbal form that substitutes the preterit and imperfective forms, given the learners' restricted verbal system. Another possible scenario that tallies with the

[24] See section 3.4.1.3 for a detailed discussion on innovative learner forms.

Default Past Tense Hypothesis, is that the 1st semester group, after receiving preterit instruction, will move to the preterit as a default form. The written contextualized task, due to an association with more formal language, requiring selection of rather than production of already given forms, and allowing time for students to make past form choices, may yield higher rates of past forms in the lower levels, than those attested in the oral task. Personal narratives have been argued to promote more backgrounded contexts (Liskin-Gasparro, 2000; Salaberry, 2003), which are expected to be expressed by higher rates of the imperfect form than the preterit form across NSs and the higher proficiency levels. Given the predicted restricted verbal repertoire in the 1st and 2nd semester learners, and the fact that the imperfect is starting to emerge in the IL, not many tokens of the form are expected and thus the imperfective function is predicted to be marked primordially by the present. Furthermore, it is predicted that the higher proficiency (i.e., course) levels will construct the background with a larger number of morphological devices than the lower course levels, showing higher rates of the progressive past forms. Finally, the higher course-levels are also expected to use a reasonable number of irrealis events in their productions, thereby exhibiting high usage rates of future in the past forms, subjunctive, and conditional forms.

VI. Personal narrative sub-types are further predicted to trigger different TA profiles. Based on pilot data analysis, the stories about yesterday's and today's activities are expected to be regarded as a mere recapitulation of past events without much subsidiary information to tell (i.e., higher rates of present and/or preterit). On the other hand, the childhood and danger stories are expected to target more emotional experiences and thus trigger more

elaboration of the background (i.e., higher rates of imperfect and imperfect-progressive forms).

3.1.2.3 Research question 3

3. **What changes characterize learner development across proficiency levels in terms of frequencies of use/selection and across task types? How do learners' frequencies of use/selection compare to NSs'?**

   General Hypothesis:

In general, learners are predicted to use higher rates of preterit compared to the imperfect in line with NS norms. With regard to the imperfect, it is predicted to be used less frequently by the learners when compared to the NSs due to the lack of a form in English that corresponds with the Spanish imperfect 100%. The imperfect form is expected to progressively gain popularity as proficiency increases. [25]

With regard to specific instruction on past-time morphology, the preterit in the 1st semester is taught at the end of the term. Additionally, both 2nd and 3rd semester groups receive instruction on the preterit-imperfect pairing as well as the present perfect. The 4th semester level receives instruction on the more complex verbal constructions (e.g., conditional perfect, subjunctive perfect, etc.) and the 5th/6th semester group reviews all of the verb form-meaning combinations besides receiving instruction in the imperfect progressive. Therefore, in terms of developmental trajectories of the acquisition of past time morphology, very little production of the preterit is

[25] Whereas the Spanish verbal system has the imperfect and the imperfect-progressive forms, English has the past progressive and the simple past (which prototypically expresses perfectivity, although imperfectivity is possible as well).

expected in the 1st semester with a considerable increase in use in the 2nd semester, when the imperfect should emerge at low rates of use, an important increase in use of both of the forms should be seen in the 3rd and 4th semesters, and in the case of the highest course-level other past forms should emerge such as the present perfect. The past-time expression system should fully develop in Spanish the 5th/6th semester with advanced/superior students showing substantial usage of a range of past time markers across discourse types.

3.1.2.4 Research question 4

4. **What linguistic and social constraints predict the use and selection of past markers in both NS and learner data across task types? What changes characterize learner development across proficiency levels in terms of linguistic and social predictors? How do learners' sociolinguistic predictors compare to NSs'?**

   General Hypotheses:

Based on previous sociolinguistic research, we hypothesize that the acquisition of past morphology will imply a great amount of regular, permanent restructuring when a new form enters the linguistic repertoire at a given proficiency level. Firstly, the restructuring entails a change in rates of different past forms' use. For example, the higher proficiency level learners will reach more balanced rates of use for different TA forms because of their enhanced and therefore more complex verbal system. For example, whereas the lower proficiency levels will use the imperfect for imperfective meaning, the higher proficiency level learners will be at a stage in which they can vary in certain contexts between the imperfect and the imperfect progressive.

Consequently, we expect predictors of past-time expression to change across proficiency levels as an indication of verbal restructuring. For example, emergent morphology in beginner levels can be constrained by telicity, with preterit being favored by telic verbs in tandem with the

AH tenets. Conversely, if the beginner learner uses the present or the preterit as the default form for pastness (in line with the default past tense form hypothesis, e.g., Salaberry, 1999), then we should expect telicity not to have an effect on the use of past morphology. At higher proficiency levels, the same predictor can lose significance (i.e., telicity does not affect past marking), as another factor group becomes significant (e.g., grounding) or there can be a rearrangement in the constraint hierarchies (i.e., atelic verbs now predict the use of the preterit), which could indicate that the learner has moved from prototypical pairings to non-prototypical ones. At the same time, a series of significant predictors can indicate how a certain form is being used by a certain proficiency level. For example, just as the beginner learners are hypothesized to use perfective morphology with telic verbs, we might find that discourse grounding also favors the use of the preterit, as well as clause type, with main clauses predicting the use of preterit. This scenario is very typical at the beginner levels in line with the one-to-one principle at beginning stages (Andersen, 1984). This constraining could reveal not only the context in which preterit will occur at a certain level but can also indicate the learner's limited language competence as a whole: the lower levels will tend to use preterit with main clauses because of their little use of subordination (or syntactization in Sato's 1990 terms). It is expected that higher proficiency learners will be able to use the preterit in subordination and so a concomitant change in predictor effects should take place.

Sections 3.2 and 3.3 will describe the participants of the study and the procedure of data collection and data coding (i.e., how each independent variable was analyzed and coded). This description is based on previous research and contains a detailed account of the hypotheses for each variable.

3.2 Participants

The current study recruited a total of 234 participants from the Spanish Language Program in the Department of Hispanic Literature and Languages at the University of Pittsburgh. Particularly, participants belonged to one of eight college-level learner groups or were the current instructors, who formed the group of NSs and near NSs of Spanish. Both group types completed three tasks which targeted past-time expression across different discourse/text contexts: an oral prompt task, a written contextualized task, and an oral movie retell. The learner groups also completed a grammar test and a language background questionnaire, whereas the instructor group only completed the latter. The learner groups completed the tasks in one or two class-periods depending on the actual proficiency level and did not follow a predetermined order, although the oral prompt task was usually administered first. The order of the tasks changed in those cases when the instructors collaborated by administering the grammar test in the class previous to the core data collection date. When the learner participants did not take the grammar test prior to the data collection point, the elicitation tasks proceeded in the following order: oral personal prompt task, written contextualized preference task, grammar test, and language background questionnaire. The NS and near NS participants met with the researcher at one data collection point and participated in all the elicitation tasks.

The participants of the eight learner groups were enrolled in one general Spanish language course (i.e., 1^{st}, 2^{nd}, 3^{rd}, 4^{th} semesters), a grammar and composition course (i.e., $5^{th}/6^{th}$ semester), and/or a content course (i.e., Medical Spanish and Spanish Applied Linguistics, merged as one group: $7^{th}/8^{th}$ semester) ranging from the lowest to the highest proficiency levels. The content level classes (i.e., Medical Spanish and Spanish Applied Linguistics) require that students have taken the grammar and composition class ($5^{th}/6^{th}$ semester). The Spanish Language Program at the

University of Pittsburgh follows a series of guidelines toward course placement of the incoming students, explained in detail in Table 3-1.

Table 3-1. Course placement conditions for incoming students.

Previous Spanish experience	Requirements	Course placement
Students with **no Spanish language experience**	You have not taken Spanish in high school, are not a heritage speaker, nor have been exposed to the language	1st semester
Students who **have taken 2 (two) or less years** of Spanish in high school	**Option 1:** You want to enroll in the Fall or the Spring immediately after you took a Spanish class in High School	Spanish 0015
	Option 2: After one academic year has passed since you took your last Spanish class in High School	1st semester
Students who **have taken 3 (three) or 4 (four) years** of Spanish in high school	**Option 1:** You want to enroll in the Fall or the Spring immediately after you took a Spanish class in High School	Spanish 0003
	Option 2: After one academic year has passed since you took your last Spanish class in High School	Spanish 0015
Substantial previous experience with the language	• You are a heritage speaker • You are a transfer student • You have taken a Spanish AP test and your score is either pending or you have received a score of 4 or 5 • You have taken 4 (years) of Spanish and have additional experience with the language (studying or living abroad in a Spanish speaking country).	Spanish placement exam

The administration of a discrete-point grammar test was deemed necessary so as to confirm the learners' placement in a course level with the corresponding course level according to the Spanish Program's standards. To this end, we utilized the same grammar test from previous empirical studies (e.g., Geeslin & Gudmestad, 2012; Kanwit, 2014), which has proven to be suitable to stratify learners according to the mastery levels of the grammatical system of Spanish. The test contained 25 multiple-choice grammatical items which made up a story about an ordinary

day experience. These discrete-point items corresponded with the formal properties of the Spanish grammatical system typically included in the language classroom curriculum. Table 3-2 below contains the specific information of each group, showing the corresponding number of participants across tasks, course semester and course proficiency level, as indicated in the website of the Spanish Language Program at the University of Pittsburgh. Generally, the participants listed under one elicitation task usually participated in the other task.

Table 3-2. Composition of participant groups.

Course level	**Number of participants**				**Mean grammar score** k total=25		**Mean time (week) abroad**	**Mean age**	**Sex**			
	Oral task		**WCT task**						**Men**		**Women**	
1st semester	T1	T2	Time 1	Time 2	Time 1	Time 2	**0**	**22.1**	Time 1		Time 2	
									2	**9**	**3**	**7**
	11	**10**	**15**	**11**	**4.8**	**10**		**21.4**				
2nd semester	**34**		**29**		**11.2**		**0**	**20.1**	**17**		**17**	
3rd semester	**25**		**26**		**12**		**0.47 weeks**	**19.3**				
4th semester	**26**		**42**		**12.5**		**0**	**18.7**	**4**		**22**	
5th/6th semester	**15**		**19**		**16.3**		**5 weeks**	**19.3**	**4**		**11**	
7th/8th semester	**12**		**12**		**16.4**		**0.4 weeks**	**21.6**	**3**		**9**	
7th/8th semester	**7**		**7**		**16.9**		**0.7 weeks**		**4**		**3**	
Near NS instructors	**10**		**9**		**-**		**6 weeks**	**29.2**	**1**		**9**	
NS instructors	**18**		**19**		**24.6** (from a separate sample of 5 NSs)		**NA**	**35.3**	**10**		**9**	
TOTAL	**195**		**223**		**25**		**-**	**-**	**54**		**80**	

Each course level was predicted to yield significantly different mean grammar test scores. Nevertheless, as illustrated in Table 3-2, several course-level groups in our study obtained similar mean scores (e.g., 3rd and 4th semester groups). Although not reported in this section, mean differences were also significantly different within-course level, yielding non-normally distributed data that yielded large ranges and standard deviations. In particular, the results indicated an important rate of individual variation within each group.

A close analysis of the results obtained and a reflection on the Spanish Language Program course placement guidelines can inform us of possible reasons that may explain the learner considerable linguistic variation. One such source of variation may lie in the various sub-levels that students with previous experience with the language bring to a 1st semester class. This course holds students with recent and more remote previous Spanish language experience in high school as well as students with no previous exposure to the language whatsoever. In addition, recent versus remote language experience is not necessarily correlated to a higher or a lower Spanish Language level, since many other factors, besides the recentness of the learning experience, can influence a student's current competence in the language. For example, the student may have had a recent Spanish class in which she has struggled, or for which she had no internal or external motivation to attend. These factors may impact directly on the learner's current linguistic behavior and proficiency. The course placement as determined only by language experience is assumed to play an important role on the learners' grammar test scores. If we factor in the instructors' distinct teaching approaches, teaching styles, and teaching focus (e.g., grammar versus communication or

literature), I further argue course placement may certainly not accurately mirror proficiency level.[26]

It is important to provide further information about the NS and near-native spesker groups, which was not included in Table 3-2.

The near-native speaker group consisted of seven graduate students and/or instructors of Spanish at the University of Pittsburgh. Three of them were born and educated in the United States to English-speaking parents, attended Spanish classes in high school and college levels, and all participated in study abroad programs in Spanish-speaking countries. One other participant was born in the US as well but grew up in a household of Spanish-speaking parents, and she recognized herself as a heritage speaker. Another participant was born in the US to Spanish-speaking parents, grew up in the US until she was seven years old, moved to Puerto Rico where she attended elementary school, returning to the US when she was 12, having lived in the US since then. Both heritage speakers showed native-like competence in all areas of language. Three other participants were born in three different foreign countries (i.e., Brazil, South Africa, and Thailand), grew up in their countries, and arrived in the US to do graduate school or to work as an Adjunct. Except for the heritage speakers, all of the participants showed near-native-like competence revealing the use of a low number of non-target-like forms. This group did not complete the grammar test.

The native-speaker group consisted of 21 PhD students and/or instructors of Spanish at the University of Pittsburgh. They came from a large number of countries in South, Central, and North America (e.g., Bolivia, Chile, Colombia, Costa Rica, Mexico, Peru, and Venezuela). The NSs'

[26] See Chapter 5 for a thorough discussion on the discrepancies between course placement and proficiency level.

length of stay in the US ranged from a maximum of 25 years to a minimum of two years. This group did not complete the grammar test. The five NSs reported in Table 3-3 under the grammar test results were different from the main study's NSs.

Due to the fact that most of the previous studies on past morphology used course placement as the benchmark criterion for proficiency level, the researcher decided to maintain the original groups and account for learner variation. The implications with regard to the connection between actual learner proficiency level and actual course placement are discussed in detail in Chapters 4 and 5.

The instructor group was invited to participate in the study by the researcher herself, having previously requested permission from the Spanish Language Program Coordinator at the University of Pittsburgh. The learners were invited to participate generally by their respective instructors with a set script provided by the researcher. Due to the functionalist approach this dissertation adopted, the elicitation tasks had an inherent communicative goal (e.g., using language to do something meaningful such as tell a story). Therefore, the learners' participation in the study was treated by the instructors as a pedagogical activity within the class syllabus, which counted toward a quiz or participation grade.

3.3 Data collection: elicitation tasks

Both NS and learner participants completed a language background questionnaire, a grammar test, and three elicitation tasks: an oral prompt task and a written personal cloze task (targeting personal narratives), and an oral movie retell (targeting a fictional narrative). Nevertheless, due to time constraints, the movie retell task was removed from the analysis and left

for future research. The learner and the NS instructor groups were tested cross-sectionally at one time generally in the middle of Fall and Spring 2018, except for the 1st semester group, for which data collection took place longitudinally both before and after instruction on the preterit. Moreover, the highest course level groups (i.e., Medical Spanish and Spanish Applied Linguistics: 7th/8th semester level) were tested in Spring 2019.

The data elicitation methods of the current study aimed at examining the use of the comprehensive concept of past time in NS and learner data. Bardovi-Harlig (2017) states that "neither temporal concepts nor TAM (tense-aspect-modality) morphology exists independently from discourse" (p. 33). Therefore, a comprehensive picture of the developmental trajectory of past morphology can only be understood in-depth by examining how past forms are distributed across text and discourse types. In consequence, we have chosen two tasks (i.e., one written and one oral) that targeted personal narratives across different sub-types such as today and yesterday's activities and a childhood experience. These tasks were considered to be the best test case for past time markers and results would be comparable with previous empirical studies that also analyzed personal narratives (e.g., González et al., 2013; Henderson, 2013; Liskin-Gasparro, 2000; Salaberry, 2003). Other non-narrative text structures are likely not as effective in triggering the range of past morphology forms. Nevertheless, the today and yesterday stories have not been tested in any previous studies on the acquisition of TA morphology in L2 Spanish. The tasks are described in detail in the following subsection and can be found in their entirety in Appendix A.

3.3.1 Oral prompt task: personal narrative

The first instrument was an oral prompt response task which aimed at eliciting monologic personal narratives (1st person singular), i.e., an extended oral sample mostly constructed by a

single speaker responding to a prompt that targets the recapitulation of past experiences at different past time points (Bardovi-Harlig, 2013). Given the combined analytical framework of this dissertation, which merged concept-oriented and variationist approaches, the oral prompt task was designed as a method of narrative elicitation that would be in line with a synergetic methodology to TA acquisition in a classroom setting.

The oral prompt task included the corresponding instructions as well as the target narratives, four prompts about the learner's past experiences at different temporal distances: remote pre-hesternal reference (a childhood memory), remote or more recent pre-hesternal reference (a scary experience), and the hesternal and hodiernal time points (activities that the learner did yesterday and today). The stories across the time reference points were originally designed to determine whether different personal sub-narrative types would further affect past form choice. In addition, the narrative sub-types were included in order to provide possible contexts that might trigger the use of the grammaticalizing PP as a past perfective marker, such as hodiernal events.

Aware that a variationist SLA study aims at uncovering the sociolinguistic variation in the learners' IL, a common elicitation methodology would also be the sociolinguistic interview, traditionally used to elicit the speaker's vernacular speech. Due to the large number of participants as well as the longitudinal nature of this study, a sociolinguistic interview was not regarded as the most suitable elicitation task choice. However, the study's oral task was designed to elicit informal language and despite the fact that there was no interlocutor present, it is assumed that the learners told stories with an interlocutor in mind. One important reason to use the oral prompt instrument, after an effort to couple it with the sociolinguistic interview, is that it provides greater opportunity to observe the learner's management of temporal reference since recapitulating on your personal

experiences gives one maximal expression of the repertoire of past-time marking (Bardovi-Harlig, 2013; Noyau, 1984). As with the sociolinguistic interview, the oral prompt task is an open-ended instrument that maximized participant production in a somewhat informal context but with the added advantage that there was no researcher intervention, thus avoiding the observer's paradox. Another motivator for the use of this instrument is that previous studies on past tense morphology have found that personal narratives allow a more suitable place for elaboration of the background through an increase in the use of supporting details besides the events of the main story (Bardovi-Harlig, 2013; Salaberry, 1999). Since the background is prototypically associated with atelic verbs and the imperfect marker, the hypothesis is that there will be a larger rate of use of the imperfect in this narrative type than in the impersonal one (Bonilla, 2013). Another benefit of an oral narrative task is that it gives the researcher the possibility of observing and thus describing the IL in a meaningful communicative task (Bardovi-Harlig, 2013).

To this end, all the learner groups were provided with a link https://1drv.ms/b/s!AmKYyHjE02qdg6Zm54NkWKdQHKdhZw, which their respective instructors posted on the course website and which was accessed during the data collection session at the language laboratory. This link contained a PowerPoint which explained the purpose of the study in general terms as well as instructions on how to record and which buttons to click in order to pause and stop, as well as the instructions on how to submit the audio file at the end of the task. The learners later proceeded to self-record themselves telling the assigned stories by means of the audio recording software *Audacity*. Specifically, each individual slide contained one written prompt with interesting visuals, which helped encourage lengthy and elaborated answers displaying a range of TA markers across a substantial number of foreground and background contexts and lexical aspectual verb classes. After fully responding to a prompt, participants clicked

to advance to the next slide with the next prompt. Students were not given planning time for the task in order to avoid the possibility that they could orally narrate a story for which verb forms were researched online. The top of each slide indicated the number of the narration that the participant was about to start. The individual slides with their corresponding prompts were not timed in order to encourage participants to speak under no pressure regarding time constraints. Nevertheless, to fit all tasks into a course period, a maximum of 30 minutes was allowed. The participants were instructed not to make notes on grammar and to speak spontaneously without excessive concern about grammatical precision. The researcher explained that errors were actually part of the research and that there was no expectation of obtaining impeccable linguistic production. Finally, all prompts began with the command *describe* "describe" or *contáme* "tell me about" in order to avoid priming participants to use target-like past time forms.

3.3.2 A written contextualized task

The participants also completed a written contextualized preference task (WCT) which was adapted from a similar version in Whatley (2013). The current version differs from the original mostly in terms of the contexts that were added in order to include irrelevant temporal reference (i.e., recent and resultative past, persistent situation, and experiential past) as a means to target the canonical current relevance function of the present perfect. The task contained 32 contextualized items that together formed a story about the learner's best friend narrated in the 1st person and thus regarded as a kind of personal narrative by the researcher (see Appendix A.2). A personal narrative was used so that participants would get involved in the story and feel as if they were the protagonists telling the story themselves, which would help them select their preferred past tense form more easily and more naturally. Furthermore, this task is extensively used in L2 variationist

research (Geeslin, Fafulas, & Kanwit, 2013), since it targets participants' past-time marker preference in a contextualized story divided into varying sections. As a controlled instrument of data elicitation, the major objective of this task was to examine the selection of past tense forms in highly controlled contexts and to compare the participants' distributions of TA morphology between task types: a written and oral open-ended narrative. The task was hypothesized to show overall higher selection rates of past markers as compared to the oral prompt task among the instructed learners due to their prior classroom exposure to explicit instruction on past-time expression. In this sense, the comparison of a highly controlled task with a communicative open-ended one can shed light on the extent of the argument that the learner's explicit knowledge is likely less necessary in communicative tasks (R. Ellis, 1993). Specifically, the contention is that it is probable that a controlled task with an inherent design similar to written classroom activities will tap into the learner's explicit knowledge of the past tense forms for which they had explicit classroom instruction (R. Ellis, 1993). Finally, we hypothesize that selection of pre-provided forms should represent fewer cognitive demands for the learner than producing those forms online (Robinson, Cadierno, & Shirai, 2009).

In order to create a natural story, the task follows the protagonist's past events across four different temporal contexts of his/her life, including pre-hesternal (before yesterday), hesternal (yesterday), hodiernal (today), and irrelevant (indefinite past time with current relevance) contexts in a realistic way. Participants selected from four options that contained a different TA marker: the preterit, the imperfect, the present indicative, and the present perfect. The choice of preterit and imperfect was based on the fact that previous research on past-time marking reported high frequencies of the forms across learners. The addition of the present was deemed appropriate in line with previous research (e.g., Hasbún, 1995; Ramsay, 1990; Salaberry, 1999, 2000) that found

that beginner proficiency levels used the form as a default past marker across perfective and imperfective contexts. The PP option was determined based on our goal to examine the grammaticalizing stage of the form (if any) as a perfective past time marker, a function that has been commonly attested in Peninsular and in Andean Spanish varieties. The order of the response options was randomized throughout the task to encourage participants to read the responses before responding and thus avoid automatization. The following sentences of the task recapitulate the writer's childhood (pre-hesternal) events and contain the subsequent response options with the target past-time markers (see Appendix A.2 and A.3 for the full version of the instrument).

Aún recuerdo las vacaciones de invierno con mi familia durante mi niñez. Yo ***1.*** *_____ a la casa de mis abuelos todos los domingos.*

a. fui

b. voy

c. iba

d. he ido

2. *_____ súper bien porque mi abuela siempre* ***3.*** *_____ tan rico.*

a.	***Comí***	***a.***	***cocina***
b.	***He comido***	***b.***	***cocinaba***
c.	***Como***	***c.***	***ha cocinado***
d.	***Comía***	***d.***	***cocinó***

"I still remember the Winter vacations with my family as a child. I **1.** _____ to my grandparents' house every Sunday."

a. went

b. go

c. ***used to go***

d. ***have gone***

2. " _____ very well because my granny always **3.** _____ delicious meals."

a.	***ate***	***a.***	***cooks***
b.	***have eaten***	***b.***	***used to cook***
c.	***eat***	***c.***	***has cooked***
d.	***used to eat***	***d.***	***cooked***

The instrument manipulated four independent variables: lexical aspectual verb class, discourse grounding, temporal reference / distance, and adverbial use, based on the most common significant predictors of past TA morphology in the concept-oriented (e.g., Meisel, 1987), form-oriented (e.g., Bardovi-Harlig, 1998), and variationist approaches (e.g., Whatley, 2013). The categories of the variables were evenly combined into 32 items, such that one item represents each possible combination of the categories of each independent linguistic variable.

Specifically, the variable lexical aspectual class was distributed in such a way that half of the items included telic verbs and the other half included atelic ones. The four-way-Vendlerian classification would entail more manipulations and thus a longer task. The verb-form response options in the task consisted of 1st person singular and plural and 3rd person singular and plural. The verbs' morphological (ir)regularity was not controlled due to task duration constraints regarding the participants. Hence, the task contained both regular and irregular verbs in the present and the preterit (See Appendix A1 for a classification of verbs that were used). Nevertheless, despite the lack of experimental control of verb (ir)regularity in the WCT, this dissertation calculated verb token and type frequencies in the oral task.

The second independent variable was manipulated such that half of the items were foregrounded situations and the other half were backgrounded situations. The third independent variable, i.e., temporal reference, was distributed evenly among contexts that were pre-hesternal (before yesterday), hesternal (yesterday), hodiernal (today) and irrelevant (indefinite past time with current relevance; in line with the operationalization of temporal reference adopted by Schwenter & Torres Cacoullos, 2008). Finally, the independent variable temporal adverbial was manipulated such that half of the items included some type of temporal adverbial and the other half did not. Given the large number of adverbial options with which each TA marker can canonically occur, manipulating this variable by means of adverbial type would have created a large number of sentences, and the instrument would have been impractical to administer. Table 3-3 shows how the independent linguistic variables were manipulated to create the task, where the numbers correspond to the sentence number in the story.[27]

Table 3-3. Manipulation of variables (and corresponding levels) in the written contextualized task.

Prehesternal, BGD, atelic 3 TA- 7 no TA	Hesternal, BGD, atelic 10 no TA- 11 TA	Hodiernal, BGD, atelic 23 no TA- 22 TA	Irrelevant - BGD-atelic no TA 25- 28 TA
Prehesternal, BGD, telic 4 no TA- 8 TA	Hesternal, BGD, telic 14 no TA- 13 TA	Hodiernal, BGD, telic 17 TA- 24 no TA	Irrelevant - BGD-telic 26 TA- 32 no TA
Prehesternal, FGD, telic 5 no TA-1 TA	Hesternal, FGD, telic 16 no TA - 9 TA	Hodiernal, FGD, telic 18 TA -19 no TA	Irrelevant - FGD-telic 27 TA- 30 no TA
Prehesternal, FGD, atelic 6 TA-2 no TA	Hesternal, FGD, atelic 12 no TA- 15 TA	Hodiernal, FGD, atelic 21 no TA- 20 TA	Irrelevant - FGD-atelic 29 TA- 31 no TA

[27] For a detailed analysis of the verbs used in the WCT, please consult Appendix A.1.

This instrument underwent important modifications after the pre-pilot data collection stage (i.e., Spring 2017) and the post-pilot stage (i.e., Fall 2017), the last of which served as the data for the Dissertation Proposal of this work, which generated further changes. For instance, the coding scheme was revised, and it resulted in the following modifications:

a. Sentence 19 originally used the verb *sentarse* "sit down", which was changed to *elegir* "choose" due to the different lexical semantic categories into which the former verb is classified in English (i.e., stance verb) and in Spanish (i.e., accomplishment verb). For example, whereas English says "I'm sitting down" as an answer to the question "Where are you?", Spanish uses the participial adjective that derives from *sentarse* 'sit down", namely *sentado/a*.
b. Some verbs were changed with respect to person and number (i.e., to 1st person singular) in order to avoid so much variation that can seem confusing to the learner
c. Sentences two and three, originally coded as backgrounded due to their expression of past habituality, were recoded as the foreground on the basis of González (2013) definition of a habitual eventuality as occurring "several times but each time the eventuality is complete, it becomes an accumulation of terminative eventualities (p. 168)."

3.3.3 Grammar test

The language grammar test (see Appendix A.4 and A.5) is an independent measure to gauge non-native proficiency and to confirm the groupings based on the level of course enrollment. The test, which was developed by Geeslin and Gudmestad (2010), contains 25 multiple-choice

grammatical items in a contextualized story. These discrete-point items correspond with many of the grammatical, morphosyntactic, and lexical properties of Spanish typically included in the language classroom and at different proficiency levels. For example, one of the items included was the third conditional clause for which the learners had to select the correct forms (i.e., the past perfect subjunctive form of the main verb in the if-clause and the conditional perfect form in the main clause). The prediction was that the lower proficiency groups would not be able to successfully select the appropriate options in this case since this grammatical structure is studied at advanced proficiency levels. This instrument has been reported to be particularly well-suited due to its relative difficulty level for the lowest proficiency group and has shown to be able to distinguish between the more advanced learner groups and between the near native learners and/or the NS group. This test was deemed appropriate since it has shown clear divisions between participant groups in numerous empirical studies (e.g., Geeslin & Gudmestad, 2010; Kanwit & Geeslin, 2014). With regard to data analysis, descriptive statistics for each course level were calculated (i.e., mean, range, and standard deviation (SD)). Afterwards, a series of one-way factorial non-parametric ANOVAs were run on the data in order to statistically validate the different proficiency levels corresponding to the Spanish classes at Pitt.[28]

3.3.4 Language background questionnaire

Both NS and learner participants completed a language background questionnaire in English that requested demographic information, language(s) spoken at home, Spanish language

[28] The specific statistical tests that were used and the corresponding results are explained in Chapter 4.

instruction experience, time spent abroad, and other facts about their language-learning histories. The questionnaire took five-ten minutes to complete and can be seen in Appendices A.6 (learner version) and A.7; A.8 (NS and near-native speaker version).[29]

3.4 Procedure

As indicated, the data from the oral personal prompt response task was digitally recorded, while the other three tasks (written contextualized task, grammar test and language background questionnaire) were completed on paper or via Qualtrics online. The learner participants completed the tasks during class time beginning with the least-controlled task (the Oral Prompt) and finished with the most-controlled task (the WCT). Following the past-time expression tasks, they completed the language grammar test and the language background questionnaire. As was indicated in the previous section, some instructors volunteered to administer the grammar test the previous or following class to the data collection time. The NSs at UPitt completed the instruments outside of class time in the same order as the NNSs and following the same procedure as the learner groups (i.e., the dissertation researcher made appointments with the instructors, who went to the Language Media Center in order to participate in all of the tasks).

[29] The survey had a section about motivation which used a self-assessment motivation trajectory in the students' language learning experience (Dörnyei & Muir, 2016) Due to length and time-constraints, the researcher will investigate the social aspect of learning in future research.

3.4.1 Data coding for the oral prompt task

As a research study that combines concept-oriented (e.g., Bardovi-Harlig, 1992c; Schumann, 1987; von Stutterheim, 1991) and variationist approaches (e.g., Geeslin, 2014; Kanwit, 2014, 2017)) to the comprehensive investigation of past-time expression, all forms used by the learners which referred to realized past situations (i.e., realis) were coded. Additionally, the current study's analysis considered all of the participants' attempts to express past temporality, including non-target-like verbal morphology such as the non-target-like verbal form *yo bailó* "I danced" (3rd person sing) instead of *yo bailé* "I danced" (1st person sing). This decision was made under the contention that temporal reference and person-number are distinct semantic systems and that morphology for person is acquired later than tense in those languages that mark both morphologically (e.g., L2 Spanish, L2 Italian, and L2 French) (Bardovi-Harlig, 2000; Malovrh, 2014).

3.4.1.1 Identification of tokens

As a research study that combines concept-oriented (e.g., Bardovi-Harlig, 1992c; Schumann, 1987; von Stutterheim, 1991) and variationist approaches (e.g., Geeslin, 2014; Kanwit, 2014, 2017)) to the comprehensive investigation of past-time expression, all forms used by the learners which referred to realized past situations (i.e., realis) were coded. Additionally, the current study's analysis considered all of the participants' attempts to express past temporality, including non-target-like verbal morphology such as the non-target-like verbal form *yo bailó* "I danced" (3rd person sing) instead of *yo bailé* "I danced" (1st person sing). This decision was made under the contention that temporal reference and person-number are distinct semantic systems and that morphology for person is acquired later than tense in those languages that mark both

morphologically (e.g., L2 Spanish, L2 Italian, and L2 French) (Bardovi-Harlig, 2000; Malovrh, 2014).

3.4.1.2 Dependent variable

The dependent variable within the envelope of variation (i.e., variable past-time expression) consists of the forms of every verb in a past-time context, that is to say, any event or state that obtained prior to speech time or in factual past eventualities. Any finite verb form that was used in that temporal context was analyzed regardless of well-formedness and in line with previous research and pedagogical grammars' most frequent forms (e.g., the present, the preterit, the imperfect, the present perfect, the imperfect progressive, and the preterit progressive). Eventualities reported via direct speech or forms like the past subjunctive, conditional past, or future in the past were not considered since they do not refer to real realized situations. Other more peripheral and/or non-target-like markers or expressive devices such as the infinitive, the participles, passive voice, forms corresponding to different moods (i.e., subjunctive and imperative) plus the instances in which a past event is expressed by means of an adverb plus a noun phrase, were also analyzed. Table 3-4 below provides detailed information and specific examples about the coding procedure.

Table 3-4. Verb form coding.

Sample verb form	English correspondence	Coding of the DV
…después me duermo.	…and then I fall asleep.	Present indicative
Cuando solo siete años, ya me gusta estudiar.	When I was seven, I like to study.	Lexical Present
…mientras estoy durmiendo…	…while I am sleeping…	Present Progressive
Ayer dormí mucho en la mañana.	I slept a lot in the morning.	Preterit
Quise estar una doctora.	I wanted to be a doctor.	Lexical Preterit
...y estaba muy ilusionada.	…and I was very hopeful.	Imperfect
…y yo tuve un accident y tenía que ir al hospital, si.	…and I had an accident and had to go to the hospital, yes.	Lexical Imperfect
…y mis amigos y yo estaban llorando.	And my friends and I were (3rd-person plural) crying.	Imperfect-Progressive
Mi padre y yo estuvimos montando bicicletas en un golf course en GA.	My dad and me rode bikes in a golf course in GA.	Preterit Progressive
He estado muy ocupado del día de ayer.	I've been very busy yesterday.	Perfect
Luego yo veré una película de Netflix y después yo estudié.	And then I will see a movie in Netflix and then I studied.	Future
Cuando yo era un niño, y yo jugando con mi hermano.	When I was a child, I playing with my brother.	Present participle
… yo tuve mucho miedo porque éste no ocurrido en mi vida antes de este	I was very scared because this not happened in my life before this.	Past Participle
Cuando solo siete años, ya me gusta estudiar.	When only seven, I like to study.	Verbless
Cuando yo yo estuve menor, yo juege para mis padres team.	When I was younger, I play (subjunctive/imperative form) for my parents' team.	Different mood form (diff-mood)
…y comió almuerzo y pasar el tiempo con mis amigas…	And I had lunch and spend (bare infinitive) time with friends	Infinitive (Inf)
cuando tuve seis años, mi abuela haz el…muertaba?	When I was six years old, my granny do (imperative form) + non-existent imperfect form derived from the combination of the noun *muerte* "death" as root and the suffix *-aba*	Novel form
Y el perro, growled.	And the dog growled.	English verb
Cuando mi madre fue conducido el coche y los roads, como se dice…	When my mother was driven the car and the roads, how to do you say…?	Passive voice

3.4.1.3 Independent linguistic variables

Eleven independent linguistic variables were coded in the current study. They are temporal reference and/ or distance, temporal adverbials, clause type, person and number, lexical aspect, discourse grounding, narrative type, form accuracy, and frequency. However, temporal adverbials, lexical aspect, and frequency received three different coding types, which resulted in three variables for each. A summary of these variables can be found at the end of this section in Table 13 below.

3.4.1.3.1 Aspectual meaning

Given the comprehensive envelope of past-time expression of this dissertation, coding for the semantic function that each form conveys in actual use was deemed necessary. Furthermore, given the focus of this research on the emergence and development of form-meaning associations, the aspectual meaning of the form is of crucial importance. Nevertheless, it is known that coding for this type of meaning can be complex due to the occasional lack of knowledge about the meaning that the participant intended to convey by using one form. According to Schwenter and Torres-Cacollous (2008), aspectual meaning is an intractable concept, and as such, the coder can only make assumptions, influenced in turn by the researcher's subjectivity. Notwithstanding, the researcher of this dissertation decided to code for meaning by relying on his/her grammatical knowledge and by making inferences based on contextual information. In particular, the preceding and following sentences to the one containing the verb in question play an essential role in helping identify form meaning. For example, when a participant was talking about a series of sequenced past events, it was assumed that an infinitive form in that event sequence served to move the plot forward like the present or preterit usually do. The levels of this variable were formulated on the

basis of the canonical functions ascribed to each past form in our envelope of variation. Moreover, each past form may index sub-meanings, and thus the coding scheme for this variable was originally very detailed (*Manual de la Nueva Gramática de la Lengua Española*, 2010), as illustrated below in Table 1-3 taken from chapter one (reproduced here as Table 3-5):

Table 3-5. Review of form-meaning mappings in English and Spanish past temporality (reproduced from Table 1-3, chapter 1).

Aspectual meaning	Status	English form	Spanish form
Perfective (real realized bounded past actions) • **Completed/terminative**	Finished eventuality/situation	***Past*** Marta was ill last Sunday.	***Preterit*** Marta estuvo enferma el domingo pasado.
• **Iterative**	Iteration of finished events.	***Past*** Marta arrived to work late last year.	***Preterit*** Marta llegó tarde al trabajo el año pasado.
Imperfective • **Habitual**	Period unfinished Each instance finished	***Past/other means (used to/would)*** Marta used to sing in a choir.	***Imperfect/ Periphrasis (soler + Infinitive)*** Marta cantaba/solía cantar en un coro.
• **Continuous**	Unfinished	***Past*** Marta was ill (when I visited her).	***Imperfect*** Marta estaba enferma (cuando la visité).
• **Progressive**	Unfinished	***Periphrasis (copula + V-ing)*** Marta was singing when we arrived.	***Imperfect/Imperfect Progressive (copula + V-ndo)*** Marta cantaba/estaba cantando cuando llegamos.
Perfect/Anterior • **Current relevance**	Past situations are still relevant at speech time	***Present perfect*** I've traveled a lot these past years.	***Complex preterite perfect*** He viajado mucho estos años.
Nuanced aspect meaning • **Perfective-progressive mix**	A durative event that came to an end	***-?***	***Preterit progressive*** Marta estuvo estudiando para el examen toda la tarde.

Due to the statistical disadvantage of having multiple levels within an independent variable that can skew the analysis, the researcher decided to simplify the coding by merging some of the levels, without losing important information. Table 3-6 below shows the coding-scheme adopted for this variable.

Table 3-6. Coding changes in aspectual meaning.

Original meaning	Recoded meaning	Reasons
Perfective • **Completed/terminative** • **Iterative**	***Perfectivity***	Iterative situations in our corpora were scarcely produced. Perfectivity was also coded for preterit progressive eventualities which express durational completed events. Since these contexts were not frequent in the data, it was deemed appropriate to classify preterit, lexical-preterit, and preterit progressive forms by indicating perfectivity where context confirmed it.
Imperfective • **Habitual** • **Continuous** • **Progressive**	***Continuity*** (continuous situations in the past without any process involved or open series of situations that repeat themselves during some time) ***Progressivity*** (ongoing past eventuality)	Continuity combines both habituality (found with dynamic verbs) and continuity (found with stative verbs). The only difference between these categories is the types of verbs with which they occur. The purpose was to get rid of fine meaning categories that hinder the statistical analysis.
Perfect/Anterior • **Current relevance** (archetypal meanings of the perfect such as experiential, recent and resultative pasts)	***Current relevance*** **(CR)**	-

It is hypothesized that the lower proficiency level (i.e., 1st semester) would use the present as a default form to refer to past time. The 2nd semester level is hypothesized to use emergent preterit for perfective past actions and the already acquired present for imperfective meaning until the imperfect, through exposure and practice, can be mapped to that function. However, in line with the Default Past Tense Hypothesis (Salaberry, 1999, 2003), the 2nd semester level is expected to rely on the preterit as a default marker across perfective and imperfective meanings. The present perfect is expected to emerge in the 2nd semester when it is initially introduced. Nonetheless, due to the restricted time allotted to the learning of this form, it is predicted that it will begin to establish in the IL system in the 3rd semester. Since the 2nd semester level's textbook introduces the present perfect within the recent/resultative past uses, the form is thus expected to be initially associated with those two functions and more meanings would be mapped to it with increasing proficiency. However, given the nature of the oral task, which requires students to narrate past stories at specific time points, the form is not expected to be very frequent since few contexts would trigger its use. Conversely, the written contextualized task (i.e., WCT) is expected to trigger a higher PP distribution since the canonical functions of the form were manipulated in the task. In this case, it is hypothesized that the higher proficiency learners will show higher frequency of selection of the form given their knowledge of grammatical rules and how and where the perfect is used. Furthermore, both the oral task and the WCT are a good testing ground for the examination of the degree of grammaticalization of the perfect by showing whether it is mapped to perfective eventualities that move the story ahead. Comparison with the NS baseline will be essential to determine whether the NS input is characterized by this use of the form.

Furthermore, it is hypothesized that the imperfect-progressive will emerge in the 3rd semester with its prototypical meaning of progressivity and both that form and the imperfect will

be mapped to their respective prototypical functions, i.e., the imperfect to habituality and the imperfect-progressive to progressivity. It is the higher proficiency levels that will show movement toward multifunctionality associating the imperfect form to both habituality and progressivity. It is further hypothesized that the conversational historical present, associated with perfective past actions in the discourse and competing with the preterit in some contexts will tend to emerge at higher proficiency levels, when the learner is ready to restructure the verbal system by mapping new meanings to a single form. In addition, the preterit progressive is not expected to emerge until the more advanced levels (i.e., $5^{th}/6^{th}$ semester) due to its low frequency of use among the NS participants largely in colloquial style, its formal complexity as a periphrasis, and its bi-functional nature of encoding perfectivity and progressivity/durativity simultaneously.

3.4.1.3.2 Lexical aspectual type

The Aspect Hypothesis (Andersen & Shirai, 1994; Shirai & Andersen, 1995) claims that emergent past TA morphology is contingent on the inherent semantics of the verb in tandem with the Congruence Principle, which argues that learners choose the morphological form whose core meaning is more congruent with the inherent aspectual meaning of the verb (Andersen & Shirai, 1994). Therefore, past tense morphology emerges on the basis of prototypical choices between grammatical aspect, aspectual meaning, and verb semantics. As was previously explained, the AH proposes a developmental trajectory in the acquisition of past-time expression in which the preterit emerges before the imperfect. Additionally, due to the canonical association of preterit with perfective (completed) meaning, it should emerge with a semantically congruent verb type that naturally encodes a terminal point in itself (e.g., telic verbs). Conversely, the imperfect, characterized by imperfective meaning, should emerge with verbs that express incompleteness (e.g., atelic verbs). In later stages of acquisition, past forms should be more frequently associated

with non-prototypical semantic verbs (e.g. atelic verbs with preterit) in line with native-speaker trends.

In order to analyze the effect of lexical aspect in the use/selection of past time expression in the NS and learner data, verbs from the oral narrative task were coded on the basis of the four-way classification type into achievements, accomplishments, activities, and states (Vendler, 1967). With regard to the written personal cloze narrative task, the verbs were coded into the broader semantic categories of telic and atelic due to the instrument's added time for completion. Moreover, in order to have a measure of reliability, two research assistants served as inter-raters. They were provided with definitions and examples of each lexical class and consulted the researcher in cases of doubt or ambiguity. Whenever discrepancies or questions arose, the classifications were confirmed by Shirai's (1991) operational tests of telicity, widely used to operationalize lexical aspect in the tradition of TA morphology research, consisting of the following progressive steps as described by Shirai (1991, 2013):

1. **Step 1: Is it a state?**

- Ask: Does V have a habitual interpretation in simple present?
- If no => V is a state.
- If yes, go to step 2.
- Example: *to love running* (state) ≠ *to buy running clothes* (non-state)

2. **Step 2: Is it an activity?**

- Ask: Does "X is V-*ing*" imply "X has V-*ed*" without an iterative/habitual meaning?
- If yes => V is an activity.

3. **Step 3: Is it an accomplishment or an achievement?**

- Ask: If "X V–*ed* in Y time", then "X was V–*ing* during that time"

- If yes => V is an accomplishment.
- If no => V is an achievement.
- Example: *I ran a marathon in three hours* (accomplishment) ≠ *I entered a marathon* (achievement).

Due to conflicting findings regarding the effect of lexical aspect on the development of L2 past morphology, our hypotheses embrace a range of possibilities. In line with the AH predictions, it is hypothesized that the NS instructor group would show few lexical aspectual restrictions across the use of the wide range of past tense markers. The advanced learners are expected to show the same trends as the NSs. Hypotheses for the lower proficiency levels maintain that a stronger association should exist between lexical aspect and past tense marking.

Conversely, a number of studies (Salaberry, 1999, 2003, 2011) have refuted the main tenets of the AH, having found no association between lexical aspect and past tense marking in beginning proficiency levels. Furthermore, Tong and Shirai (2016) argue in favor of the Lexical Insensitivity Hypothesis, by which some beginning L2 learners are insensitive to lexical aspect, but as learners' proficiency increases, they should become more sensitive to the semantics of verbs, showing a stronger association between the inherent aspectual meanings of the predicates and the past tense markers. Based on these findings, it is hypothesized that the higher proficiency level groups and the NSs will exhibit an increasing effect of lexical aspect (e.g., Salaberry, 2011).

Since this dissertation is an attempt to comprehensively weigh the statistical significance of all of the factors implicated in the L2 Spanish past marking acquisition, it was decided that other verbal taxonomies proposed by leading scholars should also be analyzed. González (2013) proposed the Predication-Effect Hypothesis for beginning learners, which states that the durative-terminative distinction that characterizes a certain predication (i.e., verb + argument(s)) proves

more relevant than Vendler's four-way classification. The author argues that the imperfective-perfective choice (i.e., preterit and imperfect) made by learners at lower proficiency levels in Spanish primarily relies on the predicational aspect of the eventuality or situation (i.e., terminative versus durative) about which they intend to tell or write. NSs' choice, on the other hand, was dependent on the intended global meaning at the sentential- discourse level (i.e., perspective on the eventuality/situation). The hypothesis proposes that preterit will emerge in the learner's IL as a default verbal form and it will thus occur with both predication types, in line with the claims made by the Default Past Tense Hypothesis (i.e., DPTH: Salaberry, 1999).[30] The second stage, the author argues, should proceed with the emergence of the imperfect across durational predications, since durativity is assumed to be the unmarked aspect in language production. This stage differs from that of the DPTH in that it relies on the compositional aspect of predications as opposed to verbal aspect alone (González, 2013). In order to operationalize this variable in the current dissertation research, verbs in both the learner and NS corpora were classified into telic and atelic, which broadly resembles González's (2013) verb classification into terminative and durative.[31]

Another aspectual taxonomy (Domínguez et al., 2012) proposed in the acquisition of preterit and imperfect forms at initial developmental stages claims that beginning learners' choice between preterit and imperfect is determined by dynamicity constraints. Specifically, the authors found that dynamic verbs (i.e., achievements, accomplishments, and activities) are most often associated with preterit and non-dynamic ones (i.e., stative) are more strongly associated with the

[30] The DPTH has been referred to as the "Lexical Insensitivity Hypothesis" in Tong and Shirai (2016).

[31] González (2013) differentiates between the pair terms telic-atelic and terminative-durative and concludes that the former dyad implies an inherent target that some predications do not seem to have such as "begin to talk".

imperfect. Furthermore, the study found that the effect of telicity on past form use becomes apparent with increasing proficiency. Specifically, telic-preterit associations at advanced levels are prominent mostly across the least controlled tasks. However, an association between dynamicity and preterit was stronger in controlled tasks. In order to test this hypothesis, the verbs in our learner and NS data were reclassified accordingly as dynamic and non-dynamic.

It was finally decided that the two-way classification of verbs into telic and atelic would be used in the statistical model for both oral and written tasks due to the low number of or empty cells that a four-way taxonomy yielded in the crosstabulations. The other taxonomies were analyzed descriptively.

3.4.1.3.3 Temporal adverbials

According to Bardovi-Harlig (2000) the study of TA morphology has allowed researchers to obtain a clearer picture of the developmental expression of past time. Specifically, this expression can be implemented via pragmatic, morphological, or lexical devices such that at beginning stages of acquisition the learner will use only temporal adverbials to mark temporality (e.g., in lexical stages, a specific time adverbial like *yesterday* can be enough to mark past time at low proficiency levels) or will indicate sequence of past events by means of un-tensed verbs ordered chronologically (i.e., in pragmatic stages), with these adverbs carrying a large amount of functional load. The hypothesis posed for the development of morphology contends that at later proficiency levels, as verbal morphology for the expression of past time extends and becomes more solid, eventually less reliance on lexical devices such as temporal adverbials will be exhibited in the learner's IL. This restructuring of the verbal system should witness a reduction on adverbial functional load at higher proficiency levels, with pastness being encoded by the developing verbal

system more and more. Therefore, accounting for the role of adverbials in our attempt to examine past-time expression is vital if we want to track TA development across proficiency.

With regard to the learner groups, we predicted a higher usage rate of adverbial expression in the low proficiency levels. The general hypothesis we offer is that NSs and higher proficiency level participants will show significantly lower rates of temporal adverbial use due to their mastery of the morphological expression of past temporality and the speakers' ensuing need to avoid the use of extra informational weight that adverbial modification carries. In consequence, the beginning learners, traversing a pre-morphological lexical period in the expression of temporality, were expected to yield a higher frequency of adverbial use (Bardovi-Harlig, 2000; 1992c).

Conversely, other roles for adverbials were found in previous studies on the L2 Spanish acquisition of past morphology (e.g., Baker & Lubbers Quesada, 2011; Lubbers-Quesada, 2007, 2013, 2018). In particular, these works found that adverbials are used across proficiency levels with distinct functions. Whereas the lower levels depend on adverbials to mark tense-aspect categories, mark sequentiality, etc., the higher levels were found to use a larger number of adverbial types and adverbial complexity with the purpose to embellish use of language or to express complex ideas. In this vein, the prediction is that adverbials will perform different functions across proficiency levels, with beginner learners showing higher reliance on simple adverbs, and with higher levels showing a more sophisticated use of more syntactically complex adverbials.

Finally, sociolinguistic studies on the Spanish perfect aoristic drift and its competition with the preterit in perfective contexts have examined whether the adverbial type used by the speakers indicated a perfective meaning of the verbal predicate or not. For example, specific adverbials and connective adverbials are frequently chosen by NSs across perfective contexts that advance the

narrative. Furthermore, given the fact that the perfect has retained its canonical current relevance function in most regions of the Spanish-speaking world (i.e., recent past, persistent situation, experiential past), it is hypothesized that this form should be favored by commonly co-occurring adverbials (i.e., frequency, indefinite, and durational) by the NS instructors' group.

Taking all of the research into account, adverbials in this study were coded according to two classification types. Following Lubbers-Quesada's (2013) taxonomy, adverbial codification distinguished among temporal adverbials of position, which specify the position of a time period on the time axis in relation to some other time period (e.g. *ahora* "now", *ayer a las 6 "*yesterday at 6:00"); adverbials of contrast, which serve to mark a particular contrast (e.g. *otra vez* "again", *todavía* "still", *ya* "already"), adverbials of duration and time span (e.g. *por varios años* "for many years", *toda la semana* "all week", *en una hora* "in an hour"), and adverbials of quantity or frequency (e.g. *dos veces* "twice", *frecuentemente* "frequently", *casi nunca* "hardly ever"). In addition, two other adverbial types were added: connective, typically used in introducing sequenced events, and which would tend to trigger preterit use, and the absence of an adverbial (NA). It is important to note that *pero* "but" was considered as a conjunction of contrast but at times it was coded as a connective adverb, if the role was to concatenate a series of perfective events. Moreover, where the adverbial was of an indefinite type such as "the other day", the researcher decided to consider it as a specific adverb since it provides some kind of temporal anchoring, different from when an adverbial is not present.

In line with previous sociolinguistic research on the perfect-preterit variation across perfective contexts (Rodríguez Louro, 2009; Schwenter & Torres Cacoullos, 2008), temporal adverbial modification was coded as follows: specific adverbs which designate a specific point in time (e.g., ayer "yesterday"), indefinite temporal adverbs, which are vague and lack temporal

anchoring (e.g., el otro día “the other day”, un día “one day”, una vez “one time”), connective adverbs (e.g., luego “then”, y “and”), frequency adverbs (e.g., a veces “sometimes”), the presence of ya “already,” durational adverbs (e.g., por una hora “for an hour”), other adverbs which do not meet the previous descriptions (e.g., aún ”still/yet”); and the absence of a temporal adverb (NA).

Finally, in order to offer a general gauge for the presence of a temporal adverb as opposed to the lack thereof, the researcher also coded for the absence and presence of a temporal adverbial (i.e., A versus NA) as a binary feature. The goal of a binary classification was to test Bardovi-Harlig’s (1992) contention that adverbials in general decrease in use as proficiency increases and to make a comparison between the oral and the written data, which only used a binary classification of adverbials.

With respect to the statistical model, I made the choice to use Lubbers Quesada’s taxonomy due to the comparability of her study with L2 Spanish classroom learners and our data. The results of crosstabulations yielded low numbers of certain adverbial types so recoding was deemed necessary. The data patterning attested in the crosstabulations provided the necessary grounds to recode position and connective adverbials into a single category and frequency and duration adverbs into another category. Therefore, the final statistical model included a three-way adverbial modification with the two aforementioned recoded categories plus the category of absence of adverbial.

3.4.1.3.4 Temporal reference

Even though this variable has not been used in previous L2 concept/form-oriented past morphology research, sociolinguistic variationist studies (e.g., Schwenter & Torres Cacoullos, 2008; Rodriguez Louro, 2009; 2016) and L2 variationist research (e.g., Kanwit, 2015, 2017; Geeslin et al., 2008; Whatley, 2013) have consistently analyzed the role of temporal reference on

past time marking usage. This variable has helped examine the degree of grammaticalization of the present perfect, by indicating whether the form occurs in past perfective contexts (prehesternal, hesternal, hodiernal) being highly grammaticalized or whether it occurs in irrelevant canonical anterior uses showing signs of no grammaticalization.

As a result, since our research seeks to examine the comprehensive use of past-time expression among NSs and L2 learners, with a comprehensive envelope of variation that contains a range of TA markers, inclusion of this variable is crucial in order to obtain a full picture of how past-time markers encode past perfective meaning at different past time points. Consequently, in line with the aforementioned previous variationist studies, five different temporal references were coded: hodiernal (today), prehodiernal (before today), prehesternal (before yesterday), irrelevant temporal contexts (i.e., do not answer the question of when an action occurred since temporal anchoring is irrelevant. These contexts normally include the canonical uses of the perfect) (See Example 5), and indeterminate temporal reference; i.e., despite the fact that the past event is situated at a specific past time, no reference is made to it (see Example 6).

21. ***He sido*** *alumna doctoral por 5 años*. (Irrelevant reference, persistent situation, current relevance).

    "I **have been** a PhD student for 5 years".

22. ***Estábamos durmiendo*** *cuando escuchamos un ruido.* (past time situation does not specify temporal anchoring. It is indeterminate if context does not provide the information for the interlocutor to work out temporal reference).

    "We **were sleeping** when we heard a sound".

Since the controlled written contextualized task coded only four of the categories described above, excluding "indeterminate" contexts, the same coding parameter was applied for the oral

prompt. The exclusion was deemed appropriate due to the constraints in terms of length and duration allowable for the cloze task. Another reason that justified the exclusion of the indeterminate contexts is the fact that they are generally accounted for by the absence of adverbials, a category within the variable of temporal adverbial modification. Finally, since the researcher had contextual information regarding all of the narratives and the time point for each, it was usually easy to understand when the situation took place.

3.4.1.3.5 Discourse grounding

Discourse has a pivotal influence on the distribution of TA morphology for both NSs and near NSs, and discourse structure plays an important role in marking the way that past morphology emerges and develops (Bardovi-Harlig, 2000, 2013, 2017; Comajoan, 2013). The most widely investigated discourse and text type in L1 and L2 acquisition of past morphology has been the narrative. The narrative text recapitulates a series of real or imaginary events in chronological order and these events are advanced by the question "What happened next?" (Bardovi-Harlig, 2000). The narrative discourse has an inherent structure that comprises two parts: the foreground and the background. The former includes past events within the skeletal structure of the discourse, the sentences/utterances move time forward and the events proceed in sequence (Bardovi-Harlig, 2000; Dry, 1983; Hopper, 1979). The background, on the other hand, provides secondary information that supports, evaluates, or elaborates on the foregrounded events. Cross-linguistic studies with NS participants have found that the preterit/simple past is used across the foreground and the findings have suggested that the foreground and the background are regarded as a universal distinction with regard to narrative discourse (Bardovi-Harlig, 2000; Dahl, 1985; Hopper, 1979). As a consequence of all this work, the Discourse Hypothesis (DH) in L2 acquisition claimed that

emerging verbal morphology is used by L2 learners to differentiate the background from the foreground (Bardovi-Harlig, 1994a).

Following Labov and Waletzky's (1967) narrative structure, all those verbs that included orientative and evaluative material that builds around the main story events, oftentimes occurring within subordinate clauses, were coded as encoders of the background. Those verbs that encode foregrounded events within the complicating action, usually occurring in main clauses, were coded as encoders of the foreground.

Both NS and learner participants were predicted to use the preterit for foregrounded events and the imperfect for backgrounded events. However, this would not be predicted to apply for the 1st semester, for which foregrounded events were expected to be in the present, as a likely default form in this level. With regard to the NS instructors, it was expected that those from Peru and Colombia would use the PP in some perfective contexts, in line with previous research in Andean Spanish.

In terms of developmental stages, it was hypothesized that the lower proficiency levels would use preterit across both grounding types, in line with the Default Past Tense Marker Hypothesis that argues that learners will show the use of one single past marker across all past time contexts. Increasing proficiency will reveal a more balanced distribution of preterit and imperfect, each of which is predicted to be used to distinguish foreground from background respectively. Furthermore, since our study aims at examining the effect of task type, it is expected that a personal narrative will trigger more backgrounded contexts than an impersonal one, as found in previous research. It was also hypothesized that given the restricted verbal system of the beginning level learners, and their linguistic limitations in general, the 1st semester would not exhibit higher rates of backgrounded events in personal narratives. It was expected that this group

would prioritize the foreground by focusing on the sequentiality of events, avoiding the elaboration of detail due to the restriction imposed by their low proficiency in the language. It is important to note that the higher proficiency levels and the NS groups would show a more sophisticated use of the foreground by bringing to the forefront a series of habitual events that used to take place in the past. This was a very frequent narrative telling type in these groups.

This dissertation also examined the interactional effects of lexical aspect and grounding on the L2 acquisition of past morphology and the common and differing predictions of both the AH and the DH (Table 6, chapter two). To this end, cross-tabulations were run for each participant group. It was predicted that beginning stages would not show an effect of telicity or grounding, if the groups are using a default form for the past. When past morphology emerges, we predict that telicity will have an initial significant effect whereas grounding would have an effect in higher proficiency levels. When interactions are considered, we hypothesized that differing predictions would confirm the AH's claims at lower proficiency levels and the DH's claims at higher levels. Nevertheless, considering recent research on the effect of aspect and grounding on past marking, we could also expect an increasing effect of telicity with increasing proficiency, as well as an overriding effect of grounding mostly at very high levels and across the NSs.

3.4.1.3.6 Clause type

In line with the Discourse Hypothesis (Bardovi-Harlig, 1994a), subordinate clauses are typically found in the background of the narrative and main clauses are found in the foreground, which in turn moves the narrative forward as an answer to the question "What happened next?" Therefore, we hypothesized, based on the principle of prototypes, that a combination such as main clause, foreground, telic verb would predict preterit use mostly at beginning stages. Conversely, situations expressed by subordinate clauses, would typically be found in the background of the

narrative and would therefore predict the use of the imperfect. As a consequence, the oral prompt utterances containing a past-time marker were coded as occurring in main or subordinate clauses. It is hypothesized that at beginning stages (e.g., 1st semester) learners will tend to use the present as a default form across past contexts. Due to their limited interlanguage, no subordination was expected, and all verbs should be produced in main clauses. When the preterit emerges, learners are expected to lower their high rates of present usage and show an increase in preterit use, mostly produced in main clauses. The present now is predicted to express imperfective meaning but still little subordination is expected. At the highest course-levels, the present is predicted to be used to mark pastness in spontaneous speech across past events that are vivid at the speaker's present (i.e., conversational historic present, Bonilla, 2011). The higher proficiency levels are predicted to show higher utterance production rates in general and of subordination in particular, also showing their ability to move back into a further past and forward to a future in the past by relying on more complex language structure.

3.4.1.3.7 Person-number

The person and number of the past tense verb form were also coded. It was predicted that personal narratives would elicit the use of 1st person singular forms whereas the movie retell would result in a higher rate of 3rd person singular verb forms. Also, within the personal narrations, it was predicted that the most emotional ones would elicit a balanced number of 1st person and 3rd person singular forms, whereas the narrations about yesterday and today's activities would show the highest 1st person singular forms. Furthermore, beginner learners were predicted to yield higher rates of non-target like form usage that would indicate a lack of grammatical agreement between the person-number form produced and the actual person-number referenced. Therefore, we aimed at determining whether the linguistic category of tense is learned prior to person and number.

3.4.1.3.8 Verb frequency

Language knowledge involves statistical knowledge so humans learn more easily and process more fluently high frequency forms and regular patterns with many exemplars and with few competitors (Ellis, 2013). Frequency is a key determinant of acquisition because rules of language emerge from the distributional characteristics of the input and from exemplars. In turn, prototypes are defined as the exemplars most typically associated to a category and are thereby judged faster and more accurately. A frequency-based approach argues that frequency/prototypicality effects are available from the beginning and determine the sample of language the learner is likely to experience. Andersen (1993) proposed the Distributional Bias Hypothesis, claiming that the input the learners receive exhibits distributional patterns similar to those observed in learners' productions (see Andersen & Shirai 1996 for a comprehensive review of DBH in TA acquisition). Such input frequency biases should aid the statistical learning of TA constructions.

According to Ellis (2013), the Aspect Hypothesis is an important hypothesis of TA acquisition in terms of the cognitive processes of prototype formation: the abstract grammatical schema for perfective past generalizes from the more concrete beginnings close to the prototypical center in the clear exemplification of telic verbs, whereas the progressive emerges from the concrete exemplars in the semantics of activities and states. At the end of the acquisitional development, the learner is able to break the categorical pairing of one lexical aspectual verb type and one TA form by showing multifunctionality. Recent studies have shown that the effect of lexical aspect tends to increase with exposure to the L2: this is contrary to the expectation that lexical semantics has maximum effect at first, until non-prototypical pairings are eventually incorporated in the L2 system. These results are in agreement with the type and token frequency

approach, since the productivity of a pattern is a function of type frequency; the more forms that exemplify a pattern, the more productive that pattern becomes. Therefore, as proficiency increases, the more prototypical exemplars the learner encounters, the more semantically restricted their past tense marking is. Bybee (2010) argues that highly frequent words have stronger mental representations that are in turn more easily accessed during production and thus exposure to linguistic tokens strengthens their mental representation. In this regard, token frequency directly bears on emergent linguistic structure, while type frequency plays a determining role in schema productivity. In other words, high preterit token frequency is claimed to be crucial for the preterit schema to emerge in beginning stages (i.e., the higher number of preterit tokens the learner encounters in the input, the easier for the form to emerge in the IL), whereas high type frequency (i.,e., the number of different verbs that tend to associate with the preterit) is essential for the preterit to become more productive and thus to get established in the learners' IL.

In order to operationalize the variable verbal frequency, four measures of frequency were calculated. Firstly, relative lemma frequencies were calculated within each participant group in the personal oral narrations. Calculations followed the 1% cut-off frequency point proposed in Bayley et al. (2013), Linford & Shin (2013), and Linford et al. (2016), and thus a verb was coded as frequent if it constituted at least one percent of the verb tokens in the corpus of analysis. An example of the frequencies found in the oral corpus of an NS group of Tucumán Spanish in Argentina is provided in Appendix B.1. This measure aimed at determining whether relative verb frequencies based on learner and NS data can predict past-time marking. If the preterit is the most frequently used past tense marker across participants, we wonder whether its occurrence is predicted by the participants' use of highly frequent verbs in the internal corpus and whether these frequencies align with the NS corpus internal frequencies and NS external one (Davies, 2018). The

latter frequencies based on an external corpus of Latin American Spanish and Peninsular Spanish were entered in each Excel file as exact frequencies of the verbs used in each participant group. Finally, cross-tabulations and chi-square tests were performed for each participant group (NSs and learners) and comparisons were made across proficiency levels and between NS and learner data.

A second frequency measure adopted in this research examined the token and type frequencies of the same past forms but with the addition of the present form, only for the lower proficiency levels. The reason for considering the present indicative was based on the highest rates of use and selection obtained in both the oral and written data of the 1st and 2nd semester levels. This frequency measure consisted of calculating the token frequency of the past forms in the learner and NS corpora in order to examine which form (i.e., preterite, imperfect, or present) was more frequently used. A second step consisted of examining whether each past form's token frequency was correlated with the number of distinct verbs (i.e., verb types) that were associated with them. Specifically, the purpose was to determine how many verb types occurred with preterit, imperfect, and present. In order to determine which verbs represented the majority of tokens for each form/construction, the conditional probability of a verb occurring in either the preterit or imperfect was calculated by performing a distinctive collexeme analysis (Gries & Stefanowitsch, 2004).

A third frequency measure determined which of the verbs with higher probabilities in each past form had the highest relative frequencies within the corpus as well (see Appendix B.2). Finally, the verbs with the highest conditional probabilities in each past form were compared across learner corpora and with the NS corpus in Davies (2018) and with the NS group corpus in the current research in order to establish connections between the patterns across corpus internal and corpus external measures.

A fourth measure of token and type frequency was used in order to disambiguate the role of morphological (ir)regularity, grammatical person-number, and lexical aspect of the verb in affecting the use of preterit and imperfect in learner and NS data. Moreover, and in line with usage-based approaches in second language acquisition, this measure aims at further examining whether linguistic categorization is a matter of degree or gradience (Huback, 2011; Shirai, 2016), with an increasing association between preterit with less prototypical exemplars. In this sense, we may predict an increasing effect of atelicity across preterit with increasing proficiency, with activity verbs first and subsequently with stative verbs progressively occurring with the form more and more frequently. To this end, all verbs produced by the participants were classified according to their actual person-number form (1st singular or plural, 2nd and 3rd singular and plural), their regularity or irregularity and their verbal paradigms (i.e., verbs ending in *-ar* or *-er/ir*) which entail different formal characteristics of the verb. The aim was to determine whether a certain verb type (e.g., telic, *-ar* regular verbs in the 3rd person singular form) is a good predictor of preterit and imperfect. Cross-tabulations were used to examine the patterns of the data. Due to the fact that regularity is construction dependent (i.e., a certain verb may be regular in the imperfect but irregular in the preterit), no regression analysis was deemed appropriate. For a detailed discussion of the way data analysis was carried out, see chapter 4.

With regard to the statistical analysis, our regression model included one measure of frequency based on the relative frequency of the verbs used in each participant group according to the frequencies provided for such verbs in the frequency dictionary by Davies (2018). Specifically, those verbs in the dictionary that ranked between 1 to 1666 were classified as high frequency verbs; those that ranked between 1667 and 3333 were classified as mid frequency verbs; and those verbs than ranked from 3334 to 5000 were classified as low frequency verbs.

3.4.1.3.9 Narrative types and sub-types

Previous research has consistently found that the distribution of past-time markers in learner and NS production is determined by the type of narrative. Specifically, a personal narrative that taps into the speaker's emotions and relevant past experiences is expected to encourage the participant to tell more details to make the story more engaging to the interlocutor. Nevertheless, pilot data from Fall (2018) and Summer (2017) revealed that the learner and NS participants did not approach all personal narratives in the same way. In particular, the trend they followed showed that the danger and/or the childhood stories triggered a larger amount of background information than the narratives about yesterday and today's activities. The latter were approached in a more mechanical, automatized way, as a concatenation of sequenced events, with barely any subsidiary information.

As a consequence, it was decided that past-time marking should be examined at both a more macro level (i.e., personal versus impersonal, fictional narratives) and a more micro level through oral narrative sub-types. Moreover, since most data collection instances took place during the morning, the number of utterances produced across the today's activities narrative were remarkably lower. Each story type was analyzed for past form distributions, with coding 1 of the coding scheme in Table 3-7 being adopted for the statistical analysis:

Table 3-7. Sub-classification of personal narratives.

Coding 1	Coding 2
Stories were originally coded in relation to their topic: a) Childhood b) Danger c) Yesterday d) Today	The four stories were recoded by merging them in two types: a) Childhood and fear stories: emotion story b) Yesterday and today's stories: non-emotion stories

3.4.1.3.10 Form accuracy

All forms produced by the learners were considered for the analysis in order to provide a qualitative and quantitative description of developmental paths, taking into account learner variation and how it is systematically predicted by a set of sociolinguistic factors. Nevertheless, in line with previous research (e.g., Ramsay, 1990), the researcher coded for the well-formedness of the markers (i.e., "morphological verbal characteristics", pp. 185-186) used by the learner participants with the purpose of obtaining what Ramsay called "morphosyntactic profiles" of IL development, modified from Klein and Dittmar (1978). Specifically, the aim was to examine the developmental trajectory from lower to higher proficiency levels in terms of the accuracy of the used or selected past forms and whether the mastery of person agreement between subject-verb takes place as other past forms are produced, all of which would represent an addition to the proposed data analysis.

Since this dissertation focuses on form-meaning mappings, the coding of this variable only distinguished between target-like and non-target-like verbal forms produced by the learner and near NS groups. In addition, target-likeness was further coded by following some of the categories provided in Ramsay (1990). For example, a non-target-like form was classified as such if:

a. a suffix did not agree in person and number with the subject
b. a form was the result of overregularization (morphophonological deviances)
c. the verb was in English
d. infinitives were used in a non-target-like way
e. verbs were omitted, adjectives or nouns replaced verbs
f. it was in a different mood that was not indicative

E.g., *yo me duche* instead of *yo* me *duché* "I have (imperative-subjunctive) a shower" instead of "I had a shower".

3.4.2 Summary of coding scheme of linguistic variables

This section presents a complete list of the independent linguistic variables with their corresponding levels which were for the oral prompt task (see Table 3-8) and the written contextualized task (see Table 3-9).

Table 3-8. Independent variables and their levels (oral prompt task).

Variable	Categories/Levels
1a. Lexical aspectual class	• Vendlerian classification of verbs: achievement, accomplishment, activity, and state
1b. Predication aspect	• Terminative (telic) • Durative (atelic)
1c. Dynamicity	• Dynamic verb (achievement, accomplishment, activity) • Non-dynamic verb (state)
2a. Temporal adverbial 1	• Specific, connective, frequency, duration, indefinite
2b. Temporal adverbial 2	• Position, connect, quantity-frequency, duration, contrast
2c. Absence or presence of adverbial modification	• Adverb (A) versus no adverb (NA)
3. Temporal reference and distance	• Pre-hesternal • Indeterminate • Hesternal • Hodiernal • Irrelevant
4. Discourse grounding	• Foreground • Background

5. Clause type	• Main • Subordinate
6. Person-number agreement	• 1st, 2nd, 3rd (singular and plural)
7. Narrative sub-type	• Childhood, danger, yesterday, today • Emotion versus non-emotion stories
8. Form accuracy	• Target-like versus non-target-like
9. Verb frequency	• Exact frequencies (Davies, 2018) • Frequent versus infrequent • Type and token frequencies • Distinctive association

Table 3-9. Independent variables and their levels (written contextualized task).

Variable	Categories/Levels
1a. Lexical aspectual class	• Vendlerian classification of verbs: achievement, accomplishment, activity, and state
1b. Predication aspect	• Terminative (telic) • Durative (atelic)
1c. Dynamicity	• Dynamic verb (achievement, accomplishment, activity) • Non-dynamic verb (state)
2. Absence or presence of adverbial modification	• Adverb (A) versus no adverb (NA)
3. Temporal reference and distance	• Pre-hesternal • Hesternal • Hodiernal • Irrelevant & Indeterminate
10. Discourse grounding	• Foreground • Background
11. Person-number agreement	• 1^{st}, 2^{nd}, 3^{rd} (singular and plural)
12. Narrative sub-type	• Childhood, danger, yesterday, today • Emotion versus non-emotion stories
13. Form accuracy	• Target-like versus non-target-like
14. Verb frequency	• Exact frequencies • Frequent versus infrequent • Type and token frequencies

This section will finish with a summary of the hypotheses posed for the different research questions, presented in Table 3-10 below.

Table 3-10. A summary of the research questions and corresponding hypotheses.

Research questions	Hypotheses concerning the learners	Hypotheses concerning the near NSs and NS participants
RQ1 **a. What are the non-morphological devices used across the learner groups and NS instructors in order to express pastness across oral personal narrations?**	• Heavy dependence on context: pragmatic and lexical means. • Higher rates of adverbial and noun/noun-phrase use that replace morphology. • Use of "parataxis", i.e., extensive reliance on discourse-pragmatic factors, a minimal use of morphosyntactic devices, and a large number of verbless clauses or infinitival ones (Sato, 1990, p. 84). • Non-target like use of non-morphological means at the lowest levels.	• A balance between non-morphological means and morphological ones. • A proficient mix of parataxis and syntaxis • Some NNSs may be expected to behave more like advanced learners than as NSs
b. Is there a clear developmental sequence regarding past-time expression from the 1st semester level to the highest level?	• Movement across three stages (pragmatic, lexical, and morphological) which overlap with each other • Use of more non-target-like non-morphological means of expression than the higher-level groups. • The developmental path should provide evidence about the differing functions of lexical-pragmatics in the IL	• NA
c. How do both sets of groups compare and/or differ from each other?	• Change from non-target-like to more target-like means of expression. • As proficiency increases, less reliance on lexis and pragmatics and more frequent use of morphology.	• Native-speakers are able to use non-morphological means in ways that learners cannot.

RQ 2 **a. What are the rates of use and selection of past time markers across our participant groups (i.e., NS and NNS instructors, elementary, intermediate and advanced L2 learners) across task types (i.e., personal oral narration task and a written contextualized task), and across narrative sub-types within personal oral narratives (i.e., remote past, yesterday, and today activities or emotion-stories versus non-emotion stories)?**	**Oral prompt task:** • Tendency towards favoring the use of one form at beginning levels: the present in the first semester and the preterit in the 2nd semester • Low use of peripheral past-time markers • No use of the present indicative as a conversational present **Written contextualized task:** • Higher rates of Imperfect form selection than of usage due to the instrument's manipulation of contexts. • Higher rates of perfect form selection than of usage due to the manipulation of its uses in the instrument. • Higher rates of perfect in the NNSs than in the NSs due to L1 influence _____ • Task types should trigger different TA distributions • Emotion stories should trigger higher rates of imperfect form due to increased backgrounded events (higher levels). The 1st semester level should use the present indicative for both the background and the foreground. • The higher levels will show higher usage rates of more peripheral markers mostly across emotion stories.	**Oral prompt task:** • Larger number of utterances and thus a larger number of past form tokens than the learner groups • Use of peripheral past-time markers • NSs: higher rates of use of the present indicative as a conversational present than the NNSs **Written contextualized task:** • Higher rates of Imperfect form selection than of usage due to the manipulation of contexts. • Higher rates of perfect form selection than of usage due to the manipulation of its uses in the instrument. • Higher rates of perfect in the NNSs than in the NSs due to L1 influence _____ • Task types should trigger different TA distributions • Emotion stories should trigger higher rates of imperfect form due to increased backgrounded events

b. What changes characterize learner development across proficiency levels in terms of frequencies of use/selection across task types?	• Basic verbal system in 1st and 2nd semesters: Gradual acquisition of past forms starting with preterit and followed by the imperfect and the present indicative. • Specializing verbal system (3rd and 4th semesters): restructuring of verbal forms-specialization of form-meaning connections • More specialized/target-like verbal system (5th/6th semester): systematic use of a more diverse verbal system • Peripheral markers emerge at higher levels • Lower rates of peripheral marking use (e.g., the perfect) than those of the NSs. • A clear developmental path observed in the OPT: movement from ➢ Default form to varied forms ➢ 1 form-1 meaning to multifunctionality; ➢ Overuse to appropriate usage rate ➢ Non-target-likeness to target-likeness	NA
c) How do learners' frequencies of use/selection compare to NSs'?	• As proficiency increases, the verbal system becomes more target-like. • 1st semester: use of present as default form for past situations: different from NSs	• The NSs' knowledge of Spanish grammar is expected to result in higher rates of peripheral markers • The WCT is expected to yield higher perfect rates than the oral task due to the manipulation of current relevance contexts • The near NS group is hypothesized to use more perfect as an L1 influence effect.

RQ 3 • **What linguistic and social constraints predict the use and selection of past markers in both NS and learner data across task types?**	• General Hypothesis: No sociolinguistic constraints in the 1st semester's use/selection of past morphology; gradual significance as a given form specializes and form-meaning mappings become more robust • 1st semester: the present is expected to be used across perfective and imperfective contexts and due to its multifunctionality it is not expected to be predicted by significant variables • 2nd semester: the preterit becomes the default past form and no significant conditioning is expected • 3rd semester on: the imperfect will be predicted by continuity and in subsequent levels it will add progressivity • Lexical aspect: the first wo semesters are characterized by default forms, therefore no semantic association between those forms and lexical aspect is hypothesized. Then, lexical aspect increases in effect with increasing proficiency. The WCT is predicted to yield less prototypical associations, mostly at more advanced levels • Discourse grounding: the foreground will mark preterit contexts from 3rd semester on and the background will tend to mark the imperfect. However, the imperfect can also occur in the FGD at more advanced levels when the speaker wants to concatenate a series of events that (s)he usually did in the past • Interactional effects: grounding is hypothesized to have an overriding effect mostly at advanced levels	• The preterit will be determined by the foreground in perfective contexts, and by position and connective adverbials.

	• Temporal adverbial: the use of adverbials will facilitate the use of past forms from initial stages but adverbial sophistication is predicted to occur at higher levels • Temporal reference: up to semester 3 the learners are predicted to use the past markers across today and yesterday's activities. Due to their restricted verbal system and vocabulary size of their IL, the pre-hesternal and current relevance contexts will be relegated until higher levels.	
• **What changes characterize learner development across proficiency levels in terms of linguistic and social predictors?**	• Predictors of past-time expression are expected to change across proficiency levels as an indication of verbal restructuring • Emergent morphology may be constrained by lexical aspect, developing morphology by both LA and grounding but advanced morphology will be determined by grounding • Lexical aspect: change from non-significant conditioning to significant; significant use of prototypical combinations; increasing non-prototypicality with increasing proficiency • Discourse grounding: grounding will become significant from 3rd semester and will maintain its significance with increasing proficiency. The change will lie in increasing factor weights. • Interactional effects: grounding is hypothesized to have an overriding effect mostly at advanced levels • Temporal adverbial: significant conditioning in initial stages (only position adverbials will determine preterit use)-no significant conditioning as preterit is restructuring-	• NA

	significant conditioning at advanced level with a more adverbial types becoming significant predictors • Temporal reference: the present as default in initial stages will occur across all past contexts; the preterit as default will occur across past contexts; with increasing proficiency specializing occurs and so preterit will be significantly determined by hesternal and hodiernal reference	
• **How do learners' predictors compare to NSs'?**	• As forms stabilize in the learners' IL and gain specialization in terms of canonical meaning, it is expected that the greater the linguistic conditioning will be. • Specifically, we expect increasing conditioning with increasing proficiency	• The most frequent forms will be highly linguistically constrained: • The preterit will be significantly conditioned by the foreground, with telic verbs, with connective and position adverbials across hesternal and hodiernal reference. The imperfect is predicted to yield the opposite conditioning to the preterit. • The near NS group should be exhibiting a similar conditioning.

3.4.2.1 Independent extra-linguistic variables

The independent extra-linguistic variables coded for both the learner and NS groups were gender, age, and grammar score. Experience in a study abroad immersion program (yes / no) and region of study abroad was coded across learner participants. Finally, region of origin for NSs was coded for the NS and near NS groups.

3.4.2.1.1 Data analysis

All finite verb forms utilized to express past temporality were examined (i.e., preterit, imperfect, imperfect/preterit, progressive, present perfect, infinitives, different-mood forms, etc.). Additionally, since the focus of the study was to track the development of past morphology and its variation in learner ILs, the analysis considered all attempts at past-time expression regardless of appropriateness of form (Bardovi-Harlig, 2000). The rates of use/selection of the past-time expressive devices were firstly analyzed qualitatively via a thorough description of the most representative patterns in the data. The concept-oriented approach promoted a description of the IL features observed across proficiency levels and the ensuing proposed morpho-syntactic profiles for the learner and NS groups.

Within the quantitative part of the study, only those past forms that reached over 10% of the total past form production were examined in terms of the forms' linguistic conditioning (e.g., lexical aspectual class, discourse grounding, adverbial modification, etc.) as well as nonlinguistic predictors (e.g., gender, age). The frequencies of the use/selection of past markers as well as their significant predictors were then compared across learner proficiency levels, as well as between NSs (i.e., the source of learner input) and learners. We are aware that recent work on usage-based approaches with L2 Spanish instructed learners (e.g., Gurzynski-Weiss et al., 2018) has found that

the NS output varies significantly across class activities and between a classroom setting and a naturalistic setting.

The statistical analysis was performed by means of mixed-effects binomial logistic regression runs conducted in R through the statistical package Rbrul (Johnson, 2009). Regressions have been the most traditional and popular statistical tests in variationist sociolinguistics and for some years highly popular in the area of L2 variationism. Regressions are highly informative since they evaluate the main effects of the independent linguistic variables on the dependent variable, while considering each individual participant and the verb used as random effects. This type of model includes individual variation and accounts for it indicating which speakers contribute most or least strongly to the variation in question.

Nevertheless, it is worth noting that regressions require large token numbers and thus larger sample sizes; therefore, regressions in the dissertation were only run with those past forms that reached over 10% usage in each participant group. However, due to the number of linguistic variables and their various levels, close inspection of the data prior to the statistical analysis was done through cross-tabulations. Cross-tabulations enabled the researcher to detect unbalanced distributions and interactions among the variables. Cross-tabulations (i.e., contingency tables) showed the counts and frequencies of each variant of the dependent variable across the independent variables (Tagliamonte, 2012), reporting statistical significance on the basis of chi-square tests. Moreover, due to the low token counts small cells were observed and consequently some of the multi-level variants were recoded and recombined with other similar ones. If the researcher found empty cells, she made decisions to either recode levels or remove a certain variable from the statistical model, reporting only the trends revealed in the cross-tabulations.

A logistic regression measures the probabilistic weight of the impact of each independent variable (IV) in relation to the application value (i.e., a particular variant of the dependent variable, such as the preterit). In our case, each regression was performed so that the application value selected was the same in each group. In addition, logistic regressions require that the variant of reference within the dependent variable be selected. Finally, logistic regressions provide three lines of evidence for the interpretation of results (Tagliamonte, 2012):

1. Statistical significance: which factors are statistically significant at 0.05 level and which are not.
2. Effect magnitude/strength: which variable is most or least significant (strength of factors) as indicated by the range of each variable, obtained by subtracting the lowest factor weight from the highest factor weight within the variable.
3. Constraint hierarchy (direction of effect): which variant of a given independent variable has the highest factor weight.

The number of regressions varied across tasks. However, at least one regression was performed per past form pair comparison (e.g., preterit versus imperfect), per task and per participant group (2 tasks x at least 3 comparisons x 9 groups= 81) in order to examine the significant predictors of NS and learner past tense marking across the different tasks. Separate regressions were performed for:

a. The interaction between grounding and lexical aspect across past forms (1 regression per group with a total of 9 regressions)
b. The interaction between (ir)regularity-verbal paradigm, telicity, and person-number: one regression per past form (i.e., one for preterit and another one for imperfect) per group (9 groups) with a total of 18 regressions.

The following chapter (i.e., chapter four) provides a detailed descriptive qualitative analysis of the data as well as the statistical findings and discusses them in light of the research questions of the current study and the previous research.

4.0 Results

"The only true wisdom is in knowing you know nothing."

Socrates

The current chapter presents the results of two elicitation tasks in view of the research questions which have guided the current dissertation, with a central focus on the learners', the near-native speakers', and the NSs' expressive devices of pastness, both morphological and non-morphological.

An oral personal prompt task and a written contextualized task were performed by 222 English-speaking learners of Spanish, 18 native speakers of Spanish, and 10 near-native speakers of Spanish[32]. The combined methodology implemented in the dissertation serves to unveil a comprehensive route of acquisition of L2 Spanish past-time expression which is inclusive of morphological and non-morphological means. This section reports the results obtained after studying such trajectory across proficiency levels and task types and which will provide a detailed picture of how the expression of pastness in a classroom setting proceeds in the learners' IL from a pre-morphological stage, through the emergence and development of morphology to the end state. Data coding and analysis were performed in accordance with the coding scheme and statistical tests outlined in chapter three. The study was guided by the following research questions:

[32] The total number of near-native speakers that participated in the oral prompt task was ten, and nine completed the written task. Regarding the native-speakers, 18 participated in the oral and written tasks but due to audio problems, the oral task only analyzed 17 NSs.

1. **What are the non-morphological devices used by the learner groups and NS and near-native-speaker instructors in order to express pastness across the oral personal narrations? Is there a clear developmental sequence regarding past-time expression from 1st to 7th/8th semester? How do both sets of groups compare and/or differ from each other?**
2. **What are the rates of use and selection of past-time markers across our participant groups, across task types (i.e., personal oral and written narration tasks), and across narrative sub-types within personal oral narratives (i.e., remote past, yesterday, and today activities or emotion-stories versus non-emotion stories)?**
3. **What changes characterize learner development across proficiency levels in terms of frequencies of use/selection and across task types? How do learners' frequencies of use/selection compare to NSs'?**
4. **What sociolinguistic constraints predict the use and selection of these past markers in both NS and learner data across task types? What changes characterize learner development across proficiency levels in terms of sociolinguistic conditioning? How do learners' sociolinguistic predictors compare to NSs'?**

These questions were explored in two contexts, as also mentioned in chapter 3: an oral personal prompt task and a written contextualized task. The results of both the tasks are presented following the aforementioned order, which in turn is the order in which the tasks were performed. For each task, the overall distribution of the forms used and/or selected in past-time contexts are presented followed by a section that outlines how many individual participants produced/selected each form. Next, the results of the statistical analysis are presented and characterize the interplay between the independent variables of the study and the use and selection of the past forms. This

exhaustive report was based on the results of the binomial and multinomial logistic regressions performed on the participant groups' data, which indicated the relative weight of the categories of the variables that statistically condition the choice (i.e., use and selection) of those forms. We now turn to the results of the oral prompt task.

4.1 Oral prompt task

The first task performed by the participants required them to orally narrate personal stories as indicated in the personal prompts and which addressed realis past-time contexts. The task targeted four types of temporal reference (i.e., pre-hesternal remote, pre-hesternal indeterminate, hesternal, and hodiernal) and elicited a range of past forms and/or expressive devices, as will be seen in the following sub-section. We begin with a look at the overall distribution of the rates of use of forms in past-time expression.

4.1.1 Frequencies of past form use: most frequent past forms

The distribution of the most commonly used forms in the oral prompt task can be found in Table 4-1 and illustrated in Figure 1. At first glance, results indicated that as proficiency increased, the total number of past forms produced by each course-level group also increased, although not necessarily uniformly due to the uneven number of participants across groups. Generally, higher verb token numbers were expected in adjacent groups where the lower level groups should theoretically exhibit fewer verb tokens than a higher one (e.g., 2nd semester versus 3rd semester). The mismatch in the 1st semester group between Time 1 and Time 2 is explained by the fact that

the first data collection time point had 15 participants, whereas at time point 2 only 11 participants attended class.

The most frequently used past forms across groups from 1st semester to native-speaker levels were the preterit, the present, and the imperfect. The other forms such as the perfect and the progressive forms occurred minimally in each learner corpus and the near-native-speaker and NS corpora with usage rates that ranged from 0.2% - 1.5% for the perfect, 0.6%- 2.0% for the preterit-progressive, and from 0.5%- 4.7% for the imperfect-progressive (see Figure 1, which shows the combination of these low frequency forms into one category called "peripheral gram types," Dahl, 2000, p. 15). According to Dahl, from a synchronic standpoint, the use of a gram tends to be obligatory in the central (i.e., prototypical) uses and optional in the peripheral ones. The core gram types are by rule expressed via morphological (i.e., inflectional) means, and are largely characterized by being more or less obligatory in their core uses.

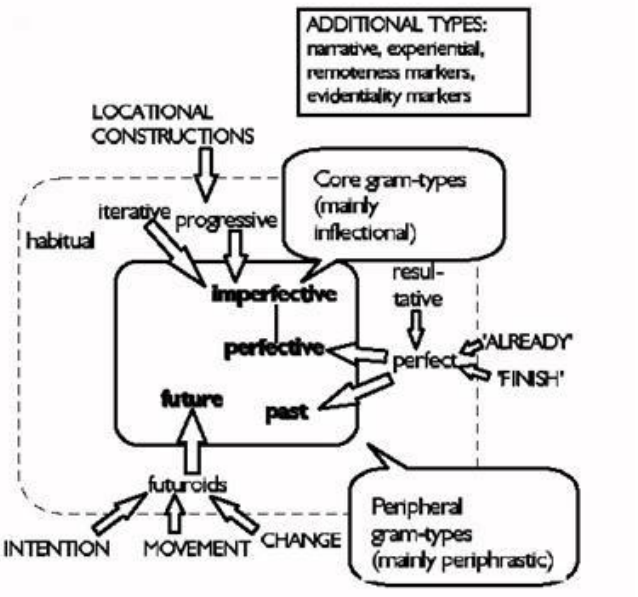

Figure 4-1. Major tense-aspect gram types (Dahl, 2000, p. 15).

Table 4-1. Distribution of the most frequent past forms used by the participant groups (oral prompt task).

Course-levels	Preterit		Present		Imperfect		Perfect		Imperfect progressive		Present progressive		Preterit progressive		Other		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1st semester Time 1	34	**17.0**	134	**66.7**	17	**8.5**	0	0	0	0	0	0	0	0	16	**8.0**	201	**100**
1st semester Time 2	97	**71.1**	23	**17.0**	9	**6.6**	0	0	0	0	0	0	0	0	8	**6.0**	137	**100**
2nd semester	435	**51**	214	**25.1**	108	**12.7**	2	**0.2**	4	**0.5**	0	**0**	5	**0.6**	85	**10.1**	853	**100**
3rd semester	331	**53.2**	106	**17.1**	135	**21.7**	1	**0.2**	17	**2.7**	0	**0**	4	**0.6**	28	**4.5**	622	**100**
4th semester	542	**56.2**	154	**16.0**	210	**21.6**	5	**0.5**	13	**1.3**	1	**0.1**	2	**0.2**	41	**4.2**	968	**100**
5th / 6th semester	296	**55.0**	61	**11.3**	138	**25.7**	5	**1.0**	10	**2.0**	1	**0.2**	0	**0**	29	**5.3**	540	**100**
7th/8th semester	604	**57.1**	61	**6.0**	311	**29.4**	5	**0.5**	39	**3.7**	3	**0.3**	7	**0.7**	38	**3.0**	1068	**100**
Near NSs	567	**64.5**	7	**1.0**	228	**26.0**	10	**1.1**	41	**4.7**	1	**0.1**	11	**1.3**	15	**1.7**	880	**100**
NSs	1431	**62.5**	79	**3.4**	630	**27.5**	34	**1.5**	60	**2.6**	2	**0.1**	68	**2.0**	13	**0.6**	2317	**100**
TOTAL	5311	**100**	1007	**100**	2127	**100**	68	**100**	218	**100**	8	**100**	103	**100**	310	**100**	7586	**100**

The peripheral gram types, on the other hand, are predominantly expressed periphrastically. The most common inflectional tense-aspect gram types in the world's languages are imperfective, perfective, past, and future (see Figure 1).

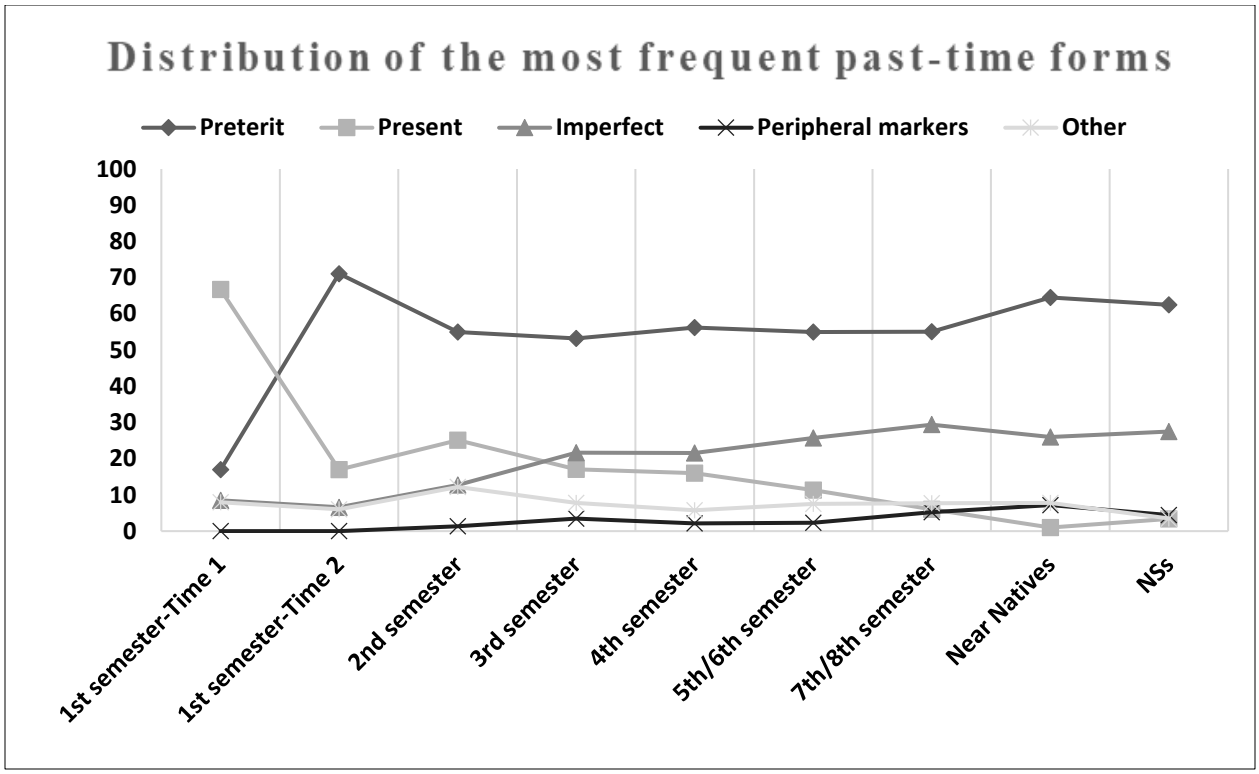

Figure 4-2. Distribution of the past-time reference forms produced across course-levels in the oral prompt task.

Our data showed that these markers' lack of popularity characterizes the beginning, intermediate, and advanced level-learners. Nevertheless, the reasons for the infrequent use of the complex forms vary according to proficiency level. Due to their precarious verbal system, the lower level-learners have not been sufficiently exposed to the forms nor are they developmentally ready to produce them. The higher levels may not use those forms due to their peripheral status, in Dahl's term, in line with native speaker norm. It is possible that these less popular markers are always scarcely produced and when they do occur, they assign some kind of nuanced aspectual/pragmatic meaning to the canonical perfective and imperfective ones. For example, the preterit-progressive, although coded as instantiating perfective meaning cannot be said to be of

equal semantic value as the preterit. Whereas both markers express perfectivity, the preterit-progressive adds further meaning by expressing past progressivity and durativity. On the other hand, the perfect may only be used in canonical contexts of current relevance with past situations having some relevance in the speaker's now or *Origo*. Nonetheless, the form's unpopularity in NS speech likely entails that it lags behind the other forms in the learners' input and also that current relevant situations are either not popular or they are expressed by the preterit or the present, whenever possible.

When the tripartite past marking system was analyzed in detail, very interesting patterns arose (see Figure 3).

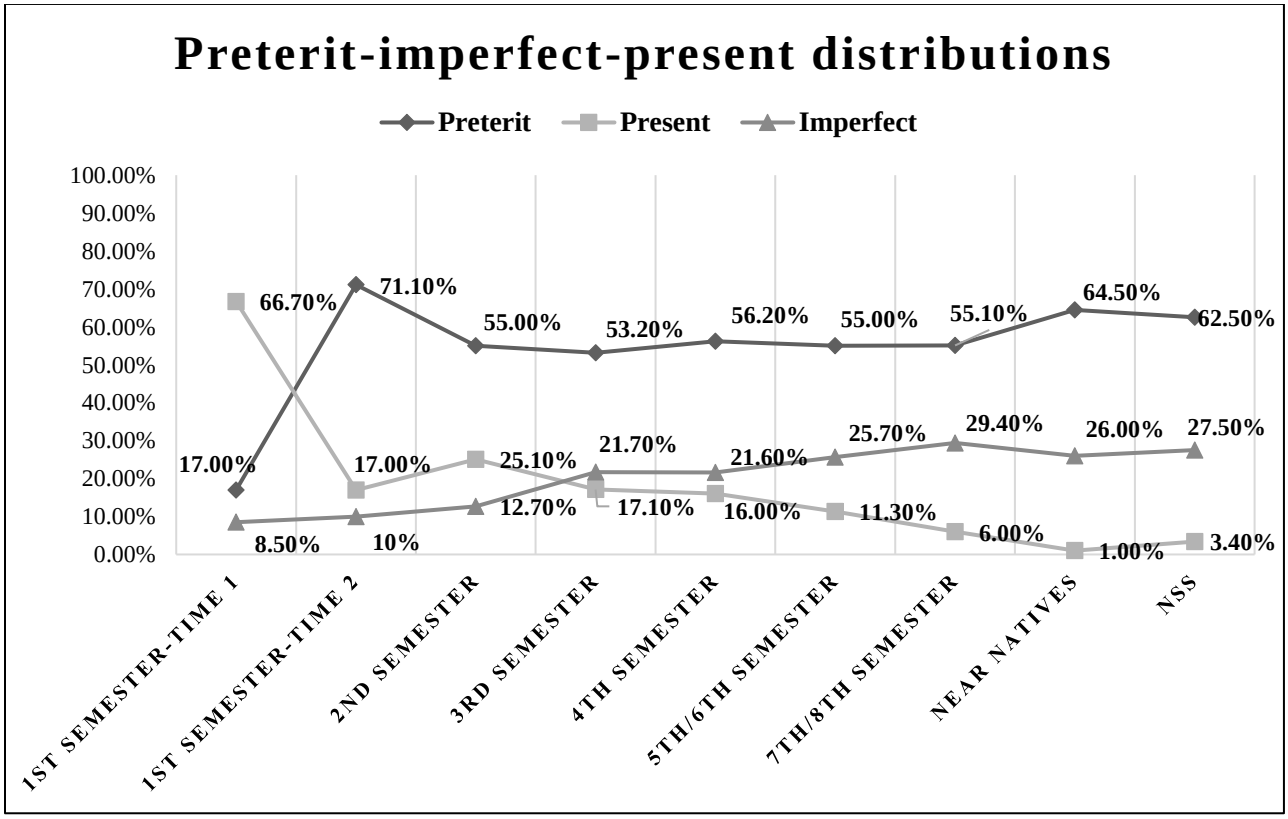

Figure 4-3. Distribution of the three preferred past-time reference forms produced across course-levels in the oral prompt task.

Tables 4-2, 4-3, and 4-4 below show three between-group chi-square comparisons of each form as compared to all of the other forms produced across participant groups. For example, Table 4-2 shows the chi-square test comparisons of the present indicative between two adjacent course-levels (e.g., 2nd and 3rd semester) at a time. For each significant comparison, Cohen's *d* values were calculated to determine the effect sizes of differences between groups (Plonsky & Oswald, 2014; Wilson, 2001), which informed about a quantitative measure of the magnitude of the experimenter effect. The larger the effect size the stronger the relationship between two variables is.

The most frequent form referencing past time in the 1st semester at Time 1 was the present (66.7%), followed by the preterit (17%), and then by the imperfect (8.5%). Preterit was the most frequent past marker beginning at Time 2 (i.e., after preterit instruction) through the NS level (i.e., from 71% to 62%, respectively). The 2nd most frequent form beginning in the 3rd semester was the imperfect. These patterns indicated that the present at Time 1 was the preferred form in past perfective and imperfective contexts, a sort of default verbal form, used across all temporal points whereas preterit became the default form at Time 2 (i.e., 71%).

Table 4-2. Chi-square tests (2 x 2) of present indicative versus all-other past forms across course-levels in the oral prompt task.

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
***First semester: Time 1 vs. Time 2	338	81.48	1	< .001	1.13
*First semester (Time 2) vs. second semester	990	4.46	1	.03	0.13
***Second semester vs. Third semester	1475	13.7	1	< .001	0.19
Third semester vs. Fourth semester	1590	0.35	1	.55	-
*Fourth semester vs. Fifth/Sixth semester	1508	6.03	1	. 01	0.13
*** Fifth/Sixth semester vs. seventh/eight semester	2148	15.95	1	< .001	0.20
***Seventh/eight semester vs. Near-Natives	1948	34.61	1	< .001	0.52
***Near-Natives vs. NSs	3197	16.65	1	< .001	0.14

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

At Time 2 learners showed a significant drop in the use of present (from 66.7% to 17%, at the $p < .001$ level, and a large effect size (d =1.13), Table 4-2) and a significant increase in preterit usage (from 17% to 71.1%, at the $p < .05$ level), which represented a large effect size (d =1.3, see Table 4-3), further confirming an instruction effect as well as revealing a dynamic interlanguage system from beginning stages, characterized by constant restructuring and reorganization. Another important change was attested in the 2nd semester when the rate of preterit use significantly dropped from 71% to 51% at the $p < .001$ level (see Table 4-3). This trend was simultaneously complemented by a rather significant increase in the use of present (from 17% to 25%, $p = 0.03$, d= 0.13) and imperfect (from 7% to 13%, $p = 0.04$), both comparisons yielding a small effect size (i.e., d= 0.13). In the 3rd semester, the learners' verbal system showed that the three most frequent forms obtained rates of usage that positioned the preterit in first place of preference, the imperfect, and the present in second place and third place, respectively. This pattern was maintained across each of the subsequent courses up to the near-native-speaker and NS groups. From the 3rd semester on, the present indicative attested a significant drop in usage rates at each subsequent course level ($p < .001$), except for the comparison between 3rd and 4th semesters, which yielded a non-significant drop at p= 0.55 level (i.e., from 17% to 16%) (see Table 4-2). The lowest rates of present indicative use were obtained by the most proficient groups: the near-native speaker group (1%) and the NS group (3.4%), which revealed significant differences between each other ($p < .001$, d= 0.14).

Table 4-3. Chi-square tests (2 x 2) of preterit versus all-other past forms across course-levels in the oral prompt task.

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
*First semester: Time 1 vs. Time 2	338	99.67	1	< .001	1.3
***First semester (Time 2) vs. second semester	990	18.62	1	< . 001	0.28
Second semester vs. Third semester	1475	0.71	1	.40	-
Third semester vs. Fourth semester	1590	1.18	1	.28	-
Fourth semester vs. Fifth/Sixth semester	1508	0.19	1	.66	-
Fifth/Sixth semester vs. seventh/eight semester	2148	0.44	1	.51	-
***Seventh/eight semester vs. Near-Natives	1948	12.49	1	< .001	0.16
Near-Natives vs. NSs	3197	1.94	1	.16	-

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

The preterit (Table 4-3) gradually showed non-significant increasing rates of use from the 3rd semester up to the 7th/8th semester, at $p > .05$. The preterit rates of use comparing the most advanced-level (i.e., 7th/8th semester) with the near-native-level were significantly different ($p < .001$) but showing a small effect size ($d = 0.16$), with the latter group yielding a similar rate to that of the NS group ($p > .05$). A final trend attested in the oral data revealed that the preterit surpassed

the NS baseline (i.e., 62.5%) only for the near-native group (i.e., 64.5%), although this difference was not statistically significant ($p > .05$).

Table 4-4. Chi-square tests (2 x 2) of the imperfect versus all-other past forms across course-levels in the oral prompt task.

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
First semester: Time 1 vs. Time 2	338	0.40	1	.52	-
*First semester (Time 2) vs. second semester	990	4.20	1	.04	0.13
***Second semester vs. Third semester	1475	21.37	1	< .001	0.24
Third semester vs. Fourth semester	1590	0.0	1	.99	-
Fourth semester vs. Fifth/Sixth semester	1508	2.91	1	.09	-
Fifth/Sixth semester vs. seventh/eight semester	2148	2.26	1	.13	-
Seventh/eight semester vs. Near-Natives	1948	2.48	1	.11	-
Near-Natives vs. NSs	3197	0.53	1	.46	-

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

Finally, the imperfect, introduced and taught on the 2nd semester, showed a significant increase in use at the $p < .001$ level (see Table 4-4) from second semester (12.7%) to third semester (21.7%), but Cohen's *d*-value of 0.24 indicated a small effect size. After the 3rd semester, the imperfect gradually increased to a peak of 29.4% in the 7th/8th semester group slightly decreasing in the near-native speaker group (i.e., 26%) and the NS group (i.e., 27.5%). The gradual increase in the usage rates of the imperfect was not significant at any level post 3rd semester ($p > .05$) or in comparison with the instructor groups (i.e., the near-native speaker group or the native-speaker one). Figures 4, 5, and 6 show the effect size of the significant chi-square test comparisons between groups and across the three most frequent past-time reference markers.

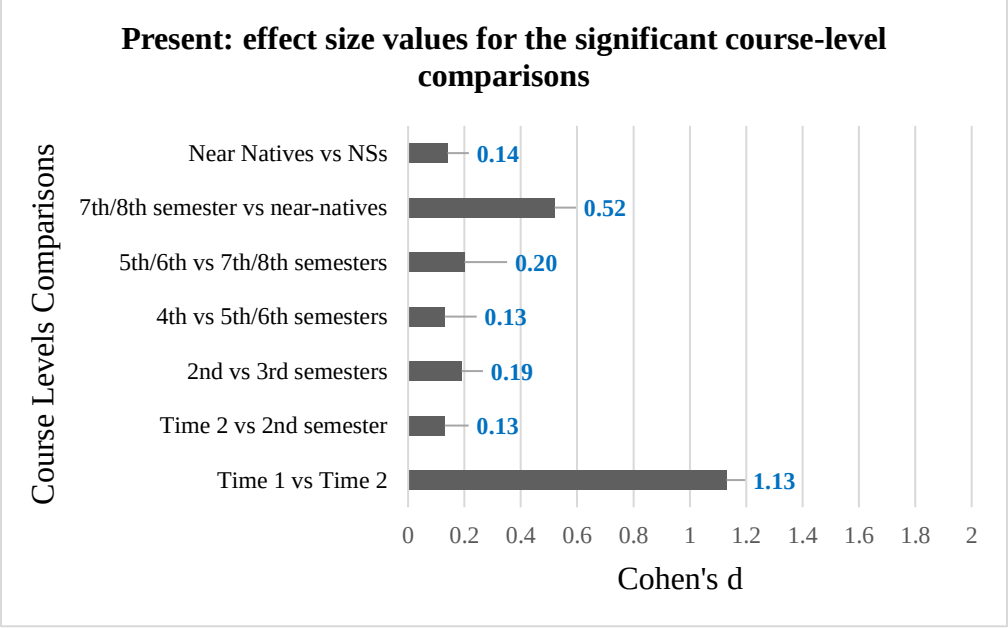

Figure 4-4. Cohen's d values for the significant between- group comparisons of present indicative rates.

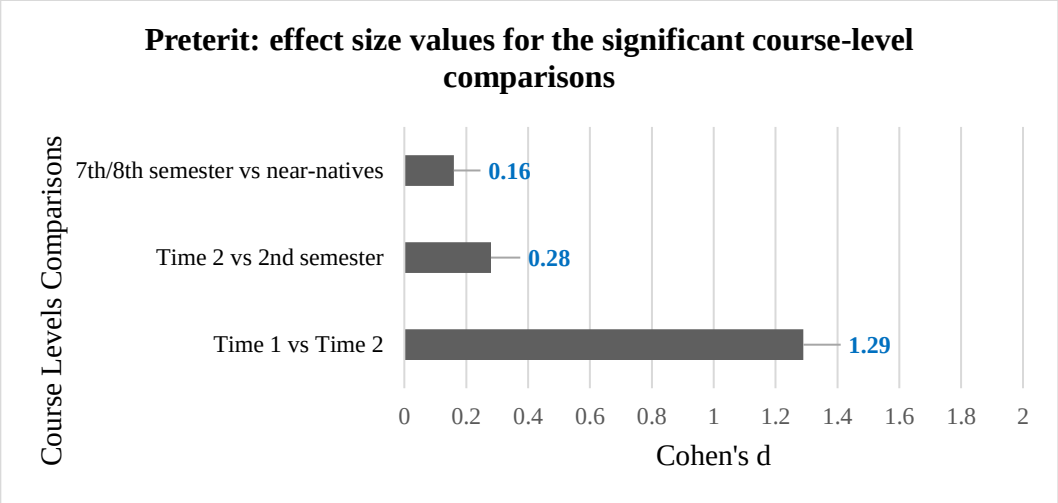

Figure 4-5. Cohen's d values for the significant between- group comparisons of preterit rates.

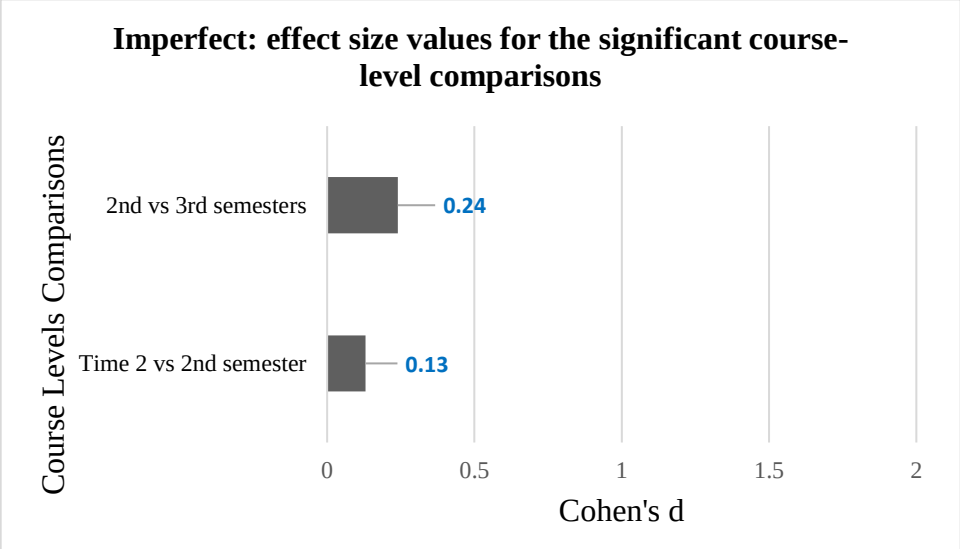

Figure 4-6. Cohen's d values for the significant between- group comparisons of imperfect rates.

4.1.2 Frequencies of past form use: individual variation analysis (oral prompt task)

Now that we have seen the overall production of past forms in past-time contexts for each participant group, we turn to a more specific look at how many participants at each level produced each form (Table 4-5).

Beginning with the 1st semester-Time 1 level, we note that all 11 participants produced tokens of the present indicative, eight learners produced tokens of the preterit, and only five produced the imperfect. This trend aligns well with the fact that at this level, the present indicative was the most frequent past-time reference marker, used pervasively across past-time contexts, and thus considered a default past-time reference marker. At Time 2 (after preterit instruction), the present indicative suffered a significant drop in usage rate ($p < .001$), and the preterit simultaneously attested a significant increase in use ($p < .001$). This result was reflected in individual production, which showed that all participants produced the preterit and nine out of ten still produced the present. The imperfect maintained its low usage rate, with only four learners out of ten producing the form.

The 2nd semester group yielded a similar trend as the 1st semester-Time 2 group, with the preterit and present being produced by all the learners (34). Moreover, the imperfect showed an increase in its usage rates and was produced by all learners except for one. At this course- level, the perfect, the imperfect-progressive, and preterit-progressive emerged in the IL of only two to four learners out of 34 (Table 4-5). The subsequent course-levels (i.e., 3rd semester and 4th semester) exhibited the same trends as the 2nd semester group, with all learners producing the preterit, all learners except for one or two producing the imperfect and with gradually fewer participants producing the present. From the 5th/6th semester on, two interesting trends were attested: all participants in each group produced the preterit and the imperfect, a sign that both

forms became established in the learners' IL. The other trend showed that the significant drop of present indicative rate from the lower to higher course-levels was accompanied by fewer participants producing the form.

Table 4-5 also shows that the perfect is inconsistently produced by a changing number of participants across course-levels. The form emerged in the second semester and was used by only two learners out of 34 (5.8%). Between the 5th/6th semester and the 7th/8th semester, 15% to 20% of the participants produced the perfect, and 60% and 50% of the participants produced the form among the near-native-speaker and NS groups, respectively.

Two other past markers attested in our oral data were the past progressive forms, as was shown in Table 4-2. Specifically, the preterit-progressive form was used in infimal rates ranging from 0.2% and 2% across course-levels, which was supported by the low number of learner participants who produced the form (i.e., between 7.6% and 17% of the total participant number per learner group), although a larger number of near-native-speaker and NS participants (60% and 50%, respectively) produced it. The other peripheral past marker was the imperfect progressive, which was increasingly produced from the 2nd semester up to the NS level by a larger number of participants (i.e., from 11.7% to 90%).

A final finding worthy of consideration is the category "other", which in this study included by and large instances of non-target-like forms produced by the learners. The table shows that these "other" forms were produced by the larger number of participants in 2nd semester (i.e., 88%), gradually decreasing through the subsequent course-levels, reaching the lowest number of participants in the 5th/6th semester, and eventually being non-existent in the 7th/8th semester, as well as in the near-native- speaker and NS groups.

Table 4-5. Number of participants who produced each form in the oral prompt task.

Number of participants who produced each form									
	Preterit	Imperfect	Present	Perfect	Imperfect progressive	Preterit progressive	Present progressive	Other	**Total participants**
1st semester Time 1	8	5	11	0	0	0	0	0	**11**
	72.7%	45.4%	100%	0%	0%	0%	0%	0%	
1st semester Time 2	10	4	9	0	0	0	0	0	**10**
	100%	40%	90%	0%	0%	0%	0%	0%	
2nd semester	34	23	33	2	4	4	0	29	**34**
	100%	67.6%	97.0%	5.8%	11.7%	11.7%	0%	85.2%	
3rd semester	25	21	23	1	5	2	0	13	**25**
	100%	84%	92%	4%	20%	8%	0%	52%	
4th semester	25	23	24	4	8	2	1	18	**26**
	96.1%	88.4%	92.3%	15.3%	30.7%	7.6%	3.8%	69.2%	
5th/6th semester	15	15	11	3	5	0	0	5	**15**
	100%	100%	73.3%	20%	33.3%	0%	0%	33.3%	
7th/8th semester	23	23	19	4	14	4	0	0	**23**
	100%	100%	82.6%	17.3%	60.8%	17.3%	0%	0%	
Near NS instructors	10	10	5	6	9	7	0	0	**10**
	100%	100%	50%	60%	90%	70%	0%	0%	
NS instructors	18	18	9	9	16	15	0	0	**18**
	100%	100%	50%	50%	88.8%	83.3%	0%	0%	
Total	205	179	175	34	76	38	1	88	**209**

*Note: each group presents the number of participants that produced each form and the respective percentage indicating the proportion of participants with regard to the total number of participants in the group.

On the other hand, Time 2, showed a sharp drop in present indicative usage rate, and a concomitant high increase of preterit. This pattern was further confirmed by the fact that the present was produced less frequently and by fewer participants whereas the preterit was produced by the largest number of participants in the fourth quartile (i.e., 75% to 100%).

What is worth pointing out is that this type of individual analysis has yielded important evidence that justifies the grouping of several learners within a certain proficiency/course level for research purposes. This further confirms the claims of previous variationist SLA research such as Bayley and Langman's (2004), who on the basis of Bayley's (1994) study on perfective-imperfective marking by Chinese learners of English, showed that the results for individual learners conformed to the group patterns. Bayley (1994) found that, regardless of their level of proficiency, the students were far more likely to mark past perfective than imperfective verbs.

4.1.3 Distribution of all past-time reference forms

The current section presents the overall frequencies of the forms produced in past-time contexts for each of the participant groups in the oral prompt task. Table 4-6 shows the distributions of the array of morphological and non-morphological forms produced by each participant group to express real past time. Within the former, several of the forms were in a different mood like the imperative and/or subjunctive, in another tense (e.g., future), in another voice (i.e., passive), or even without a verb (i.e., verbless). One of the most frequently non-conjugated forms used across proficiency levels was the bare infinitive, which in the leaners' case (i.e., from 1st semester to 6th semester), was coded as such and as a non-target-like form due to ungrammaticality. It is important to note that all forms produced and/or selected by the participant groups were also coded for their native-likeness.

4.1.3.1 The infinitive

A common pattern attested in the data of the lower proficiency learners was the use of the infinitive (rather than a past conjugation with person-number agreement) after the subject of the clause to indicate a concatenation of sequenced events, considered ungrammatical in Spanish. Nevertheless, the NS and near-native speaker groups yielded seven infinitive forms, which were all native-like inasmuch as they followed canonical rules of syntactic ordering and combination. In this sense, it is not the form itself but its use in a certain context that makes it non-target-like. Notably, the NS use of an infinitive in a narration to refer to sequenced events in the past is hypothesized to have a specific discourse function, such as indicating that the chronologically ordered events in the infinitive are also situations that occur daily as part of the speaker's routine (see example 23). Another case of infinitive that was coded was the coordinated one, which is part of a verb phrase, in which the first verb *ir* "go" is elided in line with the principle of economy (i.e., communicate as much information as is necessary). Coordinated infinitives (see example 24 below) serve the function of foregrounding and/or backgrounding sequenced events within the periphrasis that they form with the 1st verb, further showing advanced knowledge of the language by NSs. It is the NS perspicacity in their language use that distinguishes them from the SLA learners in our data.

23. *Me levanté, preparé el desayuno, y después* ***levantar*** *a los chicos,* ***vestirlos*** *y* ***salir*** *al colegio.* (Native-speaker)

    "I woke up, made breakfast, and then **wake** the kids up, **dress** them, and **go out** for school".

24. *Fuimos a desayunar y* ***a estudiar*** *a la biblioteca después.* (Native-speaker)

    "We went to have breakfast and **to study** at the library after that".

Table 4-6A. Production of all TA forms expressing past temporality across participant groups.

	Preterit		**Present**		**Imperfect**		**Infinitive**		**Perfect**		**Imperfect prog**		**Present prog**		**Preterit prog**		**Invented**		**Past part.**		**Pres part.**		**Different mood**		**Verbless**		**Lex-inf**		**Lex-perf.**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1st sem Time 1	27	**13.4**	116	**57.7**	17	**8.5**	5	**2.5**	-	**-**	-	-	-	-	-	-	3	**1.5**	2	**1.0**	-	-	2	**1.0**	3	**1.5**	-	-	-	-
1st sem Time 2	91	**66.4**	21	**15.3**	7	**5.1**	2	**1.5**	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	4	**2.9**	2	**1.5**	-	-	-	-
2nd sem	421	**49.4**	201	**23.6**	104	**12.2**	15	**1.8**	2	**0.2**	3	**0.4**	-	-	4	**0.5**	10	**1.2**	2	**0.2**	4	**0.5**	28	**3.3**	21	**2.5**	-	-	-	-
3rd sem	319	**51.3**	100	**16.1**	128	**20.6**	13	**2.1**	1	**0.2**	17	**2.7**	-	-	2	**0.3**	4	**0.6**	2	**0.3**	1	**0.2**	7	**1.1**	1	**0.2**	-	-	-	-
4th sem	521	**54.0**	137	**14.2**	193	**20.0**	11	**1.1**	5	**0.5**	13	**1.3**	1	**0.1**	1	**0.1**	7	**0.7**	3	**0.3**	1	**0.1**	18	**1.9**	1	**0.1**	-	-	-	-
5th/6th sem	282	**52.2**	54	**10.0**	129	**24.0**	12	**2.2**	5	**1.0**	10	**1.9**	1	**0.2**	-	-	5	**0.9**	-	-	-	-	8	**1.5**	-	-	-	-	-	-
7th/8th sem	563	**53.2**	57	**5.4**	282	**26.7**	3	**0.3**	5	**0.5**	40	**3.7**	3	**0.3**	1	**0.1**	3	**0.3**	2	**0.1**	2	**0.2**	8	**0.8**	1	**0.1**	-	-	-	-
Near NSs	501	**57.0**	5	**0.6**	212	**24.1**	3	**0.3**	10	**1.1**	41	**4.7**	1	**0.1**	4	**0.5**	-	-	-	-	4	**0.5**	2	**0.2**	2	**0.2**	-	-	-	-
NSs	1259	**55.0**	71	**3.1**	561	**24.5**	4	**0.2**	34	**1.5**	56	**2.4**	-	-	21	**0.9**	-	-	-	-	-	-	-	-	4	**0.2**	-	-	3	**0.1**
TOTAL	4923	**100**	915	**100**	1931	**100**	74	**100**	68	**100**	213	**100**	6	**100**	33	**100**	36	**100**	12	**100**	12	**100**	96	**100**	35	**100**	1	**100**	3	**100**

Table 4-6B. Production of all TA forms expressing past-time across participant groups (cntd).

	Lex-imp		**Lex-present**		**Lex-preterit**		**Lex-preterit prog**		**Lex-imp-prog**		**Future**		**Passive**		**Adjective**		**Coord. participle**		**Coord. inf.**		**Coord. Prog**		**Noun**		**Lex-pres-prog**		**TOTAL**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1st sem Time 1	-	**-**	18	**9.0**	7	**3.5**	-	**-**	-	**-**	-	**-**	-	**-**	1	**0.5**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	201	**100**
1st sem Time 2	2	**1.5**	2	**1.5**	6	**4.4**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	137	**100**
2nd sem	4	**0.5**	13	**1.5**	14	**1.6**	1	**0.1**	1	**0.1**	3	**0.4**	2	**0.2**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	853	**100**
3rd sem	7	**1.1**	6	**1.0**	12	**1.9**	2	**0.3**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	622	**100**
4th sem	15	**1.6**	17	**1.8**	21	**2.2**	1	**0.1**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	966	**100**
5th/6th sem	9	**1.7**	7	**1.3**	14	**2.6**	-	**-**	-	**-**	-	**-**	4	**0.7**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	540	**100**
7th/8th sem	29	**2.7**	4	**0.4**	41	**3.9**	6	**0.6**	-	**-**	-	**-**	1	**0.1**	1	**0.1**	4	**0.4**	-	**-**	11	**0.1**	1	**0.1**	-	**-**	1058	**100**
Near NSs	16	**1.8**	2	**0.2**	66	**7.5**	7	**0.8**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	4	**0.5**	-	**-**	-	**-**	-	**-**	880	**100**
NSs	69	**3.0**	8	**0.3**	172	**7.5**	24	**1.0**	4	**0.2**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	2	**0.1**	2292	**100**
TOTAL	194	**100**	92	**100**	388	**100**	47	**100**	5	**100**	3	**100**	12	**100**	2	**100**	4	**100**	4	**100**	11	**100**	1	**100**	2	**100**	7558	**100**

4.1.3.2 Embedding

The use of embedding (i.e., subordination), as opposed to combination or coordination, is an indicator of high syntactic complexity, which is gradient, showing clear evolutionary paths. According to Givón (2009), the genesis of syntactic complexity is largely compositional, originating in single lexical items, which then combine with other parts of speech to form phrases and then clauses. A next stage in the development of syntactic complexity takes place with clause coordination and finally concludes with clause subordination and/or recursivity (Chomsky, 1957). The general trend in the genesis of syntactic complexity is stated below:

a. “single words > simple clause

b. simple clause > clause chains (parataxis)

c. clause chains > complex/embedded clauses (syntaxis)” (Givón, 2009, p. 8)

Subordination was not frequently attested in the lower-division groups (1st to 4th semesters). These learners exhibited a limited interlanguage system, which was correlated with less parsing and processing effort (Szmrecsanyi, 2004), or less cognitive complexity. Conversely, syntactic complexity via embedding was attested in the upper-level groups (i.e., 5th/6th 5th/6th semester, and 7th/8th semester), whose ILs provided evidence of language advancement and mastery (see example 25).

25. *[y tuve miedo **(porque el aqua fue muy rápido)** y **(tampoco sé (cómo nadar))**]*

“[And I was scared **(because the water was going fast)** and **(I don’t know (how to swim either))**]”.

The example shows the use of complex structures in the highest proficiency level group (i.e., 7th/8th semester) by one participant narrating the background of her story. The learner’s utterance consists of a complex sentence formed by a main clause and one subordinate clause of reason, with a conjoined complement. Moreover, the last clausal complement has an embedded nominal infinitival clause. The ability to use complex syntax is hypothesized to correlate with a higher cognitive demand and more complex mental representations of the objects and events around us Givón (2009).

It is thus not surprising that complex clauses/sentences arise only at higher developmental stages, when the learners have to complete language tasks that are cognitively more complex requiring higher-order skills. Whereas 1st semester learners perform simple tasks such as a personal introduction or a physical description of their classmates as part of the curriculum, the 5th to 8th

semester-learners have to perform tasks related to expressing a viewpoint on a controversial topic, and critically discuss it, backing up opinions with factual information and appropriate argumentation.

4.1.3.3 Non-target-like morphology

Another expressive device that was coded in our research was non-native-like forms (i.e., invented), such as those which were the result of over-regularization of an irregular verb (e.g., *yo podí* "I could"). The past morpheme (i.e., *-í*) used by the learner in the example is canonically attached to the 1st person singular of regular verbs of paradigm II (i.e., ending in *-er*) and paradigm III (i.e., *-ir*). In this case, the learner over-applies the rule of preterit formation that corresponds to paradigm II treating *poder* "can" as a regular verb. In line with usage-based approaches, which highlight the importance of frequency in the acquisition process, our data showed a high rate of over-regularization of those irregular verbs that less frequently occur in the preterit in the input, in line with crosslinguistic findings in L1 acquisition (Bybee, 2008). Specifically, Spanish imperfect *podía* "I used to be able to" is more frequent than the preterit *pude* "I could", so it is expected that when retrieving the preterit form of the irregular verb (if infrequent in the input), the learner will use the grammatical rule of regular preterit formation corresponding to the verbal paradigm II (i.e., *-er*), to which *poder* "can" belongs.

Another case of non-target-like productions coded in the present research was related to the adoption of a past inflection pertaining to a different paradigm. For example, one student in the 7th/8th semester used the verb *traer* "bring" in the imperfect form but instead of using the typical inflection that signals imperfective meaning across the *-er* verbs of paradigm II (i.e., -ía), the participant used the typical paradigm I inflection (i.e., *-aba*), which resulted in the ungrammatical word *trayaba* "used to bring/was bringing" (see example 4).

26. *…pero mi parte favorita era cuando mi mamá* ***<u>trayaba</u>*** *una piñata.*

"But my favorite part was when my mother **<u>would bring</u>** a piñata".

Table 4-7 below shows the overall rate of non-target-like forms across all levels. Results indicated that the highest rate was attested in the 2nd semester, from where the rates started to decrease reaching the lowest point in the near-native-speaker group (1%) with only one non-target-like form produced in the NS group. Specifically, one participant used an ungrammatical regularized preterit form of the irregular verb *conducir* "drive". The native-speaker used the regular preterit morpheme for verbs ending in *-ir* (i.e., 3rd paradigm) uttering *condució* "drived" instead of the irregular form *condujo* "drove". Despite being considered a non-target-like form (or a non-standard one), NSs have been shown to regularize some irregular verbs as is the case of *andar* "ride, drive, go, etc." in Bogotano Spanish (e.g., Nemogá & Kanwit, 2019).[33]

The highest rates of non-target-like forms were yielded by the 1st, 2nd, and 3rd semester groups, whose IL verbal system is in constant change and restructuring, due to the large number of new incoming forms. Non-target-like forms (i.e., ungrammatical) in a high inflectional language like Spanish are therefore highly predictable at the lower course-levels.

Table 4-8 shows a more detailed account of non-target-like-forms across each of the past forms, which provides a clearer picture of the past morphology with which the learners have more difficulty at each course-level.

[33] The main findings indicated that regularized preterit *andar* was selected 34% of the times and it was significantly preferred by younger people (i.e., from 10 years to 30) of lower socioeconomic status, and conditioned by the presence of *tú* "you-singular" (i.e., the lowest frequency form of irregular preterit *andar*, Davies, 2006).

At first glance, we see that the preterit is the form that obtained a larger number of non-target-like productions when compared to the total number of past forms within each group. Moreover, as the more general Table 4-7 showed, the number of non-target-like forms decreased with increasing proficiency.

Table 4-7. Overall rates of target-like and non-target-like forms produced by all participant groups.

	1st semester Time 1		**1st semester Time 2**		**2nd semester**		**3rd semester**		**4th semester**		**5th/6th semester**		**5th/6th semester**		**7th/8th semester**		**Near NSs**		**NSs**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Target-like	160	79.6	109	79.6	575	67.4	477	76.7	804	83.2	1383	88.1	473	87.6	963	91.2	990	99.1	2171	100
Non-target like	41	**20.4**	28	**20.4**	278	**32.5**	145	**23.3**	162	**16.7**	186	**11.8**	67	**12.4**	93	**8.8**	9	**0.9**	1	**0.0**
Total	201	100	137	100	853	100	622	100	966	100	1569	100	540	100	1056	100	999	100	2172	100

Table 4-8. Rates of target-like and non-target-like productions of each past form across course-levels.

		Preterit		**Imperfect**		**Present**		**Perfect**		**Imp-Prog**		**Pret-Prog**		**Other**		**Total**
		TL	**NTL**	**TL**	**NTL**	**TL**	**NTL**	**TL**	**NTL**	**TL**	**NTL**	**TL**	**NTL**	**TL**	**NTL**	
1st semester Time 1	N	29	5	14	3	116	18	0	0	0	0	0	0	1	15	**201**
	%	14.4	**2.4**	6.9	**1.4**	57.7	**8.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.0	**7.4**	**100**
1st semester Time 2	N	78	19	9	0	21	2	0	0	0	0	0	0	1	7	**137**
	%	56.9	**13.8**	6.5	**0.0**	15.3	**1.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	0.7	**5.1**	**100**
2nd semester	N	313	122	95	13	154	60	2	0	3	1	2	3	6	79	**853**
	%	36.6	**14.3**	11.1	**1.5**	18.0	**7.0**	0.2	**.0**	0.3	**0.1**	0.2	**0.3**	0.7	**9.2**	**100**
3rd semester	N	254	77	135	0	71	35	0	1	15	2	0	4	1	27	**622**
	%	40.8	**12.3**	21.7	**0.0**	11.4	**5.6**	**0.0**	**0.2**	2.4	**0.3**	0.0	**0.6**	0.2	**4.3**	**100**
4th semester	N	468	74	201	7	112	42	4	1	12	1	1	1	6	36	**966**
	%	48.4	**7.6**	20.8	**0.7**	11.5	**4.3**	0.4	**0.1**	1.2	**0.1**	0.1	**0.1**	0.6	**3.7**	**100**
5th/6th semester	N	268	28	134	4	52	9	0	0	0	0	0	0	19	26	**540**
	%	49.6	**5.1**	24.8	**0.7**	9.6	**1.6**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	3.5	**4.8**	**100**
7th/8th semester	N	545	59	307	4	49	12	5	0	39	1	6	1	11	18	**1057**
	%	51.5	**5.5**	29.0	**0.3**	4.6	**1.1**	0.4	**0.0**	3.6	**0.0**	0.5	**0.0**	1.0	**1.7**	**100**
Near NSs	N	638	7	258	0	7	1	20	0	41	0	11	0	15	1	**999**
	%	63.8	**0.7**	25.8	**0.0**	0.7	**0.1**	2.0	**0.0**	4.1	**0.0**	1.1	**0.0**	1.5	**0.1**	**100**
NSs	N	1351	1	600	0	78	0	27	0	60	0	45	0	10	0	**2172**
	%	62.2	**0.1**	27.6	**0.0**	3.5	**0.0**	1.2	**0.0**	2.7	**0.0**	2.0	**0.0**	0.4	**0.0**	**100**

*Note: “Imp-prog” stands for Imperfect progressive and “Pret-prog” stands for Preterit progressive.

A look at the number of target-like and non-target-like forms within each past-time reference form across course-levels revealed an interesting trend. The preterit was the form with the highest rates of non-target-like productions across all levels, with the 1st semester-Time 2 to 3rd semester groups producing the highest rates of non-target-likeness (i.e., 13.8%, 14.3%, 12.3%, respectively). This may be explained by the hyper dynamicity of their verbal system at these levels when an influx of new forms has entered and/or are entering the IL and others are becoming more established with more robust form-meaning associations. For example, in the 1st semester-Time 2, the preterit usage rate increased significantly ($p<.001$) and significantly decreased in the 2nd semester ($p< .001$), when the form seemed to start to stabilize in rates of use, approximating the higher course-levels’ rates. Interestingly, whereas rates of preterit usage remained relatively similar from the 2nd to the 5th/6th semester levels, the non-target-like productions differed substantially.

Simultaneously, the rates of present use increased again together with the imperfect. Another interesting finding was attested for the imperfect form, which yielded the lowest rates of non-target-like productions from the 3rd semester across all the subsequent levels. This finding may be due to the imperfect form's generalized regularity, with a larger number of regular verbs than irregular ones (Camps, 2005; Domínguez, Arche, Myles, 2017), which provides more stable input for the learner and ease of processing and learning based on its high frequency and surface simplicity in form. Moreover, the large number of non-target-like present forms produced from the 3rd semester to the highest course-level is believed to be the result of the confusion caused by the other different past and non-past forms students are taught in the same semester. In other words, as a highly inflected language, Spanish verbal morphemes are confused and produced in a non-native-like manner after each time a new form is introduced.

Another layer of analysis consisted in the calculation of target and non-target-like productions of each past form separate from the others as illustrated in Tables 4-9, 4-10, 4-11. With regard to the preterit (see Table 4-9), the data yielded a developmental trend characterized by an increasing rate in the use of non-target-like forms, which peaked on the 2nd semester, after which the subsequent levels attested a constant decrease up to the near-native-group, with the production of only target-like forms by the native-speakers. Furthermore, the 2nd and 3rd semester groups produced the highest rates of NTL preterit forms, which can be explained as the result of the hyper-dynamicity of the IL verbal system largely across the 1st and 2nd semesters, when students are exposed to all three main forms (i.e., present, preterit, and imperfect) plus the present-progressive and the present perfect. A more detailed discussion can be found in chapter 5.

Table 4-9. Target-like vs non-target-like preterit forms across groups.

	1st semester Time 1		1st semester Time 2		2nd semester		3rd semester		4th semester		5th/6th semester		7th/8th semester		Near NSs		NSs	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Target-like	29	85.0	78	79.4	313	72.0	254	76.7	468	86.3	268	90.5	545	90.2	638	98.9	1351	99.9
Non-target like	5	**14.7**	19	**19.6**	122	**28.0**	77	**23.3**	74	**13.7**	28	**9.5**	59	**9.8**	7	**1.1**	1	**0.1**
Total	34	100	97	100	435	100	331	100	542	100	296	100	604	100	645	100	1352	100

Taking into consideration the imperfect productions, the non-target-like forms, like the preterit, also followed a developmental trend (see Table 4-10), although slightly different from the preterit. Specifically, the highest rate of NTL forms was found in the 1st semester group at Time 1 (i.e., 17.7%), and the second highest rate was attested in the 2nd semester group (i.e., 12%). What is interesting to note is that whereas the NTL preterit forms peaked on the 2nd semester, the imperfect ones did so in the 1st semester. This can be explained by the fact that the imperfect is not taught until the 2nd semester so the students that produced this form certainly did it from knowledge brought from their prior high school Spanish experience, which is predicted to have been rusty. All in all, the developmental trend becomes more noticeable from the 4th semester level up, a period that attested a decreasing rate of NTL imperfect form use.

Table 4-10. Target-like vs non-target-like imperfect forms across groups.

	1st semester Time 1		1st semester Time 2		2nd semester		3rd semester		4th semester		5th/6th semester		7th/8th semester		Near NSs		NSs	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Target-like	14	82.3	9	100.0	95	88.0	135	100.0	201	96.6	134	97.1	307	98.7	258	100.0	600	100.0
Non-target like	3	**17.7**	0	**0.0**	13	**12.0**	0	**0.0**	7	**3.4**	4	**2.9**	4	**1.3**	0	**0.0**	0	**0.0**
Total	17	100	9	100	108	100	135	100	208	100	138	100	311	100	258	100	600	100

The final analysis pertains to the present indicative, whose NTL rates showed a more complex trend. In Table 4-11 below, one can see that the highest NTL rates were attested along the 2nd, 3rd, and 4th semesters (i.e., 28%, 33%, and 27.3%, respectively). Worthy of consideration is the fact that the present indicative yielded the highest NTL rates as compared to the highest rates of the other two forms, the preterit and the imperfect. Furthermore, the higher course-level groups yielded higher rates of NTL use than the other two forms did. Interestingly as well is the fact that the near-native-speaker group's NTL productions were highest with the present indicative, while their preterit forms represented only 1% of all the preterit forms produced by this group. All in all, it seems that the learners across course-levels mostly struggled with the present indicative. This finding is discussed in chapter 5.

Table 4-11. Target-like vs non-target-like present indicative forms across groups.

	1st semester Time 1		**1st semester Time 2**		**2nd semester**		**3rd semester**		**4th semester**		**5th/6th semester**		**7th/8th semester**		**Near NSs**		**NSs**	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Target-like	116	86.6	21	91.3	154	72.0	71	67.0	112	72.7	52	85.2	49	80.3	7	87.5	78	100
Non-target like	18	**13.4**	2	**8.3**	60	**28.0**	35	**33.0**	42	**27.3**	9	**14.8**	12	**19.7**	1	**12.5**	0	**0.0**
Total	134	100	23	100	214	100	106	100	154	100	61	100	61	100	8	100	1352	100

4.1.3.3.1 Non-target-like forms: overgeneralization

A further and even more detailed layer of analysis was performed by calculating the non-target-like forms that specifically concerned the cases of overgeneralization. Table 4-12 below shows the proportions of non-target-like preterit forms sub-classified into those that were over-regularized (i.e., an irregular verb was marked as preterit through a typical regular preterit affix), overgeneralized into another verbal pattern (e.g., the preterit form of an *–er* verb-paradigm II in the 1st person singular, which requires the affix *-í*, was formed with the inflectional affix *–é*, which signals 1st person singular preterit in *–ar* verbs), those that showed a lack of agreement in person and/or number (e.g., the use of the 3rd person singular preterit for the 1st person singular), and other problems such as a misspelling of the base form (e.g., the case of the verb *recordar* "to remember" in the 3rd person singular: *recuerdó* "forgot" instead of *recordó* "forgot").

A close look at the results in Table 4-12 indicates that the non-target-like forms of the preterit across proficiency levels fell under the "Other" category, with most learners showing issues related to misspelling, which yielded innovative forms or novel forms (Beckner, Blythe, Bybee, Christiansen, Croft, Ellis, Holland, Ke, Larsen-Freeman, & Schoenemann, 2009). Interestingly, the 1st semester learners, prior to preterit instruction, produced novel preterit forms. At time 2, the 1st semester group showed a substantial change in non-target-like production of the preterit, in line with the substantial usage increase of the form after instruction. Specifically, at this time, the students most frequently produced preterit forms with affixes belonging to the wrong verbal paradigm followed by forms that showed a lack of person and/or number agreement with the subject. No cases of over-regularization were attested at this level (i.e., 1st semester-Time 2) but were across the subsequent ones including the non-native-speaker group. Moreover, the data showed that the highest over-regularized forms were produced by the 5th/6th semester group and

by the non-native speakers. Chapter 5 discusses the relevance of these results and attempts to provide a possible explanation to the data findings.

Another important finding was the change in rates of the preterit forms with person/number agreement problems, which were the 2nd most frequent in use across the 3rd and 4th semesters and the non-native-speaker group, which also produced over-regularized forms at the same rate as person/number issues.

As was stated before, the non-target-like preterit forms substantially outnumbered those of the imperfect in general. A closer inspection of the non-target-like imperfect forms (see Table- 4-13) shows that the 1st semester group at Time 1 categorically belonged to the "other "category, representing the only group with categorical productions. Surprisingly, at Time 2, the productions of the imperfect by the 1st semester group were all native-like presumably due to the decrease in the usage rates of the form as a whole as compared to the previous semester. In other words, the very few forms that were produced were used by a small number of participants who likely knew the imperfect from previous high-school experience. The 2nd semester group showed a sharp increase in imperfect usage rates which was accompanied by the second highest rate of non-target-like productions, after the 1st semester. However, the data showed that the non-target-like imperfect productions were of different types exhibiting issues of verbal paradigm overgeneralization, person-number disagreement, and others such as misspelling. Whereas the imperfect productions by the 3rd semester group were all target-like, the subsequent course-levels maintained the "other" category as the highest in production rate but added the "over-regularization" category, except for the 5th/6th semester group, which added the person/number disagreement category.

Table 4-12. Preterit rates of overregularization, verb paradigm overgeneralization, and person/number disagreement.

Classification of non-target like forms	1st semester Time 1		1st semester Time 2		2nd semester		3rd semester		4th semester		5th/6th semester		7th/8th semester		Near NSs		NSs	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Over-regularization	0	**0.0**	0	**0.0**	8	**6.5**	2	**2.6**	3	**4.0**	4	**14.3**	2	**3.4**	1	**14.3**	1	**100.0**
Paradigm overgeneralization	0	**0.0**	5	**26.3**	16	**13.1**	13	**16.9**	10	**13.5**	1	**3.6**	9	**15.3**	0	**0.0**	0	**0.0**
Person and/or number disagreement	0	**0.0**	2	**10.5**	14	**11.5**	28	**36.4**	27	**36.5**	15	**53.6**	1	**1.7**	1	**14.3**	0	**0.0**
Other	5	**100.0**	12	**63.2**	84	**68.8**	34	**44.2**	34	**46.0**	8	**28.6**	47	**80.0**	5	**71.4**	0	**0.0**
Total of non-target-like forms	5	100	19	100	122	100	77	100	74	100	28	100	59	100	7	100	1	100

Interestingly, from the 3rd semester up, the groups dropped the paradigm overgeneralization category adding the over-regularization one. It is important to point out that irrespective of past form, it makes perfect sense for over-regularized forms to be produced at the highest course-levels, since overregularization entails knowledge of verbal paradigms in Spanish. That is to say, a learner must know about the inflectional paradigm endings of the preterit and the imperfect in order for them to be able to use those inflections (erroneously) to mark pastness across irregular verbs.

Table 4-13. Imperfect form rates of overregularization, verb paradigm overgeneralization, and person/number disagreement.

Classification of non-target like forms	1st semester Time 1		1st semester Time 2		2nd semester		3rd semester		4th semester		5th/6th semester		7th/8th semester		Near NSs		NSs	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Over-regularization	0	**0.0**	0	**0.0**	0	**0.0**	0	**0.0**	4	**57.1**	0	**0.0**	1	**25.0**	0	**0.0**	0	**0.0**
Paradigm overgeneralization	0	**0.0**	0	**0.0**	4	**30.8**	0	**0.0**	0	**0.0**	0	**0.0**	0	**0.0**	0	**0.0**	0	**0.0**
Person and/or number disagreement	0	**0.0**	0	**0.0**	2	**15.4**	0	**0.0**	0	**0.0**	2	**50.0**	0	**0.0**	0	**0.0**	0	**0.0**
Other	3	**100.0**	0	**0.0**	7	**53.8**	0	**0.0**	3	**42.8**	2	**50.0**	3	**75.0**	0	**0.0**	0	**0.0**
Total of non-target-like forms	3	100	0	**0**	13	100	0	**0**	7	100	4	100	4	100	0	**0**	0	**0**

4.1.3.4 Other devices

When other expressive devices are considered, we observe that despite their overall low rates of use, non-target-like verbless clauses, verbs used in a different mood, and invented forms are typically found at beginner stages progressively decreasing in number until they disappear in near-native-speaker and NS interlanguage. Verbless clauses behave like infinitives in that they are produced by both learner and NS speakers; however, whereas the lack of an actual verb marks the learners' absence of verbal morphology at beginning stages (or avoidance at higher levels), it marks syntactic complexity, language resourcefulness, and mastery in the NS and near-native-speaker groups. For example, NS-instructor data showed the use of a verbless clause after a series of concatenated preterit situations, to signal further time movement, which again had a distinct pragmatic function possibly related to lessening the cognitive demand of using past morphology but without losing meaning.

The reason for using a verbless clause is also hypothesized to align with the principle of economy in language (Grice, 1989) by which there is no reason to say more if the extra information can be contributed by implicature. In other words, the verbal meaning should be recoverable or inferred from contextual as well as linguistic knowledge shared by the interlocutors. Consider example five below in which the participant (native speaker from Mexico) mentions a series of sequenced habitual past actions, which end up with a coordinated noun that signals the last action of the sequence:

27. *...y bueno todos los días* ***practicábamos*** *hasta que una vez em* ***le dije*** *... mi primo y yo* ***nos pusimos de acuerdo*** *para eh tomar fotografías*

"…and well every day we **would practice** until one day I **told** him….my cousin and I **agreed** to take pictures"

entonces ***llevamos*** *la cámara*

"so we **would take** the camera"

y ya, ***me echaba*** *yo mi clavado*

"and I **would plunge** into the pool"

y él ***me tomaba la foto****,*

"and **he would take** a picture of me"

luego lo ***hacía*** *él y* ***foto*** (noun)

"and then he **would do it** and **photo"** (noun)

An overview of the past tense markers used across course-level groups shows that the preterit is the preferred form with the highest frequency of use beginning in the 1st semester-Time 2 (after preterit instruction) and continuing up to native and near-native speaker levels. As explained in chapter three, verbs were coded for preterit, imperfect, and present when they

consisted of a single verb (e.g., *yo limpié* "I cleaned") but they were coded as lexical-preterit (or lexical-imperfect, lexical-present) when they consisted of a verbal phrase whose elements cannot be separated (see example 6 for an example of a lexical-preterit). These lexical-past form tokens were expressed by gerund and infinitival periphrases which form a functional-semantic whole within the utterance/sentence (Aranda, 2011).

28. *Yo* ***quise limpiar.***

"I **wanted to clean**."

Due to their low token counts, the lexical past forms were recoded into the simple ones for the regression analyses. For example, the aforementioned lexical-preterit phrase would be recoded into a preterit token. This recoding decision was based on the fact that the data are statistically analyzed via logistic regressions, whose results are trustworthy only with a sufficient number of data points. In this sense, lexical phrases would have been disregarded and not accounted for when, in fact, they had a similar function as the corresponding single verbs (e.g., *yo quería comer* "I wanted to eat" means *yo quería comida* "I wanted food").

When lexical-preterit, lexical-present, and lexical-imperfect forms are considered (see Table 4-6B), results showed that the most frequent periphrasis type across course-level groups was the lexical-preterit, which oscillated between 1.6% and 3.9% usage rates from 1st to 8th semester groups, respectively. However, the highest rate (4.4%) was obtained by 1st semester learners at Time 2. Furthermore, the native-speaker and near-native-speaker instructor groups yielded higher usage rates (i.e., 7.5%) than the other learner groups, a result that possibly indicates high morpho-syntactic complexity. The usage rates of lexical-preterit sharply dropped from 4.4% at Time 2 to 1.6% in the 2nd semester. The subsequent levels yielded very low usage rates which showed a decreasing trend up to the 7th/8th semester.

Regarding the lexical-imperfect form, the overall rates of use across proficiency levels were somewhat lower than those of the lexical-preterit, with the lowest rates attested from the 2nd to 5th/6th semester levels. The 1st semester group at Time 1 did not produce the lexical-imperfect, and at Time 2 they produced only two tokens, which represented 1.5% of the total past form tokens of the group. The near-native-speaker instructor group patterned very similarly with the 5th/6th semester group (1.8% and 1.7%) and with the 4th semester group (1.6%). The 7th/8th semester group and the NS instructors also obtained very similar usage rates (i.e., 2.7% and 3.0%, respectively).

With regard to the lexical-present, the 1st semester group (Time 1) showed the highest rate of use (9%) in tandem with the highest usage rates of the present (i.e., the present as the default form for present and past times), which surpassed those of the preterit. At Time 2, the 1st semester group only produced two tokens of lexical-present (1.5%), showing an important drop triggered by the sharp increase in the use of the preterit at this second developmental time point. In general, there was a gradual rate drop from the lowest proficiency level to the NS group, a trend that was also attested across the present (from 57.7% in the 1st semester group to 3.1% in the NS instructor group). It is contended that the NS rates of present use indicate a stylistic function of the present in referring to past events, although it was not used by all the participants.

Just as the lexical past forms obtained very low rates of use across course-levels, the perfect and the preterit-progressive forms yielded similarly low usage rates, further confirming their "peripheral" status granted by Dahl (2000) and the Real Academia Española (2010), in the sense of expressing peripheral meanings.

"Other" forms to express past temporality were coded in order to include forms in a different-mood, infinitive forms, and novel ones, which were also coded as non-target-like. They were found to exhibit very low rates of use (from 0.2% to 3.0%) when compared to the total verb

forms corresponding to each participant group. The general trend attested in the data showed that as proficiency increased, these non-target-like forms decreased with the NSs showing no productions of those. An interesting trend was observed across forms in a different mood, which gradually and almost imperceptibly increased from 1st semester to 3rd semester, after which the rates dropped to 0.2%.

4.2 Written contextualized task

The second task completed by the participants required them to read sentences that together made up a story about the learner as it was narrated in the first person singular, although it included sentences with other person-number combinations. Upon reading, the learners had to select among four otherwise identical sentences that only differed in their inclusion of a verb conjugated in the preterit, imperfect, perfect, or the present indicative. Independent linguistic variables manipulated in the task included temporal distance, Aktionsart, grounding, and presence of a temporal adverbial. Using a factorial design, each level of the independent variables was combined (i.e., four temporal distances, two lexical aspect categories, two discourse grounds, and the presence or absence of a temporal adverb) yielding a total of 32 tokens.

In order to remind the reader of the written contextualized task that this study used, the first three sentences of the task are presented below. They recapitulate the writer's childhood (pre-hesternal) events and contain the subsequent response options with the target past-time markers (see Appendices A2 & A3 for the full version of the instrument).

Aún recuerdo las vacaciones de invierno con mi familia durante mi niñez. Yo ***1.*** _____ *a la casa de mis abuelos todos los domingos.*

a. ***fui***

b. ***voy***

c. ***iba***

d. ***he ido***

2. _____ *súper bien porque mi abuela siempre* ***3.*** _____ *tan rico.*

a.	***Comí***	***a.***	***cocina***
b.	***He comido***	***b.***	***cocinaba***
c.	***Como***	***c.***	***ha cocinado***
d.	***Comía***	***d.***	***cocinó***

"I still remember the Winter vacations with my family as a child. I **1.** _____ to my grandparents' house every Sunday.

a. ***went***

b. ***go***

c. ***used to go***

d. ***have gone***

2. _____ very well because my granny always **3.** _____ delicious meals."

a.	***ate***	***a.***	***cooks***
b.	***have eaten***	***b.***	***used to cook***
c.	***eat***	***c.***	***has cooked***
d.	***used to eat***	***d.***	***cooked"***

First, we turn our attention to the overall distribution of the rates of selection of the past forms.

4.2.1 Frequencies of past form selection

Descriptive statistical analysis performed on the written task data showed that the preterit and imperfect were the most frequently selected forms across learner groups (starting with the 2nd semester group) and the native-speaker group. Conversely, the 1st semester group at Time 1 showed that the present form was the most frequent selection, with Time 2 learners yielding similar selection rates of present and preterit. From the 2nd semester, the present and the perfect were the least frequently selected forms. Nevertheless, the latter became more frequent than the present in the 4th semester and remained as such through the subsequent course-level groups (see Table 4-14 and Figure 4-7).

Table 4-14. Past form distributions across participant groups (WCT).

Groups	**Part N⁰**	**Preterit**		**Imperfect**		**Perfect**		**Present**		**Total**	
	N	N	%	N	%	N	%	N	%	N	%
1st semester Time 1	15	84	**17.5**	65	**13.5**	39	**8.1**	292	**61.0**	480	100
1st semester Time 2	11	137	**39.0**	52	**14.8**	34	**9.7**	129	**36.6**	352	100
2nd semester	32	365	**39.3**	260	**28.0**	81	**8.7**	222	**24.0**	928	100
3rd semester	26	390	**47.0**	262	**31.4**	35	**4.2**	145	**17.4**	832	100
4th semester	42	535	**40.0**	382	**28.4**	239	**17.7**	188	**14.0**	1344	100
5th/6th semester	19	283	**46.5**	184	**30.3**	71	**11.7**	70	**11.5**	608	100
7th/8th semester	19	306	**50.3**	170	**28.0**	83	**13.7**	49	**8.1**	608	100
Near-natives	9	147	**51.0**	82	**28.5**	53	**18.4**	6	**2.1**	288	100
NSs	18	281	**48.8**	183	**31.8**	102	**17.7**	10	**1.7**	576	100
Total	234	2,528	**42.3**	1,640	**26.4**	737	**12.1**	1,111	**19.3**	**6,016**	**100**

More specifically, the 1st-semester-learner group at Time 1 relied on the present indicative 61% of the time, selecting it across perfective and imperfective contexts, confirming its status as the default form for this level. The opposite trend was attested in the NS group, which selected the form at a very low rate (i.e., 1.7%). Upon analysis of the written task across groups, consistent patterns emerged: the 1st semester group (Time 1) most frequently selected the present, followed by the preterit, and then the imperfect, with the last two forms exhibiting similar rates (17.5% and 13.5%, respectively). At Time 2, the preterit significantly peaked from 17.5% to 39% ($p<0.001$, see Table 4-14) after the learners received past form instruction and simultaneously the present selection rate dropped significantly (from 61% to 36.6%, at $p< 0.001$, see Table 4-14). From this

level on, the rates of preterit selection slightly increased on a par with those of the imperfect and in line with the NS baseline (49%). The 7th/8th semester group and the near-native speaker group showed the highest rates of preterit selection even slightly surpassing the NS baseline (50.3% and

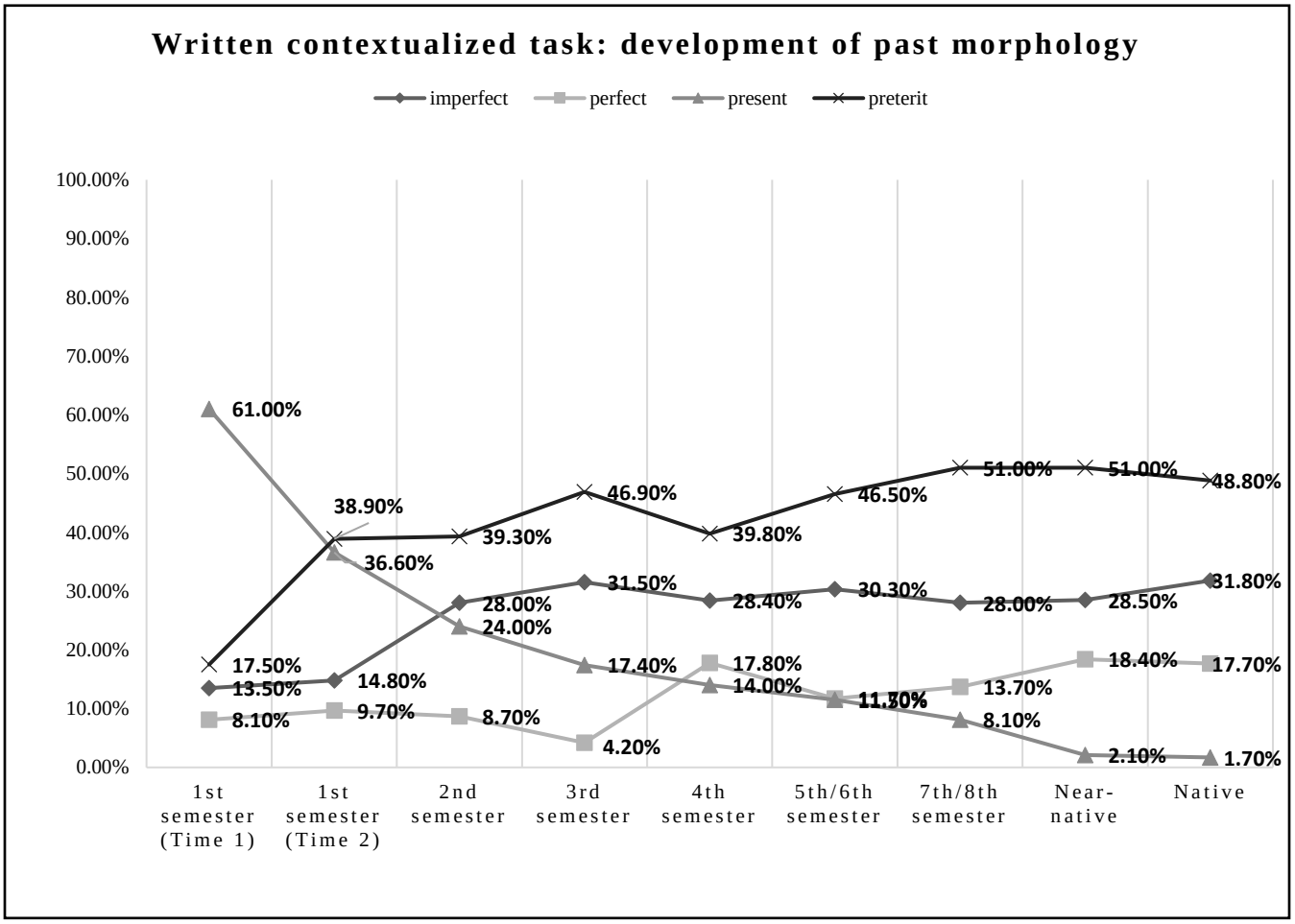

Figure 4-7. Distribution of past form use across levels.

51%, respectively), followed by the imperfect, and the present. The gradual decrease in present selection across course-levels was accompanied by a gradual increase in the rates of selection of the perfect, in line with the NS norm (17.7%). After the 3rd semester, the rate of perfect selection significantly increased with the subsequent course-level (i.e., 4th semester) reaching the same

perfect selection rate as the NS group and the near native-speaker group slightly overshooting the NS baseline (18.4%), as depicted visually in Figure 7. Finally, from the 4th semester up to the NS instructor group, the pattern indicated a preference for preterit, followed by the imperfect, then by the perfect, with the present representing the least frequently selected marker.

The perfect was minimally selected at lower proficiency levels with the lowest rate attested in the 3rd semester group (i.e., 8%), which can be explained by the lack of instruction on the form at this course-level after having been introduced on the second semester.

Nevertheless, results showed that, despite its scarce selection, the form already exists in some of the learners' IL from the first semester, which could be explained by some of the learners' prior instruction in Spanish at high school level. The considerable increase of the form's selection in the 4th semester possibly provides evidence for a stronger, more robust, form-meaning connection.

Table 4-15. Chi-square tests (2 x 2) of present indicative versus all-other past forms across course-levels in the written contextualized task.

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
***First semester: Time 1 vs. Time 2	832	47.52	1	< .001	0.49
***First semester (Time 2) vs. second semester	1280	20.80	1	< .001	0.26
***Second semester vs. Third semester	1760	11.21	1	< .001	0.16
*Third semester vs. Fourth semester	2176	4.70	1	=.03	0.09
Fourth semester vs. Fifth/Sixth semester	1952	2.24	1	=.13	-
*Fifth/sixth semester vs. seventh/eight semester	1216	4.11	1	=.04	0.12
***Seventh/eight semester vs. Near-natives	896	12.11	1	< .001	0.23
Near-natives vs. NSs	864	0.13	1	=.72	-

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

The statistical results of the imperfect indicated a clear trend characterized by selection rates that position the form in the 3rd preference order in the 1st semester (at both Times 1 and 2) and as the 2nd most frequently selected form from the 2nd semester up to the NS group. The

imperfect rates remain very stable across these groups ranging between 28% and 32%. Finally, the data revealed that the present is the most variable form functioning as a default form at the lowest course-level, with a significant rate drop from 1st semester Time 2 up to the NS group. This indicates that the present is also the most versatile in meaning (i.e., multifunctional) being able to express perfectivity and imperfectivity as well as functioning as a stylistic discourse marker adding dramatic vividness to the complicating action of the narrative.

Table 4-16. Chi-square tests (2 x 2) of preterit versus all-other past forms across course-levels in the written contextualized task.

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
***First semester: Time 1 vs. Time 2	832	47.76	1	< .001	0.50
First semester (Time 2) vs. second semester	1280	0.18	1	= .89	-
**Second semester vs. Third semester	1760	10.19	1	< .01	0.15
**Third semester vs. Fourth semester	2176	10.50	1	< .01	0.14
**Fourth semester vs. Fifth/Sixth semester	1952	7.81	1	< . 01	0.13
Fifth/sixth semester vs. seventh/eight semester	1216	1.74	1	= .19	-
Seventh/eight semester vs. Near-natives	896	0.397	1	=. 84	-
Near-natives vs. NSs	864	0.39	1	= . 53	-

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

Table 4-17. Chi-square tests (2 x 2) of imperfect versus all-other past forms across course-levels in the written contextualized task.

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
First semester: Time 1 vs. Time 2	832	0.25	1	= . 61	-
***First semester (Time 2) vs. second semester	1280	24.28	1	< .001	.28
Second semester vs. Third semester	1760	2.54	1	=.11	-
Third semester vs. Fourth semester	2176	2.32	1	= .13	-
Fourth semester vs. Fifth/sixth semester	1952	0.70	1	=. 41	-
Fifth/sixth semester vs. seventh/eight semester	1216	0.78	1	=.38	-
Seventh/eight semester vs. Near-natives	896	0.04	1	=.84	-
Near-natives vs. NSs	864	0.98	1	=.32	-

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

These results provide a full picture of IL development, revealing how forms emerge and develop in the learners' verbal system. Emerging morphology seems to be associated with default forms, which seem to have no clear-cut semantic specialization or realm. This is the case of the present as a default verb form in the lowest course-level. The data point to a possible one form-multiple meanings- relation, by which the present is used pervasively across perfective and imperfective past contexts. Developing morphology has been attested to show gradually increasing specialization via the association of forms with more specific contexts (e.g., the preterit for perfective situations). Figures 4-8, 4-9, 4-10 show the effect size values for the significant comparisons reported in the prior section.

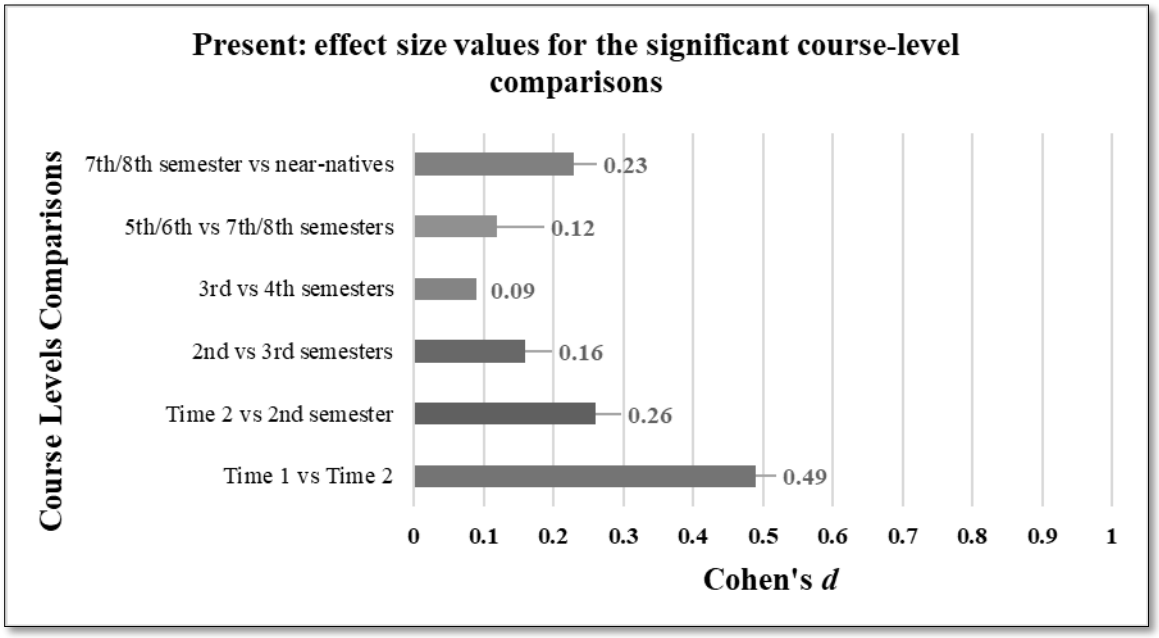

Figure 4-8. Cohen's *d* values for the significant chi-square comparisons regarding the present indicative.

Figure 4-8 shows that the change in present indicative rates from Time 1 to Time 2 in the 1st semester obtained the highest significance level ($p<0.001$) and the largest effect size ($d= 0.49$).

The second most significant change in the present indicative rates was between Time 2 and the subsequent course-level (i.e., 2nd semester), which was also significant (p<0.001) reaching an effect size value between small and medium (d=0.26). The statistical results for the subsequent comparisons confirmed the very active nature of this form, which is constantly restructuring itself within the learners' ILs, until it almost disappears at near-native speaker level.

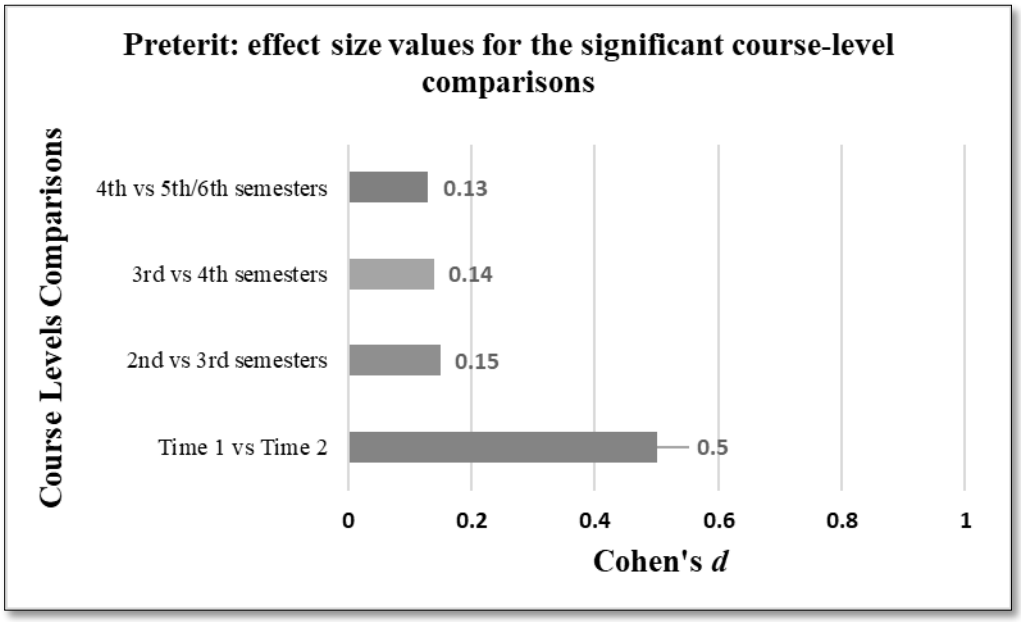

Figure 4-9. Cohen's d values for the significant chi-square comparisons regarding the preterit.

Concomitant to the present indicative changes, the preterit simultaneously changed by gaining significant popularity (from 17.5% at Time 1 to 39% at Time 2, p< 0.001). The development of the form revealed a gradual but significant increase across the 2nd semester to the 5th/6th semester (p< 0.01).

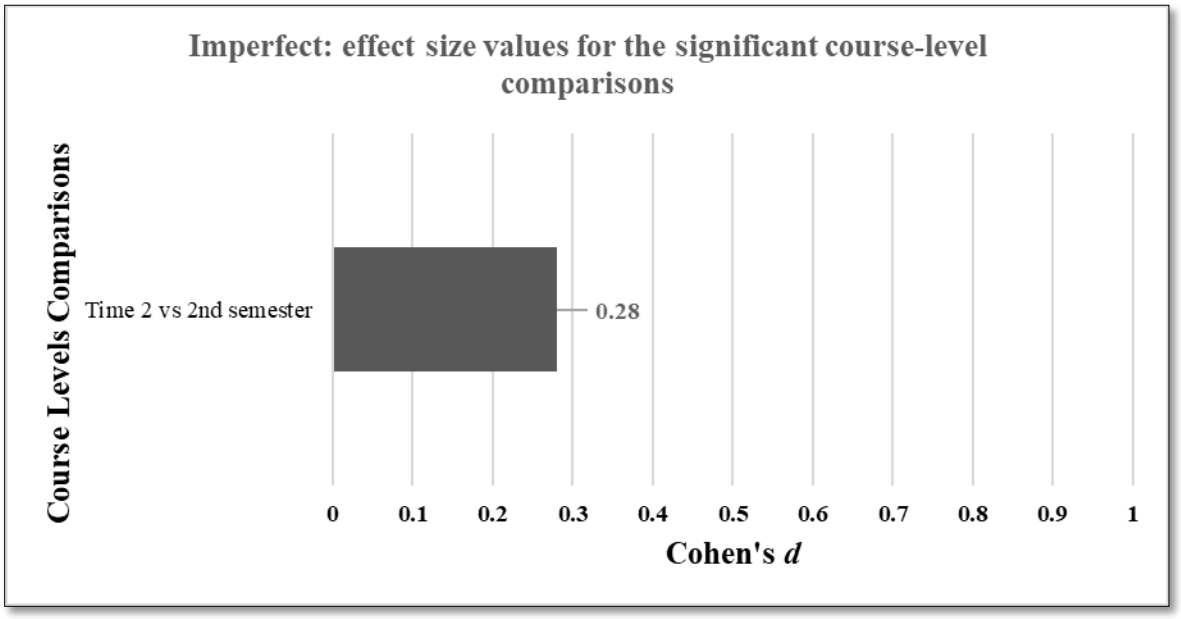

Figure 4-10. Cohen's d values for the significant chi-square comparisons regarding the imperfect.

Finally, the imperfect was shown to obtain very low rates of selection in the 1st semester at Time 1 and 2 (13.5% and 15%, respectively) and the only significant increase in selection rates was attested from Time 2 to the 2nd semester (28%, $p < 0.001$), also confirmed by the relatively small effect size value (i.e., 0.28, see Figure 4-10). From this level on, the form changed to a small degree staying around that percentage.

4.2.2 Frequencies of past form selection: selection on an individual basis

After analyzing the overall selection of TA forms in past-time contexts for each participant group, we now proceed to looking at the number of participants at each course-level who selected

each form in the written task and their average rate of selection (Table 4-18). The results help to obtain a better understanding of individual selection and how it is linked to group selection.

Table 4-18. Number of participants who selected each form in the written contextualized task.

Number of participants who selected each form					***Total participants***
	Preterit	**Imperfect**	**Perfect**	**Present**	
1st semester Time 1	**15**	14	11	**15**	**15**
	100%	93.3%	73.3%	**100%**	
1st semester Time 2	**11**	**11**	9	10	**11**
	100%	**100%**	81.8%	90.9%	
2nd semester	**29**	**29**	22	**29**	**29**
	100%	**100%**	75.8%	**100%**	
3rd semester	**25**	24	16	**25**	**26**
	96.1%	92.3	61.5	**96.1%**	
4th semester	**42**	**42**	40	36	**42**
	100%	**100%**	95.2%	85.7%	
5th/6th semester	**41**	**41**	39	40	**41**
	100%	**100%**	95.1%	97.5%	
5th/6th semester	**19**	**19**	17	18	**19**
	100%	**100%**	89.4%	94.7%	
7th/8th semester	**19**	**19**	**19**	18	**19**
	100%	**100%**	**100%**	94.7%	
Near NSs	**9**	**9**	**9**	4	**9**

	100%	**100%**	**100%**	44.4%	
NSs	**18**	**18**	17	7	**18**
	100%	**100%**	94.4%	38.8%	
Total participant number	228	226	199	202	**229**
	99.5%	98.6%	86.8%	88.2%	

A look at Table 4-18 shows that the overall past form selection rates reported in previous sections for each participant group is correlated with the number of participants that selected it. It may seem that such a statement is self-evident; however, it is not, since higher rates could be associated with larger rates of selection by some participants than others. Results show, in particular, that higher rates of selection of a form are correlated with a larger number of participants who selected the form.

The written data yielded similar results to those of the oral data in that they showed a widespread selection of the present indicative by the 1st semester-Time 1 learners, and very low rates of preterit and imperfect in the same level. Table 4-19 below presents the number of participants within a group (and their corresponding proportion from the total number of participants) who produced a certain form at a certain rate (i.e., from 0.1% to 100%). A closer look at Tables 4-18 and 4-19 demonstrates that the preterit and the present forms were selected by all the participants of the group (i.e., 15/15), with the former marker being selected by 12 out of 15 learners at a rate housed in the first quartile (i.e., 0.1% to 24%) and by three learners at a rate between 25%-50%, which represents the 2nd quartile. Conversely, the extensive present was produced by all the participants of the group, five of whom selected the form within the 2nd quartile (25%-50%), six selected the form within the 3rd quartile (50%-74%), and four within the fourth

quartile (75%-100%). Therefore, it can be concluded that the more frequent a form is, the higher the rate of the form selected by a larger number of participants, rather than particularly disparate behavior by a few individuals. The present indicative selection in 1st semester -Time 2 decreased sharply, with rates by the largest number of participants falling within the 3rd quartile. Another sharp drop in present rates of selection took place in the 2nd semester. These rates of selection concomitantly fell within the first quartile and among a large number of participants (17/29). It is worth saying that the subsequent course-levels showed the same trend with a gradual drop of present rates, with most participants in a group scoring within the 1st quartile.

In the 1st and 2nd semesters, the imperfect form obtained the lowest rates of selection, which were supported by most participants selecting the form within the first quartile (0.1-24%). From the 3rd semester up to and including the 5th/6th semester and including the near-native-speaker and NS level groups, the overall imperfect selection rates peaked, which was accompanied by a larger number of participants selecting the form within the second quartile (25%-50%). The highest course-level (i.e., 7th/8th semester), showed imperfect selection rates that fell within the first quartile as opposed to the other levels, whose selections fell within the second quartile. We hypothesize that the lower imperfect rates may be due to a low rate in the use of backgrounded events within this group.

With regard to the preterit, the developmental trend shows that the form is increasingly selected by all the participants in each group, reaching a relatively stable stage in the 3rd semester, when the form becomes the most frequently selected form up to the NS- near-native-speaker levels. At this level, the preterit was selected at higher rates than all the other forms and fell within the second quartile (i.e., 25%-50%). As was previously mentioned, these selection rates were maintained across course-levels.

The written task exhibited a different picture of perfect selection than that of the oral task. The perfect form in the preference task was selected at much higher rates, whereas the form was almost non-existent in the oral productions of both learners and near-native-speaker and NS participants. In fact, the perfect form in the written task became a more frequent form than the present from the 4th semester through the subsequent course-levels and participant groups. In general, the present perfect was increasingly selected by more participants although the rates of selection remained within the first quartile, evidence of the form's overall lack of vitality in both the IL and NS language.

Overall, the analysis of the frequency of selection of past forms across groups was greatly enhanced when complemented with an analysis of the number of individual participants that selected those forms and the rates at which each form was selected by each of them. This type of analysis, as was also argued for the oral prompt task, provided evidence that confirmed the validity of grouping individuals and reporting their selection rates as a group since they reflect individual trends (Bayley & Langman, 2004).

Table 4-19. Number of participants who selected each form by quartile.

Number of participants who selected each form by quartile																	**Total partic number**
	Preterit					**Imperfect**				**Perfect**			**Present**					
	1 Q	2 Q	3 Q	4 Q	Avg %	1 Q	2 Q	3 Q	Avg %	1 Q	2 Q	Avg %	1 Q	2 Q	3 Q	4 Q	Avg %	
1st semester Time 1	**12**	3	0	0	17.5	**14**	0	0	13.5	**10**	1	8.1	0	5	**6**	4	60.8	15
%	80.0	20.0	0.0	0		93.3	0	0		66.7	6.6		0	33.3	40	26.6		
1st semester Time 2	**4**	**4**	2	1	38.9	**10**	1	0	14.8	**8**	1	9.7	3	3	**4**	0	36.6	11
%	36.3	36.3	18.1	9		90.9	9	0		72.7	9		27.2	27.2	36.3	0		
2nd semester	6	**18**	5	0	39.3	**16**	12	1	28.0	**21**	1	8.7	**17**	12	0	0	23.9	29
%	20.6	62	17.2	0		55.1	41.3	3.4		72.4	3.4		58.6	41.3	0	0		
3rd semester	2	**14**	10	0	46.9	11	**12**	3	31.5	**14**	0	4.2	**14**	6	1	0	17.4	26
%	7.6	53.8	38.4	0		42.3	26.1	11.5		53.8	0		53.8	23.0	3.8	0		
4th semester	6	**28**	8	0	39.8	17	**23**	2	28.4	**31**	9	17.8	**22**	3	1	0	14.0	42
%	14.2	66.6	19.0	0		40.4	54.7	4.7		73.8	21.4		52.3	7.1	2.3	0		
5th/6th semester	0	**13**	6	0	46.5	7	**12**	0	30.3	**17**	0	11.7	**15**	3	0	0	11.5	19
%	0	68.4	31.5	0		36.8	63.1	0		89.4	0		78.9	15.7	0	0		
7th/8th semester	0	**10**	9	0	50.3	**12**	6	1	28.0	**19**	0	13.7	**17**	1	1	0	8.1	19

%	0	52.6	47.3	0		63.1	31.5	5.2		100	0		89.4	5.2	0	0		
Near NSs	0	**5**	4	0	51.0	**3**	6	0	28.5	**8**	1	18.4	**4**	0	0	0	2.1	9
%	0	55.5	44.4	0		33.3	66.6	0		88.8	11.1		44.4	0	0	0		
NSs	0	**14**	4	0	48.8	3	**15**	0	31.8	**16**	1	17.7	**7**	0	0	0	1.7	18
%	0	77.7	22.2	0		16.6	83.3	0		88.8	5.5		38.8	0	0	0		
Total part number	34	133	61	1		108	112	8		180	17		136	36	12	4		**229**

4.2.3 Oral prompt task: age, gender, and study abroad/origin across past form usage

In this section, the socio-demographic variables of gender and study abroad were analyzed as to whether they had an effect on the oral production of any of the past forms considered in this dissertation. Age will be analyzed only regarding the NS and near-native-speaker groups due to the participants' age differences, which allowed to group them into younger and older subjects. Conversely, the learner groups of this research study, from the lowest to highest proficiency levels, were undergraduate-level learners with an age range between 17 and 22 years-old, which automatically placed them within the first-generation group. Therefore, no age effect analysis was deemed necessary. Origin of the participants was also only considered for the near-native-speaker and NS groups due to the number of different countries of origin or study abroad that the participants declared. Instead of origin, the learners' productions of verbal forms were originally crosstabulated with study abroad (SA) country.

However, due to the low usage rates of the perfect, the comparison between the preterit and this form in order to examine whether the perfect has been grammaticalizing as a perfective marker, was not deemed appropriate. The results presented in this section were the product of crosstabulation runs via SPSS statistics version 26 and indicate whether a certain level of a variable has a favoring or disfavoring effect on the production of a form.

4.2.3.1 Age, gender, and study abroad experience across course-levels

First, we start by presenting the overall number of participants with respect to gender and study abroad experience (Table-4-20).[34]

Table 4-20. Gender and study abroad experience across past morphology usage and across course-level.

Course levels	Gender			Study abroad
	Men	**Women**	**Total**	
1st semester	1	9	10	0
2nd semester	10	9	19	0
3rd semester	4	7	11	1
4th semester	4	20	24	7
5th/6th semester	4	11	15	4
Medical Spanish 7th/8th semester	2	4	6	2
Spanish Applied Linguistics 7th/8th semester	0	6	6	2
Total	**33**	**87**	**120**	**21**
	27.5%	**72.5%**	**100%**	

[34] The crosstabulations for gender and study abroad do not reflect all the participants coded for the two different tasks due to data loss or learner's leaving answer spaces blank.

Results show that neither gender nor study abroad experience is evenly distributed in the data. Specifically, women amply outnumbered men (i.e., 27.5% versus 72.5%). As is shown, the number of learners with an immersion abroad experience was very low as well, with the highest number of participants gathering around the 4th semester and 5th/6th semester. Hence, and as it is true of sociolinguistic research, results on the influence of gender and/or SA on the production of past morphology should be taken with caution.

Table 4-21 below shows how gender and study abroad affect or not the use of each past form across learners' groups.[35] The bolded percentages indicate whether or not a level of a variable (e.g., the men or women or having been in a study abroad program or not) favors the use of a certain past form. The overall results do not point to a regular clear-cut trend; on the contrary, it uncovered a great amount of variation in the roles of gender and SA. Specifically, the most frequent past forms produced by most of the participant groups in the oral task were preterit, imperfect, present, and imperfect-progressive. Let us begin with the 1st semester group, which showed that preterit and imperfect forms, which were not frequently produced, were favored mostly by men whereas the present, which was a default form at Time 1 and obtained similar rates of use to those of preterit at Time 2, was favored by women. Neither the 1st semester group nor the 2nd semester group produced tokens of the imperfect-progressive forms. The 2nd semester group, which attested a decrease in preterit and again an increase in both present and imperfect, showed the opposite trend to the 1st semester group. Specifically, women seem to favor preterit and imperfect and men favored the present.

[35] The color-coded numbers indicate the past form rates across course-levels. Red indicates past form rates within gender and purple rates within study abroad.

Table 4-21. Gender and study abroad experience across past morphology usage and across course-level.

Group	Response	Gender						Study abroad					
		Women		Men		Total		Yes		No		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
1st semester	Imperfect	12	7.9	5	**31.3**	17	**10.2**						
	Imperfect progressive												
	Present	117	**77.5**	2	12.5	119	**71.3**						
	Preterit	22	14.6	9	**56.3**	31	**18.6**						
	Total	151		16		167							
2nd Semester	Imperfect	25	**17.5**	33	15.4	58	**16.2**						
	Imperfect progressive												
	Present	34	23.8	69	**32.2**	103	**28.9**						
	Preterit	84	**58.7**	112	52.3	196	**54.9**						
	Total	143		214		357							
3rd semester	Imperfect	109	21.5	26	**31.3**	135	**22.9**						
	Imperfect progressive	17	**3.4**	0.0	0.0	17	**2.9**						
	Present	93	**18.4**	13	15.7	106	**18.0**						
	Preterit	287	**56.7**	44	53.0	331	**56.2**						
	Total	506		83		589							
4th semester	Imperfect	162	**22.5**	31	20.3	193	**22.1**	145	**24.8**	48	16.7	193	**22.1**
	Imperfect progressive	10	**1.4**	1	0.7	11	**1.3**	7	1.2	4	**1.4**	11	**1.3**
	Present	120	**16.7**	26	**17.0**	146	**16.7**	75	12.8	71	**24.7**	146	**16.7**
	Preterit	427	59.4	95	**62.1**	522	**59.9**	358	**61.2**	164	57.1	522	**59.9**
	Total	719		153		872		585		287		872	
5th/6th semester	Imperfect	181	20.4	80	**26.6**	261	**21.9**	223	**22.0**	38	21.6	261	**21.9**
	Imperfect progressive	10	1.1	15	**5.0**	25	**2.1**	18	1.8	7	**4.0**	25	**2.1**

	Present	106	**11.9**	29	9.6	135	**11.3**	121	**11.9**	14	8	135	**11.3**
	Preterit	592	**66.6**	177	58.8	769	**64.6**	652	64.3	117	**66.5**	769	**64.6**
	Total	889		301		1190		1014		176		1190	
5th/6th semester	Imperfect	116	**30.2**	22	18.2	138	**27.3**	105	**27.4**	33	27.0	138	**27.3**
	Imperfect progressive	5	1.3	5	**4.1**	10	**2.0**	4	1.0	6	**4.9**	10	**2.0**
	Present	40	10.4	21	**17.4**	61	**12.1**	57	**14.9**	4	3.3	61	**12.1**
	Preterit	223	58.1	73	**60.3**	296	**58.6**	217	56.7	79	**64.8**	296	**58.6**
	Total	384		121		505		383		122		505	
7th/8th semester	Imperfect	142	**37.9**	33	20.0	175	**32.4**	116	32.1	59	**33.0**	175	**32.4**
	Imperfect progressive	15	4.0	10	**6.1**	25	**4.6**	16	4.4	9	**5.0**	25	**4.6**
	Present	26	**6.9**	8	4.8	34	**6.3**	29	**8.0**	5	2.8	34	**6.3**
	Preterit	192	51.5	114	**69.1**	306	**56.7**	200	55.4	106	**59.2**	306	**56.7**
	Total	375		165		540		361		179		540	

The 3rd semester group showed a minimal increase in preterit rates of use and another important decrease in the usage present indicative rates. The imperfect, on the other hand, experienced a substantial increase in rates, which continue on the rise across the subsequent participant groups. When gender was factored in, results indicated that men preferred the imperfect and women preferred the preterit and present forms as well as the imperfect-progressive, which emerged at this level.[36]

[36] Nevertheless, it is important to note that men and women's usage rates for preterit were very similar (56.2% and 53%, respectively).

It seems that women preferred the more established (and thus more frequent) past forms such as preterit and present but also preferred the newest past form that was entering their IL namely the imperfect progressive. This course-level group had only one participant who had been in a study abroad program.

The trends across the 4th semester group through the 7th/8th semester group are varied. The former group, 4th semester, showed that men who had participated in a SA program only preferred the preterit, whereas women with no SA experience preferred the present and imperfect progressive and those that did participate in a SA preferred the imperfect. It is worth noting that the imperfect has been attested to be a difficult form for the L1 English learners of L2 Spanish since English does not have a corresponding form. Therefore, it can be argued that a stay in a Spanish-speaking country and the exposure to the TL that the experience entails, could have an effect in the rates of imperfect use by these learners. The 5th/6th semester group showed that women preferred both the present and the preterit, whereas men preferred the imperfect and the imperfect progressive. With regard to SA, only the present was preferred by the learners who had that experience.

Both the 5th/6th semester and 7th/8th semester groups showed that men and participants with no SA experience preferred the preterit. The present form was preferred in both course-levels by the learners who participated in an immersion program. However, the form was preferred by women in the 5th/6th semester group and by men in the 7th/8th semester. The imperfect form, on the other hand, was preferred by women in both groups but only by learners with SA experience in the 7th/8th semester group. Finally, the imperfect progressive was preferred by classroom learners with no SA experience in both groups but by men in the 5th/6th semester group and by women in the 7th/8th semester. A summary of the results can be seen in Table 4-22 below.

Table 4-22. Summary of the favoring effects of gender and study abroad experience over the use of past morphology across course-levels.

	Preterit	Present	Imperfect	Imperfect progressive
(4th semester)	Men SA	Women No SA	Women SA	Women No SA
(5th/6th semester)	Men No SA	Men SA	Women SA	Men No SA
(7th/8th semester)	Men No SA	Women SA	Women No SA	Women No SA

4.2.3.2 Age, gender, and origin across near native and native speakers (oral prompt task)

Tables 4-23 through 4-27 below describe the effects of age, gender, and country of origin on the use of past morphology by the near-native and native speakers' groups.

4.2.3.2.1 Age

Table 4-23. Production of past forms according to near-NS and NS age.

Production of past forms according to speaker age							
Group	**Response**	**Younger**		**Older**		**Total**	
		N	%	N	%	**N**	**%**
NS-near NS instructors	Imperfect	394	22.1	350	**25.2**	744	**23.5**
	Imp. Prog	103	**5.8**	39	2.8	142	**4.5**
	Other	18	**1.0**	5	0.4	23	**0.7**
	Perfect	35	**2.0**	10	0.7	45	**1.4**
	Present	66	**3.7**	16	1.2	82	**2.6**
	Preterit	1140	64.0	944	**67.9**	2084	**65.7**
	Pret. Prog	24	1.3	27	**1.9**	51	**1.6**
	Total	1780	100	1391	100	3171	**100**

As was explained at the beginning of section 1.3, age was crosstabulated across past morphology only for the near-native and native-speaker instructor groups due to the attested age range differences only in this group. Table 4-23 shows that the older generation (i.e., 35+) preferred the preterit, the imperfect and the preterit progressive forms, whereas the younger group (i.e., 18-34 years) favored the imperfect progressive, the present, the perfect, and other forms. The results seem to point to a pattern by which the older generation tended to favor the most traditional past time markers (i.e., preterit and imperfect) and the younger generation favored the peripheral markers, lower in frequency of use across all groups and defined as more versatile and multifaceted. The present, for instance, as was demonstrated in prior sections, was used across a myriad of past time meanings typical of several past tense markers such as preterit and imperfect.

4.2.3.2.2 Sex

When biological sex was analyzed across the near-native speaker and the NS groups, the trends pointed to both similarities and differences between males and females. It is important; however, to remind the reader that the near NS group had only one male participant whereas the NS group had 10. Tables 4-24 and 4-25 below show the distribution of past forms within the NS group and the near-native-speaker group of instructors, respectively, according to gender. The Tables present the results of cross-tabulations and the run of one chi-square test per group the results rendered non-significant for the near-native speaker group (x^2=3.592, df= 6, *p*=0.496) but significant for the NS group (x^2=16.808, df= 6, p=0.006). Among the similarities, Tables 4-24 and 4-25 showed that both males and females in both the instructors' groups used the preterit at the highest rates followed by the imperfect form. Nevertheless, whereas the females in the NS group showed a higher usage rate of preterit than males did, the opposite trend was attested in the near-native speaker group, with the male participant showing preference for the preterit.

Table 4-24. Production of past forms according to NS sex (oral prompt task).

Production of past forms according to NS sex																	
Group	**Gender**	**Imperfect**		**Imperfect prog.**		**Other**		**Perfect**		**Present**		**Preterit**		**Preterit prog.**		**Total**	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
NS instructors	**Women**	205	26.8	18	2.4	5	**0.7**	7	1.0	14	1.8	494	**64.7**	21	**2.7**	764	100
	Men	395	**28.1**	42	**3.0**	5	0.4	20	**1.4**	64	**4.5**	858	61.0	24	1.7	1408	100
	Total	600	**27.6**	60	**2.8**	10	**0.5**	27	**1.2**	78	**3.6**	1352	**62.2**	45	**2.1**	2172	100

When the imperfect form was analyzed, the trends attested were quite interesting with male participants in the NS group showing a preference for the imperfect and the imperfect progressive whereas the male in the near NS group showed preference for the imperfect progressive construction. Another interesting result was the fact that this male participant proportionally used a higher rate of the progressive construction than his female counterparts, who in turn preferred the imperfect. A further finding showed that within the near-native- speaker group, whereas the female participants showed the use of a more diverse verbal system, the male participant showed basically the use of a tripartite verbal system consisting of preterit, imperfect, and to a much lesser extent imperfect progressive.

Finally, this male participant did not use the present perfect in his oral production. When male participants in the NS group were considered, results indicated that they produced the present perfect form, although minimally (1.4%), but also proportionally more frequently than their female counterparts in the same group. Another interesting finding pertaining to the present perfect was the fact

that the females in the near-native-speaker group seemed to produce a larger number of perfect forms than those in the NS group did (e.g., 1.0% versus 2.1%, respectively). When the present indicative was analyzed, results indicated that the form was preferred by the male participants in the NS group, who used the form as a historic conversational present (Bonilla, 2011). The analysis of the present indicative form showed a slightly higher preference by the NS female participants with respect to the near native-speaker ones (1.8% and 0.7%, respectively).

Table 4-25. Production of past forms according to near NS sex (oral prompt task).

Production of past forms according to near NS sex																	
Group	**Gender**	**Imperfect**		**Imperfect prog.**		**Other**		**Perfect**		**Present**		**Preterit**		**Preterit prog.**		**Total**	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Near NS instructors	**Women**	245	**26.0**	38	4.0	16	**1.7**	20	**2.1**	7	0.7	607	4.4	10	1.1	943	100
	Men	13	23.2	3	**5.4**	0	0.0	0	0.0	1	**1.8**	38	**8.0**	1	**1.8**	56	100
	Total	258	**25.8**	41	**4.1**	16	**1.6**	20	**2.0**	8	**0.8**	645	**64.6**	11	**1.1**	999	100

4.2.3.2.3 Country of origin

Now we turn our attention to the last social variable in our analysis of the near-native speaker -NS instructor groups namely the nation of origin of the participants. Table 4-26 shows some interesting trends regarding the production of past forms according to the country of origin of the instructors.

Table 4-26. Native speaker-near native speaker productions of past forms according to country of origin.

Response	**Native-speaker instructor group**																		**Near- native-speaker instructor group**									
	Argentina		**Bolivia**		**Chile**		**Colombia**		**Costa Rica**		**Mexico**		**Peru**		**Puerto Rico**		**Venezuela**		**Brazil**		**South África**		**Thailand**		**USA**		**Total**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Imperfect	31	**33.0**	105	**30.3**	104	26.5	90	24.5	22	**28.6**	134	27.0	62	**31.3**	27	**28.4**	25	23.8	42	29.4	13	23.2	59	**32.0**	144	23.4	858	**27.1**
Imperfect prog.	0	0.0	12	**3.5**	11	2.8	9	2.4	4	**5.2**	17	**3.4**	3	1.5	3	3.2	1	1.0	2	1.4	3	**5.4**	10	**5.4**	26	**4.2**	101	**3.2**
Other	0	0.0	0	0.0	1	0.3	1	0.3	0	0.0	6	1.2	1	0.5	0	0.0	1	**1.0**	2	**1.4**	0	0.0	1	0.5	13	**2.1**	26	**0.8**
Perfect	0	0.0	0	0.0	3	0.8	4	1.1	0	0.0	15	**3.0**	5	**2.5**	0	0.0	0	0.0	2	1.4	0	0.0	0	0.0	18	**2.9**	47	**1.5**
Present	0	0.0	1	0.3	43	**10.9**	0	0.0	0	0.0	5	1.0	5	2.5	9	**9.5**	15	**14.3**	0	0.0	1	1.8	3	1.6	4	0.7	86	**2.7**
Preterit	61	**64.9**	227	**65.6**	229	58.3	253	**68.8**	47	61.0	303	61.1	117	59.1	55	57.9	60	57.1	93	**65.0**	38	**68.0**	110	59.5	404	**65.7**	1997	**63.0**
Preterit prog.	2	**2.1**	1	0.3	2	0.5	11	**3.0**	4	**5.2**	16	**3.2**	5	**2.5**	1	1.1	3	**2.9**	0	0.0	1	1.8	2	1.1	6	1.0	56	**1.8**
Total	94	100	346	100	393	100	368	100	77	100	496	100	198	100	95	100	105	100	141	100	56	100	185	100	615	100	3171	100

When the NS group was analyzed, it was found that the most popular past forms were the preterit and the imperfect. Specifically, Colombia was the country that produced the largest rate of preterit forms (69%) when compared to the other countries, followed by Bolivia (65.6%), and Argentina (65%). With regard to the imperfect, the highest rates of usage were found among participants from Argentina (33%), Peru (31%), and Bolivia (30%). Argentina was seemingly the most polarized country, having yielded a usage of past-time morphology consisting of a bipartite verbal system, with no production of the perfect, the present indicative, or the imperfect progressive. Within the near-native speaker group, on the other hand, the highest rate of preterit usage was attested by the only instructor from South-Africa (68%), followed by the US participants (66%), and finally by a single participant from Brazil (65%). With regard to the imperfect form, the Thai instructor was the only participant that reached a rate of use of over 30% whereas all the other participants used the form to a substantially lower rate (23%). With respect to the imperfect progressive in the NS group, results indicated that the participant from Costa Rica yielded the highest rate of usage (5.2%) when compared to the participants of the other countries.

When the near-native speaker group was analyzed, results showed that most of the participants, especially those from the USA, Thailand, and Brazil, produced proportionally higher rates of the imperfect progressive than the other participants in the group. In the case of the US instructors, this finding could be explained as the result of L1 influence due to a structurally similar periphrasis, the English past progressive.

Another interesting trend that Table 4-26 above revealed was that the present indicative was favored by instructors from Chile, Puerto Rico, and Venezuela. A closer look at the results of these participants points to a tripartite verbal system of past-time expression led by the preterit, followed by the imperfect, and to a smaller but important extent followed by the present indicative. An analysis of the productions of the present by the participants from those countries indicated that their narration style was informal, spontaneous, and interactional. They co-constructed their stories with the principal investigator in mind as if she had been present at the time of narration. The existence of discourse markers such as *viste?* "you see?" across their narratives confirmed the interactional nature of the instructors' storytelling. A last observation to make about the present indicative use across these instructors is its function in strategic parts of the narrative (i.e., the complicating action and sometimes only sub-parts of it), which confirmed its role as a stylistic device in order to create dramatism and vividness in line with the functions of the historic present (e.g., Bonilla, 2011). An analysis of the present indicative use by the Near-Native Speaker group showed its lack of vitality with most participants barely producing it. In other words, this group did not show preference for the historic present.

One important pattern that was attested in our oral data was the fact that the present perfect was favored by NS participants from Mexico, Peru, and the near-native speakers from the USA. It is worth pointing out that previous works on the aoristic drift of the perfect in Latin America (e.g.,

Escobar, 1997; Howe, 2006; Schwenter & Torres-Cacollous, 2008) have found low usage rates of the form in Mexico (15%) and higher rates in Peru (25%-30%). Furthermore, these works found that the Mexico present perfect occurred mostly across its prototypical function of current relevance, whereas the Peruvian perfect was found to be more grammaticalized as a perfective form occurring also across sequenced and non-sequenced past perfective actions. These findings are confirmed in our data by the fact that the instructors from these countries favored the form. Nevertheless, our data also revealed that the present perfect tokens produced by the Instructors' group largely occurred across perfective contexts rather than current relevance ones (see Table 4-27). Particularly, the Table shows that the near-native speaker group almost categorically used the perfect to express perfective situations (95%). When the use of the present perfect in the non-native speaker group was compared to the native-speaker one, it was found that the latter group used the perfect with the current relevance meaning substantially more frequently than the non-native speaker group did (i.e., 33% vs 5%, respectively). On the other hand, the preference for the perfect by the US near-native speakers can be explained by the fact that some of them had participated in SA (study abroad) programs in Spain (and still do it on a regular basis), where the form is highly grammaticalized as a perfective in indeterminate and perfective hodiernal contexts.[37]

[37] Out of the 19 perfective uses of the present perfect in the near-native speaker group, 10 (ten) belong to only one participant from the USA who has been to Spain several times as part of SA programs. Of the 9 attested current relevance uses of the perfect in the NS group, five belong to only one participant from Mexico. Also, in the NS group, 6 of the 18 perfective uses of the perfect were produced by another participant from Mexico, who also produced two tokens of the form with current relevance meaning.

Table 4-27. Aspectual meanings of the present perfect in the NS nad near NS groups.

Present perfect uses	Near-native speaker group	Native-speaker group
Perfectivity	19/20 (95%)	18/27 (66.7%)
Current relevance	1/20 (5%)	9/27 (33.3%)
Total	20 (100%)	27 (100%)

4.2.3.3 Age, gender, and origin across near native and native speakers (written contextualized task)

4.2.3.3.1 Age

This variable was not evenly distributed across groups, in fact the near-native speaker group had an overall younger pool of participants than the NS group. Therefore, it was decided that the analysis should be removed due to potential inaccuracy, if the data were to be reported.

4.2.3.3.2 Sex

Upon crosstabulating the biological sex of the NS participants across their selection of the four different past temporal markers, results showed very similar selection rates across men and women. For example, Table 4-28 shows that the males' selection rates of the imperfect form were higher than women's (33% versus 30%), although this difference was not statistically significant, as indicated by the chi-square test results $\chi^2\,(1, N = 576) = 0.585, p = 0.44$. The same favoring effect by the male participants was observed regarding the perfect form (18.5% versus 16.5%) but the difference was not significant $\chi^2\,(1, N = 576) = 0.356, p > 0.05$. With respect to the preterit, the

trend showed that the form was favored by the women participants (52% versus 47%) but again this difference was not statistically significant χ^2 (1, N = 576) = 1.321, p > 0.05.

Table 4-28. Selection of past forms according to NS sex (written contextualized task).

. Selection of past forms according to NS sex							
Group	**Past form**	**Female**		**Male**		**Total**	
		N	%	N	%	**N**	**%**
NS instructors	Imperfect	67	29.9	116	**33.0**	183	**31.8**
	Perfect	37	16.5	65	**18.5**	102	**17.7**
	Present	4	1.8	6	1.7	10	**1.7**
	Preterit	116	**51.8**	165	46.9	281	**48.8**
	Total	224	100	352	100	576	**100**

With the goal of determining the role of the near-native-speaker participants' biological sex in terms of selection rates, crosstabulations were calculated (see Table 4-29) as well as a chi-square test, which yielded no significance χ^2 (3, N = 288) = 3.160, p > 0.05. The descriptive trends indicate that both women and men selected the TA forms at more similar rates than the NS participants did (see Table 4-29). This finding; however, should be taken with caution since only one near-native speaker male participated in this study, so the reported results are based on only one subject.

Table 4-29. Selection of past forms according to near NS sex (written contextualized task).

Selection of past forms according to near NS sex							
Group	**Past form**	**Female**		**Male**		**Total**	
		N	%	N	%	**N**	**%**
Near-NS instructors	Imperfect	73	28.5	9	28.1	82	**28.5**
	Perfect	48	**18.8**	5	15.6	53	**18.4**
	Present	4	1.6	2	**6.3**	6	**2.1**
	Preterit	131	51.2	16	50.0	147	**51.0**
	Total	256	100	32	100	288	**100**

An interesting finding with regard to the present indicative selection showed that the aforementioned male participant substantially preferred this form over the females (6.3% versus 1.6%). However, the number of tokens was so low that it is not deemed appropriate to generalize this trend to the larger population of non-native-speaker participants.

4.2.3.3.3 Country of origin

This section presents the effect of country of origin of the NS and near-native speaker participants on the selection of the different past temporal markers. Let us start first with an analysis of the NS participants' choices.

The first interesting result (Table 4-30) shows that the participants from Argentina and Bolivia strongly favored the selection of the preterit when compared to the other countries (59%), although the effect was not significant as indicated by the result of a chi-square test χ^2 (24, N = 576) = 21.644, p > 0.05. Nevertheless, whereas the Argentinian participant used primarily a

bipartite verbal system (preterit and imperfect), the Bolivian participants showed more diversity with a selection of the perfect and the present forms, which the Argentinian participant did not show. This means that no contexts in the WCT prompted this participant to select the perfect or the present confirming Flǿgstad's (2016) finding about the demise of the present perfect in rioplatense Spanish. With respect to the imperfect selection, results indicated that Costa Rica and Colombia were the countries that most frequently selected this form (38% and 35%, respectively), which could be related to a higher number of backgrounded situations by the participants, who used the preterit at lower rates than the rest. When the present perfect was considered, findings showed that its selection was favored by Peru, Mexico, and Colombia (22%, 22%, and 15.6%). This seems to confirm previous research on the higher rates of usage of the perfect in Mexico (Schwenter & Torres-Cacollous, 2008) and Peru (Howe, 2006; Jara Yupanqui, 2006), when compared to those found in some of the varieties of the southern cone in South America (e.g., rioplatense Spanish, Rodríguez Louro, 2009, 2016).

Table 4-30. Selection of past forms according to NS country of origin (written contextualized task).

Response	Native-speaker instructor group																			
	Argentina (one participant)		**Bolivia** (two participants)		**Chile** (two participants)		**Colombia** (four participants)		**Costa Rica** (two participants)		**Mexico** (four participants)		**Peru** (two participants)		**Puerto Rico** (one participant)		**Venezuela** (one participant)		**Total**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Imperfect	11	**34.4**	16	25.0	22	**34.4**	34	**35.1**	24	**38.1**	35	27.3	20	31.3	11	**34.4**	10	31.3	183	**31.8**
Perfect	2	6.3	7	11.0	10	15.6	20	**20.6**	10	16.0	28	**22.0**	14	**22.0**	5	15.6	6	**18.8**	102	**17.7**
Present	0	0.0	3	**4.7**	0	0.0	0	0.0	2	**3.2**	3	**2.3**	1	1.6	0	0.0	1	**3.1**	10	**1.7**
Preterit	19	**59.4**	38	**59.4**	32	**50.0**	43	44.3	27	43.0	62	48.4	29	45.3	16	**50.0**	15	47	281	**48.8**
Total	94	100	346	100	393	100	368	100	77	100	496	100	198	100	95	100	105	100	576	**100**

Now we turn to the analysis of the past form selection of the near-native-speaker group and its relation to country of origin (see Table 4-31). Also, a chi-square test was run but results obtained were not statistically significant $\chi^2 (9, N = 288) = 9.673$, $p > 0.05$. Due to the fact that three of the four countries of origin belong to one participant each, except for the USA, results will be presented for the last group as compared to the rest. The Table below shows that the US instructors seem to slightly prefer the preterit over the imperfect, although the trend is a minor one. When compared to the Thai participant, the US participants seemed to select the imperfect form substantially less frequently (27.5% versus 37.5%). This further indicates that the Thai participant overselected this form whereas the others selected it at similar rates. When the present indicative is analyzed, results show that the US participants disfavored the selection

of the form. This finding stands out when it is compared to the other countries, which yielded a much higher selection rate (USA: 1% versus the other countries: 6.3%).

Table 4-31. Selection of past forms according to near NS country of origin (written contextualized task).

Response	**Near-native-speaker instructor group**									
	Brazil (one participant)		**South Africa** (one participant)		**Thailand** (one participant)		**USA** (six participants)		**Total**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Imperfect	8	25.0	9	28.1	12	**37.5**	53	27.6	82	**28.5**
Perfect	6	18.8	5	15.6	6	18.8	36	18.8	53	**18.4**
Present	0	0.0	2	**6.3**	2	**6.3**	2	1.0	6	**2.1**
Preterit	18	**56.3**	16	50.0	12	37.5	101	**52.6**	147	**51.0**
Total	94	100	346	100	393	100	368	100	288	**100**

4.3 Regression analyses: results

The following section reports the inferential statistical results of the oral prompt task and the written contextualized task, which provide a more in-depth account of the specific linguistic contexts in which each form occurs across course-levels. Chapter 3 described the sociolinguistic variables that were coded for in order to obtain a clear picture of the type of conditioning of each form across learner, near-native, and native-speaker groups. It is worth noting that the distributions of the forms in both tasks should also be understood in the light of the degree of linguistic conditioning and the type of conditioning a certain variable exerts on a certain form. For example, the present was found to be the form most frequently selected in the 1st semester-Time 1 in both tasks. A concomitant hypothesis contends that, as a corollary of a high rate of use/selection and its status as a default form, the TA marker should not be largely conditioned linguistically and/or socially. This hypothesis would entail that no variable would reach statistical significance and it would then not exert any significant influence on the use/selection of the present.

Let us begin with unveiling the analysis that resulted from the regression runs performed on both the oral and written data. Before the results are presented, it is important to note that due to the amount of data obtained in the oral task, it was possible to run different statistical models (i.e., three) that examined the relative weight that different linguistic variables had on a given past form. In other words, including all the coded variables in a single statistical model would have resulted in overfitting, so the researcher decided to run different models. On the other hand, due to the limited number of variable manipulations allowed in the written task, not all the variables

considered in the oral prompt were manipulated in the written task. Therefore, only one model was run for this task.

4.3.1 Statistical analysis: oral prompt task

Now that we have seen the rates of use of the past forms across groups, we turn to the statistical analysis report of the oral task data. In this case, a set of linguistic variables was combined into a mixed-effects binomial logistic regression in order to examine which ones form the best predictive model for the comparison of each past form pair across each course-level, while also accounting for the individual speaker as random effects. The linguistic variables manipulated for the oral prompt task were Aktionsart, grounding, clause type, temporal reference, and temporal adverbial (analysis 1) and aspectual meaning, narrative type, and frequency ranges (analysis 2). Regression results from the different past form comparisons are fully included in corresponding Tables in Appendix C, reporting factor weights, log-odds, and percentages. In the rightmost column, a factor weight closer to 1 indicates that a certain level of an independent variable favors the application value (one variant of the dependent variable), whereas a value closer to 0 indicates a disfavoring effect. Factor groups which are not significant are placed in square brackets. Log odds (leftmost column) are similar to factor weights except that positive values indicate a favoring effect of the application value, whereas negative values indicate disfavoring. Log odd values further from 0 indicate stronger effects, just as factor weights further from 0.50 do.

Each model considers the effect of the independent variables on the use of the three most frequently selected variants of the dependent variable (i.e., present, preterit, and imperfect). Even though the oral prompt data yielded several other forms (e.g., imperfect progressive, preterit

progressive, the perfect), they were not included in the statistical model due to their very low frequency of use.

4.3.1.1 Overall significant linguistic conditioning of past morphology usage across course-levels

The preterit versus present is the first comparison that this section includes (see Table 4-32). The second comparison that will be presented corresponds to the dyad preterit-imperfect, and finally, the last comparison includes the imperfect as compared to the present. Each of the comparisons is presented generally across course-levels showing the overall linguistic conditioning of the past forms, reporting the statistically significant variables that predict their use. A second step consists in the presentation of the more specific linguistic conditioning of the past forms by reporting the factor weights that favor the levels of the significant variables.

As was presented in the previous section on frequencies of use of the different past forms, the 1st semester group showed very high rates of present indicative use (66.7%), prior to instruction on the preterit (i.e., Time 1). The preterit and imperfect yielded a much lower usage rate (8.5 % and 17%, respectively). As a default past-time reference form, the present was used pervasively across different past-time contexts, including perfective and imperfective ones at Time 1.

Table 4-32. Significant predictors of past morphology use across participant groups in the oral prompt task.

Preterit Vs. Present	**1st semester Time 1- Time 2**		**2nd semester**	**3rd semester**	**4th semester**	**5th/6th semester**	**7th/8th semester**	**NNS instructors**	**NS instructors**
Time	***X		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Temporal adverbial	--	--	**X	--	--	--	--		
Aktionsart	--	--	--	--	*X	--	--		
Temporal reference	--	--	--	*X	**X	--	**X		
Grounding	*X		***X	***X	***X	***X	*X		
Clause type	--	--	*X	--	--	--	--		
Preterit Vs. Imperfect	**1st semester Time 1- Time 2**		**2nd semester**	**3rd semester**	**4th semester**	**5th/6th semester**	**7th/8th semester**	**NNS instructors**	**NS instructors**
Temporal adverbial			*X	*X	--	--	--	*X	*X
Aktionsart	**X		--	***X	***X	--	***X	***X	***X
Temporal reference			--	***X	***X	***X	***X	***X	***X
Grounding	*X		***X	***X	***X	***X	***X	***X	***X
Clause type	**X		--	--	--	--	--	--	*X
Imperfect Vs. Present	**1st semester Time 1**	**1st semester Time 2**	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th semester**	**7th/8th semester**	**NNS instructors**	**NS instructors**
Temporal adverbial	--	--	--	--	--	--	--		
Aktionsart	--	--	--	***X	--	--	**X		
Temporal reference	--	--	--	--	--	--	--		
Grounding	--	--	***X	*X	***X	***X	***X		
Clause type	--	--	--	--	--	--	--		

*Note: *p < 0.05, **p < 0.01, ***p < 0.001, -- not significant*

This descriptive trend indicated the established status of the present in the learners' IL at this stage, supported by the statistical results, which showed no significant linguistic conditioning of the present at Time 1 (see Appendix III). A corollary of the default status of the present at Time 1 was the attested low rates of preterit use, which also resulted in a lack of linguistic conditioning of the preterit. This result is explained by the emergent status of the preterit, across several linguistic contexts that do not consistently form a strong pattern. In this sense, emerging preterit does not have a specially defined function except for the general meaning of pastness. Despite not being significantly conditioned by the linguistic context, both forms showed trends, consistent with the canonical functions of preterit and imperfect in Spanish. Specifically, the present, on the one hand, seemed to be preferred in the background of hodiernal (i.e., today) and hesternal (i.e., yesterday) contexts, with atelic verbs, across connective, position, and contrast adverbials, and in subordinate clauses. The preterit, on the other hand, showed the opposite pattern, with a preference for its use in foregrounded, pre-hesternal telic contexts, main clauses, and with the absence of an adverb.

In the 1st semester group at Time 2, post preterit instruction, the learners showed a sharp drop in present usage rates and a peak in the use of the preterit (17% and 71%, respectively), the highest rate attested across course-levels. These changing rates, which imply a restructuring of the learners' verbal system, were not accompanied by any predicted change in linguistic conditioning. Results showed that neither the present indicative nor the preterit at this second time point, was significantly constrained by any linguistic variable, in line with the pattern attested at Time 1. The learners' ILs in the 1st semester group (Time 1 and Time 2) are at a constant change with a readjustment of the verbal system, where some forms enter that system, increase in use, and get ready to specialize in meaning, and others decrease in use, leaving aside the meaning they encoded,

and simultaneously gaining others. This rapid restructuring of the verbal system is reflected in the absence of significant linguistic conditioning of the emerging forms and the more established one (i.e., preterit and present, respectively, at Time 1).

The 2nd semester group showed a drop in preterit rates of use (from 71% to 51%) and a concomitant increase of the present indicative and imperfect rates. In fact, the preterit decreased to a usage rate that gradually approximated the highest course-level (i.e., 7th/8th semester) and the near native speaker and NS participants. The significant change in rates of use of the preterit and present forms was accompanied by changes in significant linguistic conditioning. Specifically, grounding, temporal adverbial, and clause type significantly constrained preterit usage (i.e., $p<0.001$, $p<0.01$, $p<0.05$), when compared to the present. The subsequent course-levels (3rd and 4th semesters) also showed significant conditioning of the preterit and present uses by grounding ($p<0.05$ and $p<0.01$, respectively), adding temporal reference ($p<0.05$) but dropping temporal adverbial. Grounding reached the highest significance level ($p<0.001$) in the 2nd semester, which was maintained across the other course-levels. The higher course-levels (i.e., the 5th/6th semester, the 7th/8th semester) as well as the NS and near native speaker groups, had a minimum number of present forms, which thus disallowed a regression analysis.[38] In general, we can argue that the preterit is linguistically conditioned by grounding starting in the 1st semester (i.e., when both time points are combined), and it becomes more strongly conditioned in the 2nd semester when two significant variables are added to the model (i.e., temporal adverbial and clause type).

[38] The shaded grey areas indicate that a certain regression analysis was performed without enough token numbers. Therefore, the results should be regarded as tendencies.

Now we proceed to the statistical results regarding the preterit and the imperfect comparison in terms of the linguistic conditioning across course-levels. Table 4-33 (also see Appendix II) shows that Aktionsart, temporal reference, and grounding were the most significant variables in constraining the use of preterit when compared to the imperfect in the oral data. Results showed that these variables consistently achieved the highest significance level ($p<0.001$) in constraining the use of the preterit from the 3rd semester and across the subsequent levels (i.e., from the 4th semester up to the NS-near native speaker group).

Due to the very small numbers of imperfect forms produced by the learners in the 1st semester at each time, regression analyses were not deemed appropriate for such comparison. Therefore, participants in the 1st semester group at Time 1 were combined with those at Time 2, with the addition of the "Time" variable. When the merged group was tested, results indicated that the use of preterit was significantly conditioned by Aktionsart ($p<0.01$), clause type ($p<0.01$), and grounding ($p<0.05$). The 2nd semester group attested a decrease in the use of the preterit from 77% to 51%, while the imperfect simultaneously doubled its usage rate. This dynamicity of the verbal system within the learners' IL reflected in the changing usage rates usually entails accompanying linguistic conditioning. In particular, the readjusted preterit in the 2nd semester was significantly constrained by temporal adverbial ($p<0.001$) and grounding ($p<0.01$). The subsequent level (i.e., the 3rd semester), the preterit as compared to the imperfect showed that it was still constrained in use by the same predictors as in the 2nd semester but added temporal reference (i.e., (pre)hesternal, hodiernal, current relevance) and Aktionsart, both at $p<0.001$. From the 3rd semester to the near-native speaker group and the NS group, the preterit was significantly conditioned by the same variables (i.e., temporal reference, Aktionsart, and grounding, $p<0.001$), although the latter group showed the strictest linguistic conditioning of the preterit with all five variables achieving

significance.[39] The gradual but constant increase in preterit and imperfect usage rates makes pathway for both forms to become more and more established past forms in the IL with increasing proficiency, exhibiting more complete and robust meaning associations.

The last comparison to be presented is the past form dyad imperfect-present. The distributional trend indicates that as the imperfect strongly increased in use, the present sharply decreased in usage rates, reaching 1% in the near-native speaker group and 3.4% in the NS group. The past form picture across course-levels showed that the imperfect and present when compared to each other exhibit no significant linguistic conditioning in the 1st semester at either time. The non-significant variables, as seen in Table 4-32, yielded a trend that showed that the imperfect seemed to occur in subordinate clauses with atelic verbs, in backgrounded pre-hesternal contexts with no temporal adverbial. Moreover, this pattern seemed to be favored by the participants in Time 2, after preterit instruction.

[39] The reader is reminded that the variable of temporal reference includes both the yesterday and today's past contexts as well as the irrelevant past-time reference as is the case of current relevance of the canonical present perfect.

Table 4-33. Significant predictors of imperfect in the oral prompt task (model I).

1st semester: Times 1 & 2				
Imperfect versus present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Clause type (p = 0.088)				
Subordinate	0.87	32	34%	[0.71]
Main	-0.87	150	10%	[0.29]
Aktionsart (p = 0.2)				
Atelic	0.78	123	20%	[0.68]
Telic	-0.78	59	3%	[0.32]
Grounding (p = 0.27)				
Background	0.56	82	24%	[0.64]
Foreground	-0.56	100	6%	[0.36]
Time (p = 0.38)				
2	0.93	32	28%	[0.72]
1	-0.93	150	11%	[0.28]
Temporal adverbial (p = 0.5)				
No adverb	0.38	88	19%	[0.59]
Connective-position-contrast	-0.38	94	10%	[0.41]
Temporal reference (p = 0.7)				
Prehesternal	0.28	121	21%	[0.57]
hodiernal-hesternal	-0.28	61	2%	[0.43]
		Total N = 182	Overall rate 14%	
Subject (random)				
Random St. Dev	3.68			
Fixed R^2 = 0.19	Random R^2 = 0.65	Total R^2 = 0.84	Log likelihood -40.11	

When the second statistical model was run, the results indicated that aspectual meaning was a significant predictor of imperfect use. As seen with other comparisons, the imperfect when compared to the present showed to be significantly conditioned by grounding (p<0.001) across all levels from 2nd semester up to the NS-near NS group. Only 3rd semester, 7th/8th semester, and the

NS- near-native speaker groups showed use of imperfect that was also significantly constrained by Aktionsart with decreasing significance level from 3rd semester to the NS level ($p<0.001$, $p<0.01$, $p<0.05$).

To sum up, the results exhibited clear developmental trends that characterize past morphology development as the perfect blend between changing and dynamic usage rates and changing linguistic conditioning of those forms. Let us recall that at times changing rates trigger an increase or decrease in the number of linguistic predictors of past form use, and at others, rate changes cause no concomitant changes in linguistic conditioning.

4.3.1.1.1 Regression analysis: preterit versus present/present versus preterit

Results from the regressions that were performed on each comparison are shown in Appendix II and are reported by the factor weights obtained from the mixed-effects binomial logistic regression analysis performed on the oral data (see Table 4-32 for a summary). As explained in prior sections, the closer to 1 a factor weight is, the stronger the effect that a certain category of a significant variable has on the application value of the dependent variable (i.e., in this case, the preterit as compared to the present).

Let us start by describing the results of the regression analysis performed for the comparison between the preterit and the present (see Table 4-34 below; see Appendix II.A for detailed information). For the statistical runs, the 1st semester group was condensed into one single group consisting of Time 1 and Time 2. In this case, it was decided that the statistical model should include time of data collection as an independent variable in order to avoid very low tokens of the forms if the groups had been left separated.

The results in Table 4-34 below showed that the preterit and the present forms produced by the 1st semester learners were largely affected by the time when the learners participated in the

study and by grounding. Particularly, the present was favored at Time 1, when learners had not yet had instruction on the preterit (0.81) and by backgrounded events (0.62). Consequently, the preterit was favored by those learners who had instruction on the preterit in Time 2 and by the foreground. The non-significant variables showed important trends that would become significant patterns in subsequent levels. If we recall, the present was the most frequently used past-time reference form used pervasively across past contexts, whereas the preterit spiked in usage rates at Time 2 becoming the default past time reference marker at that time point. It is clear that from very beginning proficiency, these markers start to specialize semantically, and even though the present in Time 1 was the preferred marker occurring among all past contexts, it preferred the background in line with its most prototypical meaning (i.e., imperfectivity). An important observation at this point concerns the role of grounding, gaining significance in 1st semester, maintaining it through the highest course-levels. This reveals the predominant effect of this variable on L2 acquisition of morphology, widely attested by previous research in Spanish (e.g., Salaberry, 2011), as well as multiple other languages (e.g., Bardovi-Harlig, 1998).

Table 4-34. Factors contributing to use of preterit when compared to the present.

	1st sem Time 1	**1st sem Time 2**	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th sem**	**7th/8th sem**	**NNSs-NSs**
Grounding								
FGD	[0.62]	[0.64]	**0.80**	**0.66**	**0.71**	**0.79**	**0.59**	[0.48]
BGD	[0.38]	[0.36]	0.20	0.34	0.29	0.21	0.41	[0.52]
Range	--	--	60	32	42	38	18	--
p-value	0.12	0.15	<0.001	<0.001	<0.001	<0.001	0.04	0.60
Aktionsart								

Telic	[0.55]	[0.61]	[0.55]	[0.58]	**0.58**	[0.53]	[0.55]	[0.48]
Atelic	[0.45]	[0.39]	[0.45]	[0.42]	0.42	[0.47]	[0.45]	[0.52]
Range	--	--	--	--	0.36	--	--	--
p-value	0.45	0.20	0.13	0.06	0.02	0.60	0.20	0.68
Temp. Ref.								
Hodiernal	[0.44]	[0.41]	[0.38]	0.36	**0.59**	[0.56]	**0.55**	**0.75**
Hesternal	[0.44]	[0.41]	[0.58]	**0.64**	**0.59**	[0.44]	**0.60**	**0.74**
Pre-hesternal	[0.56]	[0.59]	[0.54]	0.50	0.42	[0.44]	0.35	0.10
Irrelevant	NA	NA	NA	NA	NA	NA	NA	NA
Range	--	--	--	28	18	--	25	25
p-value	0.36	0.30	0.057	0.02	<0.01	0.17	<0.01	<0.001
Temp. Adv.								
No adverb	[0.53]	[0.48]	**0.63**	[0.39]	[0.54]	[0.59]	[0.56]	[0.50]
Conn-pos-cont	[0.47]	[0.52]	**0.67**	[0.55]	[0.46]	[0.41]	[0.44]	[0.50]
Dur-freq	NA	NA	0.23	[0.57]	NA	NA	NA	NA
Range	--	--	44	--	--	--	--	--
p-value	0.67	0.80	0.0017	0.23	0.32	0.13	0.21	0.99

**Note the bolded numbers indicate a significant factor effect whereas the square brackets indicate that the factors do not significantly constrain the use of the preterit. The shaded area across a group means that Regression analysis was not deemed appropriate due to low token counts.*

The 2nd semester level added two significant predictors of preterit use, being favored by a total of three variables. Specifically, the preterit was still favored by the foreground of the narrative (0.80), incorporating at this level the significant influence by connective and position adverbs (0.67), and by the absence of an adverb (0.63). These results indicate that the use of the preterit was significantly determined by the type of adverb with which it occurred ($p<0.01$). This emerging form, which was favored by foregrounded contexts, is now gaining further specialization as a marker of perfectivity and is thus favored by those adverb types that typically associate with the preterit (e.g., Lubbers-Quesada, 2013) in order to narrate past events in sequence temporally anchoring them.

In the 3rd semester, the preterit rate slightly increased, and concomitantly a new significant variable was added by the model (i.e., temporal reference at $p<0.05$). Specifically, the preterit at this level was significantly favored by the foreground (0.66) and hesternal contexts (0.64), with pre-hesternal contexts neither favoring nor disfavoring the form (0.50). When the non-significant variables were considered (i.e., Aktionsart, clause type, and temporal adverbial), the pattern revealed that the preterit tended to occur with telic verbs, subordinate clauses, and with all adverb types. The present, on the other hand, yielded the opposite trend, being significantly predicted by hodiernal (i.e., today: 0.64) backgrounded contexts (0.66) and also tended to occur with atelic verbs in main clauses and with the absence of an adverbial.

Like the 3rd semester, the 4th semester group showed a similar linguistic conditioning of the preterit as compared to the present. The preterit was significantly predicted by the foreground (0.71) and by hesternal as well as hodiernal temporal contexts (0.59). A new variable gained significance (i.e., Aktionsart) at this level, with telic verbs predicting the use of the preterit (0.58). It is worth noting that Aktionsart had not reached significance before and did not do so at any of

the higher-level courses. The 5th/6th semester and the 7th/8th semester groups demonstrated to be significantly conditioned by temporal reference and grounding in their use of the preterit, which was favored by hodiernal (0.69) foregrounded events (0.71), and the groups thus exhibited the same direction of effect as the prior two course levels (e.g., 3rd semester and 4th semester). Finally, when the near-native speaker and NS groups were considered, preterit was still significantly predicted by the foreground. However, the linguistic conditioning showed a slight change with the addition of a new significant variable (i.e., clause type) and the dropping of grounding. Therefore, the preterit in this group was also significantly conditioned by subordinate clauses (0.61). Nevertheless, due to the very low token counts of the present indicative across the 7th/8th semester group and the near-native speaker and NS groups, the regression results should be considered as descriptive trends with no statistical validity.

Table 4-35 below shows the effects of the factors aspectual meaning, narrative type, and verb frequency on the use of past morphology corresponding to the second statistical model. The factor group Time was considered only for the 1st semester group, which combined both the Time 1 group and the Time 2 group (i.e., those students that were not receive instruction on past time markers at the time of data collection and those that did). This combination was deemed appropriate due to the low sample size in each group, which would have caused unreliable statistical results if regression had been performed for each of them.

Table 4-35. Factor weights of preterit over present usage in the oral prompt task (model II).

	1st semester Time 1 & 2	2nd semester	3rd semester	4th semester	5th/6th sem	7th/8th sem	NSs-NNSs
Time	**1 (prior to preterit instructions)**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
Aspectual meaning							
Perfectivity	**0.67**	**0.79**	**0.67**	**0.78**	**0.84**	**0.80**	**0.81**
Continuity	0.33	0.21	0.33	0.22	0.16	0.20	0.19
Range	34	58	34	56	68	60	62
p-value	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Narrative type							
ayer	[0.59]	[0.60]	[0.59]	**0.62**	[0.54]	**0.62**	**0.81**
hoy	[0.59]	[0.40]	[0.59]	**0.62**	[0.54]	**0.62**	**0.82**
niñez	[0.46]	[0.49]	[0.53]	0.44	[0.54]	**0.51**	0.21
peligro	[0.45]	[0.52]	[0.38]	0.44	[0.42]	0.37	0.17
Range	--	--	--	18	--	25	65
p-value	0.42	0.10	0.06	0.02	0.44	0.02	<0.001
Frequency ranges							
Higher frequency	[0.51]	[0.55]	[0.41]	[0.47]	[0.50]	[0.55]	[0.48]
Lower-mid frequency	[0.49]	[0.45]	[0.59]	[0.53]	[0.50]	[0.45]	[0.52]
Range	--	--	--	--	--	--	--
p-value	0.88	0.27	0.19	0.65	0.99	0.49	0.76

Now we turn to another important comparison, namely preterit and imperfect, and we examine the type and degree of linguistic conditioning that these past forms have and whether this conditioning changes over time across course-levels.

4.3.1.1.2 Regression analysis: preterit versus imperfect

Appendix C.1.2 contains the total of all the regression outputs for the comparison between preterit and imperfect. Nevertheless, Table 4-36 below represents a simplified version of the output tables in the aforementioned Appendix, including the variables considered in the statistical model and the factor weights of those levels that favor the preterit when compared to the imperfect. Regressions revealed that this comparison was more highly linguistically conditioned (i.e., past form use was significantly constrained by a larger number of predictors, and this conditioning was operative across all course-levels). Specifically, the preterit was strongly and significantly constrained linguistically from the lowest course-level (i.e., 1st semester, Time 1 and Time 2 merged). Specifically, the results showed that preterit use was significantly favored by telic verbs (0.82), main clauses (0.80), and by the foreground of the narrative (0.73). This type of conditioning unveils the main features of the preterit at this level, which are maintained across development through all the subsequent course-levels. These features were further reinforced by the second statistical model (see Table 4-27), which yielded a high significance level for aspectual meaning, particularly indicating that perfectivity strongly favored preterit use (0.91).

The subsequent level (i.e., 2nd semester) showed that the most significant predictor of preterit use was grounding, with the foreground amply favoring the form almost categorically (0.95). Temporal adverbial was added as a significant predictor of preterit use, which was significantly favored by connective and position adverbials (0.71). The second statistical model further added another important significant predictor of preterit use (i.e., aspectual meaning), with

perfectivity significantly favoring the form (0.95), even more strongly than in the 2nd semester. Let us recall that at this course-level, the preterit dropped in frequency to a rate of 51%, approximating the other levels' rates. In other words, the preterit has been struggling to stabilize in the IL by establishing its main functions, which entails strong linguistic conditioning.

The preterit in the 3rd semester group added two significant predictors of its use namely Aktionsart and temporal reference (p<0.001), which continued to significantly constrain the preterit and the imperfect in all the subsequent course-level groups (p<0.001). Specifically, the foreground of the narrative (0.80) and telic verbs (0.73) significantly conditioned the preterit in 3rd semester participants, as well as today and yesterday's contexts (0.67 and 0.59, respectively). Moreover, grounding reached the highest significance level which was maintained across course-levels including the NS and near-native speaker groups. Model 2 further indicated that preterit at this level was significantly predicted by aspectual meaning and narrative type, with perfectivity and the narratives of the speaker's today and yesterday experiences favoring the form (i.e., 0.88 and 0.82, respectively). Table 4-36 provides a summary of the factor weights that favor or disfavor the use of the preterit when compared to the imperfect.

Table 4-36. Factors contributing to use of preterit when compared to the imperfect.

	1st semester Time 1 & Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	NNSs	NSs
Grounding								
FGD	**0.73**	**0.95**	**0.79**	**0.89**	**0.95**	**0.79**	**0.87**	**0.93**
BGD	0.27	0.05	0.21	0.11	0.05	0.21	0.13	0.07
Range	46	90	58	78	90	58	74	92
p-value	0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aktionsart								
Telic	**0.82**	[0.56]	**0.73**	**0.74**	[0.61]	**0.69**	**0.82**	**0.65**
Atelic	0.18	[0.44]	0.27	0.26	[0.39]	0.31	0.18	0.35
Range	64	--	46	48	--	38	64	30
p-value	<0.01	0.40	<0.001	<0.001	0.15	<0.001	<0.001	<0.001
Temp. Ref.								
Hodiernal	[0.72]	[0.37]	**0.68**	**0.72**	**0.74**	**0.65**	[0.60]	**0.56**
Hesternal	[0.72]	[0.56]	**0.68**	**0.72**	**0.74**	**0.56**	[0.45]	**0.61**
Pre-hesternal	[0.28]	[0.57]	0.32	0.28	0.26	0.29	[0.44]	0.33
Irrelevant	NA	NA	NA	NA	NA	NA	NA	NA
Range	--	--	36	44	48	36	--	28
p-value	0.15	0.58	<0.001	<0.001	<0.001	<0.001	0.33	<0.001
Temp. Adv.								
No adverb	[0.61]	0.42	[0.43]	[0.58]	[0.63]	[0.49]	[0.54]	0.45

Conn-pos-cont	[0.39]	**0.71**	[0.57]	[0.42]	[0.37]	[0.51]	[0.45]	**0.55**
Dur-freq	NA	0.35	[0.57]	-	-	-	-	-
Range	--	36	--	--	--	--	--	10
p-value	0.32	0.02	0.12	0.10	0.10	0.67	0.18	0.03

**Note: the bolded numbers indicate a significant factor effect whereas the square brackets indicate that the factors do not significantly constrain the use of the preterit.*

The 4th semester and 5th/6th semester levels showed the same type of linguistic conditioning for the preterit. Specifically, foregrounded hodiernal and hesternal contexts with telic verbs significantly predicted the use of the preterit (4th semester: 0.90, 0.72, 0.74 for foreground, hodiernal-hesternal, and telic verbs; 5th/6th semester: 0.90 for foreground, 0.60 and 0.56 for hodiernal, hesternal, and 0.64 for telicity). As can be seen, whereas the foreground maintains the same strength of effect in each group, temporal reference and telicity seemed to have a lower effect on preterit use in the higher course-level. The 5th/6th semester level showed the same constraint hierarchy and strength of effect of the significant predictors of preterit use described in the prior course-levels, with the foreground (0.95) and hodiernal-hesternal contexts (0.74) significantly conditioning the form. Nevertheless, the 5th/6th semester group also lost Aktionsart as a significant predictor, although the pattern attested was the same as for the prior groups with telic verbs showing a preference for preterit.

When model 2 is considered (see Appendix C.1.2), results indicated that whereas the 4th semester groups' use of preterit was similarly conditioned by perfectivity as in the lower course-levels, the 5th/6th semester group besides maintaining the effect of perfectivity showed the addition of another significant variable: narrative type. Specifically, today and yesterday past experiences significantly predicted preterit use (5th/6th semester: 0.73 for both ayer-hoy).

The highest learner group (i.e., 7th/8th semester) and the near-native speaker and NS groups also showed similar linguistic conditioning of preterit use, which was in turn similar to the linguistic conditioning described for the lower course-levels. Specifically, these advanced and the instructor groups (i.e., NS and near-native-speaker) showed that their use of preterit was significantly predicted by the foreground, telic verbs and hodiernal and hesternal contexts (i.e., foreground: 0.80 7th/8th semester, 0.87 near-native-speaker, 0.93 NS; hodiernal: 0.65 7th/8th semester, 0.56 NS; hesternal: 0.56 7th/8th semester, 0.61 NS; telic verbs: 0.69 7th/8th semester, 0.82 near-native speaker, and 0.65 NS). Furthermore, the near-native speaker -NS groups also showed that their preterit use was significantly conditioned by connective, position, and contrast adverbs (0.54) as well as main clauses (0.54). This trend reveals that the preterit becomes more linguistically conditioned with increasing proficiency, an indication of a stronger mapping between form and meaning, with the form occupying a well-defined semantic-linguistic space in the IL. When the 2nd statistical model was considered, the 7th/8th semester group maintained aspectual meaning (i.e., perfectivity, 0.97) and narrative type (i.e., today and yesterday stories, 0.51) as significant predictors of preterit use. Moreover, the group added the *peligro* "danger stories" category, which significantly conditioned the use of preterit (0.67), which explains the more neutral factor weight obtained for the yesterday-today narrative types.

Table 4-37 below summarizes the effect of the variables considered in the second statistical model (i.e., aspectual meaning, narrative type, and verb frequency) for the preterit-imperfect comparison.

Table 4-37. Factor weights of preterit over imperfect usage in the oral prompt task (model II).

	1st semester Time 1 & 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	NNSs	NSs
Time point								
Time1	[0.32]	NA	NA	NA	NA	NA	NA	NA
Time 2	[0.68]	NA	NA	NA	NA	NA	NA	NA
Range	--	NA	NA	NA	NA	NA	NA	NA
p-value	0.16	NA	NA	NA	NA	NA	NA	NA
Aspectual meaning								
Continuity	0.09	0.05	0.12	0.04	0.05	0.03	0.02	0.02
Perfectivity	**0.91**	**0.95**	**0.88**	**0.96**	**0.95**	**0.97**	**0.98**	**0.98**
Range	82	90	76	92	90	94	98	98
p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Narrative type								
ayer	[0.55]	[0.48]	**0.82**	[0.61]	**0.73**	**0.51**	[0.47]	[0.60]
hoy	[0.55]	[0.40]	**0.82**	[0.61]	**0.73**	**0.51**	[0.42]	[0.51]
niñez	[0.67]	[0.49]	0.31	[0.49]	0.37	0.32	[0.43]	[0.43]
peligro	[0.29]	[0.62]	0.33	[0.40]	0.39	**0.67**	[0.68]	[0.46]
Range	--	--	51	--	36	35	--	--
p-value	0.13	0.62	<0.001	0.27	0.04	<0.01	0.40	0.53

Frequency ranges								
Higher frequency	NA	[0.58]	[0.37]	[0.51]	[0.32]	[0.56]	[0.38]	[0.44]
Lower-mid frequency	NA	[0.42]	[0.63]	[0.49]	[0.68]	[0.44]	[0.62]	[0.56]
Range	NA	--	--	--	--	--	--	--
p-value	NA	0.38	0.21	0.89	0.21	0.47	0.36	0.52

4.3.1.1.3 Regression analysis: imperfect versus present

In this section, we will report the statistical results obtained from the regression analyses performed for the comparison between imperfect and present across course-levels (see Table 4-38 and Appendix C.1.3). The statistical trend indicated that the imperfect was not significantly conditioned in the 1st semester group (at neither time point), with one significant variable (i.e., grounding) being added in the 2nd semester, and another one in the 3rd semester (i.e., Aktionsart). The type of conditioning attested for each course-level accompanies the vigor of the imperfect as related to the present in terms of changing rates of use. Particularly, the imperfect was minimally used in the first and second semesters, which explains the lack of significant linguistic conditioning of the form. Despite the lack of significance of all predictors of use, the imperfect showed a pattern of use, in line with the canonical attributes of the form: subordinate clause, atelic verbs, the background in pre-hesternal contexts, and the absence of an adverbial yielded above-baseline rates for the imperfect. Table 4-38 summarizes the (non)significant linguistic conditioning of the imperfect in relation to the present.

Table 4-38. Factors contributing to use of imperfect when compared to the present.

	1st semester Time 1 & Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	NNSs-NSs
Grounding							
BGD		0.83	0.65	0.74	0.83	0.76	0.92
FGD		0.17	0.35	0.26	0.17	0.24	0.08
Range		66	30	48	66	52	84
p-value		<0.001	<0.01	<0.001	<0.001	<0.001	<0.001
Aktionsart							
Atelic		[0.57]	0.75	[0.59]	[0.45]	0.67	0.63
Telic		[0.43]	0.25	[0.41]	[0.55]	0.33	0.37
Range		--	50	--	--	34	26
p-value		0.32	<0.001	0.08	0.57	<0.01	<0.05
Temp. Ref.							
Pre-hest		[0.53]	[0.63]	[0.52]	[0.64]	[0.48]	[0.28]
Hesternal- Hod		[0.47]	[0.37]	[0.48]	[0.36]	[0.58]	[0.55]-[0.67]
Irrelevant		NA	NA	NA	NA	NA	NA
Range		--	--	--	--	--	--
p-value		0.62	0.06	0.74	0.06	0.65	0.07
Temp. Adv.							
No adv		[0.48]	[0.44]	[0.51]	[0.49]	[0.56]	[0.48]

Conn-pos-cont		[0.52]	[0.34]	[0.49]	[0.51]	[0.44]	[0.52]
Dur-freq		NA	[0.71]	NA	NA	NA	NA
Range		--	--	--	--	--	--
p-value		0.72	0.30	0.82	0.84	0.28	0.68

**Note: the bolded numbers indicate a significant factor effect whereas the square brackets indicate that the factors do not significantly constrain the use of the imperfect. The shaded area across a group means that Regression Analysis was not deemed appropriate due to low token counts.*

In the 2nd semester level (i.e., the subsequent level), the imperfect doubled its usage rate, and this was accompanied by the addition of one significant variable namely grounding, with backgrounded contexts significantly favoring the form (0.83). Grounding remained a significant variable across the subsequent course-levels, exhibiting the same constraint hierarchy, with the background significantly predicting the use of the imperfect form (p<0.001).

In the 3rd semester level, the imperfect showed an increase in usage rate, which was characterized by the addition of another significant factor group that conditioned the use of the imperfect (i.e., Aktionsart). Specifically, the form was significantly predicted by atelic verbs (0.74) and, as in the previous course-level, by the background of the narrative (0.64). From 4th semester to 5th/6th semester, the imperfect was only significantly predicted by the background of the narrative (i.e., 0.74, 0.71, 0.83). The subsequent participant groups (i.e., 7th/8th semester, near native speakers, and NSs) obtained very low frequencies of present use, which did not allow for a strong regression analysis. Even though Appendix II.C includes the regression outputs corresponding to these two levels, we interpret them as descriptive trends with no statistical strength. The pattern attested indicated a significant effect of Aktionsart and grounding, with the

same constraint hierarchy attested for the lower course-levels: the imperfect was significantly conditioned by atelic verbs in the background (p<0.001).

An overview of the second set of models for each of the three dyadic comparisons revealed the strength of the aspectual meaning variable as exerting a significant influence on preterit and imperfect use from the 2nd semester to the near NS and NS levels. In particular, results in Table 4-39 below showed that the imperfect was significantly conditioned by the meaning of past continuity, canonically ascribed to this form. Only the 5th/6th semester group added a second significant variable, with narrative type strongly conditioning the use of the imperfect, specifically by childhood and danger stories (0.58, 0.56, respectively).

Table 4-39. Factor weights of imperfect over present usage in the oral prompt task. (model II)

	1st semester Time 1 & Time 2	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th semester**	**7th/8th semester**	**NNSs NSs**
Aspectual meaning							
Continuity-progressivity	**0.81**	**0.84**	**0.78**	**0.87**	**0.79**	**0.88**	**0.95**
Perfectivity	0.19	0.16	0.22	0.13	0.21	0.12	0.05
Range	62	68	56	74	58	76	65
p-value	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Narrative type							
ayer	[0.44]	[0.44]	[0.30]	[0.60]	0.28	**0.66**	**0.59**
hoy	[0.44]	[0.44]	[0.30]	[0.60]	0.28	**0.66**	**0.82**
niñez	[0.37]	[0.49]	[0.60]	[0.52]	**0.77**	**0.58**	0.43

peligro	[0.68]	[0.57]	[0.61]	[0.38]	0.43	0.27	0.17
Range	--	--	--	--	49	39	65
p-value	0.26	0.59	0.05	0.14	<0.001	<0.01	<0.001
Frequency ranges							
Higher frequency	NA	NA	NA	[0.44]	[0.65]	[0.45]	[0.50]
Lower-mid frequency	NA	NA	NA	[0.56]	[0.35]	[0.55]	[0.50]
Range	NA	NA	NA	--	--	--	--
p-value	NA	NA	NA	0.57	0.14	0.62	1.00

A look at the 2nd statistical model for the preterit-present comparison (see Table 4-34) showed that generally across course-levels there was a consistent effect of aspectual meaning, with perfectivity significantly conditioning the use of the preterit over the present (e.g., 2nd semester: 0.8; 5th/6th semester: 0.84). It seems that this canonical form-meaning mapping is acquired early in the learners' IL, probably due to the high token frequency of the form, which represents the input to which the learners are exposed. Narrative type was a significant predictor of preterit use, with yesterday and today's stories significantly favoring the form only in the 4th semester (0.62). However, despite the lack of significance across the other course-levels, the variable showed similar trends. Finally, the comparison between imperfect and present for model 2 yielded similar results across levels, with aspectual meaning rendering significance, with continuity and progressivity significantly favoring the imperfect form from the 2nd to 5th/6th semester (i.e., 0.84, 0.78, 0.87, 0.79). Narrative type, on the other hand, did not render statistical significance on the use of the imperfect at any course-level except for the 5th/6th semester group. Nevertheless, the

statistical conditioning for this group and the descriptive trends for all the others point to a preference of the imperfect over danger and childhood stories.

4.3.2 Statistical analysis: written contextualized task

In this section, we turn to the statistical analysis of the written contextualized task. As with the oral prompt task, a set of mixed-effects binomial logistic regressions were performed in order to examine which one represents the best predictive model for each form across each course-level. Let us recall that the linguistic variables manipulated for the written task were Aktionsart, grounding, temporal reference, and temporal adverbial (analysis 1). Each model considers the effect of the independent variables on the selection among the three most frequently selected variants of the dependent variable (i.e., present, preterit, and imperfect). Results in this section will be reported for the following comparisons: preterit-imperfect, preterit-present/present-preterit, preterit-perfect, imperfect-present/present-imperfect (see Appendix C.2 for full output Tables). The last two comparisons, as well as present-preterit/preterit-present, varied only in terms of which variant of the pair was the most frequent at each course-level. Furthermore, some comparisons were only allowable for some of the course-levels but not for others due to the scarce tokens of a certain variant (e.g., no regression was possible for the comparison between preterit-present in the NS- near-native speaker instructor groups since the latter form obtained only 2% selection).

4.3.2.1 Overall significant linguistic conditioning of past morphology selection across course-levels

We begin by viewing the linguistic variables selected as significant in the binomial logistic regressions performed across each past form dyad comparison and across all course-levels (Table

4-40), before considering more detailed information about the favoring or disfavoring effect of the categories of those same variables on each past form variant (see Appendix C.2 for a detailed list of Tables with statistical outputs).

Table 4-40. Significant variables in the selection of past morphology in the written contextualized task.

Preterit Vs. Present	**1st sem Time 1**	**1st sem Time 2**	**2nd sem**	**3rd sem**	**4th sem**	**5th/6th sem**	**7th/8th sem**	**NNSs**	**NSs**
Temporal adverbial	--	--	--	--	--	*X	--		
Aktionsart	--	--	--	***X	***X	**X	***X		
Temporal reference	--	*X	--	***X	***X	***X	***X		
Grounding	--	**X	--	***X	***X	--	***X		
Preterit Vs. Imperfect	**1st sem Time 1**	**1st sem Time 2**	**2nd sem**	**3rd sem**	**4th sem**	**5th/6th sem**	**7th/8th sem**	**NNS**	**NSs**
Temporal adverbial	*X	--	--	--	--	--	--	***X	***X
Aktionsart	--	--	--	***X	***X	***X	***X	***X	***X
Temporal reference	--	--	--	***X	***X	***X	***X	***X	***X
Grounding	--	*X	*X	***X	***X	***X	***X	***X	**X
Imperfect Vs. Present	**1st sem Time 1**	**1st sem Time 2**	**2nd sem**	**3rd sem**	**4th sem**	**5th/6th sem**	**7th/8th sem**	**NNSs**	**NSs**
Temporal adverbial	--	--	--	--	--	--	--		
Aktionsart	--	--	--	--	--	--	**X		
Temporal reference	--	--	--	***X	***X	***X	***X		
Grounding	--	--	--	--	--	--	--		

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

Table 4-40 above shows the variables that significantly predicted the selection of the preterit when compared to the imperfect. In the section on frequencies of selection (Section 4.2.2), the general trend indicated that at beginning levels of proficiency, the preterit was slightly more frequent than the imperfect. This trend was shown to be supported by a scarcely linguistically conditioned preterit, as opposed to the higher levels, which showed a more frequent and highly conditioned selection of the form.

In the 1st semester at Time 1, only temporal adverbial was a significant predictor of preterit selection ($p<0.05$), whereas at Time 2 discourse grounding became significant ($p<0.01$) by dropping temporal adverbial. Grounding remained the sole significant variable in the 2nd semester as well ($p < 0.05$). From the 3rd semester, an important change took place characterized by an increase in the degree of linguistic conditioning of the preterit by three significant linguistic variables (i.e., grounding, temporal reference, and Aktionsart; $p <0.001$). In addition, these factor groups remained statistically significant across the 4th semester, 5th/6th semester, and the 7th/8th semester groups. The NS-near-native-speaker instructors' groups (i.e., the baseline for comparison) revealed the highest degree of linguistic conditioning in preterit selection, with a model that yielded statistical significance of the four variables considered ($p <0.001$), incorporating temporal adverbial. It is worth noting that when the past forms emerged in the learners' interlanguage system in 1st semester and 2nd semester, they showed very little linguistic specialization, which was attested in the low number of significant predictors of selection of forms.

An overview of the selection of the preterit over the present also supports the trend attested for the previous comparison by which a form's linguistic conditioning increases with increasing proficiency. This pattern, in fact, is predicted mostly across emerging forms, some of which enter the IL as default markers of pastness and with loose associations of meaning. In the 1st semester-

Time 1, the default past marker was the present, which co-existed in the verbal system with very low numbers of preterit and imperfect. Consequently, the preterit at this stage, was not significantly conditioned by any linguistic variable, a pattern that repeated itself in 2nd semester, when the form attested another important change in rates of use. Meanwhile, learners in the 1st semester after having received instruction on the preterit, showed a sharp increase in the use of this form, a situation which triggered significant linguistic conditioning by temporal reference and grounding. From the 3rd semester on, the preterit increased its degree of conditioning, being significantly predicted by Aktionsart, temporal reference, and grounding.

A final look at the imperfect selection over the present and vice versa showed, at first glance, an overall lesser degree of linguistic conditioning (except for 1st semester -Time 1). At this stage, the imperfect was significantly favored by temporal adverbial, Aktionsart, and temporal reference, although due to the form's very low selection rates, the statistical results should be regarded as a descriptive trend. At Time 2 and the 2nd semester, the markers underwent rough changes in selection rates, and the results indicated no significant conditioning of either form. In the subsequent level (i.e., 3rd semester), the imperfect seemed to gain stability in the IL and from this level on, the main difference between imperfect and present lies in temporal reference with pre-hesternal contexts favoring the imperfect across all levels.

4.3.2.1.1 Regression analysis: preterit versus imperfect

Now we proceed to the report of the statistical results, which provide more detailed information about the magnitude of effect and the constraint hierarchy of the predictors of the preterit when compared to the imperfect across all groups (see Table 4-41 and Appendix C.2.1). As a reminder, the effect magnitude is measured by the statistical significance level of the p-value (i.e., the lower the value the more significant the variable or the stronger the effect it has on the

dependent variable) and the range (i.e., obtained by subtracting the lowest factor weight from the highest factor weight within the variable; the higher the range the higher the significance level of the variable). The constraint hierarchy, on the other hand, is revealed through the relative factor weights, which indicate the categories of a variable that significantly favor the form.

In the previous paragraphs, the more general linguistic conditioning of the preterit was described for each group and compared among them. The observed trend was null or little linguistic conditioning at beginner levels, higher conditioning between the intermediate advanced levels, and absolute conditioning among the NS and near-native speaker participants. This trend was further confirmed by the outputs of the binomial logistic regressions, presented and discussed below.

The 1st semester learners, before receiving instruction on the preterit, showed very low selection rates of the form (17.5%), and the lowest rates when compared to the rest of the groups. In Time 1, the preterit, when compared to the imperfect, was significantly constrained only by the presence of an adverbial (0.61). This result confirmed Lubbers-Quesada's (2007, 2013) contention that adverbials at elementary levels are a necessary device for the learners to choose among different TA markers. Interestingly, temporal adverbial did not achieve significance again up to the NS- near-native speaker group, at which point the variable had a stronger predictive effect on the preterit ($p<0.001$), also revealed by an even higher factor weight (0.75), with the same constraint hierarchy (i.e., the presence of an adverb favors preterit over imperfect).

The results of the 1st semester at Time 2, after receiving preterit instruction, showed that the form increased in frequency use to 39%, from 17.5% in Time 1. This increase was accompanied by a concomitant change in linguistic conditioning. At this point, discourse grounding gained significance, with foregrounded contexts significantly predicting the preterit at a factor weight of

0.55. The results clearly point to a learner who has an internal knowledge of the narrative act from the lowest proficiency level, and who thus conforms to the narrative structure by showing that the skeleton of the story largely consists of sequenced events that advance the storyline forward. Table 4-41 also shows that after reaching significance at this course-level, discourse grounding maintained its strength of effect throughout the other course-levels as well as the NS- near-native speaker group, who reached the highest factor weight (i.e., 0.75). This result points to an overriding effect of discourse grounding in the selection of past morphology, in line with Salaberry (2011), whose students also completed a written task.

The second significant variable that constrained the selection of preterit over the imperfect was Aktionsart or lexical aspect. This variable did not reach significance in the 1st semester or in the 2nd semester, although the trends are worthy of analysis. The low rates of preterit selection in the 1st semester at Time 1 indicated that the form was not a stable past marker in the learners' IL, having no linguistic specialization. This was shown by the low linguistic conditioning of the form, as was discussed above. The general effect of lexical aspect on preterit selection at this level indicated that atelic verbs showed a preference for it. At Time 2, the preterit is selected more frequently, slightly surpassing the present rate of selection, with a concomitant decrease in the rates of selection of the present. The subsequent course-level, the 2nd semester, maintained a similar rate of preterit selection as the 1st semester at Time 2, but the present decreased further, and the imperfect selection rate increased. The preterit seemed to gain more vitality as a prototypical encoder of perfectivity with a concomitant change of the linguistic conditioning. Aktionsart, although not reaching significance at this level, started to show preference for telic verbs across preterit selection. The developmental picture became even more interesting at the subsequent level (i.e., 3rd semester) when Aktionsart reached statistical significance for the first

time (p<0.001), specifically favoring the preterit across telic verbs (0.61). Across the subsequent course-level groups, as well as the NS and near-native speaker groups, Aktionsart remained as a significant predictor of preterit selection with telic verbs always showing a favoring effect on the form, with stable factor weights of approximately 0.60.

The third variable, temporal reference, reached significance in predicting the selection of the preterit also in the 3rd semester. Specifically, and most importantly, hesternal (i.e., yesterday) contexts significantly favored the selection of the form (0.66), and these contexts consistently predicted the form through all course-levels as well as the NS- near-native speaker groups. Moreover, the hodiernal contexts (i.e., today) also obtained factor weights of at least 0.5 across the 3rd and 4th semesters but they were low enough, thus revealing that the preterit was neither favored nor disfavored by this temporal point. Across the subsequent course-level group (i.e., 5th/6th semester) as well as the NS- near-native speaker instructor groups, hodiernal contexts disfavored the selection of the preterit, although they regained significance in the highest learner-level group (i.e., 7th/8th semester). A final interesting result within temporal reference was with regard to the effect of the irrelevant contexts, which targeted the canonical current relevance uses of the present perfect. Whereas the 3rd semester group showed that these contexts disfavored the selection of the preterit, the 4th semester group showed a neutral effect with neither a favoring nor a disfavoring effect. Irrelevant contexts significantly constrained the selection of the preterit from the 5th/6th semester level up to and including the NS and near-native speaker instructor groups. This trend indicated that the preterit was the preferred form across the prototypical contexts of the perfect, further confirming a grammaticalization path in which the preterit has been encroaching on the semantic realm of the perfect, as attested in rioplatense Spanish (Fløgstad, 2016; Rodríguez Louro,

2009, 2016). Table 4-41 below provides a summary of the direction and magnitude of effect of the linguistic factors that favor the preterit over the imperfect.

Table 4-41. Factors contributing to selection of preterit when compared to the imperfect (WCT).

	1st sem Time 1	**1st sem Time 2**	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th sem**	**7th/8th sem**	**NNSs**	**NSs**
Grounding									
FGD	[0.52]	**0.64**	**0.55**	**0.62**	**0.61**	**0.64**	**0.66**	**0.73**	**0.76**
BGD	[0.48]	0.36	0.45	0.38	0.39	0.36	0.34	0.27	0.24
Range	--	28	10	24	22	28	32	46	52
p-value	0.75	<0.001	0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Aktionsart									
Telic	[0.43]	[0.46]	[0.52]	**0.61**	**0.58**	**0.59**	**0.59**	[0.57]	**0.58**
Atelic	[0.57]	[0.54]	[0.48]	0.39	0.42	0.41	0.41	[0.43]	0.42
Range	--	--	--	22	16	18	18	--	16
p-value	0.16	0.34	0.20	<0.001	<0.001	<0.001	<0.001	0.07	<0.01
Temp. Ref.									
Hodiernal	[0.45]	[0.32]	[0.58]	**0.52**	**0.53**	0.48	**0.59**	0.48	0.47
Hesternal	[0.53]	[0.56]	[0.49]	**0.66**	**0.61**	**0.66**	**0.61**	**0.78**	**0.56**
Pre-hest	[0.64]	[0.65]	[0.43]	0.42	0.35	0.30	0.29	0.20	0.15
Irrelevant	[0.38]	[0.47]	[0.5]	0.40	**0.51**	**0.57**	**0.53**	**0.56**	**0.84**
Range	--	--	--	26	26	36	32	58	69
p-value	0.25	0.07	0.90	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Temp. Adv.									
Absent	0.39	[0.48]	[0.53]	[0.51]	[0.53]	[0.48]	[0.48]	0.42	0.30
Present	**0.61**	[0.52]	[0.47]	[0.49]	[0.47]	[0.52]	[0.52]	**0.58**	**0.70**
Range	22	--	--	--	--	--	--	16	40
p-value	0.02	0.62	0.18	0.54	0.16	0.53	0.57	<0.05	<0.001

4.3.2.1.2 Regression analysis: preterit versus present

Table 4-42 (see also Appendix C.2.2) shows the changes in the linguistic conditioning of the present as compared to the preterit across the two times combined within the 1st semester, as well as the linguistic conditioning of the preterit versus the present across course-levels.

Table 4-42. Factors contributing to selection of preterit when compared to the present.

	1st sem Time 1	**1st sem Time 2**	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th sem**	**7th/8th sem**	**NNSs**	**NSs**
Grounding									
FGD	[0.57]	**0.61**	[0.52]	**0.60**	**0.59**	[0.58]	**0.68**		
BGD	[0.43]	0.39	[0.48]	0.40	0.41	[0.42]	0.32		
Range	--	22	--	20	18	--	36		
p-value	0.05	<0.01	0.34	<0.001	<0.001	0.06	<0.001		
Aktionsart									
Telic	[0.53]	[0.47]	[0.52]	**0.61**	**0.62**	**0.61**	**0.75**		
Atelic	[0.47]	[0.53]	[0.48]	0.39	0.38	0.39	0.25		
Range	--	--	--	22	24	22	50		
p-value	0.37	0.37	0.29	<0.001	<0.001	<0.01	<0.001		
Temp. Ref.									
Hodiernal	[0.39]	0.34	[0.55]	**0.53**	**0.51**	**0.64**	**0.72**		
Hesternal	[0.62]	**0.64**	[0.54]	**0.60**	**0.71**	**0.60**	**0.71**		
Pre-hest	[0.44]	0.48	[0.47]	**0.76**	**0.61**	**0.70**	**0.59**		
Irrelevant	[0.55]	**0.54**	[0.44]	0.15	0.20	0.14	0.10		
Range	--	30	--	61	51	56	62		
p-value	0.07	0.03	0.26	<0.001	<0.001	<0.001	<0.001		
Temp. Adv.									
Absent	[0.47]	[0.50]	[0.49]	[0.53]	[0.55]	**0.59**	[0.60]		
Present	[0.53]	[0.50]	[0.51]	[0.47]	[0.45]	0.41	[0.40]		
Range	--	--	--	--	--	18	--		
p-value	0.34	0.90	0.52	0.42	0.07	0.03	0.06		

As was previously described, the present indicative was the most frequently selected form at Time 1 reaching a rate of 61%. We suggested that, when compared to the 17.5% and 13.5% rates of preterit and imperfect, respectively, the present form seemed to be functioning as a default form. The present indicative at Time 1 was not significantly conditioned by any of the four independent linguistic variables, which confirmed its default status as a past-time marker across both perfective and imperfective contexts. At Time 2, the present indicative attested a sharp decrease in selection rate to 36.6%, which further indicated a specialization of the form in linguistic terms. The hypothesized specialization of the form was confirmed by the regression results, which showed that grounding and temporal reference significantly predicted the selection of the present ($p<0.01$ and $p<0.05$). In particular, results revealed that the present was significantly favored across backgrounded contexts, in both hodiernal (i.e., today) and pre-hesternal (before yesterday) environments. However, the former contexts were more predictive of preterit selection than the latter were (with factor weights of 0.66 and 0.52, respectively).

In the 2nd semester, the present selection rates decreased to 24% from 36.6% at Time 2, and the imperfect form simultaneously gained popularity with a significant increase in selection rates (i.e., from 15% at Time 2 to 28% in the 2nd semester, $p< 0.001$). This restructuring of the learners' IL in terms of emerging forms and some others becoming less vital was characterized by an absence of statistically significant linguistic conditioning (on the 2nd semester) on the present indicative as shown in Table 4-40.

Nevertheless, the descriptive trend of the four linguistic variables across the 1st semester revealed that overall hesternal/irrelevant and backgrounded contexts (i.e., current relevance), atelic verbs, and the presence of an adverbial form showed a preference for the present indicative. The

3rd semester represents a turning point in terms of present form selection in that three independent linguistic variables reached significance (i.e., temporal reference, Aktionsart, and grounding) and maintained it throughout the subsequent course-level groups. The direction of effect of each variable was the same as the one attested in the 2nd semester, when no statistical significance was reached. The 3rd and 4th semesters showed the same type and degree of linguistic conditioning. The higher course-level groups showed the drop of one linguistic variable as a significant predictor of present selection (i.e., 5th/6th semester: grounding; the 7th/8th semester: temporal adverbial), yielding a similar conditioning of three variables as the lower course-level groups (i.e., the 3rd and 4th semesters). Moreover, the highest-course-level group (the 7th/8th semester), although showing the same significant conditioning as the lower levels, attested the strongest effects exerted by the significant variables illustrated in the higher factor weights (i.e., irrelevant temporal reference: 0.90, atelic verbs: 0.75, and background: 0.68) as well as by the highest ranges. As was explained, the instructor group was not statistically analyzed for the present-preterit comparison due to the very low tokens of the present selected.

In summary, when the present and the preterit are compared, a clear developmental path was obtained. The present indicative functions as the default form in the lowest level at Time 1, before instruction, being the pervasive form produced across past meanings. Therefore, the present at this stage was not significantly constrained by the linguistic variables, which is explained by the lack of specialization of the form, encoding all past meanings. At Time 2, the present drops sharply with a concomitant increase in preterit selection rate. This decrease in present indicative selection rates was accompanied by the form's starting to specialize in meaning, favored by hodiernal, pre-hesternal, backgrounded contexts with atelic verbs. The 2nd semester level observed another decrease of present selection rate and thus a change in the form's linguistic conditioning, although

not reaching significance at this stage. Finally, from the 3rd semester up to the highest course-level (the 7th/8th semester), the present becomes a more established form in the learners' IL as an encoder of current relevance meaning, a function canonically ascribed to the perfect. One could hypothesize then that the present indicative, from 3rd semester to 8th semester, is selected as an alternative to the perfect in irrelevant temporality and under specialized contexts (i.e., backgrounded ones expressed with atelic verbs).

It is worth clarifying that the patterns described pertain to the results of the written task, which included a story which manipulated the four independent variables in question. In the last section, a comparison is drawn between the written and the oral data results, where it becomes evident that the present indicative in the oral task, for example, is almost non-existent across current relevance contexts, which are in turn very scarce.

4.3.2.1.3 Regression analysis: imperfect versus present

Table 4-43 (see also Appendix C.2.3) shows the results of the regression analysis that contains the type of linguistic conditioning of the imperfect as compared to the present across course-levels. It was pointed out in previous sections that a trend attested in our data generally points to significant linguistic conditioning of a form in cases when it shows stability and or/establishment in the IL.

A look at the findings of the 1st semester group at Time 1 revealed that the present indicative is highly conditioned by three linguistic variables (i.e., temporal reference, Aktionsart, and temporal adverbials).

Table 4-43. Factors contributing to selection of imperfect when compared to the present (WCT).

	1st sem Time 1	1st sem Time 2	2nd semester	3rd semester	4th semester	5th/6th sem	7th/8th sem	NNSs	NSs
Grounding									
FGD	[0.54]	[0.45]	[0.48]	[0.52]	[0.49]	[0.41]	[0.48]		
BGD	[0.46]	[0.55]	[0.52]	[0.48]	[0.51]	[0.59]	[0.52]		
Range	--	--	--	--	--	--	--		
p-value	0.33	0.33	0.35	0.67	0.72	0.08	0.76		
Aktionsart									
Telic	**0.60**	[0.54]	[0.52]	[0.51]	[0.53]	[0.49]	**0.67**		
Atelic	0.40	[0.46]	[0.48]	[0.49]	[0.47]	[0.51]	0.33		
Range	20	--	--	--	--	--	34		
p-value	<0.01	0.40	0.55	0.83	0.35	0.92	<0.01		
Temp. Ref.									
Hodiernal	0.40	[0.49]	[0.46]	0.50	0.49	**0.62**	**0.65**		
Hesternal	**0.65**	[0.60]	[0.53]	0.46	**0.64**	0.40	**0.62**		
Pre-hest	0.32	[0.29]	[0.53]	**0.85**	**0.73**	**0.88**	**0.76**		
Irrelevant	**0.62**	[0.62]	[0.47]	0.17	0.18	0.11	0.09		
Range	33	--	--	68	55	77	67		
p-value	<0.01	0.06	0.63	<0.001	<0.001	<0.001	<0.001		
Temp. Adv.									
Absent	**0.58**	[0.56]	[0.47]	[0.50]	[0.48]	[0.57]	[0.60]		
Present	0.42	[0.44]	[0.53]	[0.50]	[0.52]	[0.43]	[0.40]		
Range	16	--	--	--	--	--	--		
p-value	<0.05	0.18	0.25	0.96	0.39	0.16	0.08		

Specifically, pre-hesternal and hodiernal contexts (0.68, 0.60) with atelic verbs (0.60) and the presence of an adverbial (0.58) significantly favored the present as compared to the imperfect

form. It should be recalled that at this stage the present was the most frequently selected form (61%) across past contexts. The 1st semester group at Time 2 and the 2nd semester group, the preterit selection rates increased to 39%, which caused a decrease in present indicative rates to 36.6% and 24%. The change in rates of selection of the past forms in question was accompanied by a shift in linguistic conditioning. Given the increasing importance of the preterit and for past temporal reference targeted in this dissertation research, the present indicative (and the imperfect) at these two levels was not significantly constrained by any variable. The imperfect form in the 3rd semester reaches a stable selection rate similar to the subsequent course-levels. Consequently, the form achieves significant condition by temporal reference (p<0.001) with pre-hesternal contexts significantly favoring it (0.85) and hodiernal ones displaying neither a favoring nor disfavoring effect (0.50). The selection of the imperfect by the 4th semester learners was also significantly predicted by temporal reference, specially by pre-hesternal contexts (0.73) as well as hesternal ones (0.64). The subsequent level, 5th/6th semester, showed that the selection of the imperfect was significantly conditioned by only temporal reference, particularly by pre-hesternal and hodiernal contexts (0.88, 0.62, respectively). The results for the highest course-level (i.e., 7th/8th semester) also yielded a low significance level of temporal reference, with pre-hesternal, hodiernal, and hesternal contexts favoring the imperfect (0.76, 0.65, 0.62) as well as telic verbs (0.67). Moreover, a look at the selection of the present indicative in relation to the imperfect revealed a favoring effect of irrelevant contexts (i.e., current relevance) from the 3rd semester up to the 7th/8th semester. This further confirms the function of the present in this task as an encoder of current relevance, typically ascribed to the perfect form. The NS and near-native speaker groups are not discussed for this comparison due to the very low selection rates of the present (2%), which would yield an invalid statistical result.

4.4 Further analyses

This section will present a series of descriptive analyses considering a set of the independent variables of interest in this research. The purpose of these analyses was to test some hypotheses with respect to the interplay between past morphology and lexical aspect and grounding. First, lexical aspect is tested in a within-semantic verb category and an across-semantic verb category analysis of how each past form is marked with respect to the aspect of verbs, and whether these analyses differ on the basis of task-type and course-level. A second analysis consists of examining the interactional effects of grounding and Aktionsart (i.e., lexical aspect) on the production and selection of past morphology in order to disambiguate their roles when they make common and differing predictions about the choice of past form. According to Bardovi-Harlig (2000), the Aspect Hypothesis and the Discourse Hypothesis make a set of common and differing predictions. A telic verb in the foreground marked by the preterit provides evidence for either hypothesis, whereas a telic verb in the background receiving preterit provides evidence in favor of the AH.

4.4.1 Oral prompt task: within and across-verb class analyses

Bardovi-Harlig (2000) contends that aspect studies have not typically identified differing quantified analyses (i.e., within versus across-category analyses), and this can erroneously mislead researchers to accept or reject the Aspect Hypothesis. Two main analyses have been used in reporting past tense marking in SLA and the role of lexical aspect. Whereas the within-semantic verb category analysis aims at examining how the lexical aspectual classes are marked (e.g., the percentage of achievements that inflects for the preterit, the present, and the imperfect), the across-

category analysis examines with which aspectual class a certain form most /least frequently occurs (i.e., how a certain form like the preterit is marked across the Vendlerian verb categories). Furthermore, the across-semantic verb category analysis is sensitive to imbalances of verb tokens, and as such, it is not recommended in the analysis of oral data that usually exhibit a higher number of telic verbs than atelic ones. Bardovi-Harlig (2000) reanalyzed Salaberry's (1999) data from an across to a within-semantic-verb category approach and found a clearer developmental trend among his L2 Spanish learners than the one originally reported.

In order to propose a more fine-grained analysis of the role of lexical aspect in the L2 development of past morphology, this dissertation discusses the within-semantic-verb category and across-semantic-verb category analyses, popular in TA studies, and draws comparisons between both. Due to the imbalance in the number of telic and atelic verbs across the preterit and the imperfect in the oral task, a within-semantic-verb category analysis was deemed necessary so as to be able to uncover developmental trends.

4.4.1.1 Oral prompt task: a within-semantic-verb category analysis

As was stated in the previous paragraph, in this section we will be analyzing how a certain Vendlerian class is marked morphologically (i.e., through the use of past markers) across the different course-levels. The ultimate goal of this analysis is to determine whether there are developmental trends with respect to the emergence and development of morphology and the effect of lexical aspect, as hypothesized by the Aspect Hypothesis (Andersen & Shirai, 1994; Shirai & Andersen, 1996). Let us recall that Andersen and Shirai claim that emerging perfective morphology should occur with semantically congruent lexical aspectual classes; therefore, the preterit in Spanish should emerge with achievements, then with accomplishments, later with activities, and finally with states. The imperfect in Spanish, should emerge first with states,

following the opposite route, up to achievements, which should be the last category to be marked by this form (i.e., the least prototypical). The progressive should emerge with activities, then should extend to accomplishments and achievements and eventually to states (i.e., in exceptional uses/contexts).

Due to the objective of the analysis in tracking learner development of past morphology, the results will be presented by taking into account and comparing the information in Figures 4-11 to 4-13. Specifically, the analysis will start with telic verbs (i.e., achievement and accomplishment verbs) and it will account for the percentage of use of each past form within a certain lexical aspectual class in each course-level (e.g., the percentage of states that are marked with preterit). The analysis will then proceed with atelic verbs (i.e., activities and stative verbs). The results will be reported in the light of the Aspect Hypothesis by discussing whether its tenets are met or not.

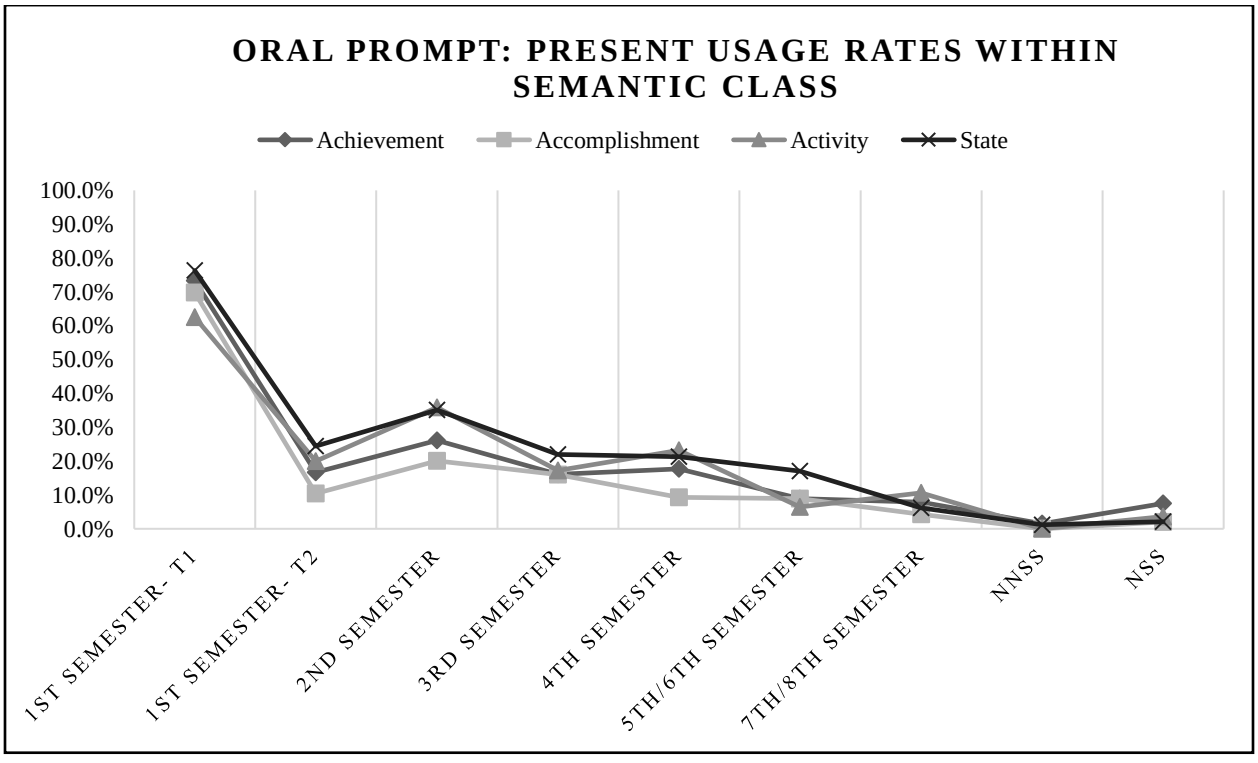

Figure 4-11. Within-lexical aspectual class analysis of the present (oral prompt task).

Let us start with the telic verb categories, i.e., achievements and accomplishments. Table 4-44 below shows that both verb types were most frequently marked by the present in the 1st semester-Time 1 (73% and 70%, respectively), in tandem with the high usage rates of the form and its status as a default verbal form. The remaining 27% percent was marked solely by the preterit (See Table 4-45 below). At Time 2, the present lost popularity and decreased in use almost 50%, giving space for the preterit to gain vitality. This change was accompanied by a change in verbal class marking rate, where achievements and accomplishments at Time 2 were largely marked by the preterit (83% and 90%, respectively, see Table 4-45), with the remaining 17% occurring with the present and 0% with the imperfect (see Table 4-46).

Table 4-44. Percentage of semantic verb classes across the present.

Within present	**Semantic verb class**			
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**
1st semester- T1	73.3%	69.8%	62.5%	76.3%
1st semester- T2	16.7%	10.4%	20.0%	24.4%
2nd semester	26.1%	20.1%	35.9%	35.1%
3rd semester	16.1%	16.0%	17.2%	22.0%
4th semester	17.7%	9.3%	23.2%	21.3%
5th/6th semester	8.9%	8.9%	6.5%	17.0%
7th/8th semester	7.9%	4.3%	10.6%	6.2%
Near NSs	1.5%	0.0%	0.0%	1.2%
NSs	7.5%	2.0%	3.6%	2.1%

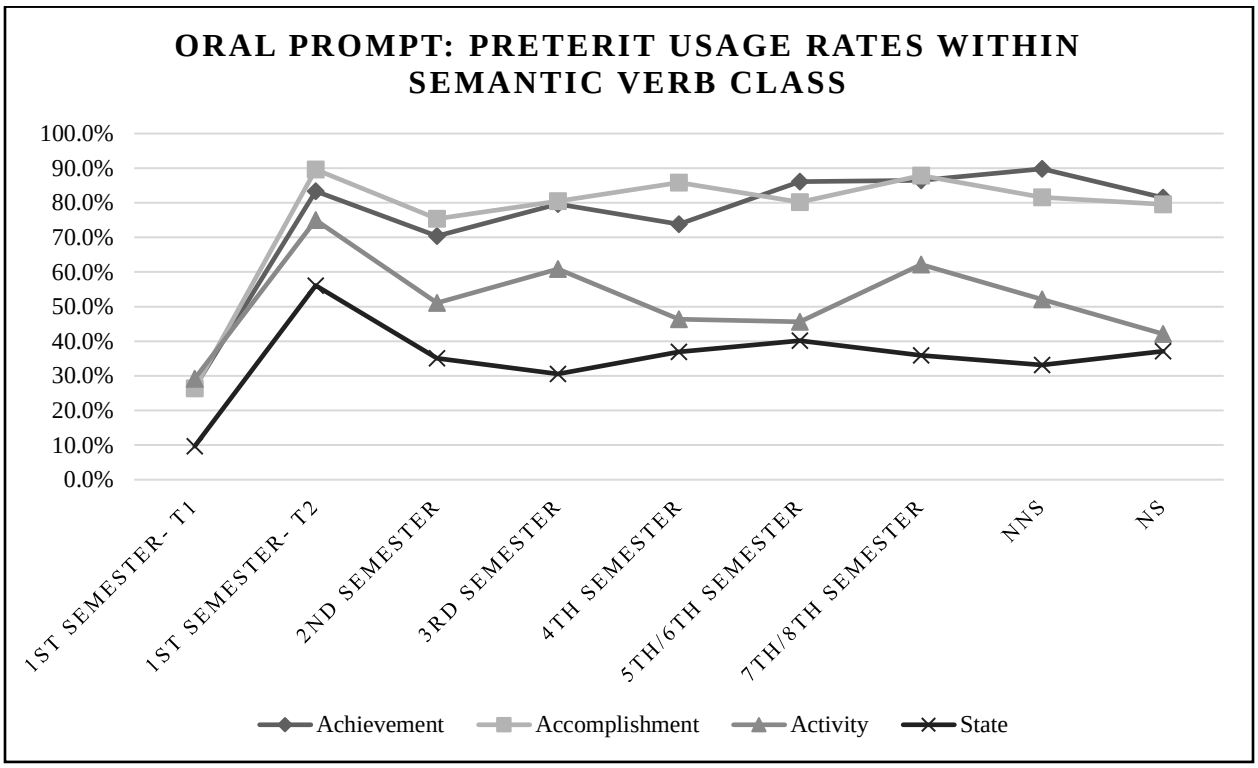

Figure 4-12. Within-lexical aspectual class analysis of the preterit (oral prompt task).

Achievement and accomplishment verbs generally followed similar trends across course-levels. For example, Figure 11 shows that in the 1st semester (Time 1) both verb types reached their highest marking rate with the present indicative (73% and 70%, respectively) but a sharp decrease in usage rates with the same form in the 1st semester (Time 2) was attested. These trends revealed the pervasiveness of the present in Time 1, as a default verb form, and its significant loss of vitality in Time 2. Interestingly, at either time point, and as an overused form or as a scarcely used one, the present showed no significant semantic bias (i.e., no significant association of present form with lexical aspectual class) (see Table 4-44 and Figure 4-11). In the 2nd semester, the preterit decreased in usage rate (from 71% to 51%) while the present increased (12% to 25%). This change in usage rates was characterized by an increase in the preterit's association with achievements and

accomplishments (see Table 4-45), from which point these verbs decreasingly occurred with the present up to the NS- near-native-speaker level (see Table 4-44).

Table 4-45. Percentage of semantic verb classes across the preterit.

Within Preterit	**Semantic verb class**			
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**
1st semester- T1	26.7%	26.4%	29.2%	9.7%
1st semester- T2	83.3%	89.6%	75.0%	56.1%
2nd semester	70.4%	75.4%	51.1%	35.1%
3rd semester	79.6%	80.5%	60.9%	30.5%
4th semester	73.8%	85.9%	46.4%	36.9%
5th/6th semester	86.1%	80.1%	45.7%	40.2%
7th/8th semester	86.5%	87.9%	62.1%	35.9%
Near NSs	89.8%	81.6%	52.1%	33.1%
NSs	81.5%	79.5%	42.1%	37.1%

When the preterit and imperfect forms are examined, achievements and accomplishments showed very clear-cut patterns (see Figures 4-12 and 4-13). In the 1st semester (Time 1), preterit and imperfect use was minimal, and so was their association with either verb type. In the 1st semester (Time 2), achievements and accomplishments showed their highest marking rates across the preterit (83% to 90%, respectively), at which point the form became the most frequently used past marker. In the 2nd semester, the preterit decreased in use (51%), and this rate slightly and gradually increased through the native-speaker group. From the 2nd semester to the NS- near-

native-speaker levels, as preterit use slightly increased, it did so with an increasing association with achievement and accomplishment verbs. When each verb type is compared with each other, accomplishments generally either slightly surpassed achievements or obtained the same rates from the lowest to the highest course-level. This seems to go against the AH claim that preterit will emerge with achievements. It is only in the 5th/6th semester that accomplishments were less frequently marked for preterit than achievements.

When the imperfect is analyzed (see Figure 4-13 and Table 4-46), the pattern obtained for achievement and accomplishment verbs is also clear but opposite to the one attested for the preterit. Particularly, achievements were not marked by the imperfect in the 1st semester (at neither time), after which the association rate increased very slightly, remaining at a minimum (8%).

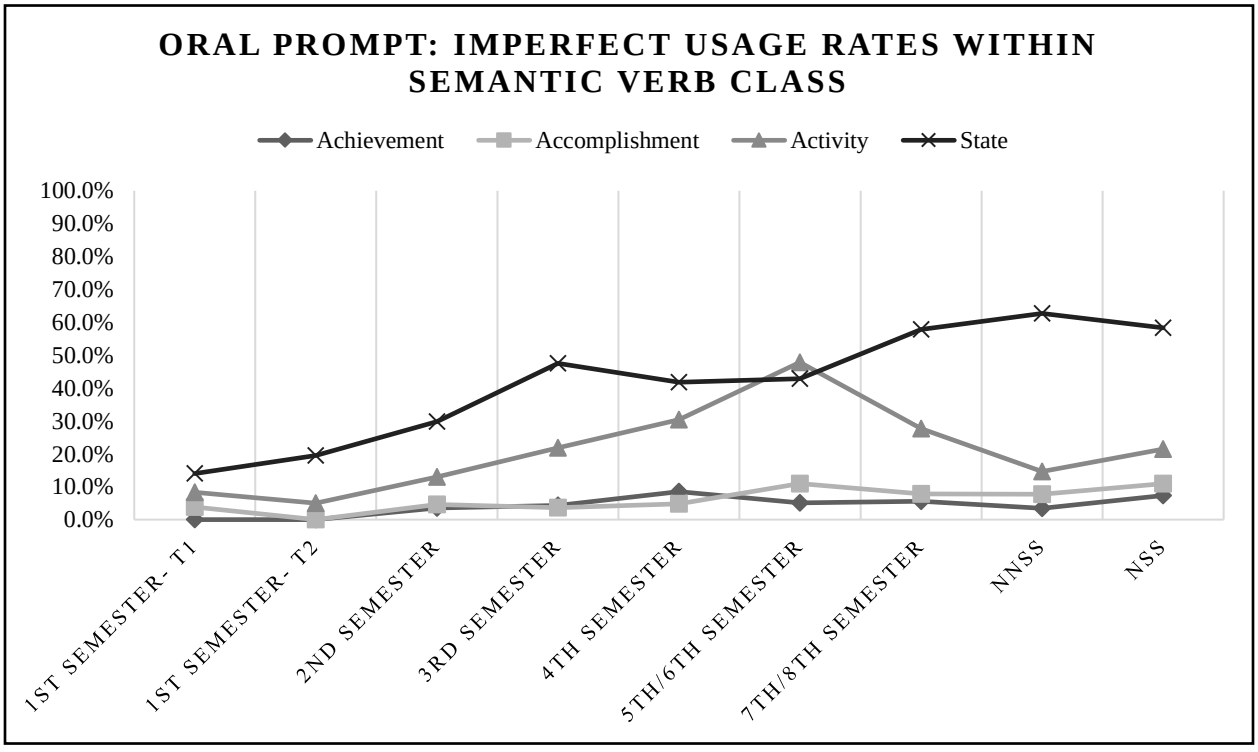

Figure 4-13. Within-lexical aspectual class analysis of the imperfect (oral prompt task).

Accomplishments were barely marked with the imperfect (4%) in Time 1, showing no marking at all in Time 2, gradually increasing its association with the imperfect up to the 5th/6th semester, decreasing in the 7th/8th semester and then slightly rising again among the NS and Near Native Speaker group. Overall, the pattern seems to show that accomplishments were somewhat more frequently marked by the imperfect than achievements were (in line with the AH tenet), with the latter never surpassing accomplishment rates (except for the 3rd and 4th semester-groups).

Finally, the trend revealed that the imperfect did not show a strong association with telic verbs at any point of development (see Table 4-46), providing evidence against the claim that non-prototypical combinations of form and lexical aspectual class should emerge and/or increase in frequency with increasing proficiency. Specifically, the highest association rate between imperfect-achievement was only 8.5% in the 4th semester and the highest association rate between imperfect-accomplishment was 11% in the 5th/6th semester and the NS group.

Table 4-46. Percentage of semantic verb classes within the imperfect.

Within imperfect	**Semantic verb class**			
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**
1st semester- T1	0.0%	3.8%	8.3%	14.0%
1st semester- T2	0.0%	0.0%	5.0%	19.5%
2nd semester	3.5%	4.6%	13.0%	29.8%
3rd semester	4.3%	3.6%	21.8%	47.5%
4th semester	8.5%	4.8%	30.4%	41.7%
5th/6th semester	5.1%	11.0%	47.8%	42.9%
7th/8th semester	5.6%	7.8%	27.7%	57.9%
Near NSs	3.4%	7.7%	14.6%	62.7%
NSs	7.3%	10.9%	21.4%	58.3%

Now, we turn our attention to the marking of the atelic verb classes. Activity verbs widely emerged with the present indicative (62%) in the 1st semester at Time 1, followed by the preterit (29%), and finally by the imperfect (8%). At Time 2, when the preterit became the most frequently used form, with an ensuing drop in the use of present, activities showed to occur largely with the preterit (75%), less so with the present (20%), while very minimally with the imperfect (5%). Activities increasingly occurred with the imperfect from Time 2 to 5th/6th semester at rates oscillating between 13% and 48%, at which point activity verbs decreased sharply in the highest course-level group (i.e., 7th/8th semester: 28%) maintaining the same rate in the NS and near-native-speaker instructor groups. Finally, activity verbs, from the 1st semester (Time 2) to the NS and near-native-speaker levels, experienced general decreased marking with the preterit and more so with the present. Nevertheless, the decreasing pattern was not absolute and steady across course-levels.

The within-semantic-verb category analyses show that in the 1st semester at Time 1 stative verbs largely occurred with the present (78%), and only minimally with the imperfect and preterit (i.e., 15% and 10%, respectively). At Time 2, stative verbs presented a very different pattern of association, largely occurring with the preterit (55%), but much less with the present (25%), and even less with the imperfect (15%). These opposite patterns correlate with the frequencies of use of each form at each level. For example, whereas at Time 1 the present was the most frequent marker across past-time contexts, at Time 2 the form significantly dropped due to the increasing rate in preterit use, which came to be the most widely used within stative verbs. Moreover, this pattern does not seem to confirm the claims of the AH for the emerging preterit with telic verbs. This may be explained by the fact that the stative verbs that participants used at both Time 1 and Time 2 belong to the most frequent ones (i.e., in the higher frequency ranges) in the Spanish native-

speaker corpus compiled by Davies (2018). The trend of stative verbs across the subsequent course-levels showed consistent general patterns: stative verbs increasingly occurred with the imperfect, starting in the 2nd semester at a rate of 19.5%, reaching a rate of 58% at the highest course-level (7th/8th semester) and 61% at the near-native/NS level. This trend confirmed the AH claim that the imperfective form should emerge with states due to their shared meaning of imperfectivity or atelicity. The trend; however, also showed that the association between lexical aspect and past morphology became stronger with higher proficiency. On the other hand, stative verbs showed a gradual and significant decreasing rate of occurrence with the present (which lost vitality with higher proficiency), from 76% among first semester learners at Time 1 to 2% in the NS- near-native-speaker instructor group, which further revealed the multifaceted nature of the form and its ability to express various past meanings (e.g., from all past meanings in 1st semester-Time 1 as a default form to a very specialized past meaning related to background information in the narrative at the highest course-levels).

To sum up, the within-semantic-verb category analysis showed clear developmental patterns in tandem with the tenets of the AH. For example, the use of the preterit significantly increased in 1st-semester participants at Time 2 with achievements and accomplishments in the lead, and activities and states lagging behind. This trend confirms the path of preterit emergence and development according to lexical aspect, as proposed by the AH: the preterit emerged in the 1st semester (Time 2) at very high rates (i.e., was overproduced) and mostly with telic verbs. In subsequent levels, the preterit rates slightly increase, and they do so largely with telic verbs. Conversely, the imperfect showed a strong and constant increase in rates of use with stative verbs in the lead, followed by activity verbs, which never exceeded states, and with both telic verb classes holding back. Finally, the present seems to be the most versatile past time marker capable

of encoding different past sub-meanings. As a default marker in the lowest course-level in Time 1, the four verb classes were largely marked by the present. This trend was largely maintained across levels, as the form gradually decreased in frequency of use.

An overall look at the results put together (see Appendix C.3.2), shows an even more detailed within-semantic-verb category analysis, called in this dissertation, the strong-within-category analysis. Each table in the Appendix shows exactly how each verb category is marked for past at a certain developmental point. This analysis is complementary to the within-category one that was used in this section.

To conclude, the reported results seemed to confirm the main tenets of the AH in terms of lexical aspectual classes more typically associating with certain past markers in their emergence. It was shown that each verb class in the oral data emerged with the hypothesized past form. Nevertheless, the results also revealed that these prototypical associations became stronger with higher course-level, reaching the highest semantic bias with the NS- near native speaker instructor group. In this sense, the hypothesized development of non-prototypical associations (e.g., preterit and stative verbs) as strengthening with higher proficiency was not attested in our data.

4.4.1.2 Oral prompt task: an across-semantic-verb category analysis

In this section, a different analysis will be presented on how past morphology and lexical aspect interact. Specifically, we will examine one past form (e.g., preterit) and determine how frequently it is used with the different lexical aspectual verb classes. The ultimate goal will be to conclude whether the results confirm the main tenets of the AH with respect to emerging and developing morphology and to eventually decide whether a within-category analysis or an across- one better provides a developmental picture.

Let us start with the preterit (See Figure 4-14). Since we are interested in examining the preterit across aspectual verb classes at a certain course-level and then compare it with the subsequent levels, the best way to read the figure below for interpretation purposes is vertically at the dots at each level.

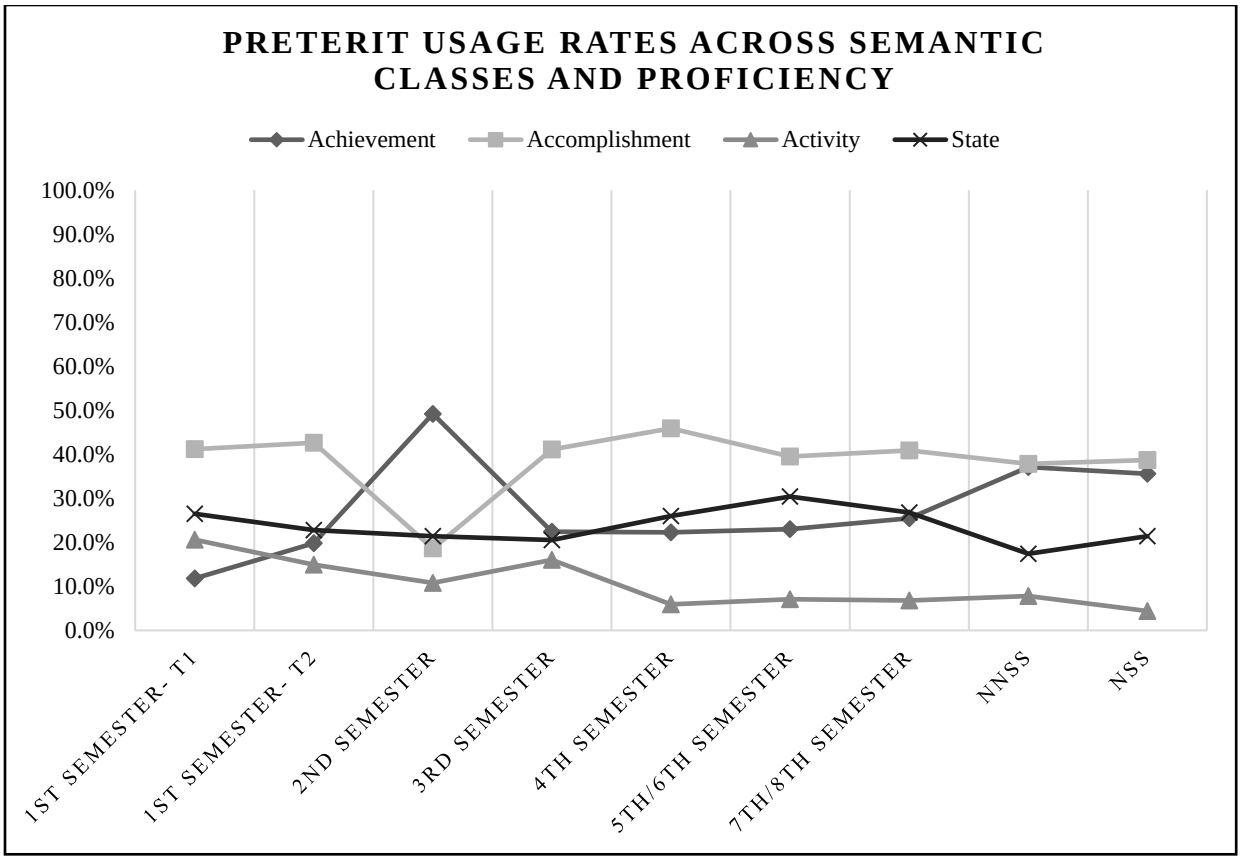

Figure 4-14. Preterit across semantic categories in the oral prompt task.

Let us recall that in the 1st semester at Time 1, the present emerged as the default verb form, whereas the preterit and imperfect yielded very low rates. The preterit at this course-level was used at a 17% rate. Table 4-47 shows that, at this level, the preterit was most frequently used with accomplishment verbs (41%) followed by states (26%) and to a lesser degree by activities (21%) and by achievements (12%). At Time 2, just after the learners had had instruction on the preterit,

the form sharply increased in usage rates to 71% gaining more popularity from this stage on. The pattern across semantic classes was maintained with accomplishment verbs in the lead (43%). Moreover, whereas activities decreased in the rates of association with preterit with increasing proficiency, achievement verbs increased in use competing with states for second place.

Table 4-47. The preterit across semantic verb classes.

Across preterit	**Semantic verb class**				
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**	**TOTAL**
1st semester- T1	11.8%	**41.2%**	20.6%	26.5%	100%
1st semester- T2	19.8%	**42.6%**	14.9%	22.8%	100%
2nd semester	**49.2%**	18.6%	10.8%	21.4%	100%
3rd semester	22.4%	**41.1%**	16.0%	20.5%	100%
4th semester	22.3%	**45.9%**	5.9%	26.0%	100%
5th/6th semester	23.0%	**39.5%**	7.1%	30.4%	100%
7th/8th semester	25.5%	**40.9%**	6.8%	26.8%	100%
Near Natives	**37.1%**	**37.8%**	7.8%	17.4%	100%
NSs	35.6%	**38.7%**	4.4%	21.4%	100%

As can be observed in Table 4-47 above, when the preterit became a stronger and more stable form in the IL, the pattern yielded a greater effect of telicity. In the 2nd semester, preterit was largely marked by achievement verbs, with accomplishment and stative verbs competing for the 2nd place, but to a much lesser extent than achievements (see Table 4-47 above and Figure 4-14). Both stative and activity verbs attested a decreasing trend up to the 2nd semester, with states

and achievements also decreasing in the 3rd semester. At this level, the preterit was primarily marked by accomplishment verbs, by achievement and stative verbs to a lesser degree, and with activity verbs lagging behind. A similar pattern was attested in the 4th semester, with two changes: unlike the 3rd semester group, stative verbs surpassed achievements and they did so up to the 7th/8th semester; the other change attested showed that activities sharply decreased at this level, at which point the activity rates of use were maintained up to the NS level. Notably, from the 4th semester to 7th/8th semester, a consistent pattern of the preterit is attested with the form most frequently occurring with accomplishments, then with states, then with achievements and finally with activities. This pattern does not fully confirm the tenets of the AH, which poses that states are the last class to occur with preterit. What is even more interesting is the increase in achievement rates across the preterit at the NS level, competing with accomplishments for 1st place. Again, the picture points to a stronger effect of lexical aspectual class with higher proficiency.

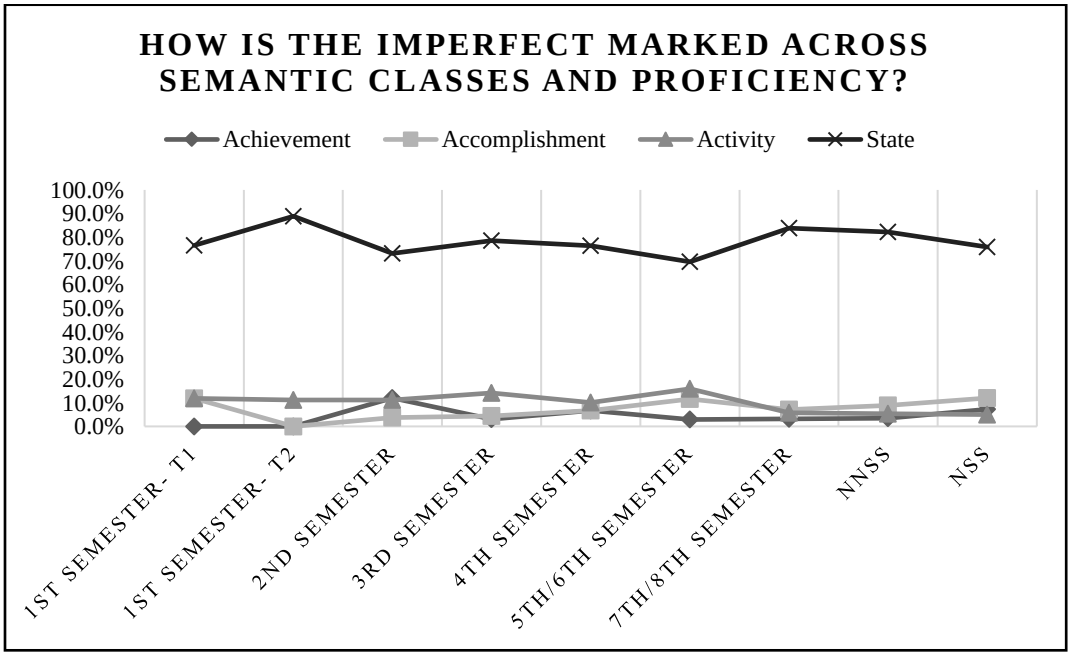

Figure 4-15. The imperfect across semantic verb classes.

Table 4-48. The imperfect across semantic verb classes.

Across imperfect	**Semantic verb class**				
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**	**TOTAL**
1st semester- T1	0.0%	11.8%	11.8%	**76.5%**	100%
1st semester- T2	0.0%	0.0%	11.1%	**88.9%**	100%
2nd semester	12.0%	3.7%	11.1%	**73.1%**	100%
3rd semester	3.0%	4.4%	14.1%	**78.5%**	100%
4th semester	6.7%	6.7%	10.1%	**76.4%**	100%
5th/6th semester	2.9%	11.6%	15.9%	**69.6%**	100%
7th/8th semester	3.2%	7.1%	5.8%	**83.9%**	100%
Near NSs	3.5%	8.9%	5.4%	**82.2%**	100%
NSs	7.2%	12.0%	5.0%	**75.8%**	100%

We now continue with the across-semantic-verb category analysis regarding the imperfect (Figure 4-15). The most salient result shown in the Figure is the fact that the imperfect is primordially marked by stative verbs from 1st semester to the 7th/8th semester. Therefore, the imperfect emerged with stative verbs (confirming the AH) but maintains this strong, prototypical association up to the NS and near-native speaker levels, which goes against the AH predictions for higher proficiency and NS levels. The three other verb classes showed very low rates of occurrence with the imperfect, ranging from 0% to 15%, with activities on the lead, followed by accomplishments and much less frequently by achievements (except for the 2nd semester, for which achievement verbs increased sharply from 5% to 11%). The 1st semester group at Time 1 and Time

2 showed that the imperfect did not occur with achievements. Accomplishments represented the 10% of all preterit verbs in Time 1 but sharply fell to 0% in Time 2, after which they gradually and steadily increased in usage rates up to (11.8%). When we observe participant groups from 4th semester to the NS and near-native speaker levels (except the 5th/6th semester), a pattern seemed to arise showing very similarly low rates of activity, accomplishment, and achievement verbs across the imperfect, which was being used with stative verbs at very high rates. In sum, Figure 4-15 showed that overall the imperfect did not yield developmental trends, in fact, when the 1st semester and NS and near-native speaker levels are compared, the rates of use across the lexical aspectual classes are very similar.

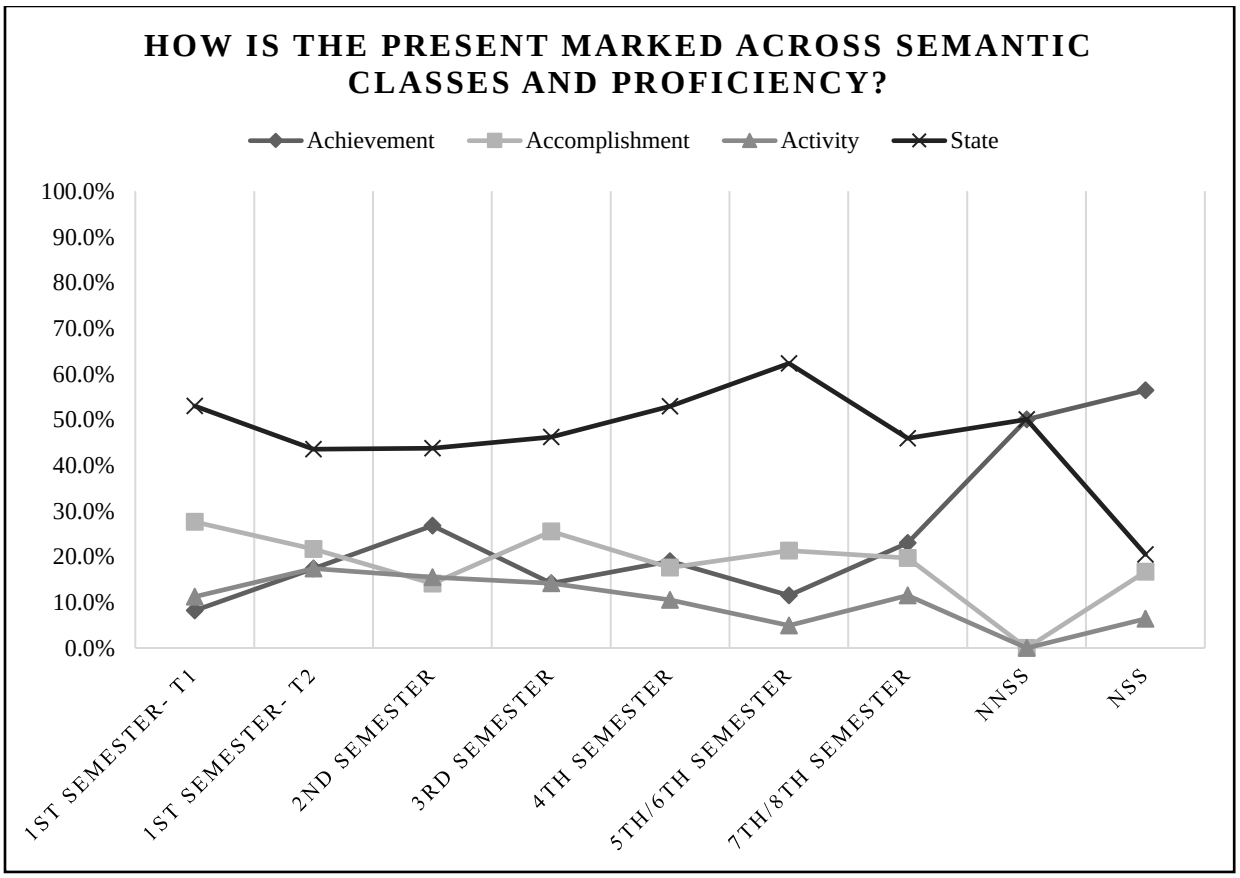

Figure 4-16. The present across semantic verb classes and course-level.

Table 4-49. The present across semantic verb classes.

Across present					
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**	**TOTAL**
1st semester- T1	8.2%	27.6%	11.2%	**53.0%**	100%
1st semester- T2	17.4%	21.7%	17.4%	**43.5%**	100%
2nd semester	26.8%	14.1%	15.5%	**43.7%**	100%
3rd semester	14.2%	25.5%	14.2%	**46.2%**	100%
4th semester	19.0%	17.6%	10.5%	**52.9%**	100%
5th/6th semester	11.5%	21.3%	4.9%	**62.3%**	100%
7th/8th semester	23.0%	19.7%	11.5%	**45.9%**	100%
Near NSs	**50.0%**	0.0%	0.0%	**50.0%**	100%
NSs	**56.4%**	16.7%	6.4%	20.5%	100%

The last across-semantic-verb category analysis to report concerns the present indicative (Figure 4-16). Let us recall that this form was the most frequently used past marker in the 1st semester at Time 1, used as a default across past contexts. The form suffered a gradual decrease in use, reaching a 2% rate among the NS- near-native speaker groups. When the 1st semester group is compared to the NS group, the present indicative use exhibits the opposite patterning with regard to lexical aspect. At Time 1, the present was most frequently used with stative verbs (53%) followed by accomplishment verbs (28%), achievements and activities lagged behind (8% and 11%, respectively). At the NS and near-native speaker levels, the present revealed the opposite trend, namely that it was largely used across achievement verbs (56% and 50%, respectively).

However, the second most frequent verb type substantially differed in terms of association rates between the NS and the near-native speaker groups (21% versus 50%, respectively). The NSs used the present with accomplishment verbs at a similar rate as with states (17% and 21%, respectively), with activities left behind. One possible explanation to this trend lies in the type of function the present fulfills in each course-level. The NS group is using the present largely as a stylistic device for dramatic vividness through which a series of foregrounded situations are presented with a nuanced pragmatic meaning and this may explain why achievement verbs are largely preferred by the present tense. In the case of the near-native speaker group, the present was a highly dispreferred form but whenever it was used, it seemed to express both perfective and imperfectives past meanings, which can seemingly explain why the form was used 50% with achievements and 50% with states.

4.4.2 Towards a comparison between within and across-lexical aspectual class analyses

Bardovi-Harlig (2000) contends that both within and across category analyses have different goals. Therefore, if the purpose is to examine the distributional bias between past morphology and lexical aspectual class across native-speakers as a source of input to their children and/or learners, then the across-category analysis is deemed appropriate. The author also states that having an imbalance in the number of the different aspectual classes is not problematic when analyzing NSs since their proficiency is not in question. Conversely, if the goal is to examine the same distributional pattern in learner data that will exhibit an uneven number of accomplishments and achievements, for example, then a within-category analysis is preferred.

When the oral prompt data results from both analyses are considered, two striking differences were observed. First, the across-category analysis for the imperfect shows an unclear

pattern where development could not be traced. The results indicated that the imperfect emerges with states and develops with the same verb type using the other categories at a bare minimum. This lack of a developmental pattern is argued to be the result, in this particular case, of stative verbs outnumbering all the other types. On the other hand, the within-semantic-verb category analysis for the same form, showed a much clearer developmental trend by which the imperfect emerges with states and is increasingly marked by stative verbs. A similar trend was observed when activity verbs were compared in each analysis.

Another important difference between both analyses in our oral data was observed with the preterit. When Figures 4-11 and 4-13 are compared, the developmental pattern is clear in the within-semantic-verb category analysis but much less so in the across-semantic-verb category one. In this case, when stative and accomplishment verbs are examined, the trends differ strongly. In the across-semantic-verb category analysis, the preterit shows differing tendencies and rates of use across accomplishments and achievements, whereas the within-semantic-verb category analysis shows a trend in which these two verb categories behave similarly and are at the top in occurring with the preterit.

4.4.3 Written contextualized task: a within-lexical aspectual class analysis

Let us recall that the written contextualized task manipulated a series of independent variables, one of which was Aktionsart. It was explained that due to the disadvantage of generating a large number of sentences, the categories of some variables were simplified in the coding. Consequently, the written task instead of using the four-way Vendlerian classification of verbs, used the more general distinction into which verbs are classified as telic or atelic. This analysis utilizes the Vendlerian classification; hence, the number of achievements, accomplishments,

activities and states were not even, and a within-semantic-verb category analysis was deemed appropriate.

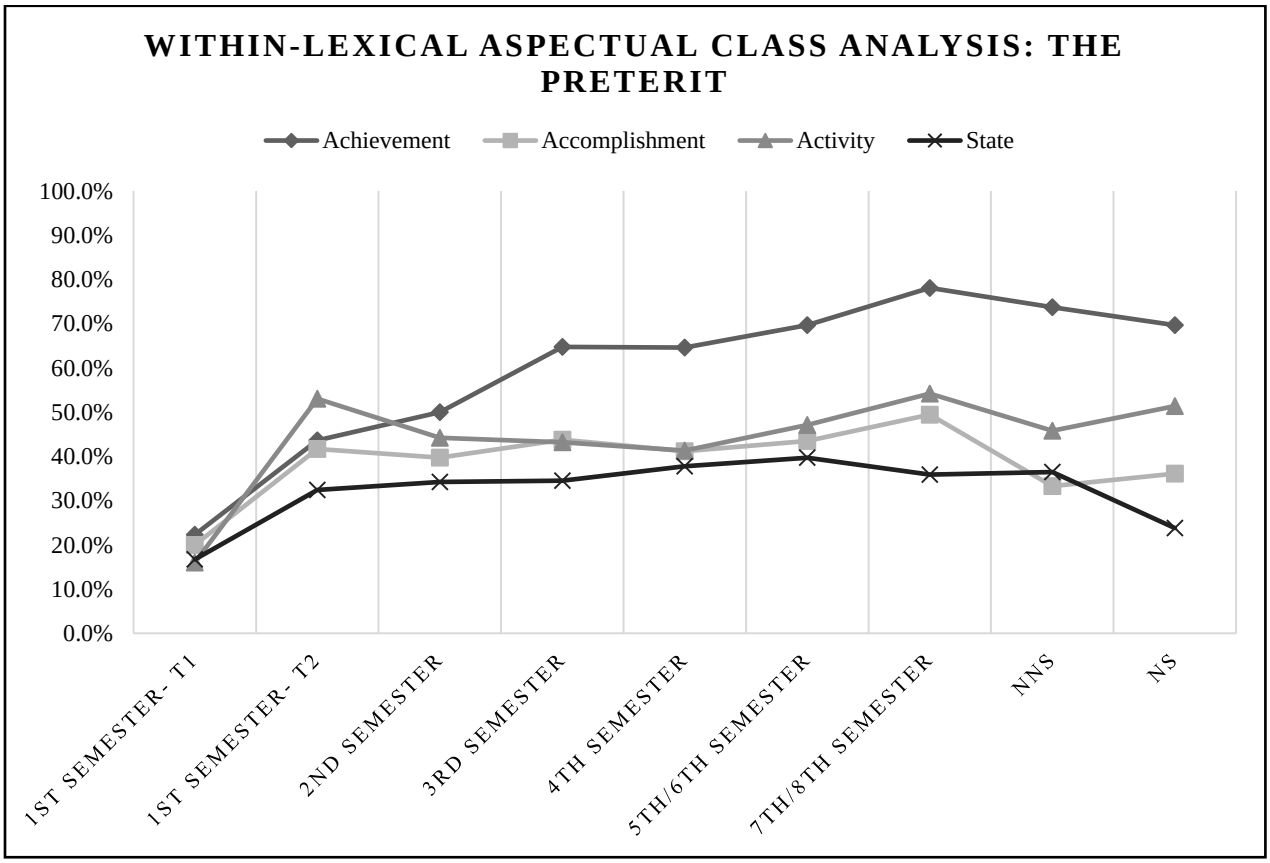

Figure 4-17. Within-category analysis: the preterit in the written contextualized task.

Now we turn to the within category analysis of the preterit based on the written task data (Figure 4-17). As pointed out several times in this chapter, the preterit in the 1st semester-Time 1 was selected at very low rates (17.5%) with the present functioning as the default verbal form. The emergence of preterit at this level is signaled by its tendency to occur with both telic verbs (i.e., achievement and accomplishment) and with activities and states staying rather behind. However, the differences are minimal, and one could argue that the preterit occurs with all lexical aspectual categories at similar rates. In the 2nd semester, the form peaks in selection rates and the four lexical

classes of verbs also increased in number across the form, with activities in the lead, telic verbs following, and with states being left behind. From the 2nd semester to the 7th/8th semesters, the trend indicates that preterit increasingly occurred with achievements in the lead, activities second, accomplishments in the 3rd place, and with states a little behind the other categories. The pattern revealed is clearly developmental and partially meets the tenets of the AH. From the 2nd semester to the highest course-level (see Table 4-50), there is a clear pattern of developing preterit, which is consistently selected with achievements in the lead (providing evidence for the AH), followed by activities (which refutes the AH claim that preterit should emerge with telic verbs), which competed with accomplishments for the 2nd place, and finally with states lagging behind.

Table 4-50. Percentage of semantic verb classes within the preterit.

Within preterit				
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**
1st semester- T1	22.3%	20.0%	16.0%	16.7%
1st semester- T2	43.6%	41.7%	53.0%	32.4%
2nd semester	**50.0%**	39.7%	44.2%	34.2%
3rd semester	**64.8%**	43.8%	43.2%	34.5%
4th semester	**64.6%**	41.2%	41.3%	37.8%
5th/6th semester	**69.7%**	43.5%	47.1%	39.7%
7th/8th semester	**78.1%**	49.5%	54.2%	35.9%
Near NSs	**73.7%**	33.3%	45.8%	36.5%
NS	**69.7%**	36.1%	51.4%	23.8%

The next within-semantic-verb category analysis implicates the imperfect form.

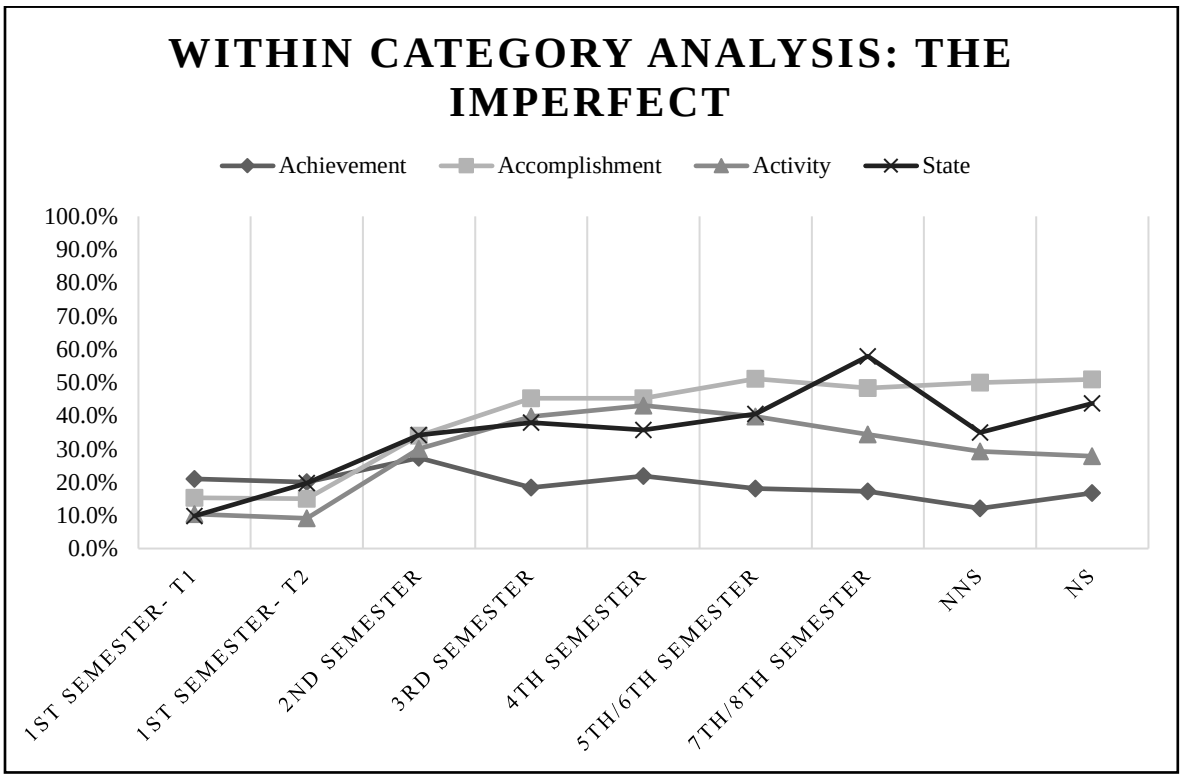

Figure 4-18. Within-lexical aspectual class analysis: the imperfect in the written contextualized task.

At first glance, the pattern unveiled by Figure 4-18 shows a clear developmental pattern that does not necessarily confirm the AH predictions. Emergent imperfect in the 1st semester at Time 1 was mostly associated with achievements, then with accomplishments, and finally with activities and states. This finding does not provide support for the AH, which predicts that the imperfect form should emerge with states and activities following the opposite trend just described. At Time 2, when the imperfect maintains a similar rate of selection as at Time 1, states peak and compete with achievements for the 1st place. The other verb categories show no change at this level. The 2nd semester shows an increasing number of achievements with the imperfect, which was selected more frequently with states and accomplishments. From the 2nd semester onwards, achievement verbs drop reaching a relatively constant rate of use from the 4th semester through the

NS level. The trend also revealed a steady increasing association between the Imperfect and state verbs (see Table 4-51) from the 3rd semester up to the NS and near-native speaker groups (with the exception of the 7th/8th course-levels)

Table 4-51. Percentage of semantic verb classes within the imperfect.

Within imperfect				
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**
1st semester- T1	**21.0%**	15.3%	10.4%	9.8%
1st semester- T2	**20.0%**	15.0%	9.1%	**19.7%**
2nd semester	27.3%	**34.0%**	30.0%	**34.2%**
3rd semester	18.4%	**45.2%**	39.7%	37.9%
4th semester	21.8%	**45.2%**	43.1%	35.7%
5th/6th semester	18.1%	**51.1%**	39.7%	40.5%
7th/8th semester	17.2%	**48.4%**	34.4%	57.9%
Near NSs	12.1%	**50.0%**	29.2%	34.9%
NS	16.7%	**50.9%**	27.8%	43.7%

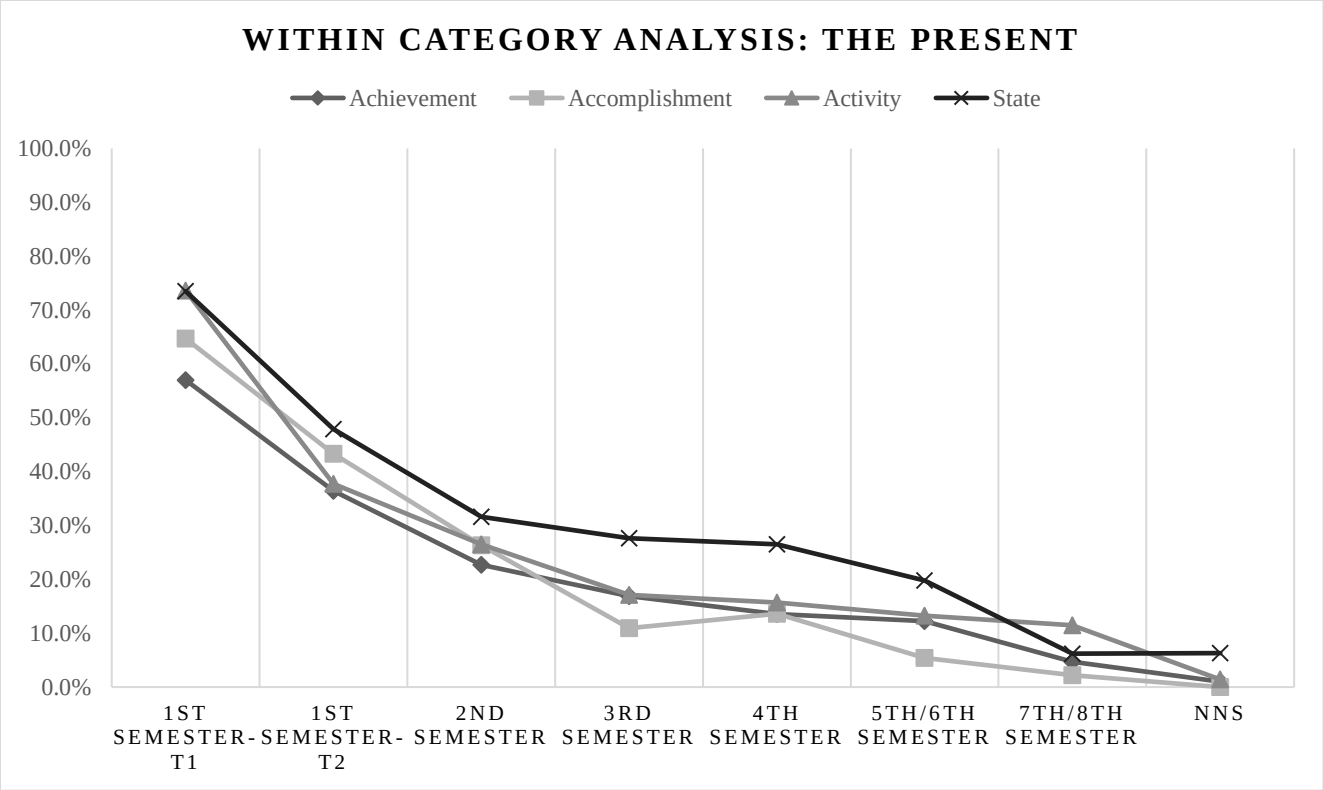

Figure 4-19. Within-lexical aspectual class analysis: the present in the written contextualized task.

Figure 4-19 shows how each verb class was marked by the present indicative at each stage. The trend points to a clear developmental path by which stative verbs and activities are predominantly marked for present in the 1st semester at Time 1 (when the present was selected in the written task at very high rates as a default verb form), followed by accomplishments and achievements, in that order. This trend provides evidence that confirms one tenet of the AH with respect to the emergence of this form, prototypically considered an imperfective one (Bybee, 1995). In the 1st semester at Time 2, the preterit selection rates sharply increase, and the present rates simultaneously drop. This rate change in Time 2 is accompanied by a changing effect of lexical aspect whereby the present is still largely marked by states but also by accomplishments, with activities and achievements lagging somewhat behind. The pattern observed also shows the

decreasing rates of present and the concomitant change in semantic function, or the gradual loss of a robust meaning associated with the form. One important change attested was the sharp decrease of accomplishment verbs up to the 3rd semester, at which point they increased again up to the 4th semester, and continuously decreased through the near-native speaker and NS groups. From the 2nd to the 5th/6th semesters, both activities and achievements patterned very similarly and occurred with the present at similar rates. Also, and up to the 5th/6th semester, stative verbs were the most frequent context for selection of the present.

Table 4-52. Percentage of semantic verb classes within the present indicative.

Within present				
Levels	**Achievement**	**Accomplishment**	**Activity**	**State**
1st semester- T1	57.0%	64.7%	**73.6%**	**73.5%**
1st semester- T2	36.4%	43.3%	37.7%	**47.9%**
2nd semester	22.7%	26.3%	26.5%	**31.6%**
3rd semester	16.9%	11.0%	17.1%	**27.6%**
4th semester	13.6%	13.6%	15.7%	**26.5%**
5th/6th semester	12.2%	5.4%	13.2%	**19.8%**
7th/8th semester	4.7%	2.2%	**11.5%**	6.2%
Near NS	1.0%	0.0%	1.4%	**6.3%**
NS	0.0%	0.0%	2.1%	**5.6%**

4.4.4 Within-lexical aspectual analyses compared: oral and written data

When the results of both analyses are compared across tasks, the first look at the results shows an overall similar developmental pattern of use and selection of past morphology. The following trends are shared by both data types:

- Achievement verbs are increasingly marked with the preterit as proficiency increases.
- Achievements also showed a very low degree of association with the imperfect across course-levels, although they obtained overall higher rates in the controlled task.
- Both achievements and accomplishments were decreasingly marked by the present, with the accomplishment verbs showing a sharper drop in cooccurrence rates across the present in both tasks.
- Accomplishment verbs in each task showed opposite trends with respect to the imperfect. The written data showed an important increase in accomplishment verbs across imperfect selection. These verbs led the selection of the imperfect from the 2nd to the 5th/6th semester. In the oral task, accomplishments partnered with achievements, and both remained with minimal usage/selection rates across the imperfect.
- Stative verbs showed the same pattern of use and selection with the preterit, slightly decreasingly occurrence with this form in both tasks. Stative verbs also showed similar patterns, the leading category in marking the imperfect in the oral prompt but occupying the 3rd place in cooccurring with the imperfect in the written task. Nevertheless, states in each task were increasingly marked by the imperfect.

4.5 The interactional effects of lexical aspect and grounding on the use and selection of past forms

One important analysis that this dissertation set out to pursue concerns the relation between the lexical aspectual classes of verbs and the discourse grounding in the emergence and development of past morphology. In chapter 2, we discussed the main tenets of two hypotheses extensively investigated in tense-aspect research (i.e., the Aspect Hypothesis and the Discourse Hypothesis). Due to the long research tradition which has examined the distribution of past morphology as being affected by the semantics of verbs or by narrative grounding, this dissertation aimed at disentangling their effects by examining those contexts in which the predictions of each hypothesis differ. For example, the AH predicts a low use of perfective past marking with atelic verbs whereas the discourse hypothesis predicts an overall high use of the form regardless of aspectual category. Therefore, when the learner uses an atelic verb in the foreground, each hypothesis differs in their predictions about past marking: the AH expects a perfective marker whereas the DH expects an imperfective one. Bardovi-Harlig (2000, 1998) investigated the development of L2 English past morphology according to verb semantics and narrative structure. Her main findings were the following:

- Achievements more likely inflect for simple past regardless of grounding.
- Accomplishments occupy the 2nd place in marking perfective past, with a tendency to co-occur in foreground contexts.
- Activities are less likely to inflect for perfective past. Foreground activities are more likely to be marked with perfective past than background activities.

In order to test the relative effect of both lexical aspect and grounding, this dissertation designed a quantitative study that would examine multiple linguistic variables that have been

attested to be implicated in emerging and developing past morphology. These multiple variables were considered in a single statistical model (i.e., a logistic regression analysis) which indicates the probabilities that a certain level of a variable will have an effect on the dependent variable. In fact, the previous section reported the statistical results for each past-form dyad comparison and a major finding was generally the predominant effect of grounding over lexical aspect (see section 4.31). However, the regression analysis did not yield the specific results that an interactional effect analysis can carefully do. In order to analyze differing predictions of the hypotheses in conflicting scenarios, the following sub-sections will present the interactional effects of Aktionsart and grounding for both task types (i.e., oral and written). It is important to point out that since the written contextualized task manipulated Aktionsart into the two broad categories of telic and atelic verbs, the oral data tested the interactional effects of lexical aspect and grounding by using the two-fold taxonomy of verbs in order to obtain comparable data.

The differing predictions made by each hypothesis about the use and/or selection of past form are referenced in Table 4-53 below, which was also included in chapter 2. These predictions have been summarized on the basis of Bardovi-Harlig (1998, 2000) and Howard (2004).

Table 4-53. Congruent and differing predictions about past morphology choice by the AH and DH.

Congruent predictions	Differing predictions
✓ **The FGD & telic verbs** are associated through a common meaning of completeness= perfective past marker ✓ **The BGD & atelic verbs** associated through incompleteness= encoded by imperfective past markers	× **The FGD & atelic verbs** ➢ The AH: imperfective past marker ➢ The DH: perfective past marker × **The BGD & telic verbs** ➢ The AH: perfective past marker ➢ The DH: imperfective past marker

4.5.1 Aktionsart and grounding: differing predictions across the oral data (oral prompt task)

Appendix C.3.1 contains the contingency tables with the results of the oral data, which specifically show the cross-tabulations of Aktionsart and discourse grounding across the participants' productions of past morphology. Tables 4-54 and 4-55 below show the number of preterit, imperfect, and present forms that were produced by the NSs and near-native speakers (NNSs) across lexical aspect and grounding. We start describing the trends of these groups in order to have a clear picture of the way the data of the baseline groups patterned. Similarly, the goal is to compare both of the instructors' groups in order to determine whether or not the near-native speaker data patterned with the NS data.

A first look at the near-native speaker data in Table 4-54, illustrated in Figure 4-20, shows that the overall rate of preterit production was higher than those of the imperfect and the present

indicative. Also, foregrounded contexts (574) outnumbered backgrounded ones (415). More specifically, atelic background and telic foreground contexts (i.e., prototypical combinations) outnumbered atelic foreground and telic background (i.e., non-prototypical). Finally, telic foreground contexts (441) outnumbered all the other contexts (atelic background: 291, atelic foreground: 143; telic background: 124).

Table 4-54. Interactional effects of lexical aspect and grounding on the use of past morphology across the near NS group.

ATELIC			**Imperfect**	**Other**	**Present**	**Preterit**	**Total**
	Background	N	210	34	3	44	291
		%	92.90%	81.00%	75.00%	27.20%	67.10%
	Foreground	N	16	8	1	118	143
		%	7.10%	19.00%	25.00%	72.80%	32.90%
			100%	**100%**	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Other**	**Present**	**Preterit**	**Total**
	Background	N	29	23	0	72	124
		%	90.60%	50.00%	0.00%	14.90%	21.90%
	Foreground	N	3	23	4	411	441
		%	9.40%	50.00%	100.00%	85.10%	78.10%
			100%	**100%**	**100%**	**100%**	**100%**

When past morphology was factored in, we observed that the prototypical contexts of lexical aspect and grounding were largely marked by prototypical past markers (See Figure 20). Specifically, atelic background contexts were highly favored by the imperfect form (92.9%) whereas the telic foreground contexts were favored by the present indicative (100%) and the preterit (85%). When non-prototypical contexts were examined, the atelic foreground ones were largely favored by the preterit (72.8%) and to a lesser degree by the present (7.1%). Telic background contexts, on the other hand, were amply favored by the imperfect (90.6%). These patterns suggest that the near-native speaker participants' use of past morphology was mostly

determined by grounding over lexical aspect (see Table 4-54), with preterit used across the discourse foreground and the imperfect across the background, regardless of lexical aspect. Nevertheless, the imperfect revealed more extreme rates of use than the preterit did, which indicates the latter form's flexibility.

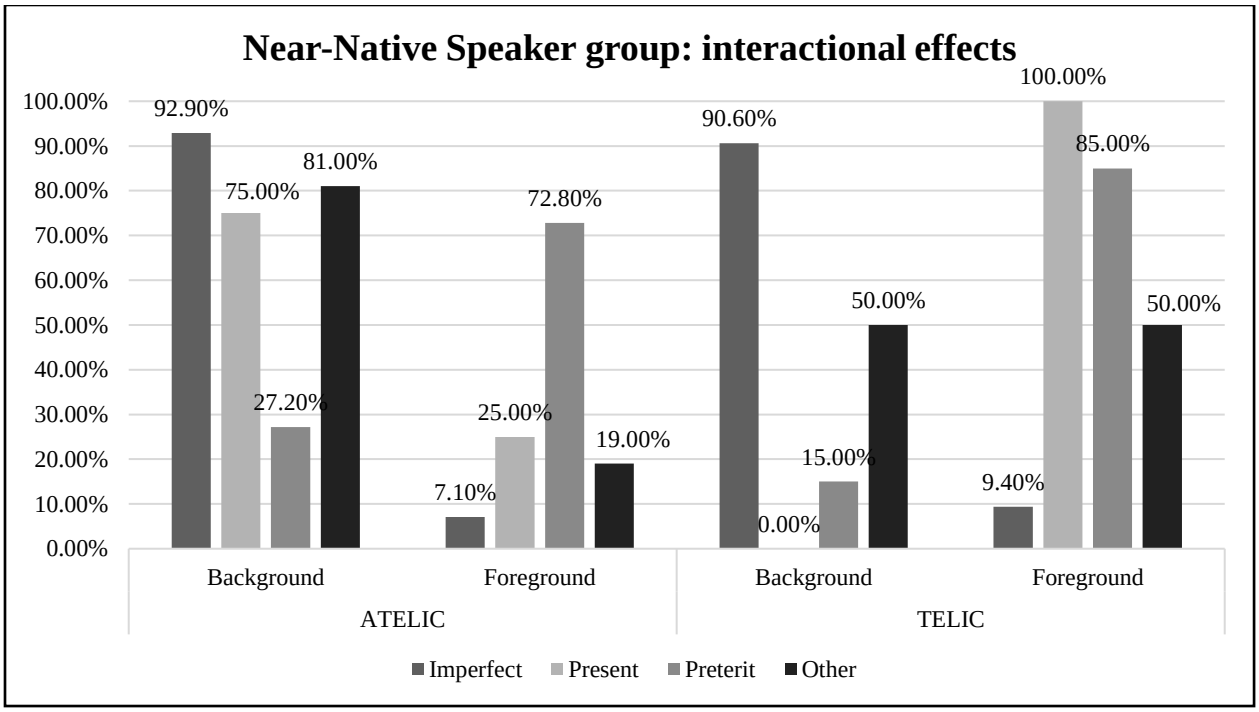

Figure 4-20. Use of past morphology within lexical aspect and grounding in the near-native speaker group (oral prompt task).

Table 4-55 below shows the interactional effects of lexical aspect and grounding across the native-speaker group. A close look enables one to see a similar trend as the one attested in the near-native speaker group. More generally, foregrounded contexts (1301) outnumbered backgrounded ones (867). More specifically, atelic background and telic foreground contexts (prototypical: 1643) outnumbered the non-prototypical atelic foreground and telic background ones (525). Finally, when each non-prototypical context was calculated, results indicated that atelic

foreground contexts slightly outnumbered the telic background contexts (i.e., 290 versus 235), possibly explained as a corollary of the overall larger number of foreground situations. However, it is important to note that the NS's preferred non-prototypical context was atelic foreground.

Table 4-55. Interactional effects of lexical aspect and grounding on the use of past morphology across the native speaker group.

ATELIC			**Imperfect**	**Other**	**Present**	**Preterit**	**Total**
	Background	N	477	41	9	105	632
		%	98.40%	61.20%	42.90%	30.10 %	68.50%
	Foreground	N	8	26	12	244	290
		%	1.60%	38.80%	57.10%	69.90 %	31.50%
			100%	**100%**	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Other**	**Present**	**Preterit**	**Total**
	Background	N	111	40	2	82	235
		%	96.50%	56.30%	3.50%	8.20%	18.90%
	Foreground	N	4	31	55	921	1011
		%	3.50%	43.70%	96.50%	91.80 %	81.10%
			100%	**100%**	**100%**	**100%**	**100%**

When past marking was examined (see Figure 4-21 below), results indicated that the atelic background contexts and the telic background ones were nearly categorically marked by the imperfect form. Furthermore, the telic-foreground contexts were also largely marked nearly categorically, in this case, by the preterit and the present indicative, although the latter form yielded very low token counts.

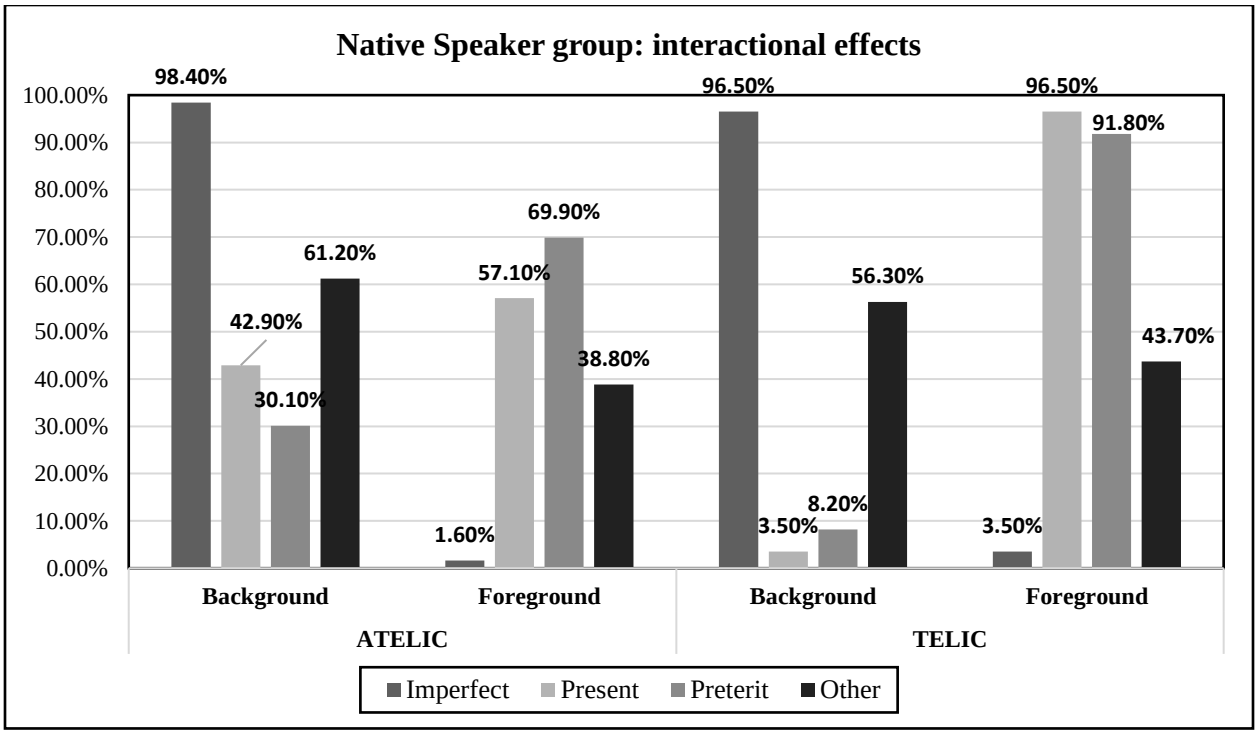

Figure 4-21. Use of past morphology within lexical aspect and grounding in the native speaker group (oral prompt task).

Now we will proceed to comparing the patterning of past form use by the 1st semester at Time 2 with those of the NSs and near native speakers. As already stated, this group had already received instruction on the preterit and attested a sharp increase in the form's rates of use (71%). Table 4-56 below (and Appendix V.A) shows that the foreground greatly outnumbered the background (e.g., 82% versus 18%), in line with the near native speaker and NS groups, although the latter yielded more balanced rates of foreground and background contexts (i.e., 60% versus 40%, respectively). This pattern confirmed that NSs have a mastery of the language that allows them to elaborate on ideas and details. The Time 2 group revealed other interesting trends. For example, the imperfect only occurred with atelic verbs regardless of grounding, and no tokens of the form were produced with telic verbs on either ground. Thus, the imperfect was seemingly

affected by lexical aspect and this trend confirmed the AH prediction for emerging past morphology. On the other hand, the preterit occurred largely across the discourse foreground regardless of lexical aspect, although telic verbs exerted a stronger effect (i.e., 98.6% of telic preterit verbs were marked with the foreground). These results indicate that the preterit was more strongly affected by grounding. Finally, the combination telic-background yielded no imperfect or present productions and only one token of the preterit, revealing it was the most dispreferred association at beginning stages when preterit was emerging. When the non-prototypical combinations were considered, one finds that atelic-foreground contexts (38) were substantially more popular than the telic background ones (1) (see Table 4-56), in line with NS data.

Table 4-56. Interactional effects of lexical aspect and grounding on the use of past morphology in the 1st semester-Time 2 group (oral prompt task).

ATELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	5	7	11	23
		%	55.6	50.0	28.9	**37.7**
	Foreground	N	4	7	27	38
		%	44.4	50.0	71.1	**62.3**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	0	0	1	1
		%	0.0	0.0	1.6	**1.4**
	Foreground	N	0	9	62	71
		%	0.0	100.0	98.4	**98.6**
			100%	**100%**	**100%**	**100%**

When the NSs and near native speakers were compared (see Figure 4-22), one such comparison showed that both groups yielded similar trends: a larger number of foregrounded contexts and a larger number of telic-foregrounded combinations. A closer look at the results

demonstrates that the NSs showed a slight tendency towards more prototypical combinations of telic verb and foreground contexts and atelic verbs and background contexts.

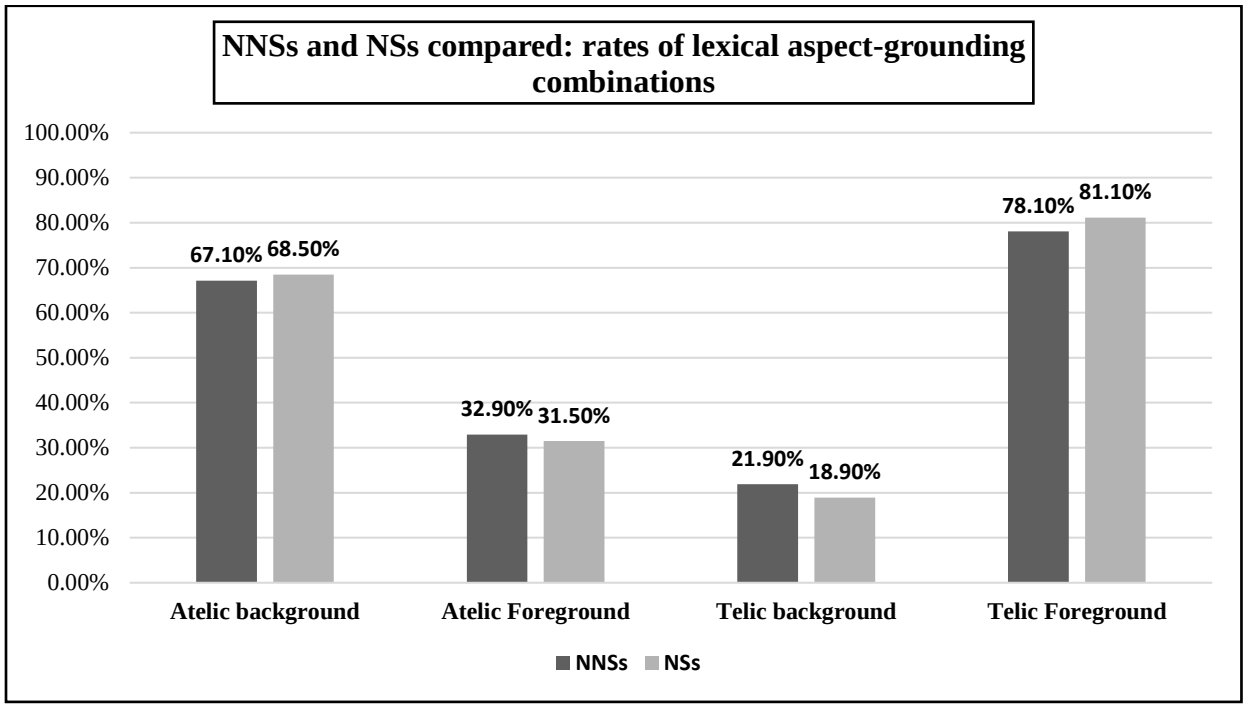

Figure 4-22. Lexical aspect-grounding pairs across near-native speakers and native-speakers (oral prompt task).

4.5.2 Aktionsart and grounding: differing predictions across the written contextualized task

As was explained in chapter (3), the written task was designed by manipulating a series of independent variables with balanced combinations of each of their levels. Consequently, the written task was evenly distributed in terms of Aktionsart and grounding contexts with each combination yielding 50%. Therefore, all atelic verbs represented 100%, with atelic background

contexts representing 50% of the total and atelic foreground another 50%. All telic verbs and grounding types represented 100%, with telic background contexts representing 50% and atelic foreground the other 50%.[40]

Table 4-57. Interactional effects of lexical aspect and grounding on the selection of past morphology in the near native speaker group in the written contextualized task.

				Imperfect	Perfect	Present	Preterit	Total
Near-native speaker instructors	**ATELIC**	**Background**	N	29	15	4	24	72
			%	40.30%	20.80%	5.60%	33.30%	100.00%
		within past form	%	65.90%	46.90%	80.00%	38.10%	50.00%
		Foreground	N	15	17	1	39	72
			%	20.80%	23.60%	1.40%	54.20%	100.00%
		within past form	%	34.10%	53.10%	20.00%	61.90%	50.00%
	TELIC	**Background**	N	29	16	1	26	72
			%	40.30%	22.20%	1.40%	36.10%	100.00%
		within past form	%	76.30%	76.20%	100.00%	31.00%	50.00%
		Foreground	N	9	5	0	58	72
			%	12.50%	6.90%	0.00%	80.60%	100.00%
		within past form	%	23.70%	23.80%	0.00%	69.00%	50.00%

[40] Contingency Tables can be examined in detail for all groups in Appendix C.3.2.

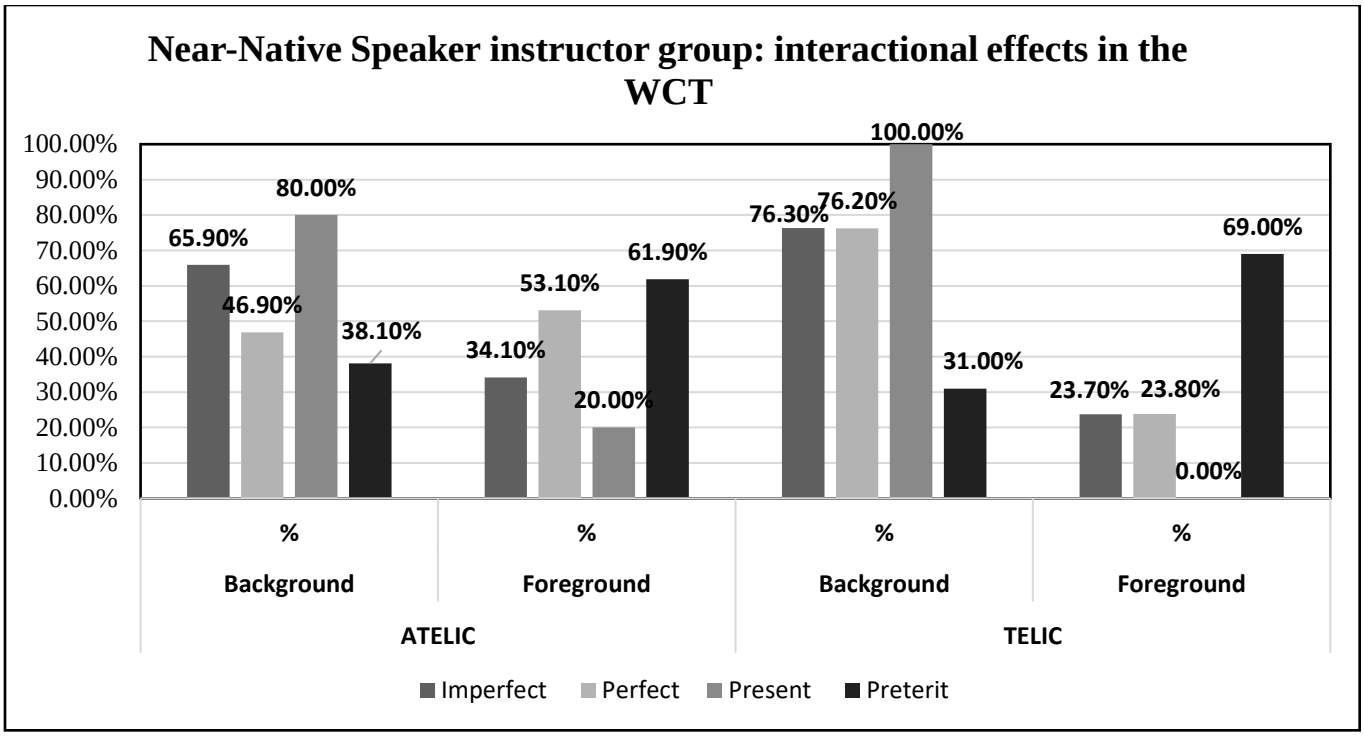

Figure 4-23. Interaction between lexical aspect and grounding in the NNS group (oral prompt task).

Tables 4-57 and 4-58 show the interactional effects of lexical aspect and grounding across the near native speaker and the native-speaker groups and reveal different results from the ones attested in the oral prompt task. Generally, the WCT results showed a tendency for background contexts, regardless of lexical aspect, to be marked mostly by the imperfect and for the foregrounded ones to be marked mostly by the preterit, which confirms the overriding effect of grounding, as discussed by Salaberry (2011). For example, the preterit was similarly distributed across atelic foreground and telic foreground contexts (71% and 73%, respectively), different from the oral task, in which the preterit was used substantially more frequently across telic-foreground contexts (92%) than across atelic-foreground ones (70%). This signals an important trend towards prototypicality between aspect and discourse grounding with past marking attested by and large across the oral mode.

Table 4-58. Interactional effects of lexical aspect and grounding on the selection of past morphology in the native speaker group in the written contextualized task.

				Imperfect	Perfect	Present	Preterit	Total
Native-Speaker Instructors	**ATELIC**	**Background**	N	62	38	9	35	144
			%	43.10%	26.40%	6.30%	24.30%	100.00%
		within past form	%	64.60%	62.30%	90.00%	29.20%	50.20%
		Foreground	N	34	23	1	85	143
			%	23.80%	16.10%	0.70%	59.40%	100.00%
		within past form	%	35.40%	37.70%	10.00%	70.80%	49.80%
	TELIC	**Background**	N	68	32	0	44	144
			%	47.20%	22.20%	0.00%	30.60%	100.00%
		within past form	%	78.20%	78.00%	0.00%	27.30%	49.80%
		Foreground	N	19	9	0	117	145
			%	13.10%	6.20%	0.00%	80.70%	100.00%
		within past form	%	21.80%	22.00%	0.00%	72.70%	50.20%

Conversely, telic background and atelic-background contexts revealed similar trends as the oral data, showing preference for the imperfect, although the attested selection rates (65%: atelic-background and 78%: telic-background) were not as extreme as the usage rates (98.4%: atelic-background and 97%: telic-background). Overall, the WCT showed less categorical selection of past forms than the oral task, an effect of the type of controlled task that manipulated the variables under study, offering form-meaning combinations that are far less frequently produced by the native-speakers in everyday spontaneous speech. It seems that the WCT shows an even more intricate pattern of selection of past-time markers that involves a more complex relationship between lexical aspect and grounding.

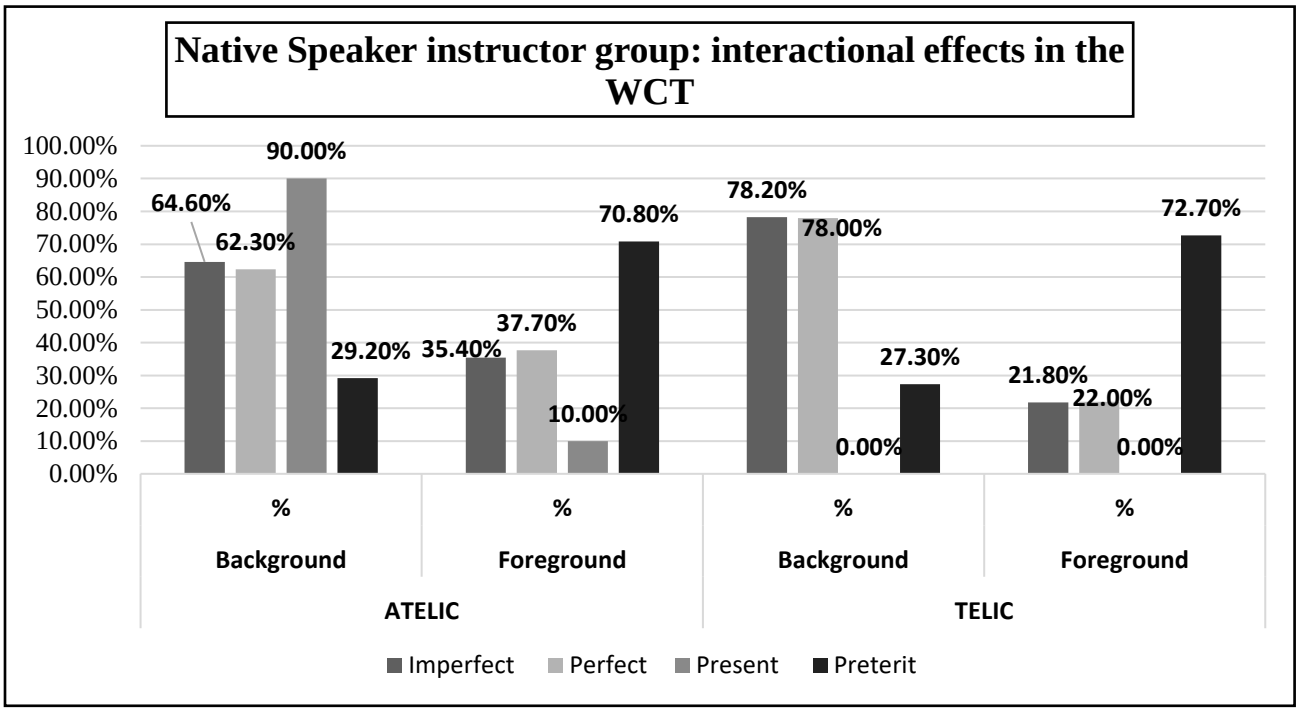

Figure 4-24. Interaction between lexical aspect and grounding in the NS group (written contextualized task).

Table 4-59 below shows the interactional effects of lexical aspect and grounding on the selection of past morphology across the 1st semester group at Time 2. The results indicate that preterit and imperfect selection follow similar trends to the ones attested in the oral data. For example, the imperfect showed a preference for background contexts across both verb types (i.e., telic and atelic). However, the effect of grounding does not seem to be as strong as in the oral data, which explains the higher selection rates of past markers across non-prototypical combinations (e.g., the imperfect for telic foreground contexts). The preterit, on the other hand, showed a preference for the foreground across verb types, with an even greater preference for telic foreground events. This tendency towards higher rates of past marker selection across non-

prototypical combinations of contexts is opposite to the ones attested in the oral data, which yielded a tendency towards more categorical use of past morphology.

Table 4-59. Interactional effects of lexical aspect and grounding on the selection of past morphology across 1st semester-Time 2.

				Imperfect	Perfect	Present	Preterit	Total
1st Semester Time 2	ATELIC	**Background**	N	14	6	38	30	88
			%	15.9%	6.8%	43.2%	34.1%	100.0%
		within past form	%	60.9%	31.6%	59.4%	42.9%	50.0%
		Foreground	N	9	13	26	40	88
			%	10.2%	14.8%	29.5%	45.5%	100.0%
		within past form	%	39.1%	68.4%	40.6%	57.1%	50.0%
	TELIC	**Background**	N	19	8	36	25	88
			%	21.6%	9.1%	40.9%	28.4%	100.0%
		within past form	%	65.5%	53.3%	55.4%	37.3%	50.0%
		% of Total		10.8%	4.5%	20.5%	14.2%	50.0%
		Foreground	N	10	7	29	42	88
			%	11.4%	8.0%	33.0%	47.7%	100.0%
		within past form	%	34.5%	46.7%	44.6%	62.7%	50.0%

Table 4-60 below shows a summary of the oral prompt task results across all groups. In particular, the Table shows a summary of the past-time markers used across the non-prototypical contexts, which deemed differing predictions by the AH and DH. As is clear, the choice of past morphology by almost all the course-levels was highly constrained by the discourse grounding and/or narrative structure.

From the very low course-level groups, the learner uses preterit to foreground events and the imperfect to background them, confirming Hopper's (1979) claim that narrative structure is a universal concept cross-linguistically and the learner starts to learn an L2 with an important amount of world and cognitive knowledge.

Table 4-60. Summary of interactional effects across the oral prompt task data.

	Congruent predictions			**Differing predictions**	
	Atelic background	**Telic foreground**		**Telic background**	**Atelic foreground**
1st semester -Time 1	Imperfect	Present-preterit		Imperfect	Preterit
			Favored hypothesis	DH	DH
1st semester-Time 2	Imperfect-present	Present		Preterit?	Preterit
			Favored hypothesis	AH	DH
2nd semester	Imperfect-present	Preterit		Imperfect-present	Preterit
			Favored hypothesis	DH	DH
3rd semester	Imperfect-present	Present-preterit		Imperfect	Preterit
			Favored hypothesis	DH	DH
4th semester	Imperfect-present	Present-preterit		Imperfect	Preterit
			Favored hypothesis	DH	DH
5th/6th semester	Imperfect-present	Present-preterit		Imperfect	Preterit
			Favored hypothesis	DH	DH
7th/8th semester	Imperfect	Preterit		Imperfect-present	Present-preterit
			Favored hypothesis	DH	DH
Near native speaker instructors	Imperfect-present	Present-preterit		Imperfect	Preterit
			Favored hypothesis	DH	DH
Native speaker instructors	Imperfect	Present-preterit		Imperfect	Present-preterit
			Favored hypothesis	DH	DH

4.6 Frequency

This dissertation aimed at uncovering the role of frequency in the emergence and development of past morphology in L2 Spanish learners. Verb frequency was treated as an independent variable which was operationalized in three different ways, as shown in the three subsequent sub-sections.

4.6.1 Corpus external frequency

As explained in chapter 3, the verbs produced by each course-level group were ranked according to their absolute frequencies of occurrence on the basis of an external NS Spanish corpus (Davies, 2018). The verbs' absolute frequencies were rank-ordered from most frequent (number one) to least frequent (5000) and verbs were finally classified as falling into the higher, mid, and lower frequency ranges.[41] This measure of frequency was entered as an independent variable in the second statistical model (i.e., model II) with aspectual meaning and narrative type, with the purpose of testing other possible significant predictors of past form use that had not been tested in model I. The overall results of model II were presented in the section of regression analyses. However, let us return to verb frequency to highlight some of the more pertinent results to our research on TA morphology.

[41] Each range corresponded to one-third of the total of 5000 verbs listed in Davies (2018). Higher frequency ranges: 1-1665, mid frequency range: 1666-3333, lower range: 3334-5000+.

The 1st semester-level at Time 1 yielded an invalid result due to the categorical use of the preterit (as compared to the imperfect) with verbs in the lower and mid frequency ranges. It is worth noting that at this level, the preterit was used at very low rates since the present was the default form. The overall low rates of preterit use were due to the fact that most learners in the group did not produce the form. The few participants at this level who used the preterit in turn demonstrated that the form was more established in the IL across less frequent verbs. When Time 1 and 2 were combined, results comparing preterit-present indicated that the preterit seemed to slightly favor higher frequency verbs. Importantly, none of the statistical runs for the subsequent levels yielded statistical significance. Therefore, only descriptive statistics are described. The 2nd semester group showed that the preterit was used preferably with higher frequency verbs, which can be explained by the increasing rates of the form. It was hypothesized that as rates of use increased, they would do so with the verbs that the learners have been exposed to in the classroom. The subsequent course-levels from 3rd semester and 5th/6th semester not only showed no statistical significance by frequency and the pattern attested indicated that preterit tended to be preferred with verbs in the low to mid frequency ranges to a small extent. Furthermore, only the 4th semester and 7th/8th semester learners, on the other hand, showed preference for preterit across higher frequency verbs. In sum, the attested results do not seem to provide a sensical pattern of past form use when it comes to the frequency of the verb.

Table 4-61. Frequency ranges of the verbs across preterit vs. imperfect in the oral prompt task.

	1st semester Time 1 & 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	NNSs	NSs
Frequency ranges								
Higher frequency	NA	[0.58]	[0.37]	[0.51]	[0.32]	[0.56]	[0.38]	[0.44]
Lower-mid frequency	NA	[0.42]	[0.63]	[0.49]	[0.68]	[0.44]	[0.62]	[0.56]
Range	NA	--	--	--	--	--	--	
p-value	NA	0.38	0.21	0.89	0.21	0.47	0.36	0.52

Within the preterit-present comparison, results for frequency indicated that in the 1st semester, the merged Time 1 and Time 2 groups, used the preterit with no preference for either higher frequency verbs or those in the low-mid ranges (see table 4-63). Let us recall that at this level, the present was used at higher rates than the preterit, so it was expected to be used with verbs in the higher frequency ranges.

Table 4-62. Frequency ranges of the verbs across preterit vs. present in the oral prompt task.

	1st semester Time 1 & 2	2nd semester	3rd semester	4th semester	5th/6th sem	7th/8th sem	NS-NNSs
Frequency ranges							
Higher frequency	[0.51]	[0.55]	[0.41]	[0.47]	[0.50]	[0.55]	[0.48]
Lower-mid frequency	[0.49]	[0.45]	[0.59]	[0.53]	[0.50]	[0.45]	[0.52]
Range	--	--	--	--	--	--	--
p-value	0.88	0.27	0.19	0.65	0.99	0.49	0.76

In the 2nd semester, when the preterit rate dropped to approximate the subsequent course-levels' rates, the form was preferred with higher frequency verbs, which may point to an effect of input exposure (e.g., whether the verbs used in the classroom at the time of presenting the preterit were high frequency or not). The 3rd and 4th semesters showed preference for the preterit with lower and mid frequency verbs in line with NS- near-native speaker use. The 5th/6th semester did not show a preference for either verb frequency type, occurring with both lower and higher frequency verbs at the same rate (50%). The 7th/8th semester used the preterit most frequently across high frequency verbs. Again, this trend could be related to more language experience by the learner. However, it is worth noting that the present indicative across these levels was used at very low rates, almost disappearing in near-native speaker-NS group. Therefore, preterit, the most frequent form, was predicted to be marked mostly by higher frequency verbs.

Table 4-63. Frequency ranges of the verbs across imperfect vs. present in the oral prompt task.

	1st semester Time 1 & Time 2	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th sem**	**7th/8th sem**	**NS vs NNSs**
Frequency ranges							
Higher frequency	NA	NA	NA	[0.44]	[0.65]	[0.45]	[0.50]
Lower-mid frequency	NA	NA	NA	[0.56]	[0.35]	[0.55]	[0.50]
Range	NA	NA	NA	--	--	--	--
p-value	NA	NA	NA	0.57	0.14	0.62	1.0

Finally, the imperfect in relation to the present showed an uneven trend. The 4th semester learners used preterit with a preference across lower-mid frequency verbs, whereas the subsequent level (5th/6th semester) showed the opposite pattern, showing a preference for highly frequent

verbs. NS-and near-native speaker instructors showed no preference for either verb frequency type, occurring evenly across both categories. For the first three course-levels, the variable of verb frequency was not input in the statistical model due to low token counts and categorical associations between form and verb.

4.6.2 Corpus internal frequency

For this measure, relative frequencies were calculated for the verbs in the corpus of each participant group in order to determine which verbs were more frequently produced by each group (see Appendix C.4.1). A second measure of frequency rank-ordered the verbs in each group from highest to lowest relative frequency and calculated the frequency of occurrence of each verb in each learner group across each of the three most frequent past forms (i.e., preterit, imperfect, and present). The goal was to examine the patterns of association between the most frequent verbs in each corpus and the past forms with which they occurred (i.e., lemma frequency) (see Appendix C.4.2). A third frequency measure consisted of determining with which past form (i.e., preterit, present, or imperfect) the most relatively frequent verbs most frequently occurred across participant groups (see Appendix C.4.3). The focus was on those verbs that represented over 1% of the corpus and which also showed a strong association with a past form (over 50%). The fourth and last measure of frequency was a multiple distinctive collexeme analysis (Gries, 2007) in order to statistically determine the strength of association between a verb and a past form, or according to Wulff et al. (2009), "the verbs that most distinctively associated with particular TA constructions" (p. 357) (see Appendix C.4.4).

4.6.3 Verb token frequencies across participant groups

Appendix C.4.1 lists the most frequent verbs produced by each participant group, from more frequent (on the top) to less frequent (bottom). Following previous works that have investigated lexical effects on the variation of morphosyntactic constructions (e.g., Linford et al., 2016), the relative frequency measure considered 1% of the total verbs of the corpus as the frequency cut-off point above which all verbs were coded as frequent. Therefore, any verbs produced by the participants which fell below this percentage were considered infrequent within our corpus. It is important to note that all the verbs produced within a group took some form of tense, aspect, and mood marking (except for infinitives); hence, the frequency list that was compiled was based on the relative frequencies of the lemmatized forms of the verbs in question. Table 4-64 (and Appendix C.4.1) shows the most frequent verbs that were produced to refer to pastness by the participant groups. A close look at these verbs reveals that the first four verbs listed under each group are the same across all groups (i.e., *ser* "be", *ir* "go", *estar* "be", *tener* "have"). Notably, three of those verbs (i.e., *ser, estar*, and *tener*) are atelic verbs whereas only *ir* is telic. Finally, the top four most frequent verbs in the learner corpora require an irregular morphology in the present, the preterit, and the imperfect. The verbs *ser* and *ir* are regarded as the most irregular verbs since all their morphemes for past and present change for preterit, imperfect, and present.

It is worth noting that the most frequently used verbs in each learner corpus and the near native speaker and NS corpora (i.e., *ser, tener, ir*) were rank-ordered in the first, second, and third places in all groups. Even more interesting is the fact that these top three verbs, which are the most frequently used across all course-levels, are the most frequently used across the most frequent verb forms.

Table 4-64. The five verbs most frequently produced in the oral prompt task across course levels.

Frequency order of the five most frequent verbs	1st semester Time 1	1st semester Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	Near native speakers	Native speakers
1st most frequent	*Ser* "be"	*Ir(se)* "go"	*Ir* "go"	*Ser* "be"	*Ser* "be"	*Ir* "go"	*Ser* "be"	*Estar* "be"	*Ser* "be"
2nd most frequent	*Ir* "go"	*Ser* "be"	*Ser* "be"	*Ir(se)* "go"	*Ir* "go"	*Ser* "be"	*Tener* "have"	*Tener* "have"	*Tener* "have"
3rd most frequent	*Tener* "have"	*Tener* "have"	*Estar* "be"	*Tener* "have"	*Tener* "have"	*Tener* "have"	*Ir* "go"	*Ser* "be"	*Estar* "be"
4th most frequent	*Estar* "be"	*Comer* "eat"	*Comer* "eat"	*Levantar / se*	*Estar* "be"	*Estar* "be"	*Estar* "be"	*Ir* "go"	*Ir* "go"
5th most frequent	*Comer* "eat"	*Estar* "be"	*Tener* "have"	*Comer* "eat"	*Hacer* "do"	*Hacer* "do"	*Haber* "there be"	*Hacer* "do"	*Hacer* "do"

This may indicate that at least at beginning stages of acquisition, lexical aspect is not the primary or sole predictor of past morphology, but verb token and type frequency also play key roles. In other words, if the three most frequent verbs across our corpora more frequently associate themselves with the three most frequent past markers, then the choice of a form would not necessarily be conditioned by the lexical aspect of the verb but by the frequency with which the learner encounters a certain verb in the input and across a given construction (e.g., how frequently the verb *ser* "be" associates with the preterit and/or the imperfect in learner groups).

Interestingly, the three most frequently used verbs across participant corpora were also the most frequent verbs in the NS corpus by Davies (2018), ranking between 7 and 33 orders out of a total of 5000 words, for which number one represented the most frequent word and number 5000 the least frequent (out of a 20 million word-corpus). This result (i.e., a match between corpus

internal and corpus external verb token frequencies) supports the usage-based view of language acquisition as essentially involving statistical learning, with learners extracting the frequencies of words and constructions from the input they receive in order to produce language that resembles those usage patterns. In this sense, lexical frequency plays a central role in language acquisition. The findings are even more informative when one observes that even the lowest proficiency-level learners, who have had the least exposure to the language (i.e. in terms of time duration), preferred to use the high-frequency verbs in line with the NS norm. These irregular verbs are entrenched in the Spanish language due to their high frequency of use; hence, they are the first verbs to emerge in the IL and the preferred verbs by the NS group. In addition, the high frequency verbs *ser* and *estar* "be" are the first ones to be taught at the 1st semester course-level for both the present and preterit. Instruction on the preterit continues with highly frequent irregular verbs and with regular ones. In the 2nd semester the imperfect is introduced with regular and high-frequency irregulars. The learners' high frequency of use of these irregular verbs can then be explained by an input effect, both textbook and instructor-based, which is expected to contain a large number of these verbs in the input. Moreover, the frequency of these verbs likely makes these verbs become salient to the learners, and saliency can also play a role in driving TA morphology acquisition and production. Nevertheless, increasing language experience seems to help to maintain this pattern of use in the subsequent course-levels.

4.6.3.1 The most frequent verbs and their association with preterit, present, and imperfect across groups: type-token frequencies

The second measure of frequency aimed at examining the patterns of co-occurrence between the different verbs, types of verbs (i.e., belonging to different lexical aspectual classes) and the past markers produced by the participants in each group. In particular, the goal was to

determine the frequency with which the most frequently produced verbs by a certain participant group most frequently associated with the preterit, imperfect, and the present (see Appendix C. 4.2).

A look at the Tables 4-65, 4-66, 4-67 across participant groups enables us to spot interesting trends. For example, the most frequent verbs used by the 1st semester group at Time 1 were shown to be highly associated with the present indicative, which goes in line with the form's high usage rates at this level and its function as a default verb form (see Table 4-65). The least frequently used verbs in the corpus (e.g., the ones used only once), all associated with the most frequent TA category (i.e., the present indicative at this level).

Table 4-65. Token and type frequency of verb forms (1st semester -Time 1) in the oral prompt task.

Verb	**Lexical aspect**	**Relative frequency**	**Imperfect**		**Present**		**Preterit**		**Total**	
		%	N	%	N	%	N	%	N	%
Ser **"be"**	**Atelic**	17.8	7	21.2	23	**69.7**	3	9.1	33	100
Ir/se **"go"**	**Telic**	12.4	0	0.0	14	**60.9**	9	39.1	23	100
Tener **"have"**	**Atelic**	10.3	3	15.8	13	**68.4**	3	15.8	19	100
Estar **"be"**	**Atelic**	7.6	3	21.4	11	**78.6**	0	0.0	14	100
Comer **"eat"**	**Atelic**	5.9	0	0.0	10	**90.9**	1	9.1	11	100

At Time 2, the participants showed a sharp increase in preterit rates of use, which was characterized by an almost categorical co-occurrence with the most frequent verbs in the corpus

(see Table 4-66). These verbs were the same frequent verbs used at Time 1, which were highly associated with the present (i.e., the default form). At this stage, even those verbs typically associated with the imperfect do so with the preterit, providing further evidence for the form as the default marker of pastness.

Table 4-66. Token and type frequency of past form (1st semester -Time 2) in the oral prompt task.

Verb	Lexical Aspect	Relative Frequency	Imperfect		Present		Preterit		Total	
		%	N	%	N	%	N	%	N	%
Ir/se **"go"**	**Telic**	15.0	0	0.0	2	10.0	18	**90.0**	20	100
Ser **"be"**	**Atelic**	15.0	4	20.0	6	30.0	10	**50.0**	20	100
Tener **"have"**	**Atelic**	5.3	1	14.3	0	0.0	6	**85.7**	7	100
Comer **"eat"**	**Atelic**	4.5	0	0.0	2	33.3	4	**66.7**	6	100
Estar **"be"**	**Atelic**	4.5	1	16.7	1	16.7	4	**66.7**	6	100

In the 2nd semester, one observes that the most frequent verbs produced by the learners no longer show categorical associations with a certain TA marker. Exceptions were the verbs *ir* "go", *levantarse* "get up", *despertarse* "wake up", and *desayunar* "have breakfast", which achieved high rates of association with the preterit (i.e., 86.7%, 83.3%, 70.8%, and 70%). Worthy of note is the fact that these verbs were classified as telic, so the trend pointed to a preference for prototypical combinations of verb and past form.

In the 3rd semester, the preterit reached more stability in terms of its rates of use, whereas the imperfect and the present showed changes. The imperfect at this stage doubled its rates of use and did so largely with three highly frequent stative verbs that require regular imperfect morphology (i.e., *gustar* "like", *tener* "have", and *estar* "be"). The 4th and 5th/6th semesters showed similar trends, with very few verbs strongly associating with the imperfect, and a larger number showing strong associations with preterit. This pattern can be explained by the popularity of the preterit, which occurred in higher rates than the imperfect across all groups, and thus across a larger number of verb types. Finally, the highest course-level and the NS and near-native speaker groups showed an increase in the number of strong associations between verb and imperfect, simultaneously maintaining the rates of verb-preterit associations, and eventually showing a loss of association strength between the verb and the present indicative (see Tables 4-67, 4-68, 4-69 for an example of the most frequent verbs in the 7th/8th semester group, the near native-speaker group, and the native-speaker group).

Table 4-67. Token and type frequency of past form (7th/8th semester).

Verb	**Lexical aspect**	**Relative freq**	**Imperfect**		**Imperf prog.**		**Other**		**Perfect**		**Present**		**Preterit**		**Preterit prog.**		**Total**	
		%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
***Ser* "ser"**	**Atelic**	10.0	178	**56.0**	0	0.0	1	0.3	2	0.6	5	1.6	132	41.5	0	0.0	318	100
***Tener* "have"**	**Atelic**	7.0	137	**61.7**	2	0.9	0	0.0	6	2.7	4	1.8	73	32.9	0	0.0	222	100
***Estar* "be"**	**Atelic**	6.3	151	**75.9**	6	3.0	0	0.0	0	0.0	2	1.0	38	19.1	2	1.0	199	100
***Ir/se* "go/leave"**	**Telic**	5.6	16	9.0	5	2.8	2	1.1	1	0.6	0	0.0	154	**86.5**	0	0.0	178	100
***Hacer* "do"**	**Telic**	3.9	19	15.3	8	6.5	0	0.0	7	5.6	0	0.0	85	**68.5**	5	4.0	124	100
***Decir/se* "say"**	**Telic**	2.4	4	5.3	1	1.3	0	0.0	0	0.0	15	19.7	56	**73.7**	0	0.0	76	100

Table 4-68. Token and type frequency of past form (near-native speaker group).

Verb	Lexical aspect	Relative frequency	Imperfect		Present		Preterit		Total	
		%	N	%	N	%	N	%	N	%
Ser **"ser"**	**Atelic**	16.3	79	**49.7**	5	3.1	75	**47.2**	159	100
Tener **"have"**	**Atelic**	11.6	61	**54.0**	3	2.7	49	43.4	113	100
Ir **"go"**	**Telic**	10.5	6	5.8	2	1.9	95	**92.2**	103	100
Estar **"be"**	**Atelic**	7.4	58	**80.6**	7	9.7	7	9.7	72	100
Haber **"there be"**	**Atelic**	2.5	15	**62.5**	6	25.0	3	12.5	24	100
Empezar **"start"**	**Telic**	2.3	0	0.0	1	4.5	21	**95.5**	22	100

Table 4-69. Token and type frequency of past form (native speaker group).

Verb	Lexical aspect	Relative freq	Imperfect		Imp prog.		Other		Perfect		Preterit		Preterit prog.		Total	
		%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Estar **"be"**	**Atelic**	7.8	57	**73.1**	3	3.8	1	1.3	0	0.0	16	20.5	1	1.3	78	100
Tener **"have"**	**Atelic**	7.7	43	**55.8**	1	1.3	0	0.0	1	1.3	32	41.6	0	0.0	77	100
Ser **"ser"**	**Atelic**	6.4	42	**65.6**	0	0.0	2	3.1	1	1.6	19	29.7	0	0.0	64	100
Ir(se) **"go, leave"**	**Telic**	5.8	0	0.0	1	1.7	1	1.7	1	1.7	55	**94.8**	0	0.0	58	100
Hacer **"do"**	**Telic**	3.3	2	6.1	3	9.1	0	0.0	2	6.1	25	**75.8**	1	3.0	33	100
Empezar **"start"**	**Telic**	3.1	0	0.0	0	0.0	1	3.2	0	0.0	29	**93.5**	1	3.2	31	100

4.6.3.2 Verbs of highest relative frequency most strongly associated with preterit, imperfect, and present

The subsequent frequency measure resembles the one discussed in the prior sub-section, although it groups the most frequent verbs more strongly associated with each form across course-levels, which would serve as an indicator of whether the learners at different levels approximate or depart from the NS baseline. Appendix C.4.3 shows a list of those verbs that associated with a certain past form at a rate of over 40%. Whereas Appendix C.4.3 rank-ordered the verbs from their highest to their lowest relative frequency within the corresponding corpus, Appendix C.4.4 rank-ordered those verbs from the strongest to less strong rate of association with a past form, regardless of relative frequency ranking. Notwithstanding, the verbs were still ranked among the most frequent verbs in the corpus. A look at the Table 4-70 revealed consistent patterns.

Table 4-70. Verbs with highest relative frequencies most strongly associated with present (oral prompt task).

	1st semester Time 1	1st semester Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	Near-native speakers	Native speakers
PRESENT	poder "can"	ver "see"	pensar "think"	Mirar "see"	poder "can"	poder "can"			
	querer "want"	estudiar "study"	dormir "sleep"	comer "eat"		saber "know"			
	vivir "live"	dormir "sleep"	ver "see"			haber "there be"			
	duchar/se "shower"	trabajar "work"	querer "want"						
	escribir "write"	Levantar/se "get up"							
	estacionar "park"								
	nadar "swim"								
	recordar "remember"								
	tomar "take"								
	comer "eat"								

For example, the 1st semester group at Time 1 showed the largest number of verbs most strongly associated with the present indicative in line with the higher usage rates attested for the form at this level. The preterit and the imperfect, which were produced at very low rates, showed the lowest number of verb associations. A further look at the present across the subsequent course-levels showed a decreasing number of verbs strongly associated with the present, which is explained by the corresponding decreasing rates of the present indicative until it reached 2% in the NS-near native speaker group. Moreover, a look at the types of verbs strongly associated with the present form can provide evidence of the form's meaning changes across proficiency levels. For

example, whereas the form is strongly associated with activity and stative verbs up to the 3rd semester course-level, the higher course-levels showed an association only to stative verbs. This pattern points to the imperfective and perfective past functions of the present at elementary levels which became only imperfective at higher levels until the present practically disappeared at NS-near native speaker level.

An analysis of the imperfect form shows the opposite trend to the one attested by the present, with an increasing number of verbs associating more and more strongly with the form with increasing proficiency (see Table 4-69). This pattern helps explain the very low production rates at beginning levels and its increased usage rate in the 3rd semester, when the imperfect reached a more stable stage in the IL reflected in the similar rates obtained across the higher-course-levels. The verb types highly associated with the imperfect also varied across levels, with the 1st semester group using the form with activity verbs. From 2nd semester up to the 5th/6th semester, the imperfect was strongly associated with stative verbs, with the subsequent levels maintaining this trend but adding one or two activity verbs as well.

Table 4-71. Verbs with highest relative frequencies most strongly associated with imperfect (oral prompt task).

	1st semester Time 1	1st semester Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	Near native speakers	Native speakers
IMPERFECT	jugar "play"	trabajar "work"	estar "be"	gustar "like"	gustar "like"	estar "be"	necesitar "need"	saber "know"	querer "want"
			tener "have"	estar "be"	querer "want"	visitar "visit"	estar "be"	querer "want"	haber "there be"
				tener "have"	estar "be"		jugar "play"	haber "there be"	estar "be"
							haber "there be"	tener "have"	tener "have"
							poder "can"	vivir "live"	ser "be"
							saber "know"	ser "be"	
							tener "have"	tener "have"	
							ser "be"	llevar "take"	

This section will finish with an analysis of the preterit and the association strength of the co-occurring verbs (see Table 4-72). As was pointed out in this chapter, learners in the 1st semester at Time 1 used the present indicative as a default form, with the preterit reaching very low rates of use. This result was accompanied by only two activity predicates being strongly associated with preterit use. In the 1st semester at Time 2, the learners showed a spike in preterit usage rates, and this was reflected in the increasing number of verbs strongly associated with the form, most of which were telic verbs. When the verbs were examined across course-levels, one could observe

that increasing proficiency entails a gradual addition into the IL of those verbs that strongly associated with the preterit in the NS and near native speaker groups. This pattern seemingly confirms the Distributional Bias Hypothesis (Andersen, 1993), with learners showing distributional biases similar to those observed for the NSs.

Table 4-72. Verbs with highest relative frequencies most strongly associated with preterit (oral prompt task).

	1st semester Time 1	1st semester Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	Near native speakers	Native speakers
PRET	*pasar* "spend"	*hacer* "do"	*ir* "go"	*asistir* "go/attend"	*regresar* "return"	*decir* "say"	*volver* "return"	*decir* "say"	*levantar/se* "get up"
	disfrutar "enjoy"	*tomarse* "take"	*levantar/se* "get up"	*hacer* "do"	*duchar /se* "shower"	*levantar/se* "get up"	*empezar* "begin"	*ir* "go"	*preparar/se* "prepare"
		caer "fall"	*despertar/se* "wake up"	*romper* "break"	*ir* "go"	*comer* "eat"	*despertar/se* "wake up	*preparar/se* "prepare"	*poner/se* "put on"
		correr "run"	*desayunar* "have breakfast"	estudiar "study"	*ver* "see"	*regresar* "return"	*comer* "eat"	*empezar* "begin"	*despertar/se* "wake up
		desayunar "have breakfast"	*comer* "eat"	*salir* "leave"	*levantar/se* "get up"	*ir* "go"	*ir* "go"	*dar* "give"	*tomar* "take"
		despertar/se "wake up"	*estudiar* "study"	*ir* "go"	*necesitar* "need"	*dormir* "sleep"	*tomar* "take"	*salir* "leave"	*dar* "give"
		golpear "hit"	*mirar* "see/watch"	*duchar /se* "shower"	*tomar* "take"	*empezar* "begin"	*regresar* "return"	*despertar/se* "wake up	*empezar* "begin"
		montar "ride"	*hacer* "do"	*ver* "see"	*poner/se* "put on"	*pasar* "spend"	*hacer* "do"	*cocinar* "cook"	*ir* "go"
		lastimar "hurt"	*querer* "want"	*dormir/se* "sleep"	*despertar/se* "wake up	*terminar* "finish"	*dar* "give"	*ver* "see"	*comer* "eat"
		llegar "arrive"		*despertar/se* "wake up	*comer* "eat"	*tomar* "take"	*pasar* "spend"	*tomar* "take"	*tomar* "take"

In sum, our data revealed that increasing proficiency entailed higher rates of usage of the forms, both preterit and imperfect, with the present yielding the opposite trend, showing a decrease in use. Moreover, increasing use of past form with higher proficiency also entailed a larger number of verbs that more strongly associated with these forms. Last but not least, these patterns were also characterized by an increasing use of verb types that were more semantically congruent with each

past form (i.e., there was a stronger association of telic verbs with preterit and of atelic verbs, mostly stative verbs, with the imperfect).

4.6.3.3 A multiple distinctive collexeme analysis

This analysis type is similar to the one presented in the previous sub-section, except that it uses an R script (Gries, 2007) and runs an exact binomial test to quantify the association strength between the verbs and their past morpheme realizations. The analysis provides a p-value for each verb with each TA morpheme and log-transforms it such that highly positive values indicate a large degree of attraction and 0 indicates random co-occurrence. An (absolute) p-log-value that is equal to or higher than 1.3 corresponds to a significance level of 0.05 (Wulff et al., 2009). Therefore, the higher the log-transform value, the stronger the association between verb and TA marker is, and the lower the p-value.

We first report the oral prompt task results for the NS and the near-native speaker groups, since they constitute the baseline for comparison. A look at the preterit (see table 4-73 below) shows that a total of 33 verbs (i.e., with a p-log-value equal to or higher than 1.3) was strongly and distinctively associated with the form. These verbs were the same as the ones listed for the same group in Appendix C.4.3 but the distinctive collexeme analysis yielded a longer list of verbs thus allowing for a more comprehensive analysis. These verbs were primarily telic (i.e., achievement and accomplishment), which supports the assumption that only a set of very strong verb-past form associations drive the acquisition of form-meaning mappings (e.g., Ellis, 2006a; Shirai, 2016). In other words, the most frequent verbs distinctively associated with preterit (i.e., which in our NS-near native speaker corpus were mostly telic) are predicted to be responsible for the acquisition of perfectivity as well as the preterit-perfectivity mapping.

Table 4-73. Association strength between verb and preterit form (NNS-NS group).

Words	obs.freq.1	obs.freq.2	exp.freq.1	exp.freq.2	pref.occur	delta.p.constr.to.word	delta.p.word.to.constr	coll.strength
ir	16	154	51.09	118.91	**preterit**	-0.06	-0.22	**10.56**
llegar	1	56	17.13	39.87	**preterit**	-0.03	-0.29	**7.54**
despertar	0	48	14.43	33.57	**preterit**	-0.02	-0.31	**7.53**
empezar	2	62	19.23	44.77	**preterit**	-0.03	-0.28	**7.44**
levantar	0	36	10.82	25.18	**preterit**	-0.02	-0.3	**5.63**
decir	4	56	18.03	41.97	**preterit**	-0.02	-0.24	**5.09**
preparar	1	39	12.02	27.98	**preterit**	-0.02	-0.28	**4.99**
poner	1	37	11.42	26.58	**preterit**	-0.02	-0.28	**4.70**
pasar	4	52	16.83	39.17	**preterit**	-0.02	-0.23	**4.58**
dar	5	55	18.03	41.97	**preterit**	-0.02	-0.22	**4.38**
comer	1	31	9.62	22.38	**preterit**	-0.01	-0.27	**3.82**
volver	0	24	7.21	16.79	**preterit**	-0.01	-0.3	**3.74**
salir	4	44	14.43	33.57	**preterit**	-0.02	-0.22	**3.58**
ver	5	41	13.82	32.18	**preterit**	-0.01	-0.19	**2.74**
encontrar	0	17	5.11	11.89	**preterit**	-0.01	-0.3	**2.65**
terminar	2	27	8.72	20.28	**preterit**	-0.01	-0.23	**2.57**
hacer	19	85	31.25	72.75	**preterit**	-0.02	-0.12	**2.41**
ense¤ar	0	14	4.21	9.79	**preterit**	-0.01	-0.3	**2.18**
regresar	0	13	3.91	9.09	**preterit**	-0.01	-0.3	**2.02**
desayunar	0	12	3.61	8.39	**preterit**	-0.01	-0.3	**1.87**
dormir	1	17	5.41	12.59	**preterit**	-0.01	-0.25	**1.86**
leer	1	17	5.41	12.59	**preterit**	-0.01	-0.25	**1.86**
tomar	4	29	9.92	23.08	**preterit**	-0.01	-0.18	**1.85**
almorzar	0	11	3.31	7.69	**preterit**	-0.01	-0.3	**1.71**
comprar	0	11	3.31	7.69	**preterit**	-0.01	-0.3	**1.71**
cocinar	1	15	4.81	11.19	**preterit**	-0.01	-0.24	**1.59**
ba¤ar	0	10	3.01	6.99	**preterit**	-0.01	-0.3	**1.56**
caminar	0	10	3.01	6.99	**preterit**	-0.01	-0.3	**1.56**

subir	1	14	4.51	10.49	**preterit**	-0.01	-0.24	**1.46**
entrar	0	9	2.7	6.3	**preterit**	0	-0.3	**1.4**
preguntar	0	9	2.7	6.3	**preterit**	0	-0.3	**1.4**
vestir	0	9	2.7	6.3	**preterit**	0	-0.3	**1.4**
decidir	1	13	4.21	9.79	**preterit**	-0.01	-0.23	**1.33**
cenar	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
duchar	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
intentar	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
lograr	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
mandar	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
pedir	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
robar	0	8	2.4	5.6	**preterit**	0	-0.3	1.24
acercar	0	7	2.1	4.9	**preterit**	0	-0.3	1.09

Notably, these verbs are considered to account for the majority of the exemplars of the preterit's prototypical function as a whole (Wulff et al., 2009).

A look at Table 4-74 shows the two verbs most highly associated with the preterit form in the 2nd semester group (i.e., *ir* "go" and *levantarse* "get up"). Let us recall that at this stage the form had sharply increased in its rates of use. It is noteworthy to point out that both verbs are also among the verbs that distinctively associated with preterit in the NS-near native speaker group.

Table 4-74. Association strength between verb and preterit form (2nd semester Spanish).

Coll_Word	imperfect	present	preterit	exp_imperfect	exp_present	exp_preterit	pbin_imperfect	pbin_present	pbin_preterit	SumAbsDev	LargestDev
ir	1	15	104	17.26	35.02	67.72	-6.77	-4.91	**12.03**	23.71	**preterit**
levantar/se	0	2	10	1.73	3.5	6.77	-0.81	-0.56	**1.29**	2.66	**preterit**
caminar	0	0	4	0.58	1.17	2.26	-0.27	-0.6	0.99	1.86	preterit
llevar	0	0	4	0.58	1.17	2.26	-0.27	-0.6	0.99	1.86	preterit
tomar	0	0	4	0.58	1.17	2.26	-0.27	-0.6	0.99	1.86	preterit
despertar/se	0	7	17	3.45	7	13.54	-1.62	-0.22	0.96	2.8	imperfect
ayudar	0	0	3	0.43	0.88	1.69	-0.2	-0.45	0.75	1.4	preterit
decir	0	0	3	0.43	0.88	1.69	-0.2	-0.45	0.75	1.4	preterit
entrar	0	0	3	0.43	0.88	1.69	-0.2	-0.45	0.75	1.4	preterit
sentir/se	0	0	3	0.43	0.88	1.69	-0.2	-0.45	0.75	1.4	preterit
comer	3	12	27	6.04	12.26	23.7	-0.89	-0.27	0.72	1.88	imperfect
desayunar	1	2	7	1.44	2.92	5.64	-0.25	-0.39	0.53	1.17	preterit
pensar	0	3	7	1.44	2.92	5.64	-0.67	0.23	0.53	1.43	imperfect
beber	0	0	2	0.29	0.58	1.13	-0.13	-0.3	0.5	0.93	preterit
conocer	0	0	2	0.29	0.58	1.13	-0.13	-0.3	0.5	0.93	preterit
encontrar	0	0	2	0.29	0.58	1.13	-0.13	-0.3	0.5	0.93	preterit
poder	0	0	2	0.29	0.58	1.13	-0.13	-0.3	0.5	0.93	preterit
visitar	0	0	2	0.29	0.58	1.13	-0.13	-0.3	0.5	0.93	preterit
volver	0	0	2	0.29	0.58	1.13	-0.13	-0.3	0.5	0.93	preterit
terminar	0	1	3	0.58	1.17	2.26	-0.27	-0.18	0.38	0.83	preterit
estudiar	1	6	11	2.59	5.25	10.16	-0.61	0.36	0.36	1.33	imperfect
mirar	2	5	11	2.59	5.25	10.16	-0.29	-0.25	0.36	0.9	preterit
acariciar	0	0	1	0.14	0.29	0.56	-0.07	-0.15	0.25	0.47	preterit
alfombrar/se	0	0	1	0.14	0.29	0.56	-0.07	-0.15	0.25	0.47	preterit
aprender	0	0	1	0.14	0.29	0.56	-0.07	-0.15	0.25	0.47	preterit

Table 4-75 shows the three verbs (i.e., *estar* "be", *tener* "have", *ser* "be") most strongly associated with the imperfect in the 2nd semester group, which were all stative verbs and the most frequent in Spanish (Davies, 2018).

Table 4-75. Association strength between verb and imperfect form (2nd semester Spanish).

Coll_Word	Imp	Pres	Pret	exp_imperfect	exp_present	exp_preterit	pbin_imperfect	pbin_present	pbin_preterit	SumAbsDev	LargestDev
estar	28	12	14	7.77	15.76	30.47	**9.99**	-0.78	-5.27	16.04	**Imp**
ser	32	32	37	14.53	29.48	57	**5.1**	0.49	-4.31	9.9	**Imp**
tener	13	6	15	4.89	9.92	19.19	**3.27**	-1.03	-0.99	5.29	**Imp**
montar	2	1	1	0.58	1.17	2.26	0.99	-0.18	-0.65	1.82	imperfect
jugar	5	7	7	2.73	5.54	10.72	0.9	0.51	-1.16	2.57	preterit
regresar	1	0	0	0.14	0.29	0.56	0.84	-0.15	-0.36	1.35	imperfect
conducir	2	0	3	0.72	1.46	2.82	0.81	-0.75	0.21	1.77	imperfect
acostar/se	1	0	1	0.29	0.58	1.13	0.57	-0.3	-0.17	1.04	imperfect
doler	1	0	1	0.29	0.58	1.13	0.57	-0.3	-0.17	1.04	imperfect
soler	1	0	1	0.29	0.58	1.13	0.57	-0.3	-0.17	1.04	imperfect
comprar	1	0	2	0.43	0.88	1.69	0.43	-0.45	0.22	1.1	present
ganar	1	0	2	0.43	0.88	1.69	0.43	-0.45	0.22	1.1	present
salir	1	2	0	0.43	0.88	1.69	0.43	0.69	-1.08	2.2	preterit
duchar/se	1	1	2	0.58	1.17	2.26	0.33	-0.18	-0.23	0.74	imperfect
haber	1	1	2	0.58	1.17	2.26	0.33	-0.18	-0.23	0.74	imperfect
poner/se	1	1	2	0.58	1.17	2.26	0.33	-0.18	-0.23	0.74	imperfect
acariciar	0	0	1	0.14	0.29	0.56	-0.07	-0.15	0.25	0.47	preterit
ahogar	0	1	0	0.14	0.29	0.56	-0.07	0.53	-0.36	0.96	present
alfombrar/se	0	0	1	0.14	0.29	0.56	-0.07	-0.15	0.25	0.47	preterit
andar	0	1	0	0.14	0.29	0.56	-0.07	0.53	-0.36	0.96	present
aprender	0	0	1	0.14	0.29	0.56	-0.07	-0.15	0.25	0.47	preterit
asistir	0	1	0	0.14	0.29	0.56	-0.07	0.53	-0.36	0.96	present

Table 4-76 demonstrates that the aforementioned verbs in the 2nd semester group were also most distinctively associated with the imperfect in the NS-near native speaker group, occupying the first three rank-orders. Nevertheless, the NS-near native speaker group further shows a larger number of distinctive verb-imperfect associations, a trend which was also attested in the higher course-level.

Table 4-76. Association strength between verb and imperfect form (NS-NNS group).

words	obs.freq.1	obs.freq.2	exp.freq.1	exp.freq.2	pref.occur	delta.p.constr.to.word	delta.p.word.to.constr	coll.strength
estar	151	38	56.8	132.2	**imperfect**	0.16	0.53	**48.14**
tener	137	73	63.11	146.89	**imperfect**	0.12	0.38	**27.24**
ser	178	132	93.16	216.84	**imperfect**	0.14	0.31	**25.75**
querer	36	3	11.72	27.28	**imperfect**	0.04	0.63	**15.5**
haber	35	4	11.72	27.28	**imperfect**	0.04	0.61	**14.15**
saber	21	1	6.61	15.39	**imperfect**	0.02	0.66	**9.84**
vivir	16	2	5.41	12.59	**imperfect**	0.02	0.59	**6.5**
necesitar	8	0	2.4	5.6	**imperfect**	0.01	0.7	**4.19**
creer	4	0	1.2	2.8	**imperfect**	0	0.7	**2.09**
gustar	9	5	4.21	9.79	**imperfect**	0.01	0.34	**2.08**
poder	20	21	12.32	28.68	**imperfect**	0.01	0.19	**2.07**
compartir	3	0	0.9	2.1	**imperfect**	0	0.7	**1.57**
jugar	8	6	4.21	9.79	**imperfect**	0.01	0.27	**1.5**
sentir	12	14	7.81	18.19	imperfect	0.01	0.16	1.22
esperar	3	1	1.2	2.8	imperfect	0	0.45	1.08
practicar	3	1	1.2	2.8	imperfect	0	0.45	1.08
celebrar	2	0	0.6	1.4	imperfect	0	0.7	1.04
conocer	2	0	0.6	1.4	imperfect	0	0.7	1.04
llevar	10	12	6.61	15.39	imperfect	0.01	0.16	1.04
llover	2	0	0.6	1.4	imperfect	0	0.7	1.04

A comparison of these results with those of the written contextualized task renders them worthy of scrutiny. The results for the NS-near native speaker group reveals that several verbs that most strongly associated with the imperfect in the written task, were distinctively associated with the preterit in the oral task, such as the telic ones *ir "go", hacer* "do", *tomar* "drink", *cocinar* "cook", *comer* "eat", *levantarse* "get up", *dar* "give".[42] This pattern could only be explained by task-type. Specifically, the written task manipulated four independent variables (i.e., temporal reference, temporal adverbial, Aktionsart, and grounding) and it thus included non-prototypical contexts (e.g., a telic verbal predicate in the background), which were scarce in the oral data. For example, sentence number one in the written task describes a habitual past situation (i.e., going to the grandparents' house), which should by default require the imperfect. Specifically, this context contained a telic predicate, but the view of the situation as imposed by the instrument (i.e., the viewpoint aspect of the situation) required the selection of the imperfect form. Therefore, it is due to the number of non-prototypical combinations that the NS-near native speaker imperfect was highly associated with numerous telic verbs in the written task. When the preterit was examined, one could observe that the verbs most strongly associated with the form were largely achievement and accomplishment verbs, followed by activity verbs, with no use of stative verbs; whereas the oral data showed that the strongest associations of the preterit were by and large with telic verbs. Let us recall that the oral narrations did not provide a welcoming context for non-prototypical combinations.

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[42] The Spanish verbs for drink, cook, and eat can shift from the telic to the atelic category depending on whether the verbs take a certain complement type or not (e.g., a singular or quantified noun phrase). Therefore, *comer una banana* "eat a banana" is considered a telic verbal predicate whereas *comer* "eat" without any following arguments is classified as atelic.

4.6.3.4 Type and token frequency of regular and irregular past morphology

According to usage-based approaches to grammar, language learning is highly dependent on the frequency of exposure since the learner is sensitive to the input frequencies of linguistic patterns (Ellis, 2009). Under this model of language acquisition, learners have to induce the associations of form and function from experience of language use, gathering the information of the relative frequencies of those form-meaning mappings.[43]

Two key concepts are crucial in the acquisition of a certain construction or pattern in the target language: token and type frequencies. Token frequency, as explained in previous chapters, is defined as the frequency of occurrence of a particular form or construction in a certain language corpus, such as the frequency of the preterit within a learner group. Type frequency, on the other hand, refers to the number of lexical items that actually and typically associate with the target construction(s), the preterit, in our example. The usage-based model of language acquisition sustains that the productivity of a pattern in language is the result of type frequency, which ensures that a myriad of words occur in this pattern strengthening its representational schema, which makes it more accessible for use with new lexical items.

In this section, we present the results of the type and token frequency of the verbs used at each course-level group across preterit and imperfect. The analysis not only provides information about verb frequency and its relation to the use of past morphology, but it also considers person-number and morphological (ir)regularity. Appendix C.4.4 shows how many tokens of regular preterit morphology occurred across the different person-number combinations and across the

[43] Nevertheless, Ellis (2007) contends that there are important aspects of second language acquisition that do not appear to support this claim.

three verbal paradigms in Spanish (i.e., *-ar, -er, -ir*), as well as how many types of verbs were used with each morphological marker. For example, regular preterit morphology in the 1st semester-Time 1 group (Table 4-77) shows that 1st person singular verbs of the *-ar* paradigm obtained a total token frequency of 13 (thirteen), which means that the person-number-TAM combination was used thirteen times across the same corpus. The column on type frequency called "number of different verbs" provides specific information about the number of distinct verbs that entered the aforementioned combination. In this case, 9 (nine) different *-ar* verbs were used with the 1st person singular.

Table 4-77. Type and token frequency of regular preterit morphology (1st semester-Time 1 group).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
***-ar* verbs**	1st sg.	-é	9	75%	13	81%	1st pl.	-amos	0	0%	0	0%
	2nd sg.	-aste	0	0%	0	0%	--	--	--	--	--	--
	3rd	-ó	3	25%	3	19%	2nd/3rd pl.	-aron	0	0%	0	0%
	Total		12	100%	16	100%	Total		0	0%	0	0%
***-er/ir* verbs**	1st sg.	-í	2	67%	2	67%	1st pl.	-imos	0	0%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	1	33%	1	33%	2nd/3rd pl.	-ieron	0	0%	0	0%
	Total		3	100%	3	100%	Total		0	0%	0	0%

Table 4-78. Type and token frequency of regular imperfect morphology (1st semester-Time 1 group).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
***-ar* verbs**	1st /3rd sg.	-aba	3	100%	4	100%	1st pl.	-ábamos	0	0%	0	0%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	2	100%	2	100%
	Total		3	100%	4	100%	Total		2	100%	2	100%
***-er/ir* verbs**	1st /3rd sg.	-ía	2	100%	4	100%	1st pl.	-íamos	0	0%	0	0%
	2nd sg.	-ías	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	0	0%
	Total		2	100%	4	100%	Total		0	0%	0	0%

Tables 4-77 and 4-78 above show the type and token frequencies of regular preterit and imperfect morphology produced by the 1st semester (Time 1) learners. Results indicated higher tokens of preterit than of the imperfect form, which goes in line with the overall high preterit rates of use attested across all groups (except for 1st semester -Time 1), and with the relative higher usage rates of preterit as compared to the imperfect. Moreover, a look at the regular preterit production showed a preference for the 1st person singular of the *-ar* paradigm, followed by the 3rd person-singular of the same paradigm, in terms of both token and type frequencies. The imperfect, on the other hand, showed a similar token count of 1st/3rd person singular *-ar* and *-er/-ir* verbs with the *-ar* showing a somewhat higher type count. As can also be observed, the number of preterit forms across the *-er* and *-ir* paradigms was minimal. In addition, this level did not produce any plural forms across any of the paradigms. A look at the imperfect indicated an equal token number of the form across each paradigm; however, the *-ar* paradigm yielded a higher type verb frequency count than the *-er/-ir* set.

Let us recall that 1st semester - Time 2 showed a significant increase in preterit rates of use, with a concomitant decrease of the present. Appendix Table 128 reveals that the regular preterit productions showed a preference for the 1st person singular form of the *-ar* paradigm, followed by the 1st person singular across the *-er/-ir* paradigms. Moreover, results indicated the emergence of preterit tokens across the 1st person plural, showing a preference for the *-ar* paradigm, a combination that also yielded the highest type frequency among all the plural *-ar* and *-er/-ir* verbs at this level. Preterit plurality seemed to have emerged across both paradigms, although there was a bias toward the *-ar* one. With regard to regular imperfect morphology (see Appendix Table 129), results showed a very low rate of production of the form, which occurred in the 1st/3rd person-singular of both paradigms.

The overall results in the 2nd semester, when regular preterit was analyzed (see Appendix Table 132), showed a remarkable increase in the production of verb tokens as compared with the 1st semester (e.g., from 28 verbs to 123 within the *-ar* paradigm). The 1st person singular outnumbered all the other person-number combinations with the 1st person singular representing the highest rate of type frequency. The imperfect (see Appendix Table 133) attested an increase in token number in tandem with an increase in type frequency. Interestingly, at this stage the imperfect emerges with plural subjects.

The overall trends observed across all participant groups regarding preterit and imperfect regular morphology, showed a higher use of verbs that belong to the *-ar* paradigm than verbs from the 2nd and 3rd paradigms (i.e., *-er* and *-ir*). Another important trend across all course-level groups was the larger number of verbs that occurred in the 1st person singular than in the 3rd person singular. When the verbs in the *-er* and *-ir* paradigms were considered, results showed an overall preference for 1st person singular than for the 3rd person singular and a preference for singular conjugations than for plural ones. When plural productions were analyzed, one could observe that 1st person plural forms always outnumbered the 3rd person plural forms. These results can be explained by the fact that the narrative type was personal and then triggered a great amount of personal involvement in the storytelling with the 1st-person subject as the doer of actions or as experiencer of a situation, for example. Another important trend across levels was the relatively larger numbers of different verb types across the regular preterit than for the regular imperfect used by the learners. This trend (i.e., higher type frequency of regular preterit) could be related to the characteristics of the learners' input by our NS and near-native speaker groups, characterized by an overall higher rate of the preterit over the imperfect (i.e., higher token frequency) across several verb types. Let us bear in mind that textbooks usually present the preterit construction

through a number of sections where the form is usually taught as co-occurring with certain verbs. For example, the first preterit verbs studied by 1st semester learners at the University of Pittsburgh are *ser* and *estar* "be" (i.e., the two most frequent irregulars in Spanish). Furthermore, the product of the peak in preterit usage rate, entails the acquisition of new lexical items and verbs as the result of greater exposure to the construction.

Now let us proceed to examine the trends with regard to irregular morphology (Appendix Tables 146 through 163). Let us examine the NS- near-native speaker groups first, our baseline for comparison. In terms of token numbers, irregular preterit verbs outnumbered irregular imperfect across both the *-ar* and *-er/-ir* paradigms. Regarding irregular preterit itself, the results indicated a larger number of the form in the *-er/-ir* paradigm than in the *-ar*. Irregular imperfect was only found across the *-er/-ir* paradigms with both singular and plural number, with the former being much more frequent. An interesting pattern upon comparing regular and irregular morphology was the larger token numbers of regular preterit than irregular preterit in the *-ar* paradigm. Conversely, irregular preterit was more frequent than regular preterit across the *-er/-ir* paradigm. However, when verb type frequency was factored in, results indicated a significantly larger number of distinct verbs across regular preterit and regular imperfect in that same paradigm. In sum, the NS- near-native speaker group in our study revealed the following trends.

Table 4-79. Type and token frequencies of regular and irregular past morphology within the NS and near native speaker group.

Regular preterit	Irregular preterit
• *-ar* paradigm and *-er/-ir* paradigm: similar verb type frequency rates (more distinct verbs in the 1st person singular and plural) • *-ar* paradigm*:* higher token frequency than *-er/-ir* across singular and plural	• *-er/-ir* paradigm: higher token and type frequencies than *-ar* paradigm • *-er/-ir* paradigm: higher token frequencies than regular preterit within the same paradigm
• *-ar* and *-er/-ir* paradigms: higher token and type frequency	• *-er/-ir* paradigm: highest token frequency (1st-3rd singular)
General trend: • Regular morphology occurs with the *-ar* paradigm whereas irregular morphology occurs with the *-er/-ir* paradigm • Same token counts of regular preterit and regular imperfect in the *-er/-ir* paradigm	

A consideration of irregular morphology across course-levels exhibits interesting trends (see Appendix C.4.7). The 1st semester learners at Time 1 used only one verb for irregular imperfect morphology in the *-er/-ir* paradigms across the 1st and 3rd person singular. Conversely, six distinct verbs were used with irregular preterit morphology also across the *-er/-ir* paradigms. Four of those verbs occurred with the 1st person singular and two in the plural.

Irregular preterit in the *-ar* paradigm emerged in the 1st semester at Time 2 with only three tokens and 2 distinct verb types. Contrariwise, irregular imperfect morphology decreased in token numbers and maintained the same type frequency as in Time 1, with only one verb in the *-er/-ir* paradigm. In the 2nd semester, let us recall that the preterit sharply spiked in usage rates, showing

much higher tokens of irregular preterit forms at this level, with the same trend as in Time 1: higher tokens within the *-er/-ir* paradigms, and with singular forms outnumbering the plural ones. The 3rd semester level yielded the same pattern of use and the same token frequencies of both preterit and imperfect as the 2nd semester group. The 4th semester group showed a pattern change with respect to irregular preterit morphology related to token frequency: larger token numbers were used across the *-ar* paradigm than across the *-er/-ir* ones; however, the latter exhibited a higher verb type frequency. The 5th/6th semester group reversed the pattern again yielding larger tokens of irregular preterit across the *-er/-ir* paradigms when compared to the *-ar*. This pattern was maintained across the higher course-level groups.

In summary, the results in Appendix C.4.5 showed that there was a larger number of regular verbs (i.e., across both preterit and imperfect) than irregular ones (i.e., higher token frequency), in both the NS-near native speaker groups and in the learner groups. This finding is assumed to be the result of a larger number of regular verbs in Spanish specifically, in line with general cross-linguistic tendencies. Moreover, whereas irregular preterit and imperfect morphology most frequently occurred across the *-er/-ir* paradigms, regular preterit and imperfect morphology showed a higher token frequency across the *-ar* paradigm across course-levels. This result can be explained by the high token frequency across our corpora of the irregular verbs *ser* and *ir* (see Appendix C.4.2 for the list of the most frequent verbs used across participant groups). Another important finding was the larger number of regular imperfect tokens across the *-ar* paradigm at the 1st, 2nd, and 4th semester levels. Conversely, the 3rd semester level as well as the subsequent course-level groups showed the opposite trend, with the largest number of regular imperfect tokens being used within the *-er/-ir* paradigms.

4.7 Conclusions

This chapter reported the results of the analyses performed on the oral data and the written data. First, we provided an overall picture of all the forms and devices used by the learners across course level in the oral prompt task. The overall results indicated that the NS and the learner's verbal system is mostly a triadic one, with three main markers of pastness (i.e., present, preterit, imperfect). Results also showed that some past markers in the oral data were hardly attested (e.g., the perfect and the preterit-progressive), which makes them be considered peripheral within the verbal system. These forms were further described through a qualitative account that focused on the major differences between course-level groups in terms of syntactic complexity and target-like forms (e.g., subjunctive forms). Results indicated that increasing proficiency entails higher morphosyntactic complexity (e.g., syntactization) and a lower number of non-target-like forms, which disappeared almost completely in the NS level.

Secondly, we proceeded to report the usage and/or selection rates of the most common past forms across participant groups in both the oral and written data: the present reaching the highest frequency of use and selection at beginning levels, the preterit gaining popularity from Time 2 (1st semester), and the imperfect gaining terrain from the 2nd semester. This section included an analysis of individual production/selection of the forms in question, with the purpose of determining whether group aggregates are a fair reflection of individual past form use/and or selection. Results indicated that the higher frequency past forms were produced by the largest number of participants. These sections were followed by a report of the social variables considered in our study and their roles in predicting the use of certain past markers.

A central section of this chapter presented the statistical results of the oral and written data through a report of the degree of linguistic conditioning of the use and selection of the various past

forms considered in this research. The account of the oral data considered two statistical models with two different sets of linguistic variables, and the written data considered only one. When the descriptive and inferential analyses were compared, it was clearly seen that past morphology acquisition (i.e., emergence and development) was explained by the frequency of use and selection of the forms, the changes in those rates that entail reorganization and restructuring of the verbal system in the learners' IL, topped with an examination of the type and degree of constraint exerted by a set of linguistic variables. In general, results indicated that emerging forms are less conditioned by linguistic factors, which gain significance as the forms gain more popularity in the IL and become more established. From the 3rd semester through the highest course-level (7th/8th semester) and through the NS-near native-speaker group, regression analyses yielded significant variables across all levels: grounding, Aktionsart, and temporal reference. As for the second statistical model, past forms were significantly constrained by aspectual meaning, with perfectivity predicting the use of the preterit and continuity and progressivity constraining the use of the imperfect.

The last section presented a series of analyses that relied on descriptive statistics of our data simultaneously complemented by a qualitative analytical approach. These analyses presented two different approaches in the consideration of lexical aspect as a predictor of past form use. Particularly, we compared across-category and within-category analyses in order to determine which one best shows developmental trends in our data. Another analysis that followed compared the interactional effects of lexical aspect and grounding through a detailed examination of the interaction of both variables and their common and differing predictions about the choice of past form. Overall results confirmed an overriding effect of grounding over Aktionsart, although the

qualitative analysis rendered a more complex picture of their roles in past morphology, probably one in which both are complementary.

A final analysis included a detailed description of the role of verb frequency in the acquisition of past morphology by examining different measures of frequency (e.g., corpus-external and internal) and explore the effects of token and type frequencies on the expression of past temporality. One important trend attested across course-levels was the use of the same high frequency verbs across corpora, which constitute the highest frequency rank in Davies (2018). Another measure of frequency found that the higher the usage rate of a form, the larger number of verbs that associate with it. Finally, the results of a distinctive collexeme analysis provided evidence that the verb types most distinctively associated with preterit, for example, are telic verbs and increasing proficiency entails stronger prototypical associations. Nevertheless, task type seems to have an important role in associating verbs to forms.

Chapter 5 will present a discussion of the results from chapter 4 and will do so in the light of the previous research that was already presented in the literature review with a focus on the new findings of this study. In addition, chapter 5 will provide an answer to each of the research questions posed in the Methodology section (chapter 3) and will propose the predicted developmental stages that the learners go through in terms of the acquisition of past morphology in L2 Spanish. The chapter will finalize with the main conclusions, the limitations of the study and the directions for future research.

5.0 Discussion and conclusions

The current chapter contains a discussion of the dissertation's findings on emerging and developing past-time expression in terms of usage and selection rates of past morphology and usage of past-time expression devices and their corresponding linguistic and extra-linguistic conditioning. These findings are discussed in the light of those from relevant previous research studies on the acquisition of TA morphology in L2 Spanish (and other second languages), as presented in chapter 2. Furthermore, results are also discussed in relation to issues in the different areas of second language acquisition, variationist SLA, and variationist sociolinguistics, making important references to the four acquisitional processes (Ortega, 2009) and the three processes of form-meaning mapping (VanPatten & Williams, 2004), as well as the effects of L1 influence, as mentioned in chapters 1 and 2.

We begin the first section by answering the study's research questions and continue in subsequent sections with the research limitations and suggestions for potential future research that should further advance the field of the SLA of tense-aspect morphology and facilitate the learner's acquisitional process. Important topics that this discussion will include are task effects, instructional effects, task variation, and morphosyntactic development in terms of form-meaning mappings (emergent and developing). The ultimate goal is to provide a morphosyntactic profile of each learner group at a given course-level. This profile will depict the acquisitional process at each developmental sequence with the inclusion of information about past form usage rates and their linguistic conditioning.

5.1 Discussion of results

5.1.1 Research questions, hypotheses, and findings

Each section presents a summary of the research questions and sub-questions together with the corresponding proposed hypotheses followed by the answers to the questions in each case.

5.1.1.1 Research question 1: sub-questions

According to Klein et al. (1993), the expression of temporality in a natural language is normally based on the interaction of several means: lexical (e.g., inherent verb meaning, use of adverbials), morphological (e.g., tense marking), syntactic (e.g., position of temporal adverbs), and pragmatic (e.g., discourse constraints). Table 5-1 shows a summary of the hypotheses posed for the participant groups regarding research question 1a, and as can be observed, learners are expected to go through a developmental path in their expression of pastness, moving from the pragmatic stage to the morphosyntactic one (e.g., Dittmar, 1984; Sato, 1990).

Table 5-1. Research question 1.A. and corresponding hypotheses.

Research questions	Hypotheses about the learners	Hypotheses about the near-native speaker (NNS) and NS participants
RQ1 **a. What are <u>the non-morphological devices used</u> across the learner groups and NS instructors in order to express pastness across oral personal narrations?**	• Heavy dependence on context: pragmatic and lexical means. • Higher rates of adverbial and noun/noun-phrase use that replace morphology. • Use of "parataxis", i.e., extensive reliance on discourse-pragmatic factors, minimal use of morphosyntactic devices, and a large number of verbless clauses or infinitival ones (Sato, 1990, p. 84). • Non-target like use of non-morphological means at the lowest levels.	• A balance between non-morphological means and morphological ones. • A proficient mix of parataxis and syntaxis • Some NNSs may be expected to behave more like advanced learners (in the former group) than as NSs

5.1.1.1.1 Answer to RQ 1a: partially confirmed hypotheses

Since the study's participant pool consisted of instructed learners, as opposed to naturalistic ones, the lowest proficiency group (i.e., the 1st semester) exhibited a lower rate of pragmatic reliance and a higher use of inflectional morphology than originally predicted for a beginning group. In this sense, our learners were not found to move through clear-cut stages that previous research with untutored learners has found (e.g., Dietrich et al., 1995). In particular, their study with untutored immigrants in Europe attested a three-stage acquisitional process regarding TA morphology:

a. *The pre-basic variety* included extensive lexical items such as nouns, adjectives, and simple verbs used pronominally, no functional inflections existed, and they were context dependent.
b. *The basic variety* comprised uninflected verbs in the base form with their arguments and few adverbials, no copula and no case marking, taking the time of utterance as default, with no marking at all.
c. *The post-basic variety* showed development of morphology with various forms coexisting without appropriate functions.

Our learners in the 1st semester showed a mixture of the features of the aforementioned varieties, showing the functional inflections of the present indicative and overusing it to refer to past time. In our study, the present indicative was observed to function as a default form for the lower levels across all temporal points. Therefore, our beginning learners' linguistic profiles were somewhat different from the ones described by Dietrich et al. (1995). For example, whereas the authors sustained that their participants' basic variety was characterized by an absence of inflections on the verb, our learners, on the other hand, were already using the present indicative

inflections, with few learners also using preterit and imperfect ones. A major explanation to this result lies in the fact that Dietrich et al.'s study examined naturalistic learners. An additional explanation to this difference may lie in the fact that our 1st semester participants were false beginners having taken some Spanish in high school. A further explanation may be found in the fact that Spanish is a highly inflectional language, although this cannot be the sole explanation given that most of the languages studied in Dietrich et al. (1995) were also synthetic (e.g., German and French).

In summary, it seems appropriate to classify our beginner learners as exhibiting a post-basic variety, in Dietrich's terms, with a number of forms not being used appropriately (e.g., the overgeneralization of the present as a default verbal form-See Example 1). In other words, the lowest levels' varieties revealed rather incomplete form-meaning mappings as well as a lack of displaced spatio-temporal reference (Givón, 2009).

A more specific analysis of the non-morphological means of expression of pastness in the 1st semester showed somewhat paratactic language use (i.e., showing the use of conjoined clauses) and some reliance on discourse factors such as chronological order (see Examples 29, 30, 31, 32), and verbless clauses that contain only the object (see Example 33). This learner-level showed higher rates of conjoined clauses than of subordinate ones. The following example illustrates the narrative of one learner about their activities on the day before.

29. *Me **levanto** a las nueve del día de áye.*

    "I **get up** at 9am yesterday."

30. ***Como** los huevos fritos y el café seliente.*

    "I **eat** fried eggs and hot coffee**."**

31. ***Estoy** en mi residencia por la tarde*

"I **am** in the dorm all afternoon"

32. *y **pasó** la apuntes de mi clasa de neurociencía porque tengo la, el examen miércoles.*

"…and I **wrote** my notes of the neuroscience class because I have the exam on Wednesday."

33. *Después de **pasó** las apuntes al- y **Ø** a la residencia con mi amiga, con la amiga.*

"After of **wrote** the notes, I **Ø** (verbless) to the dorm with my friend."

The 1st semester learners also made use of expressive devices to talk about sequenced events such as adjectives, infinitives, 2nd/3rd person singular present forms for the 1st person singular, and an overuse of the 1st person singular pronoun (*yo* -"I"):

34. *A la, a las uno de la tarde, yo **vas** **(2nd person singular)** a la cafetería por **comé**.*

"At 1pm, I **go** to the cafeteria to **ate.**"

35. ***Me gustó comé** el pollo con arroz y yo **tomas** **(2nd person singular)** un café.*

"I **liked to ate** chicken and rice and I **take a coffee.**"

36. *Después yo **trajabador** **(adjective)** mucho*

"Later I **hard-working** a lot."

37. *yo **escribo** un papier on White Supremacy.*

"I **write** a paper on White Supremacy."

38. *Yo **lier** **(infinitive)** mucho también.*

"I **to read** a lot too."

Example 34 also shows the use of connective and position adverbials to concatenate and temporally locate past events (e.g., *a la una de la tarde, después*), which confirms the early reliance on lexical devices in expressing past temporality.

In the 1st semester at Time 1, the present indicative becomes the default verbal form used to refer to past time, although at this level the form occurs simultaneously with other non-target-like forms such as different mood forms, or infinitives. Example 39 below illustrates the past-time reference of the present.

39. *Cuando **soy** niña, **me gusta** leer, dormir, nadar e comer.*

"When I **am** a child, I **like** to read, sleep, swim, and eat."

Table 5-2 below reminds the reader of research question 1b about the developmental trajectory of the learners in the acquisition of TA morphology

Table 5-2. Research question 1.B. and corresponding hypotheses.

Research questions	**Hypotheses about the learners**
RQ1 **b) Is there a clear developmental sequence regarding past-time expression from the 1st semester level to the highest level?**	• Movement across three stages (pragmatic, lexical, and morphological) which overlap with each other mostly due to effects of instruction • Use of more non-target-like non-morphological means of expression at lower levels than the higher-level groups. • The developmental path should provide evidence about the differing functions of lexical-pragmatics in the IL: characterized by extensive use of one non-morphological device at low proficiency levels (e.g., reliance on chronological order), with higher course levels moving to a stage where chronological order can be complemented with restricted verbal morphology and in which adverbials have a lowered functional load as sole past-time expression devices, to finalize in an advanced stage where adverbials are realized by more complex constructions such as a clause.

5.1.1.1.2 Answer to RQ 1b: confirmed hypotheses

A comparison of non-morphological forms across learner-levels showed that the highest rates of use were found in the 1st and 2nd semesters (7.4% versus 9.3%). However, whereas these forms were largely non-target-like among the lowest courses, for the higher-level courses the forms were both target-like and non-target-like. Both the NNS and the NS groups showed similarly low rates of usage of non-morphological means (1.7% versus 0.6%), with the former producing them more frequently and largely in a target-like manner.

Table 5-3 below shows the main hypotheses proposed for the research question about the differences and similarities among the learner groups and as compared to the NNS and NS groups.

Table 5-3. Research question 1.C. and corresponding hypotheses.

Research questions	Hypotheses about the learners	Hypotheses about the near NS and NS participants
RQ1 **c) <u>How do both sets of groups compare</u> and/or differ from each other?**	• Change from non-target-like to more target-like means of expression. • As proficiency increases, less reliance on lexis and pragmatics and more frequent use of morphology.	Native speakers are expected to: • exhibit a non-morphological but complex and sophisticated system of expression that targets meaning nuances, specific discourse functions, and the speaker's intentions triggered by the communicative act. • NSs' uses of these devices are predicted to be complementary to inflectional

		morphology resulting in highly complex linguistic production.

5.1.1.1.3 Answer to RQ 1c: confirmed hypotheses

In terms of non-morphological devices, one important difference was noticed between the learner groups when compared to the NS group. The learners' use of these devices can be considered at times non-target-like, revealing the precariousness of their IL system at a given state but also revealing the learners' resourceful nature so as to manage to express meaning at any cost. One such example is verbless clauses, which were used by one NS participant from Mexico when sequencing perfective events in the past. What is evident is that this type of sequencing device can be a common communicative strategy in spontaneous speech by which verbless clauses acquire a distinctive discourse function, i.e., that of saving the number of words per utterance, which aligns with the Maxim of Economy (Grice, 1999), with the purpose of quickly expressing the concatenation of events without unnecessarily uttering verbs if they can be recovered by the context of the situation. Conversely, lower-level learners' use of verbless clauses were found to be the result of the absence of TA morphology or insecurity with its use, which led them to omit a given form (see Example 4 below produced by a 1st -semester Spanish learner at Time 1). Specifically, the learner omits the verb *tener* "to have" and uses a noun phrase as the object of such an omitted verb.

40. *Mi, **yo miedo a agua** después el evento.*

"My, **I fear of water** after the event."

All in all, while verbless clauses are a sign of language complexity among NSs, they are a sign of a basic IL that relies on pragmatics to convey past meaning.

The NS group showed evidence of a full-fledged system of expression of temporality described as highly complex. Even though morphological means of expression were at the core of all of the learner groups, the NS group showed an interconnection between the majority morphological means of expression and those that are not necessarily related to inflectional morphology. One important difference between the NS level and the lower course-levels concerns the NSs' (as well as highly proficient learners) ability to recapitulate past events by using complex morphosyntactic resources such as "reverse-order reports" or "reverse chronological order" (e.g., Bardovi-Harlig, 2014, p. 130). This strategy is possible in the combination of the past perfect and the preterit, for instance, in the same sentence consisting of a main clause and a subordinate one (see Example 41):

41. *Cuando **llegamos** **(preterit)** a la fiesta, todos se **habían ido** **(past perfect)**.*

"When we **arrived** at the party, everyone **had left**."

A look at the higher course-level groups (e.g., 5th/6th semester) shows a different discourse organization by the use of a type of reverse-order report that is expressed with only one adverbial, consisting of a complex preposition followed by an infinitival clause as complement, which as a whole provides temporal anchoring information about the event/situation expressed in the main clause. See Example 42 from our data.

42. ***Antes de ir** al doctor, mi amiga y yo hacimos nuestra tarea.*

*"***Before going** to the doctor, my friend and I did our homework.*"*

It is important to note that this type of discourse strategy is acquired with language experience and thus found at higher proficiency levels (Bardovi-Harlig, 2000). Nevertheless, the example above did not entail an overall frequent use of this strategy within the 5th/6th semester group.

Another comparison of non-morphological devices in the expression of pastness when learner groups are compared to the NS group concerns the use of adverbials. On the one hand, we observed that coordinating conjunctions were popular in the NS level as well as in the lower ones, although to a lesser extent in the latter groups, who preferred chronological order. The conjunction *y* "and" is by far the most frequent, mostly for uninterrupted sequences of events, which the speaker does not want to break. Other conjunctions such as *de repente* "all of a sudden" were very frequently used mostly when the participants introduced the complicating action or the most important actions within it. This adverbial was largely found across the higher course-levels (5^{th} to 8^{th} semesters) whereas the lower levels used *entonces* "then" or *después* "later". Table 5-4 below summarizes the hypotheses posed for each developmental stage regarding the rates of use and selection of the TA markers in the data.

5.1.1.2 Research question 2: sub-questions

Table 5-4. Research question 2.A. and corresponding hypotheses.

Research questions	1. General hypotheses
RQ2 **a) What are <u>the rates of use and selection of past-time markers</u> across our participant groups <u>for each task</u> (i.e., personal oral and written narratives)?**	• Both the learner's IL across proficiency levels and the near-native and native speaker groups are expected to reveal differing rates of usage and selection of the past forms. It is also predicted that differing rates will become significantly different at the extremes of the proficiency continuum (e.g., 1st semester versus 7th/8th semester levels). • The 1st semester-level group is expected to use a default form for past-time reference • All participant groups from the 2nd semester up are expected to use the same past forms representing the highest rates of use and/or selection: preterit and imperfect. • From the 2nd semester to the 7th/8th semester levels, the IL system should exhibit a principally tripartite verbal system that also includes the present, with decreasing rates of use from lowest to highest course-level • The near-native and native speaker groups should also show a primarily tripartite verbal system, but the third most frequent past form is predicted to be the perfect, with the present being the least preferred form

	• The perfect and past progressive tenses are predicted to obtain small rates of use and would thus be considered forms that are peripheral in the verbal system	
Specific hypotheses RQ2. A.	**Specific hypotheses about the learners**	**Specific hypotheses: NNS and NS participants**
<u>The 1st semester group was predicted to:</u> • reveal a more restricted and rudimentary verbal system (e.g., 3rd person singular present, infinitival forms), with few finite verbal conjugations • extensively first use the present as a default form for present and past temporal points • use the preterit as a default form for past temporality, after receiving preterit instruction • produce a restricted number of preterit tokens and almost no imperfect forms • use one form with one clearly delimited function (i.e., the most prototypical) in line with the one-to-one principle (Andersen, 2002) • exhibit a large number of non-target-like forms (i.e., null and infinitive forms). <u>The 2nd semester group was predicted to:</u> • use a significantly larger number of preterit tokens than in the 1st semester • start using the imperfect form and possibly the present perfect (both introduced at this course-level) • use a significantly lower number of present indicative forms in reference to past time		The <u>near-native speaker group</u> was predicted to: • exhibit the most native-like rates of past form use • show higher rates of preterit than the NS group, possibly due to the absence of a truly imperfective form in L1 English influence, as in

• use no default forms • start to reorganize the IL verbal system in a more target-like way The 3rd semester group (through the 5th /6th semester) was predicted to: • show increasing usage of both preterit and imperfect • use the imperfect more productively with increasing proficiency • show increasing multifunctionality of past forms (e.g., the imperfect across continuous, habitual, and progressive meanings) • show important decreasing rates of present indicative for past-time reference The 7th/8th semester group (i.e., the highest course level) was predicted to: • exhibit preterit, imperfect, and present usage rates that are more similar to the NS norm • show consistent use of multi-functionality • show a more enhanced verbal repertoire with more frequent use of verbal periphrasis and concomitantly a more balanced distribution of past forms.	Spanish (the same could apply to the present perfect) • show higher rates of imperfect-progressive use due to the similar past-progressive form in L1 English • show native-like multifunctionality

5.1.1.2.1 Answer to RQ 2a: Rates of use in the oral prompt task- hypotheses confirmed

The most frequently produced verb forms in the oral task across all of the learner groups were the preterit, the present, and the imperfect (see Table 5-5 above), confirming previous research on cross-linguistic acquisition of L2 past morphology (e.g., Andersen, 1991; Bardovi-Harlig, 2000; Bergstrom, 1995; Giacalone-Ramat & Banfi, 1990; Hasbún, 1995; Ramsay, 1990; Ruiz-Debbe, 2005; Salaberry, 1999). The distribution of past morphology also confirms our predictions about the tripartite nature of the participants' verbal system, which further supports Dahl's (1985) findings about the tripartite system of verbal morphology in Spanish (i.e., present, imperfect, preterit), whose universal correlates are: present, past imperfective, and past perfective (Bybee, 1995).

Table 5-5. Distribution of the most frequent past forms used by the participant groups (oral prompt task).

Course levels	Preterit		Present		Imperfect		Other forms		TOTAL	
	N	%	N	%	N	%	N	%	N	%
1st semester -Time 1	34	**17.0**	134	**66.7**	17	**8.5**	16	**8.0**	201	**100**
1st semester -Time 2	97	**71.1**	23	**17.0**	9	**6.6**	8	**6.0**	137	**100**
2nd semester	435	**51**	214	**25.1**	108	**12.7**	96	**11.4**	853	**100**
3rd semester	331	**53.2**	106	**17.1**	135	**21.7**	50	**8.0**	622	**100**
4th semester	542	**56.2**	154	**16.0**	210	**21.6**	62	**6.3**	968	**100**
5th / 6th semester	296	**55.0**	61	**11.3**	138	**25.7**	45	**8.5**	540	**100**
7th/8th semester	604	**57.1**	61	**6.0**	311	**29.4**	92	**8.3**	1068	**100**
Near NSs	567	**64.5**	7	**1.0**	228	**26.0**	78	**8.9**	880	**100**
NSs	1431	**62.5**	79	**3.4**	630	**27.5**	177	**6.8**	2317	**100**
TOTAL	5311	**100**	1007	**100**	2127	**100**	934	**100**	7586	**100**

The hypothesis about differing rates of use across past forms was confirmed: the preterit is always in the lead followed by the imperfect, in line with previous studies on L2 Spanish past temporality (e.g., Andersen, 1991; González et al., 2013; Hasbún, 1995; Salaberry, 1999, 2011). Notably, each course-level generally exhibited differing rates of use of these forms, which offers support for the contention that development entails a permanent reorganization of the means of expression (e.g., Klein, 1995). In addition, changing rates of past form use, largely across the first three course-levels as compared to the near-native or native speaker level, not only imply adjustment of frequencies of use but also in some cases, they imply a qualitative change in form-meaning mapping. In other words, significant changes in rates of use should indicate a change in the representation of the TL form's meanings (Ortega, 2009). For example, in the 1st semester at Time 1 the present indicative obtained the highest rates of usage (67%), occurring pervasively across temporal points (i.e., present and past times) and meanings (i.e., imperfective and perfective). This positioned the form as default in the IL (Andersen, 1991; Hasbún, 1995; Salaberry, 1999). Later, when the same learners received preterit instruction (Time 2), the present indicative and preterit rates of use drastically changed, showing a significant decrease and increase, respectively ($p<0.001$) and a large effect size (d =1.13).

At this point, the preterit's high usage rates (71%) produce a shift in the learner's IL by becoming the new default past form. Development, as was previously stated, is attested in the changing rates in past form use, which oftentimes further indicate a form's change of function/meaning. Our data showed that the present form was the one that suffered a greater number of significant changes in usage rates (see Figure 1), and this is ascribed to the form's constant change of function along the IL levels from a default at initial stages to lack of vitality in the near-native speaker level.

The idea of the present as a default form is also importantly linked to displacement. The term designates the human capacity to refer to things and/or events not here and now (i.e., displaced events). Bickerton (2009) sustains that displacement has been crucial in the evolutionary pressure that led to language development in humans. Therefore, second language acquisition, which can also be described as a diachronic evolutionary process, should resemble general language development in this sense. The beginning learners, by predominantly using the present form, provide evidence that confirms a stage of non-displaced language by which past-time reference has not yet been morphologized (i.e., morphologically encoded, Givón, 2009). Preterit emergence is then an indication of linguistic displacement signaling the emergence of "tense" as a linguistic category. It becomes apparent that at this level displacement becomes productive through the overuse of the preterit, the default form for pastness. This represents a qualitative change. In the 2nd semester, the preterit usage rates significantly decreased to 51% ($p<0.001$) but with a small effect size (d=0.28), at which point the form starts to stabilize in the IL, maintaining similar rates up to and including the highest course-level (i.e., 7th/8th semester). At this stage, the production of the preterit became significantly lower than the one in the near-native speaker group (55% and 64%, respectively, at $p < .001$ but showing a small effect size (d = 0.16)).

Simultaneously, from the 2nd semester, the present form starts to decline almost falling in disuse in the near-native speaker and native speaker groups (i.e., 1% and 3.4%, respectively). The present tense can be considered one of the most flexible forms, which changes in usage rates across course-levels, as it likely serves differing functions. For example, as previously explained, whereas the present, at the lowest course-level, functions as a default form used extensively to express present and past temporal reference, the NS group uses it as a stylistic device to make a past event more recent and thus more dramatically vivid (i.e., the conversational historical present, Bonilla,

2011). Finally, due to the focus of this study on the expression of past temporality, only those tokens with past-time reference were coded. Nevertheless, the present was found across background events in our narratives, presenting complementary information to the main story, which was usually related to habitual situations.

The imperfect form was used scarcely in the 1st semester at Time 1 and Time 2, but doubled its usage rate in the 2nd semester, yielding a significant difference from the prior semester ($p<0.05$) but with a small effect size ($d=0.13$), reaching an even higher rate in the 3rd semester ($p<0.001$), with a slightly higher effect size although still small ($d=0.24$). From this point on, the imperfect gradually increased, gaining more terrain in the learner's IL and approximating the near-native and native speakers' baseline. Interestingly, it seems that from 3rd to 5th/6th semesters, the preterit maintained similar rates of use, then showing increasing rates from the highest course-level (i.e., 7th/8th semester) up to the near-native and native speakers. The imperfect, on the other hand, showed a gradual increase, while simultaneously the present form substantially decreased.

The perfect and the progressive forms in our data obtained very low rates of use, which confirms Dahl's (1985) contention that these markers seem to be located at the periphery of the TL verbal system. The lack of popularity of these forms may be the result of their function, which is mostly about adding a nuance of meaning to past or present, or both (e.g., current relevance). Moreover, at least across several Spanish-speaking varieties, the preterit has been grammaticalizing through the incorporation of the canonical functions of the perfect into its semantic realm (Fløgstad, 2016). The relatively low present perfect rates in the Spanish-speaking world, reflected on the NS group's low production of the form, plus the brief period of instruction that the form receives in the curriculum may have resulted in restricted input, which can ultimately explain the underuse of the form among the L2 learners across all course-levels.

Table 5-6 below summarizes the hypotheses proposed for the selection rates of past markers across participant groups in the written contextualized task.

5.1.1.2.2 Answer to RQ 2b: rates of selection in the written contextualized task- hypotheses confirmed

Table 5-6. Research question 2B. and corresponding hypotheses (written contextualized task).

Research questions	*Specific hypotheses about the learners*	*Specific hypotheses: NNS and NS participants*
RQ2 **b) What are <u>the rates of selection of past-time markers</u> across our participant groups for written narratives?**	**<u>Written contextualized task:</u>** • Higher rates of imperfect form selection than of usage due to the instrument's manipulation of contexts, which prompt more frequent imperfective selection. • Concomitantly, lower rates of preterit selection are expected, if the imperfect form is more frequently selected than used. • Higher rates of perfect form selection than of usage due to the manipulation of its uses in the written instrument. • Higher selection rates of present at lower course-levels are predicted as an alternative form for the perfect form	**<u>Written contextualized task:</u>** • Higher rates of Imperfect form selection than of usage due to the manipulation of contexts. • Higher rates of perfect form selection than of usage due to the manipulation of its uses in the instrument. • Higher rates of perfect in the NNSs than in the NSs due to L1 influence (i.e., English perfect)

Appendix Figure 1 illustrates the developmental trend of past-time selection followed by the learners from the 1st semester to the 7th/8th semester and the near-native speaker group and the NS group.[44] An examination of the results indicates that the present indicative is the default form in the 1st semester at Time 1 (61%), confirming previous findings in L2 Spanish among instructed learners (Ramsay, 1990, Salaberry, 1999) and naturalistic ones (Andersen, 1991). At Time 2 in the same semester, post preterit instruction, the present form significantly decreased to 37% and the preterit significantly increased to 40% (both at $p<0.001$ and yielding a medium effect size, $d=0.50$). Both forms compete for first place at this stage of evident restructuring, with one form struggling to "survive" and the other struggling to be the most vital in the IL's verbal system. The present indicative follows stages of significant gradual decrease in selection rates, with the NS group selecting it the least frequently (i.e., 1.7%, at $p<0.001$, less than the near natives) but with all distributions yielding a small effect size. The trajectory followed by the present form confirms our hypothesis about its vitality among the learner groups, maintained up to the 5th semester (11%). It was also hypothesized that the present form was going to be selected by the learner groups with the purpose of partially fulfilling the perfect function of current relevance (CR). This is confirmed, for example, with the lower level (2nd semester), which showed that 25% of CR was marked by the present and 13% by the perfect. Semester 3 marked 34% of the CR contexts with the present and only 11% was marked by the perfect.

[44] This section discusses the results presented in chapter 4. The discussion is backed up by a comparison between rates of use and of selection of the past markers and their statistical analysis (i.e., p-values and effect size). Appendix Tables 1 through 3 and Appendix Figures 2 through 4 are included for consultation.

The near-native speaker group; however, selected the present a total of six times and only across the CR contexts. It seems that as proficiency increases the present is increasingly preferred across CR meanings, which further confirms Howe and Rodríguez Louro's (2013) finding that the present perfect has functional overlap with preterit in perfective contexts (i.e., core envelope of variation) and with the present tense in continuative ones (i.e., peripheral envelope of variation).

A look at the preterit and the imperfect forms, the most frequently selected markers from the 2nd semester on, shows gradually increasing rates. Nevertheless, whereas these preterit rates were significantly different from the previous level up to the 5th/6th semester level ($p<.01$ and a small effect size $d= 0.14$), the imperfect increase was only statistically significant in the 2nd semester ($p< .001$ and a small effect size, $d= .28$). These differences highlight the more stable path of the imperfect than that of the preterit, which is seemingly more versatile.

Appendix Figure 1 also confirms the hypothesis about the lower rates of preterit and higher rates of imperfect in the written task. As predicted, the task's controlled experimental design that combined all the independent variables of interest yielded contexts that were more rarely found in naturally occurring data (Domínguez et al., 2012), which can explain the differing rates of selection of past forms in the WCT as compared to the usage rates in the oral task. It can be argued, then, that the written task provided more contexts that the participants found to be a better fit for the imperfect form. This can be further explained by the controlled non-prototypical combinations of grounding and lexical aspectual class (e.g., telic verbs and background information) included in the WCT, which could have triggered a higher selection of the imperfect. Our results seem to align with those in Domínguez et al. (2012), whose controlled task (i.e., storytelling) prompted a higher use of the imperfect with telic verbs.

Table 5-7 below shows the hypotheses for the research question regarding the use and selection of past-time markers across narrative sub-types within personal narratives.

Table 5-7. Research question 2C and corresponding hypotheses (oral prompt task).

Research Questions	***Specific Hypotheses about the learners***	***Specific Hypotheses: NNS and NS participants***
RQ2 **c) What are <u>the rates of use and selection of past-time markers</u> across our participant groups <u>for each narrative sub-type</u> (i.e., remote past, yesterday, and today activities or emotion-stories versus non-emotion stories)?**	• Task types should trigger different TA distributions • The childhood and danger stories or emotion stories are expected to target more emotional experiences and thus trigger more elaboration of the background (i.e., higher rates of imperfect and imperfect-progressive forms, e.g., Liskin-Gasparro, 2000; Salaberry, 2003). • Higher rates of present indicative use were expected across childhood and danger stories and at higher proficiency levels, who would use it as an encoder of dramatic vividness regarding past experiences. This stylistic function of the present is not expected to take place among the learner groups up to the 5th/6th semester. • The 1st semester level should use the present indicative as a default form, and it should therefore be used similarly across the narrative sub-types • Based on pilot data analysis, the stories about yesterday's and today's activities (i.e., non-emotion narratives) were expected to be regarded as a mere recapitulation of past events without much subsidiary information (i.e., higher rates of present and/or preterit). • Higher rates of preterit usage are predicted with the 2nd semester learners using it as a default form regardless of narrative sub-type • The higher levels will show higher usage rates of more peripheral markers mostly across emotion stories	• Task types should trigger different TA distributions • Emotion stories should trigger higher rates of imperfect form due to increased backgrounded events • Higher rates of imperfect are expected for the NSs when compared to the learner groups

5.1.1.2.3 Answer to RQ 2C: rates of use across narrative sub-type (oral prompt task) hypotheses confirmed

Different task types were predicted to affect past form distribution (e.g., Bardovi-Harlig, 2013, 2017). Traditionally, TA morphology studies cross-linguistically (e.g., L2 French: Ayoun & Salaberry, 2008; L2 Spanish: Liskin-Gasparro, 2000; Salaberry, 1999; L2 English: Zaho & Shirai, 2018) have investigated the effect of task type through the examination of personal narratives versus impersonal ones (story/movie-retell). Some of these studies have also investigated the effect of mode through the examination of past morphology across narratives in the oral and written modes (e.g., Domínguez et al., 2012). In particular, they used a comprehension task and three oral tasks with different degrees of experimental control (e.g., personal narrative versus a semi-controlled impersonal narrative). Results have largely found higher production rates of the imperfect across personal narratives, which generally foster greater background information. What has not been investigated so far is the effect of narrative sub-type, that is to say, given an elicitation task with personal narratives, can we hypothesize that different sub-types (e.g., danger stories versus today's activities) will yield different TA distributions? The answer, on the basis of our data results, is positive. Nonetheless, since the current research is a developmental study, sub-hypotheses were considered in that a stage characterized by a default form should be different from one which shows an advanced IL with an advanced and more sophisticated verbal system.

Figure 5-1 above shows how the past/verb markers in the first semester, prior to preterit instruction, are used in the oral task according to narrative sub-type. Our study examined four such types, namely, childhood and danger stories and yesterday and today's activities. For the purposes of our research, the two former types were classified as "emotion stories" and the latter two types were called "non-emotion stories" due to the participants' tendency to merely recapitulate events.

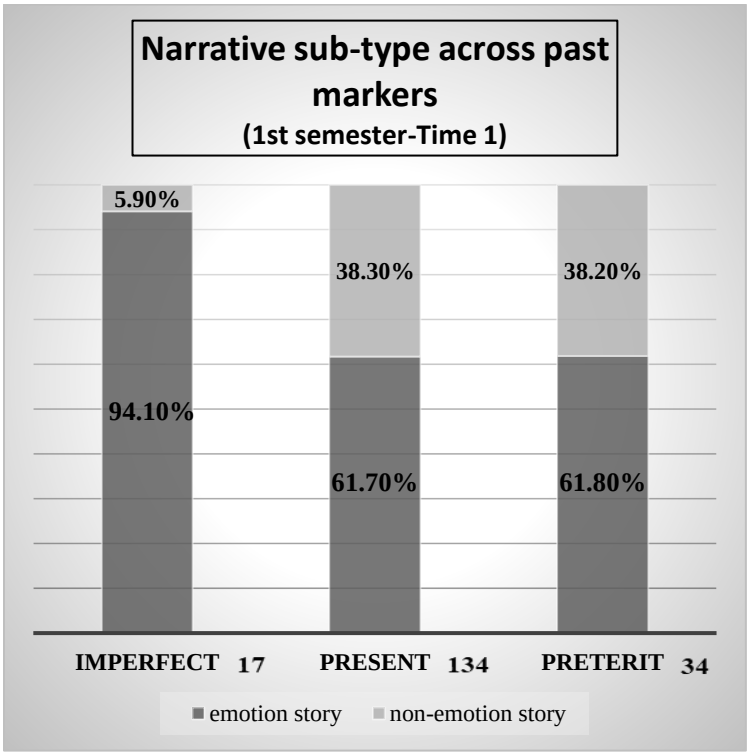


Figure 5-1. Past forms across narrative sub-types (1st semester: Time 1-OP).

Let us start with Time 1 learners in the first semester, who were found to use the present indicative as a default verb form, with minimal use of preterit, and even less so of the imperfect form. Figure 5-1 shows that the present and the preterit are used similarly (i.e., 62% of the time) across emotion stories as compared to non-emotion stories. Conversely, the imperfect behaves in a more categorical way being used 94% of the time across emotion stories as well. The general trend at this level indicates that all three forms were used substantially more frequently in emotion than non-emotion stories. Figure 5-2 below shows the trends of those same learners after preterit instruction, a stage characterized by the use of the form as the default (71%), with slightly decreasing rates of imperfect and a substantial decrease in the usage rates of the present.

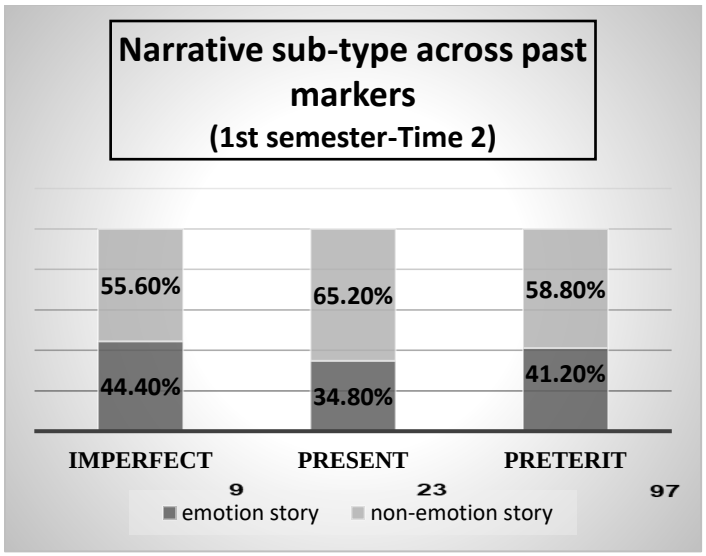


Figure 5-2. Past forms across narrative sub-types (1st semester: Time 2-OP).

This stage shows the opposite trend with the three forms occurring more frequently in the non-emotion stories, which can partially be due to the total number of narrative types produced by the learners at each Time (i.e., Time 1: 119 emotion stories versus 65 non-emotion; Time 2: 52 emotion stories versus 77 non-emotion). What we see; however, is a fast-changing verbal system in the learners' IL that poses a challenge and certainly causes learner confusion. This may encourage students at this same level but at the end of the semester to speak more about the non-emotion stories, which can be linguistically and structurally simpler.

Figure 5-3 shows the trends followed by the learners in the second semester, a stage of restructuring of the verbal forms which entails a substantial decrease of the preterit (51%), starting to approximate the NS norm. The restructuring also involves a substantial increase in the rates of use of both the imperfect and the present. This changing verbal system impacts the forms' occurrence across narrative sub-types again, with the latter two forms occurring more in the emotion-stories, with the imperfect showing the highest association (82%).

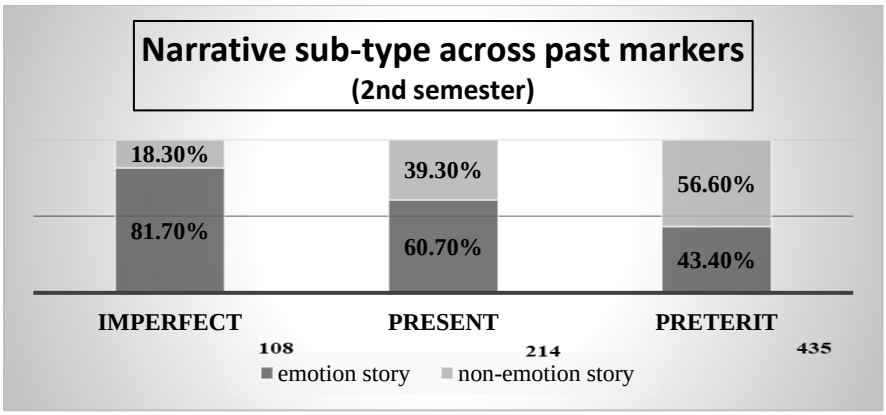


Figure 5-3. Past forms across narrative sub-types (2nd semester-OP).

As it will be observed in the subsequent course-levels, the imperfect maintained this tendency of high association with emotion stories, which confirms previous research on the form occurring more frequently in the background of personal narratives (Henderson, 2013; Lafford, 1996; Liskin-Gasparro, 2000; López-Ortega, 2000). It is also possible that these results signal a developmental change with the learners being more confident in talking about a type of story that requires more subsidiary information in the background and whose structure is thus more complex than a mere recapitulation of events.

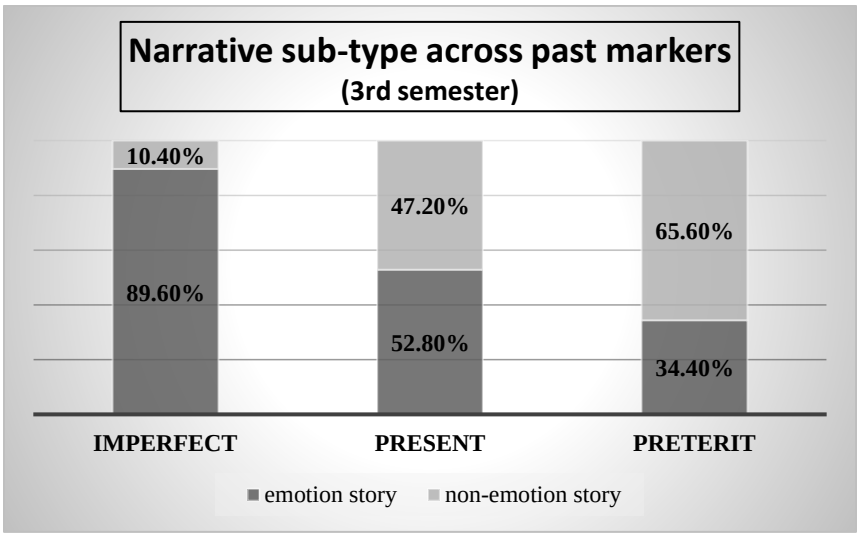


Figure 5-4. Past forms across narrative sub-types (3rd semester-OP).

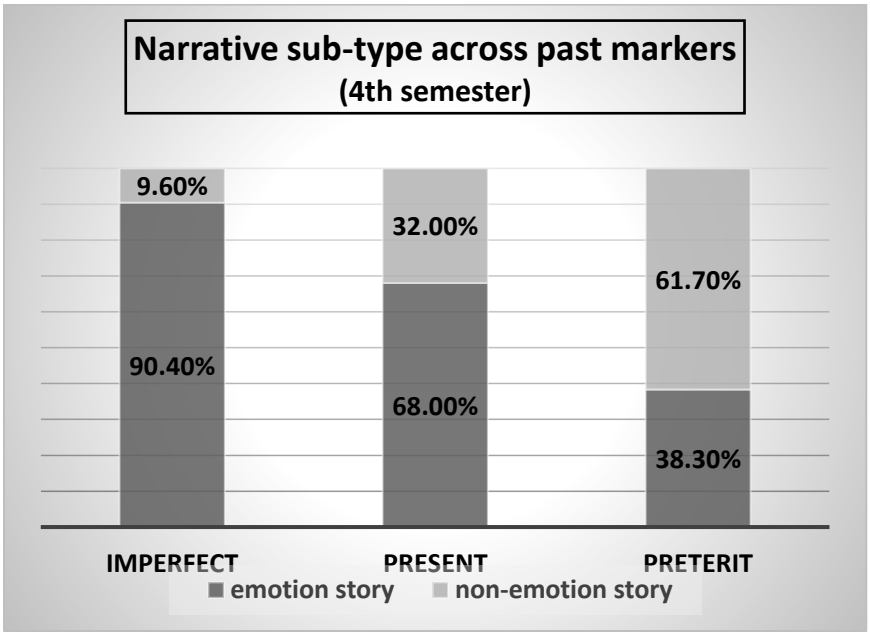


Figure 5-5. Past forms across narrative sub-types (4th semester-OP).

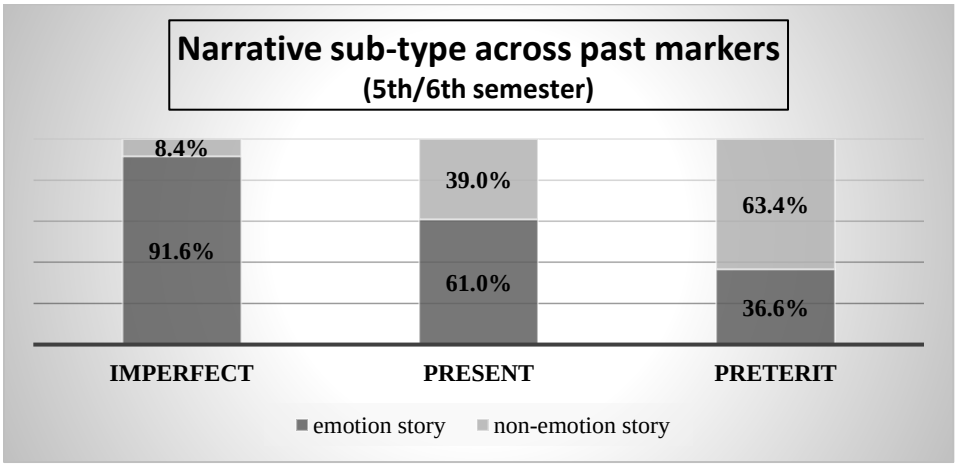


Figure 5-6. Past forms across narrative sub-types (5th/6th semester-OP).

The link of the imperfect to emotion stories increases in association up to the 5th/6th semester level (see Figures 5-4, 5-5, and 5-6), which is regarded as movement forward in terms of TA morphology use, with the learners more consistently using the imperfect for elaboration of

their narratives. It is contended that the emotion stories will trigger more elaboration than the yesterday and today's activities.

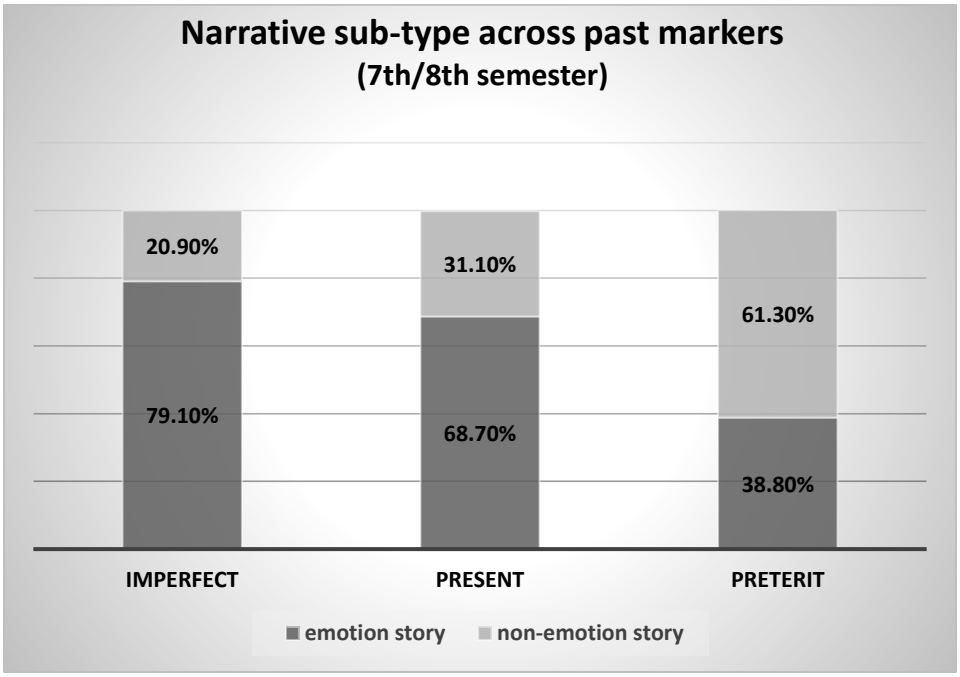


Figure 5-7. Past forms across narrative sub-types ($7^{th}/8^{th}$ semester-OP).

The learners in the $7^{th}/8^{th}$ semester-level (see Figure 7) show differences from and similarities with both the previous course-levels and the near-native speaker and NS groups. Specifically, this level exhibits a pattern of use of the imperfect similar to that of the near-native speaker and NS participants, with the form largely occurring across emotion stories but not showing the high association rates of the learner participants in previous levels. Conversely, the preterit is used more frequently across non-emotion stories, and this rate is similar to the learner groups analyzed.

A look at Figures 5-8 and 5-9 shows that both near-native speaker and NS participants use the imperfect similarly across emotion stories. The association; however, is not as high as in the

learner groups, which is interpreted as an indication of n allowing more non-prototypicality, similar to what NSs do.

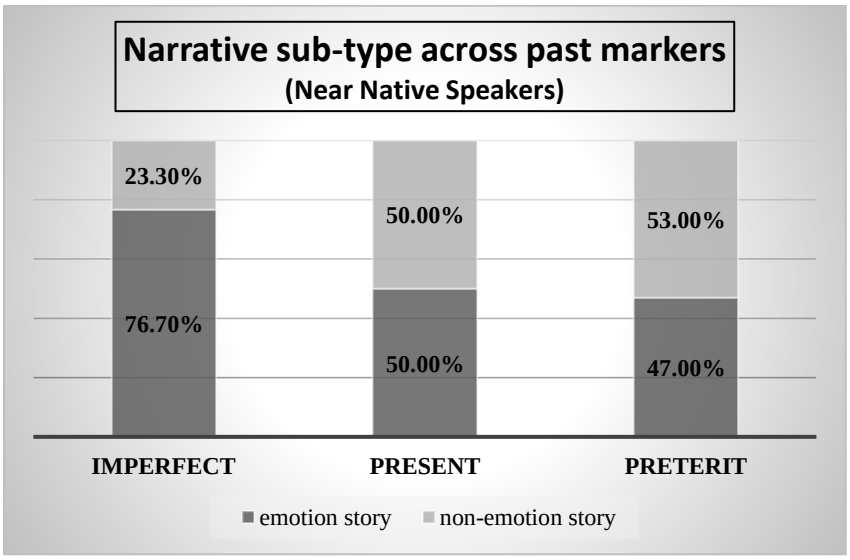


Figure 5-8. Past forms across narrative sub-types (near natives-OP).

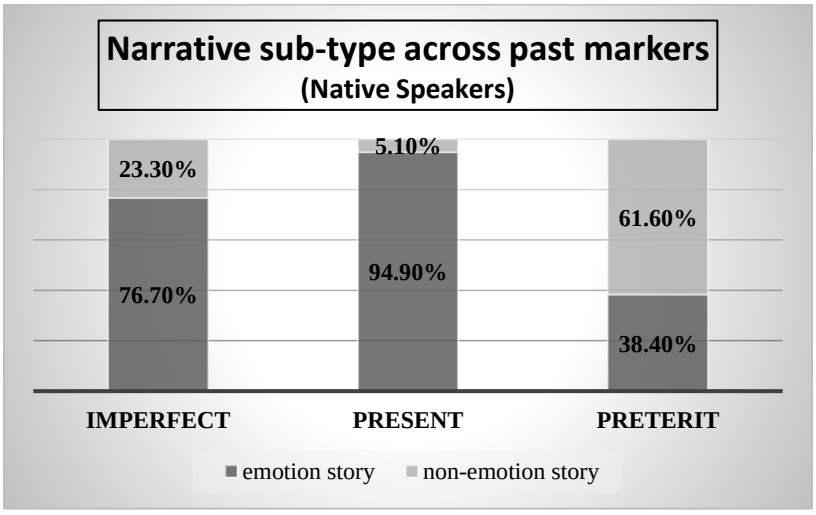


Figure 5-9. Past forms across narrative sub-types (native speakers-OP).

The preterit, on the other hand, shows interesting trends in both the near-native speaker and NS groups. The near-native speaker participants seem to use the form more evenly across emotion and non-emotion stories but both groups still prefer the preterit across the latter. This seems to confirm the recapitulatory nature of the non-emotion stories. The most interesting trends were attested with the present form, which show important differences in rates. Not only do we know that the near-native speakers produced significantly fewer present tokens than the NSs (8 versus 78, respectively, $p<0.001$) but the use of this form is different. What becomes evident based on the results is that the NSs used the present almost categorically across the emotion-stories rather than non-emotion stories, confirming its role as a conversational historic present. When the researcher was transcribing the NS audios, she found that the few participants using the present as a stylistic device (Bonilla, 2011; Silva-Corvalán, 1983) did so when their narratives were told as if the researcher were a physical interlocutor at the time of narration. This was further confirmed with co-occurring forms unique to this context, such as tag questions that included the researcher or onomatopoeia, as in Example 43 below, uttered by a Chilean instructor.

43. …*se tropieza con mi pie y* ***¡fuu!***

"…he trips over my foot and ***fuu!"***

The discussion of this research question is relevant for TA morphology research since, firstly, it provides evidence in favor of the contention that TA forms will show differing distributions of use depending on the task type (Bardovi-Harlig, 2013, 2017). Moreover, this narrative sub-type will determine such TA distributions. The content of the narrative will determine the frequency of use of the past forms. Thus, some personal stories will be treated differently from others as shown by the today and yesterday's stories (i.e., non-emotion) because they generally foster a recapitulation of events concatenated in time (i.e., sequenced) which have

no transcendental meaning to the speaker. These stories in turn trigger preterit use. The study of TA morphology should take into greater consideration different narrative types and sub-types in order to be able to substantiate important claims when testing a particular hypothesis. We will return to this idea later in this chapter to address the value of discussing the discourse and lexical aspect hypotheses as applied to as many contexts as possible.

Table 5-8 below presents the specific hypotheses proposed for the research question about the changes in terms of rates of use and selection of TA markers attested across levels.

Table 5-8. Research question 2D. and corresponding hypotheses.

<table>
<tr><th>Research Question</th><th>Specific hypotheses about the learners</th></tr>
<tr><td>RQ2
d) What changes characterize <u>learner development across proficiency levels</u> in terms of frequencies of use/selection across task types? How do learners' frequencies of use/selection compare to NSs'?</td><td>

Basic verbal system in 1st and 2nd semesters: Gradual acquisition of past forms starting with preterit and followed by the imperfect and the present indicative.
Specializing verbal system (3rd and 4th semesters): restructuring of verbal forms-specialization of form-meaning connections
More specialized/target-like verbal system (5th/6th semester): systematic use of a more diverse verbal system
Peripheral markers emerge at higher levels
Lower rates of peripheral marking use (e.g., the perfect) than those of the NSs.

<table>
<tr><th>A clear developmental path observed in the OPT: movement from</th><th>A clear developmental path observed in the WCT: movement from</th></tr>
<tr><td>➢ Default form to varied forms
➢ 1 form-1 meaning to multifunctionality;
➢ Overuse to appropriate usage rate</td><td>➢ Default form to varied forms
➢ Over-selection to appropriate rate
➢ Generally higher selection of forms than usage: especially</td></tr>
</table>
</td></tr>
</table>

	➢ Non-target-likeness to target-likeness	the present perfect and the imperfect

5.1.1.2.4 Answer to RQ 2d: rates of use in the oral prompt task- hypotheses confirmed

Let us start with a comparative analysis of the different course-levels at crucial points across the Oral Prompt Task and the WCT. A look at the 1st semester group (Appendix Table 1) shows that this level is at a stage of default present indicative form, where the form is the most frequently used (67%) and selected (61%) form in both tasks. These results confirm previous research on past morphology cross-linguistically which attested a first developmental stage in past morphology as consisting of the use of present morphology (Andersen, 1991; Amenós-Pons et al., 2017; Dietrich et al., 1995; Giacalone-Ramat & Banfi, 1990; Hasbún, 1995; Ramsay, 1990; Salaberry, 1999) for present and past temporal references. The preterit is similarly used and selected across tasks at very low rates (17%) and the imperfect follows a similar trend, although the written task yielded somewhat higher rates (13.5% versus 8.5%, $p>0.05$). The higher rate of the imperfect in the WCT confirms our hypothesis about the likeliness that a form will be easier to be selected than produced due to lower cognitive demands involved in the written task. Higher rates of selection of a form than usage of a form entering the grammar at lower learner levels also confirms results of variationist SLA studies on future temporal expression (e.g., Kanwit, 2017). A look at the 1st semester group at Time 2 highlights a similar trend of increasing preterit use and selection. Nevertheless, an important difference lies in the significantly different rates that each task yielded at this stage (see Appendix Figure 5), which mark different routes of development of the form. Specifically, the oral task shows the preterit as the default form having reached a peak (71%) with a concomitant significant decrease of the present indicative (17%, $p <0.001$). The

written task, on the other hand, shows that both preterit and present were selected at very similar rates (39% versus 37%, respectively, $p>0.05$). This result further shows that this semester-group at Time 2 does not attest a default form stage in the WCT like in the oral task. The reader should recall that the reason for this may lie in the degree of experimental control of the instrument, which was designed by manipulating all the variables of interest and therefore providing contexts that are scarcer in speech. This combined with the fact that the present perfect function was targeted in the written task may have contributed to more balanced rates of selection.

When the subsequent course-levels are considered, one can observe a steady increase in the imperfect rates of selection and use. Despite this similar increasing trend, the imperfect rates of use in the oral task were lower than those in the written task up to the $5^{th}/6^{th}$ semester group and these differences were statistically significant (see Appendix Table 164). This confirms our hypothesis about higher rates of the imperfect form in the written task due to the relative easiness of selecting already provided forms than producing them online.

With regard to the present indicative, there is a similar decreasing trend in the rates of use and selection (see Appendix Table 165). The only significantly different rates are those from the NS group. In particular, the data showed that the NS participants produced significantly higher rates of the form than they selected in the written task. An explanation to this is in the different functions that the present tense adopts in each task: as a stylistic device to refer to past events in a more vivid and dramatic way versus an alternative option to the current relevance function of the present perfect.

When the preterit is analyzed across semester-levels and across task types, there seems to be an increasing trend in the selection and production rates of the form. A look at Appendix Table 166 shows; however, that the rates of use are significantly higher than the rates of selection of the

form across all levels, including the near-native speaker and NS groups ($p<.05$, and small effect sizes).

When taking the all these results together, it is clear that the oral prompt task triggered significantly higher rates of usage of the preterit than those of selection in the written task. Furthermore, the written task fostered higher rates of selection of the imperfect than of use. This result was already explained as a possible task effect due to the higher number of non-prototypical contexts that spontaneous speech does not trigger. Nonetheless, the fact that the imperfect was significantly lower in the oral task seems to be in contrast of research that found that personal narratives are the locus of the imperfect due to a greater need for elaboration of the main events.

With regard to the differences attested between the learner groups and the NS group, a striking one is related to the use of the present form. Whereas the form at the very initial stage functions as a default across present and past temporality in both task types, used as a substitute of the preterit and thus indicating how rudimentary or basic the IL verbal system still is. Conversely, the present indicative was not a pervasive form across past-time contexts for the NSs. In fact, the form was scarcely used and selected by the NNS and the NS groups, with the latter showing somewhat higher rates than the former. This is a very important result because it shows that despite the native-like competence of the NNS group, they still lack some pragmatic nuances in the use of the past markers such as the conversational historic present. This is a characteristic that sets this group apart from the NS one. Nevertheless, we should not forget that the oral task consisted of a monologic production and thus the results obtained should be empirically validated in a dialogic oral elicitation task. Another important result is the increasing rates of use and selection of both preterit and imperfect attested across the course-levels, which increase until they most closely approximate the NS baseline, always below their base rates. Regarding the preterit,

the only two levels that surpassed the NS norm were the 1st semester at Time 2, when preterit became the default, and the near-native speaker level, whose rates of preterit use and selection were higher. This can be explained as an L1 effect with English having the past simple to fulfill perfective and imperfective functions. Table 5-9 below summarizes the main hypotheses proposed for the third research question and sub-questions regarding the sociolinguistic conditioning of past markers' use and selection, their change across levels, and the differences between the NS group and the learner groups.

5.1.1.3 Research question 3: sub-questions

Table 5-9. Research question 3A. and corresponding hypotheses.

• **RQ 3** **a. What linguistic and social constraints predict the use and selection of past markers in both NS and learner data across task types?** • General hypothesis: No sociolinguistic constraints on the 1st semester's use/selection of past morphology; gradual significance as a given form specializes and form-meaning mappings become more robust • 1st semester: the present is expected to be used across perfective and imperfective contexts and due to its multifunctionality it is not expected to be predicted by significant variables • 2nd semester: the preterit becomes the default past form and no significant conditioning is expected • 3rd semester on: the imperfect will be predicted by continuity and in subsequent levels it will add progressivity • Lexical aspect: the first two semesters are characterized by default forms, therefore no semantic association between those forms and lexical aspect is hypothesized. Then, lexical aspect increases in effect with increasing proficiency. The WCT is	**b. What changes characterize learner development across proficiency levels in terms of linguistic and social predictors?** • Predictors of past-time expression are expected to change across proficiency levels as an indication of verbal restructuring • Emergent morphology may be constrained by lexical aspect, developing morphology by both LA and grounding but advanced morphology will be determined by grounding • Lexical aspect: change from non-significant conditioning to significant; significant use of prototypical combinations; increasing non-prototypicality with increasing proficiency • Discourse grounding: grounding will become significant from 3rd semester and will maintain its significance with increasing proficiency. The change will be in increasing factor weights.	**c. How do learners' predictors compare to NSs'?** • As forms stabilize in the learners' IL and gain specialization in terms of canonical meaning, it is expected that the greater the linguistic conditioning will be. • Specifically, we expect increasing

predicted to yield less prototypical associations, mostly at more advanced levels • Discourse grounding: the foreground will mark preterit contexts from 3rd semester on and the background will tend to mark the imperfect. However, the imperfect can also occur in the FGD at more advanced levels when the speaker wants to concatenate a series of events that (s)he usually did in the past • Interactional effects: grounding is hypothesized to have an overriding effect mostly at advanced levels • Temporal adverbial: the use of adverbials will facilitate the use of past forms from initial stages, but adverbial sophistication is predicted to occur at higher levels • Temporal reference: up to semester 3 the learners are predicted to use the past markers across today and yesterday's activities. Due to their restricted verbal system and vocabulary size of their IL, the pre-hesternal and current relevance contexts will be relegated until higher levels.	• Interactional effects: grounding is hypothesized to have an increasing overriding effect with increasing proficiency • Temporal adverbial: significant conditioning in initial stages (only position adverbials will determine preterit use)-no significant conditioning as preterit is restructuring-significant conditioning at advanced level with more adverbial types becoming significant predictors • Temporal reference: the present as default in initial stages will occur across all past contexts; the preterit as default will occur across past contexts; with increasing proficiency specializing occurs and so preterit will be significantly determined by hesternal and hodiernal reference	conditioning with increasing proficiency

5.1.1.3.1 Answer to RQ 3A: Linguistic and social predictors of use/selection- hypotheses confirmed

Table 5-10 below shows a summary of the significant conditioning of the three most frequent past markers: preterit, imperfect, and present. The hypotheses are answered by discussing each of the linguistic/ non-linguistic predictors entered in the statistical model. An overall look at the results shows some important trends. First and foremost, one can observe a progression with regard to past-time marking and the corresponding (non)linguistic conditioning. This progression consists, on the one hand, of incremental changes characterized by an addition of significant predictors of use of the preterit and the imperfect. The data shows that as learners move onto a subsequent course-level, the preterit and the imperfect become more specialized as TA markers by gaining terrain across (non)-linguistic contexts that previous research has found to significantly constrain the use of such past forms cross-linguistically in first and second languages (e.g., lexical aspect, discourse grounding, etc.)

Furthermore, this specialization is usually followed by usage and selection rate changes, mostly at initial stages, when the forms seem to undergo the most radical changes, largely due to instructional effects, which are in turn argued to foster form specialization. It is my contention, in line with previous research on the effects of explicit and implicit instruction on grammatical constructions (e.g., Ellis, 2008; Ellis, McManus & Marsden, 2019), that the instruction received by our learners had an impact on the learners' ILs, triggering qualitative changes in their verbal systems.

Table 5-10. Categories that favor preterit, imperfect & present use across semester levels.

Oral prompt task									
	1st: Time 1	**1st: Time 2**	**2nd semester**	**3rd semester**	**4th semester**	**5th/6th semester**	**7th/8th semester**	**NNSs**	**NSs**
Preterit	--	**</br>PERFECTIVITY	* CONNECTION POSITION *** FGD *** PERFECTIVITY	*** TELIC *** HODIERNAL HESTERNAL *** FGD *** PERFECTIVITY *** YESTERDAY TODAY	*** TELIC *** HODIERNAL HESTERNAL *** FGD * PERFECTIVITY * YESTERDAY TODAY	*** HODIERNAL HESTERNAL ***X FGD * PERFECTIVITY * YESTERDAY TODAY	*** TELIC *** HODIERNAL HESTERNAL *** FGD * PERFECTIVITY ** YESTERDAY TODAY DANGER	*** TELIC *** FGD *** PERFECTIVITY	*** TELIC *** HODIERNAL HESTERNAL *** FGD * PERFECTIVITY * CONNECTION POSITION CONTRAST
Imperfect	--	**</br>CONTINUITY	*** BGD *** NO ADV *** CONTINUITY PROGRESSIVITY	*** BGD *** ATELIC *** PRE-HEST *** CONTINUITY PROGRESSIVITY *** DANGER CHILDHOOD	*** BGD *** ATELIC *** PRE-HEST *** CONTINUITY PROGRESSIVITY	*** BGD *** PRE-HEST * CONTINUITY PROGRESSIVITY * DANGER CHILDHOOD	** ATELIC *** BGD *** PRE-HEST * CONTINUITY PROGRESSIVITY ** CHILDHOOD	*** BGD *** ATELIC *** CONTINUITY PROGRESSIVITY	*** ATELIC *** BGD *** PRE-HEST *** CONTINUITY PROGRESSIVITY *** NO ADV
Present	--	**</br>CONTINUITY	*** FGD *** CONTINUITY	* FGD	*** FGD	*** FGD	** TELIC *** FGD	* TELIC *** FGD	* TELIC *** FGD

Furthermore, as form specialization entails the addition of significant predictors, it also entails dropping one predictor and incorporating another, to later incorporate the original one back again. Another possible change that has been observed lies in the strength or magnitude of effect of a significant predictor as indicated by the range (Poplack & Tagliamonte, 2001). This means that given a series of significant predictors, the one that obtains the highest range has the strongest conditioning effect. Let us pinpoint and discuss some of those changes by predictor type.

The reader should be reminded that two statistical models were run per group and per task type (i.e., oral prompt and written contextualized tasks). Each model included a number of the targeted independent variables: model I included lexical aspect (i.e., telic vs. atelic) , discourse grounding (foreground vs. background), temporal reference (i.e., current relevance, hodiernal, (pre)-hesternal), and temporal adverbial (i.e., connective-position-contrast, frequency-duration, and absence of adverbial modification); model II included aspectual meaning (i.e., perfectivity vs imperfectivity), narrative sub-type (i.e., today, yesterday, danger story, childhood story), and frequency ranges (i.e., high, medium, low frequency ranges). The extra-linguistic variables were only analyzed descriptively due to the high levels of variation that the data exhibited in some cases. For example, country of origin of the near-native-speakers and natives were composed of diverse locations, which did not make the category suitable for inferential statistical analysis. The same occurred with the variable age.

5.1.1.3.1.1 Aspectual meaning

A look through course-levels up to the NS level helps us see that aspectual meaning significantly constrained the use of the preterit and the imperfect from initial stages to the instructors' group (See Table 5-10 above). A more specific look indicates that Aspectual Meaning

becomes significant in the 1st semester after preterit instruction (p<0.01), when the form reaches a peak (71%) and becomes the default form at this stage. We can sustain that once the preterit becomes productive in the learners' IL, perfective meaning or perfectivity, the canonical semantics of the form significantly guides the learners into using the form and does so up to and including the NS level. Furthermore, since the statistical models were binomial logistic regressions, a certain conditioning of one form means the opposite for the other. In this case, the imperfect form without being used as a default at any stage was also significantly conditioned from Time 2 by its canonical meaning of imperfectivity (p<0.01). However, the preterit was also compared to the present, which as Table 12 shows, was also favored by imperfectivity (i.e., continuity). Leaving some differences aside for now, these results confirm previous research on the acquisition of preterit and imperfect forms in L2 Spanish (e.g., Domínguez et al., 2011, 2017; Domínguez et al., 2013; González & Quintana Hernández, 2018), which learners associate with their archetypal meanings from initial stages of acquisition. Nonetheless, these associations vary according to proficiency level and the authors argue that even at advanced levels the L1 English learners have difficulty rejecting the preterit across imperfective meaning.

An important note on imperfectivity should be made. "Imperfectivity" is sub-classified as continuous, progressive, and habitual meaning (Bybee, 1995). This means that the L2 Spanish learner has to learn that the imperfect form (inexistent for the L1 English speaker) should be mapped to three sub-meanings. In order to simplify the coding for the statistical analysis, continuousness and habituality were regrouped together as a different category from progressivity. Appendix Table 4 shows how aspectual meanings are expressed at Time 1 and then how they change at Time 2 with respect to the markers that express them.

One can observe that at Time 1, the stage when the present form is the default, the learners produce a larger number of perfective contexts than continuity ones. Nevertheless, both contexts are largely expressed by the same form (i.e., the default present indicative) at very similar rates (continuity 70% and perfectivity 74%). At Time 2, when the preterit has peaked and become the default form, one can see "restructuring," defined by Ortega (2009) as knowledge change of a qualitative nature. This means that once the learners receive explicit instruction on the preterit, they are able to remap "perfectivity" from the present indicative to the preterit. Again, this is confirmatory evidence in favor of the facilitative role of explicit instruction (McManus & Marsden, 2019). With regard to continuity-habituality, the learners also seem to prefer the preterit, using it 40% across those contexts, with the remaining expressed by the imperfect (29%) and the present (20%). Progressivity appears in the 2nd semester with 10 tokens marked by and large by the imperfect-progressive (40%), a form that also enters the IL for the first time at this stage. This means that progressive meaning emerges with the progressive aspect in our group of L2 Spanish learners, which is taken as evidence of L1 transfer since progressivity in English can only be expressed with the progressive aspect. In the 3rd semester, the learners tripled the use of progressivity but still preferred the imperfect-progressive as a means of expression (50%). Nevertheless, the students showed an increasing use of progressivity with the imperfect form (10%), as compared to 1% the previous semester.

Another important point concerns the larger proportion of use of continuity-habitual meanings as proficiency increases and a lower number of perfective meanings, which is interpreted as another developmental change. In particular, this result entails that the learners' forms stabilize and specialize as new forms enter the IL and they give space to the incorporation of other aspectual meanings like current relevance.

"Perfectivity" had the strongest effect as a significant predictor of preterit use up to the 3rd semester-level, with the subsequent learner levels losing strength, probably due to further movement and readjustment of the verbal system, with the form being used across many other linguistic contexts, which vary in strength of conditioning effect. However, the loss of strength of perfectivity seems to align with the NS norm. Finally, we see that the near-native speaker group's conditioning of preterit use loses significance (i.e., temporal reference and narrative sub-type) but regains the strength of effect of perfectivity. It seems that the near-native speakers associate the preterit more strongly with perfectivity than with a particular temporal reference, which could also be the result of this group's status as instructors of Spanish. The Spanish classes at Pitt are grammar-based, requiring the instructor to manage the verbal system very well and when learning Spanish, one rule of thumb is to use the preterit with finished/bounded situations in time (*Manual de Gramática de la Lengua Española*, 2010). Therefore, due to these participants being non-native speakers and having learned Spanish as a second language through instruction as well as the fact that they are now instructors themselves can explain why for them perfectivity plays a stronger role when using the preterit than it does for the native speakers.

In sum, the hypothesis about the 1st semester learner group was confirmed since none of the TA markers was significantly conditioned by independent variables at Time 1. This is due to the present form being the default verb form, and the other past markers being minimally produced. The present at this stage strongly expresses both perfective and imperfective past meanings, confirming our hypothesis about the form's multifunctionality. At time 2, when the preterit spikes in frequency and becomes the default, the first level of restructuring seems to take place, signaled by usage rate increase and concomitantly by specialization of the form through its significant association with perfectivity. The imperfect form gains more gradual importance, but it is

significantly predicted by imperfectivity from the 2nd semester on. As course-level increases, the association of perfectivity with preterit also increases, except at the near-native speaker level. Within imperfectivity, continuousness emerges first, followed by habituality and finally by progressivity.

One of the goals of this dissertation was to examine the conditioning of the perfect in both task types in order to determine whether it is a grammaticalizing form in the near-native speaker and NS verbal system. Let us remember that the WCT manipulated the canonical contexts of the perfect; thus, the instrument had specific blanks that targeted current relevance. Appendix Table 168 illustrates the differences and/or similarities between the perfect use and its selection among the near-native speaker and NS groups.

One important result is the near-native speaker group ‘s production of relatively more tokens of the perfect than the NS group, considering the much lower number of participants in the former group. Also, and because the written instrument manipulated CR (i.e., current relevance), one can observe a higher number of perfect forms across the WCT. Both groups in the oral task showed a tendency to use the perfect preferably across perfective contexts (i.e., NS: 67% and near-native speaker: 95%), although the near-native speaker group showed an even stronger effect in this sense. When CR and perfectivity are compared, the within Aspectual Meaning (AM) category reveals that even through the CR contexts are scarce, when they occur, they prefer the perfect form, and this is the case for both the oral and written tasks. An examination of the WCT shows that both groups select the perfect almost categorically across CR. In sum, the OPT favors the perfect across perfective meaning whereas the WCT favors the same form across CR contexts. The NS group seems to vary more in the use of the perfect across both meanings, which can be explained by the country of origins that the NSs come from, since the ones from Mexico showed a greater

use of PP in CR contexts, in line with previous research (Schwenter & Torres-Cacoullos, 2008). A last point to make is that the preference of the perfect across perfective contexts in the oral task confirms previous research on the grammaticalization form into a perfective marker and in line with grammaticalization theory, the grammaticalizing perfect exhibits this new layer of meaning (i.e., perfectivity) but also maintains the old one (i.e., current relevance). This analysis confirms the importance of task effects since the WCT shows that the perfect is the preferred marker (among others) to express CR, on the one hand, and CR meaning favors the perfect form. The oral task shows opposing trends: whenever CR meaning is expressed, it does so largely with the perfect; however, when the perfect production is examined, one can see that the form largely expresses perfectivity. Interestingly, whereas the oral task confirms that the perfect among NS and near-native speaker participants is grammaticalizing as a perfective form, the WCT shows that the form is only used canonically across CR contexts. This is crucially relevant for researchers investigating grammaticalization of morphosyntactic structures. Finally, these results also confirm Dahl's (2000) contention that the perfect lies in the periphery of the verbal system.

5.1.1.3.1.2 Lexical aspect

Oral prompt task. It was hypothesized that the first two stages (i.e., 1st semester: Time 1 and Time 2), characterized by the use of default forms, would exhibit no semantic bias (i.e., significant association between lexical aspect and past forms). Based on previous research in L2 Spanish developmental morphology (e.g., Hasbún, 1995; Ramsay, 1990, Salaberry, 1999, 2011) it was hypothesized that lexical aspect would increase in effect with increasing proficiency. Significant use of prototypical combinations would appear first in the learners' IL and non-prototypicality would be significant with increasing proficiency. The WCT was predicted to yield fewer prototypical associations, mostly at more advanced levels.

The hypothesis about the lack of semantic bias in the 1st semester at Time 1 was confirmed, since the default present indicative form was used at high rates with all the aspectual classes of verbs (States: 76%, Achievements: 73%, Accomplishments: 70%, and Activities: 63%). The preterit at Time 1 is scarcely produced (17%) and consequently shows a weak association, but this time with all the dynamic verbs. At Time 2, when the preterit becomes the default form (71%), the form strongly associates with dynamic verbs (i.e., Achievements: 83%, Accomplishments: 90%, Activities: 75%, States: 56%; see Appendix C.3.2: Appendix Figures 1 through 4). The results for preterit at the initial stages seem to confirm previous research on past morphology in L2 Spanish, which found that the preterit is conditioned by dynamicity rather than telicity (e.g., Domínguez et al., 2013; González & Quintana Hernández, 2018). This same type of constraint by dynamic verbs was also found in L2 French by Bergstrom (1995) and Salaberry (1998). From the 2nd semester up to and including the NS group, the preterit strongly associated with telic verbs (i.e., over 80% of telic tokens were a preterit verb form) and at some course-levels the form also highly correlated with activities, but always to a lesser extent, with rates ranging between 42% and 62%. Nevertheless, activities highly correlate with the preterit, further confirming that the form is seemingly constrained by dynamicity. States increasingly associate with the imperfect form, which becomes the strongest association from the 3rd semester up to and including the NS level. This also provides evidence in favor of non-dynamicity constraints in the use of imperfective morphology, as proposed by Domínguez et al. (2013).

Notably, when patterns of association are compared between the preterit and the imperfect, one finds a stronger semantic bias regarding the former. The fact that the imperfect associates with activities, but less strongly than the preterit does, responds to two reasons. First, let us remember that the participants produced a larger number of prototypical combinations. Earlier it was said

that continuity was a pervasive meaning within imperfectivity up to the 3rd semester when progressivity emerged, and it did so largely with the imperfect progressive. Therefore, it can be argued that the imperfect form will strongly associate with states due to the learners' preferred continuity meaning, whereas the progressive form emerges and develops largely with activity verbs. A second explanation to the stronger association between preterit-activities lies in the perception of the lexical aspectual class as denoting telicity (Salaberry, 2011). The author explains that "activities represent a shifty category of verbal predicates inherently defined by many optional arguments and adjuncts that can be added through context" (p. 198) (see also Dowty, 1986; Smith, 1997).

It was also hypothesized that non-prototypical combinations (e.g., preterit-states) would increase at more advanced levels but this hypothesis was not confirmed. The preterit, in fact, attested an increasing association with telic verbs including the NS group. This supports Andersen's Distributional Bias Hypothesis, which claims that the learners' patterns of association between form and lexical aspectual class are the result of similar distributions in their input from the NSs. However, Andersen also predicted that the learners would yield stronger associations due to their categorical interpretation of the NS data, but this was not attested in our groups of learners.

Tong and Shirai (2016) found no associations between the past simple in L2 Chinese and telic verbs since the form was functioning as a default. This finding led the authors to propose the "Lexical Insensitivity Hypothesis" that would help explain the lack of semantic bias mostly at initial stages. Our data with beginning learners provides support for this hypothesis. As the authors also argued, the AH makes two types of distinctions: one about a pattern of association and the other one about a pattern of development on the basis of those associations. The 1st semester level's data, characterized by default forms, suggest a pattern of association involving dynamicity versus

non-dynamicity. From the 2nd semester on, our data seems to provide evidence of a strong pattern of association between the preterit and general telicity, rather than punctual versus durative telicity. This seems to confirm Salaberry's (1999) conclusion that the proposed theoretical distinction between achievements and accomplishments in terms of how they should differentially emerge with the preterit in Spanish is not empirically validated (p. 87), since on the basis of our Spanish data, both verb types maintain strong associations with the preterit with increasing proficiency. Finally, our data also support McManus's (2013) idea that increasing prototypical combinations (e.g., preterit-telic) with increasing proficiency are a by-product of form-meaning connections. In other words, prototypicality occurs after the perfective marker has been mapped to perfectivity. In fact, our data showed that "perfectivity" is a significant factor of preterit use since Time 2 (1st semester) and it remains so up to the NS group.

Written contextualized task. The within-lexical aspectual class analysis points to a clear pattern of developing preterit (see Chapter 4, section 4.4.3, Figure 4-17), consistently selected with achievements in the lead, with this combination yielding the strongest associations, followed by activities, which competed with accomplishments for the 2nd place, and finally with states lagging behind. Notably, these three last aspectual classes showed weaker associations with the preterit. An explanation to why activities pattern very similarly to accomplishments was offered in the aforementioned paragraph and relates to the likely perceived telicity of this class (Salaberry, 2011) but it can also be ascribed to the strong experimental control of the instrument, with the inclusion of non-prototypical contexts.

A commonality of the tasks with respect to the preterit is their increasing strong association with telic verbs. Nonetheless, whereas the oral task showed a strong association with both telic

verbs, the WCT showed the strongest association with achievements, the most prototypical exemplar of preterit.

When the imperfect form is analyzed, we see an increasing association of accomplishment and stative verbs from Time 2 in the 1st semester up to and including the NS group (see Chapter 4, section 4.4.3, Figure 4-18). Activities show an increasing association as well but up to the 4th semester, when the association rates decline up to the NS group but without losing their 3rd place. Finally, achievement verbs attest a decreasing association with the form from the 2nd semester to the NS level. Patterns are not all that clear, but one can see that the WCT welcomes a higher percentage of non-prototypical combinations such as imperfect-accomplishment. Overall, the WCT shows that both preterit and imperfect, despite strongly associating with prototypical classes also associate with less prototypical ones, as opposed to the oral task that showed more prototypicality supporting previous research (Domínguez et al., 2013).

When the results of the statistical analysis are considered, we see that telicity is a significant predictor of preterit selection from the 3rd semester up to the NS group. Conversely, atelicity significantly conditions imperfect selection. Therefore, while an analysis that takes into account the Vendlerian classification makes it difficult to see consistent patterns, significance is gained when the aspectual classes are combined into telic and atelic verbs/predicates. Our results seem to confirm previous research that found that past morphology in Spanish is significantly determined by the terminative-durative distinction of predications (e.g., González, 2013; González & Quintana Hernández, 2018).

In summary, both the oral and written tasks have yielded very similar results with respect to the effect of lexical aspect on the use and selection of past morphology. The statistical models in both tasks have rendered a significant role of lexical aspect that was maintained from the 2nd

semester (in the OPT) and from the 3rd semester (in the WCT) up to the NS level in both tasks. Specifically, the results indicated that telicity significantly constrains the preterit and that atelicity significantly constrains the imperfect across proficiency levels. Our statistical models also showed that the low significance levels were maintained from one group to the other.

5.1.1.3.1.3 Discourse grounding

Let us review the main hypotheses that we had posed in this study:

- The foreground will significantly mark preterit contexts from 3rd semester on and the background will tend to mark the imperfect.
- The imperfect can also occur in the FGD at more advanced levels when the speaker wants to concatenate a series of habitual events in the past
- Increasing effect of grounding: changes in factor weights or significance level to indicate change
- The WCT is expected to yield higher rates of non-prototypical associations. Therefore, we expect more background across the preterit and more foreground across the imperfect form.
- Interactional effects: grounding is hypothesized to have an overriding effect mostly at advanced levels

A look at Table 5-10 again shows that grounding is a significant predictor of preterit and imperfect use ($p < 0.001$) from the 1st semester at Time 2 (i.e., a stage of preterit as the default) up to and including the NS group. Specifically, the foreground significantly conditions the preterit and the background significantly conditions the imperfect across all the course-levels including the instructors' groups. These results confirm the main tenet of the Discourse Hypothesis (Bardovi-

Harlig, 1994), which sustains that "learners use emerging verbal morphology to distinguish background from foreground in narratives" (p. 43). In fact, our results confirm the hypothesis not only for emerging morphology but for developing (higher course levels) and developed morphology (NS level). The statistical significance of the predictor of grounding provides evidence in favor of the crucial role this predictor has at all stages. It seems that, just like with Aspectual Meaning, which revealed the same statistical significance level across proficiency, the results of grounding confirm Bayley's (2005) contention that once a rule has entered the grammar, predictors and their levels should have similar effects on learner performance regardless of acquisition stage, and what should change across stages is rates of use. At a very early stage, our learners showed that they had internalized the rule for preterit as associated with perfectivity, telicity, and foregrounded contexts although the form changed in terms of rates of usage across course-levels. The opposite effects were attested for the imperfect, internalized as an imperfective, atelic, backgrounded form. Finally, it seems that these rules were internalized by the participants and applied to both task types: the oral prompt and the written contextualized task. When the predictor of grounding is analyzed in the light of the other significant predictors of past morphology, and ranges are considered, one can see that Aktionsart (i.e., lexical aspect) has obtained the smallest range across groups whereas temporal reference and grounding have yielded larger ranges. The reader should be reminded that in variationist analysis a larger range entails a larger strength of effect (Poplack & Tagliamonte, 2001; Tagliamonte, 2012).

This particular observation about ranges is also important for our other set of hypotheses regarding the interactional effects of lexical aspect and grounding. Specifically, we hypothesized that on the basis of previous findings (e.g., Bardovi-Harlig, 1998; Salaberry, 2011), grounding would have an overriding effect on the use of past morphology mostly at advanced levels. Also on

the basis of Bardovi-Harlig (1998), who claimed that in some contexts both the AH and DH conspire in the emergence and development of past morphology but whereas some combinations would yield similar predictions from both hypotheses, some others (non-prototypical ones), would pose differing predictions (see Table 5-11 below reproduced here from chapter 4, section 4.5, Table 4-53).

Table 5-11. Congruent and differing predictions about past morphology usage by the AH and DH.

Congruent predictions	**Differing predictions**
✓ **The FGD & telic verbs** are associated through a common meaning of completeness= perfective past marker ✓ **The BGD & atelic verbs** associated through incompleteness= encoded by imperfective past markers	× **The FGD & atelic verbs** ➢ The AH: imperfective past marker ➢ The DH: perfective past marker × **The BGD & telic verbs** ➢ The AH: perfective past marker ➢ The DH: imperfective past marker

These interactions were extensively presented in chapter 4 through an analysis of cross-tabulations calculated on the oral and written data. The most important results across course-levels and the instructors' groups indicated that when considering non-prototypical combinations, the atelic-foreground dyad is largely preferred to the telic-background dyad in the sense of being more frequently produced. When past morphology is considered, the most dispreferred contexts (telic-background) are overwhelmingly marked by the imperfect and the less dispreferred ones (i.e., atelic-foreground) are frequently produced with the preterit. This result highlights that when non-prototypical combinations are considered, the predictions of the DH are confirmed, further supporting an overriding role of grounding in the expression of past morphology, as found in

Salaberry (2011). The written task provided similar results with regard to non-prototypical combinations. However, since the task included the present perfect, one can observe that the form is equally preferred across the non-prototypical pair telic-background as the imperfect is. However, the effect of grounding does not seem to be as strong as in the oral data, attested in the higher rates of past marking across all combinations and less categorical marking across prototypical combinations. Our results support Bardovi-Harlig's (1998) attested influence of grounding (foregrounded activities were marked with perfective past) but does not fully support the overriding effect of lexical aspect (achievements were marked with perfective past regardless of grounding). The contradicting results can be explained as a corollary of elicitation task and thus as text type, since Bardovi-Harlig's study examined film retells whereas Salaberry (2011) and the current dissertation examined personal narratives. Specifically, a film retell task can be argued to lead the narrative, thus it can be hypothesized that the plot of the story may contain a larger number of achievement verbs that advance the plot and are consequently marked by the perfective past by most learners. Moreover, given the fact that the movie plot does not change across participants, the results should present more uniformity. Another explanation can be found in the fact that our interactional effects were calculated by combining achievements and accomplishments into a single category (i.e., telic) and states and activities into the atelic category.

5.1.1.3.1.4 Temporal reference

Inclusion of this variable is crucial in order to obtain a full picture of how past-time markers encode meaning at different past-time points. Consequently, in line with previous variationist studies, five different temporal references were coded: hodiernal (today), prehodiernal (before today), pre-hesternal (before yesterday), irrelevant temporal contexts (i.e., do not answer the question of when an action occurred since temporal anchoring is irrelevant. These contexts

normally include the canonical uses of the perfect), and indeterminate temporal reference (i.e., despite the fact that the past event is situated at a specific past time, no reference is made to it). A review of the hypotheses posed for this independent variable is provided below:

- the present as default in initial stages will occur across all past contexts; the preterit as default will occur across past contexts with increasing proficiency specializing occurs and so preterit will be significantly determined by hesternal and hodiernal reference
- the imperfect is predicted to be significantly conditioned by pre-hesternal reference due to its major function in the background of the narrative, which makes the childhood and danger stories favorable contexts of use of the form.
- current relevance contexts (i.e., irrelevant) in the oral task will be significantly constrained by the preterit due to the expected low rates of the perfect

A look at Table 5-10 above shows that this predictor significantly conditions past forms in the oral task in a steady, consistent way from the 3rd semester on. This confirms the hypothesis that with increasing proficiency, specialization of the past markers takes place, which further entails the addition of significant predictors to the statistical model. Specifically, once the preterit has specialized as a perfective past marker that occurs in the foreground of the narrative, learners in the 3rd semester on are significantly more likely to use the preterit across hodiernal and hesternal temporal points. Moreover, this result also supports the view that once a linguistic variable significantly conditions the use of a past form, it continues to do so in subsequent levels. With regard to the imperfect, the opposite trend is followed with telic backgrounded situations significantly favoring the form. At this level, the form also becomes significantly constrained by pre-hesternal situations. A look at the ranges of the other significant predictors of the form at this level shows that temporal reference not only gains significance at this level but also becomes the

predictor with the strongest effect. Our oral task and written task results replicate those of a crucial variationist SLA research study (Whatley, 2013), whose elicitation task was used to model and modify the current study's task, adding to the importance of replicating prior research in order for results to be more generalizable. Specifically, she found that her Study Abroad learners in an immersion-program in Spain significantly favored preterit with hesternal (i.e., yesterday) situations. This result can also be explained in the light of the functions each of the past markers play when used at a certain temporal point. For example, the preterit is used to refer to those hesternal and hodiernal situations lived by the speaker, which, as noted for narrative sub-types, are usually regarded as a sequence of events told in chronological order that merely recapitulate the days without many backgrounded situations. The pre-hesternal time point specifically required that the learners tell stories about their childhood or an embarrassing time in their life. These types of stories are the kind that will normally take a number of interesting details that help make the story a memorable one. These details are usually part of subsidiary information, or the background of the narrative, and usually as well, are expressed by the imperfect. Therefore, our data confirms previous research that found the imperfect more frequently occurring across "personal narratives' (e.g., Liskin-Gasparro, 2000).

An examination of the WCT confirms that the preterit is significantly preferred in yesterday contexts. However, it also shows a result that was not yielded in the oral task: the preterit is also significantly conditioned by irrelevant reference (i.e., current relevance), the canonical function of the perfect. This is an important finding that highlights the fact that the preterit is significantly associated not only with perfectivity but also with past situations that have some relevance in the speaker's present or *origo*. This means that for the learners, the preterit is a better substitute for the perfect, which can also imply a stronger association between CR with past than with present

or with past perfectivity than present, which is naturally imperfective. The archetypal function of the perfect is fulfilled by the preterit in the written task, in line with sociolinguistic research that attested the grammaticalization of the preterit as an anterior (i.e., perfect) form (e.g., Rodríguez Louro, 2006, 2016; Flagstad, 2016). It is possible that the present perfect as a surfacing form in the initial IL weakly associates with current relevance and this encourages the learner to use the preterit, perceived as the most suitable form that can serve as a substitute for the perfect likely due to both forms' common reference to pastness and boundedness, in the case of the resultative or recent past. This further seemingly confirms Andersen's (1984) one-to-one principle (e.g., one single form across two aspectual meanings: perfectivity and CR). Another possibility is that the learners' input in class shows this bias for preterit-CR, although given the instructional setting, and the previous research that found differences between classroom NS production and outside classroom NS production (Gurzynski et al., 2018), the instructor is not expected to use his/her actual vernacular in the classroom. In fact, as was already suggested, these instructors are expected to be very well aware of the formal grammar rules and to apply them in the classroom setting.

Appendix Tables 170 and 171 show the results of crosstabulations between past morphology and temporal reference across the NS and near-native speaker groups, respectively. Interestingly, the NS participants showed that all seven cases of irrelevant reference (i.e., current relevance) were expressed by the perfect, whereas the near-native speaker group produced fewer instances and the perfect did not categorically express irrelevant reference. When the perfect form is examined with respect to the temporal points that it was used across, both groups showed a preference for perfect with hodiernal contexts, with the near-native speaker groups yielding an even stronger effect (i.e., 75% of the perfect was a hodiernal past) and the NS groups showing more flexibility (i.e., 41% of the perfect was used in hodiernal contexts). These results confirm previous research which found

that whenever the perfect incorporates perfective meaning, it starts at the closest temporal point to that of the speaker and follows a route gradually extending into temporal points that are farther away from the speaker (Comrie, 1976; Schwenter & Torres-Cacoullos, 2008).

5.1.1.3.1.5 Temporal adverbial: hypotheses confirmed

With respect to this predictor of past morphology, the following hypotheses were proposed:

1. the use of adverbials will facilitate the use of past forms from initial stages, but adverbial sophistication is predicted to occur at higher levels
2. significant conditioning in initial stages (position and/or connective adverbials will determine preterit use)
3. no significant conditioning as preterit is restructuring-significant conditioning at advanced level with more adverbial types becoming significant predictors

The oral data in our study show that connective and position adverbials significantly constrain the use of the preterit only in the 2nd semester group and in line with the NS norm. Let the reader be reminded that the 2nd semester was a stage of preterit default with the form being used pervasively across past contexts. However, the statistical results also showed that despite its pervasiveness, the form already started specializing as a past marker that expresses perfective situations in the foreground of the narrative. It can be argued that at this stage using adverbials has a facilitative role on the use of past morphology confirming previous research (Baker & Lubbers-Quesada, 2011; Lubbers-Quesada, 2006) and supporting the contention that adverbials have a stronger functional load at initial levels (Bardovi-Harlig, 1998). Our data further showed that adverbials lose significance at this learner level and only regains it at the NS level. This confirms Bardovi-Harlig's (1992) findings about a decreasing use of adverbials with increasing proficiency. Our data highlights the importance of adverbial use as a facilitative lexical device in the use of

past morphology at a stage when preterit has become the most frequent past marker, further showing that adverbial reliance is not essential for learners with increasing proficiency because they rely on other devices such as the lexical aspect of verbs, the discourse grounding, etc. It is possible as well that the lack of significance of adverbial modification is a result of task effect. The learners told the story within the temporal reference stipulated by the instructions in the PowerPoint. It is possible that the yesterday and today's stories were set as occurring at a certain time point at the very beginning and the learners did not feel it was necessary to continue anchoring the events in time. Conversely, when the learners were asked to talk about their childhood or a danger story, these pre-hesternal narratives may contain several sub-temporal points that are deemed more necessary to specify.

A look at the WCT indicates a similar effect of adverbial modification with both the near-native and NS instructor groups favoring the selection of the preterit whenever an adverb was present, confirming Lubbers-Quesada (2006). What is even more interesting when these two groups are compared is that the NS data yielded a larger factor weight for the "presence of adverbial" factor than the one yielded by the near-native speakers and the former also exhibited a greater range. It can then be argued that the most proficient language users do not stop using adverbs; on the contrary, they use more sophisticated ones to express more complex ideas (Baker & Lubbers-Quesada, 2011). It seems that our near-native speaker and NS groups relied on the contextual information provided by the neighboring adverbials in order to make a choice of past marker. This further supports other research that contends that the choice of marker at higher proficiency levels depends on myriad linguistic and contextual devices that require the learner to consider a wider text/discourse portion than the mere verbal predicate (Salaberry, 2011).

5.2 Proposed developmental stages in the acquisition of past-time expression

This section aims at discussing the identifiable stages of acquisition of past-time expression in L2 Spanish. In other words, the route of acquisition followed by each group of learners from beginning to advanced and near-native-speaker levels is discussed. The developmental sequences presented in the following pages are the result of a detailed analysis of learner data and their varieties at a given time point and were accomplished on the basis of the multi-methodological approach that this dissertation used in the study of past-time expression, a synergetic approach that enabled us to use the contributions of each of the analytical frameworks (i.e., concept-oriented, form-oriented, and variationist). Specifically, the concept-oriented approach contributed the data in which the focus is on the functional load of lexico-grammatical devices and the consideration of production by individual learners. The form-oriented approach has contributed the focus on specific form-meaning mappings, their restructuring and development as well as measures of target-likeness of the learner's productions. The variationist approach provides a focus on rates of past form use and selection and the consideration of social and linguistic predictors of such selection and use. As Bayley (2005) stated, each predictor represents one dimension of the multi-dimensions involved in the acquisition process such as lexical aspect, grounding, adverbial use, etc.

Eight stages are proposed following the examination of the learner varieties across each of the seven course-levels (i.e., from 1st semester- Time 1 through 7th/8th semester) plus the consideration of the near-native-speaker level, constituting the last stage and what has been referred to as "ultimate attainment" (Dekeyser, 2000; R. Ellis, 2015). These developmental stages are an attempt towards a comprehensive characterization of the route followed along the learner's adventurous journey as he/she acquires the Spanish system of past-time expression. Previous

research on L2 Spanish past-time expression has not presented such a complete trajectory of the acquisition of L2 past temporality as a by-product of a multi-analytical approach.

5.2.1 Stage one: 1st semester-Time 1

The earliest stage of past-time expression in L2 Spanish among tutored learners at college-level corresponds to the first semester level prior to instruction on the preterit and the imperfect (i.e., prior to the introduction to past morphology). Four categories will be used in order to describe the developmental sequences.

5.2.1.1 Rates of use

A first look at Appendix Table 171 in Appendix D shows that all the learners at this level primarily use the present indicative in reference to any past time (68%). This pervasive use of the present indicative places it as a default verbal form (in the sense of occurring in the most frequent and across both most and least specified contexts, Schwenter and Torres-Cacollous, 2008). In other words, the present is the single preferred form to express past-time reference, which further confirms Andersen's (1984) one-to-one principle in second language acquisition (i.e., the expression of past temporality defaults to one most preferred form). Our study thus confirms the use of default forms at initial stages reported by previous research cross-linguistically (e.g., Bardovi-Harlig & Reynolds, 1995; Bergström, 1985; Giacolone Ramat & Banfi, 1990; Hasbún, 1995; Ramsay, 1990; Salaberry, 1999, 2011; Tong & Shirai, 2016). Nevertheless, depending on the learner's course-level, the default form will be the present (when data collection occurs prior to preterit instruction; Hasbún, 1995; Ramsay, 1990), like in the present study, or the preterit, when the data are collected after preterit instruction as found by Salaberry (1999) for L2 Spanish.

As discussed in chapter two, in concept-oriented studies on the acquisition of temporality systems in a naturalistic setting in Europe (e.g., Dietrich et al., 1995), learners were found to use three different types of varieties along their acquisitional process: the pre-basic, the basic, and the post-basic varieties. The authors describe the first stage as non-morphological with the existence of infrequent past forms that were largely idiosyncratic. Nonetheless, although non-morphological expressive devices were described in chapter four with respect to learner and near-native speaker and NS data, none of our lower level groups were at a 100% absolute non-morphological stage, the reason of which can be ascribed to the fact that our participant pool consisted of instructed learners. Therefore, our stage one data seems to correspond to the basic variety due to the learners' knowledge of morphology from the very beginning level (1st semester).

5.2.1.2 Individual usage rates and non-target-like production

Stage one in our study is also characterized by a lower number of learners who produced preterit and imperfect (73% and 45% of learners, respectively) than those who produced the present form (100%).

The least frequent form, the imperfect, was produced by the fewest learners and showed the highest non-target-like (NTL) rate of production (18%). The NTL rate of preterit production (14.7%), although lower than that of the imperfect, was slightly higher than that of the present (13%). Specifically, the type of non-target-likeness of the preterit consisted of the category "Other", which included mostly innovative forms, but which were formally interpreted as preterit.

5.2.1.3 Linguistic predictors of past form use

Stage one is characterized as one in which neither the default form nor the less frequent forms are significantly conditioned from a linguistic perspective. The present indicative as a

default form signals its role of "joker", applied across past and present temporal points, so it is expected that the form will not be narrowly linguistically constrained. Finally, such a lack of linguistic conditioning at this stage seems to align well with previous SLA variationist research on other TA forms such as the present indicative to express future time (Kanwit, 2017).

5.2.1.4 Aggregate and individual rates of selection

An examination of the WCT data indicates that past form selection rates are very similar to the reported usage rates in the oral task at Stage one. This is particularly the case with the preterit (usage: 17.5% and selection: 17%) and the present (usage: 61% and selection: 67%). Different results are associated with the imperfect, which was selected at a higher rate (13.5%) than it was used (8.5%). However, this was a predicted finding since selection of given forms should be cognitively easier than their spontaneous online production without planning time (R. Ellis, 2005; Robinson & Gilabert, 2007, 2015). Moreover, the production of past forms in Spanish becomes even more challenging to the second language learner due to the differing encoding of grammatical concepts such as person, number, tense, and aspect in a single morpheme (i.e., portmanteau morpheme). The seeming difficulty in production is further confirmed by the larger number of learners selecting the imperfect and the preterit than producing these forms (e.g., imperfect: 93% versus 45%; preterit: 100% versus 73%).

5.2.1.5 Independent predictors of past form selection

Contrary to the oral task, the preterit was only significantly predicted by the presence of an adverbial. This finding confirms previous research (e.g., Bardovi-Harlig, 1998; Comajoan, 2013; Dietrich et al., 1995) on the higher functional load of adverbials at beginning stages of acquisition of TA morphology.

5.2.2 Stage two: 1st semester-Time 2

The second stage in the acquisitional process of past-time expression in L2 Spanish among tutored learners at college-level corresponds to the first semester level after instruction on past morphology, i.e., the preterit.

A first look at Appendix Table 173 (See Appendix D) shows a dramatic change from the first part of the semester, resulting from a redistribution in the frequency of use and selection of the past-time markers. Particularly, after instruction on the preterit, the form becomes the preferred form across any past time point (71%). The preterit as a default verbal form at initial stages of acquisition confirms previous research in L2 Spanish, L2 French, L2 Italian, and in L2 English (e.g., Bardovi-Harlig & Reynolds, 1995; Giacalone-Ramat & Banfi, 1990; Salaberry, 1998, 1999, 2000). An interesting finding shown by the current study is the distinct default verbal forms that characterize beginning IL grammars, which further reveals the importance of explicit grammar instruction as part of the input to which learners are exposed. Specifically, it is observed that the increasing usage rates of each past-time marker stem from the learners' declarative knowledge, shaped, in this particular group of students, by a focus on form, in line with previous research on the acquisition of morphosyntactic structures by instructed learners (DeKeyser & Prieto Botana, 2013; Fernández, 2008).

Stage two in our study is characterized by a flip in the distribution of past morphology usage: the preterit increases in frequency of use from 17% prior to instruction to 71% post instruction; the present, on the other hand, drastically decreases from 67% use to 17% use. Also, the imperfect did not suffer major changes, maintaining its low usage frequency. (i.e., 7%) and produced only by 40% of the learners (i.e., five). When the number of participants were analyzed in relation to the preterit and the present, the data showed that these two most frequent forms at

this stage were produced by all the learners with a 10% of them having abandoned the present. Furthermore, one can observe that the highest rate of non-native-like productions correspond to the preterit (20%), as expected, followed by the present form (8%), with the imperfective showing no formal issues. This specific finding can be explained by the very low tokens of the imperfect produced at this level, likely produced by those that already knew the form. In summary, the preterit at Time 2 attested a sharp increase in usage frequency accompanied by a concomitant higher rate of non-native-like productions. The short-time exposure to the new form allows the learner to produce preterit forms but not in a native-like manner, as was predicted, since this type of linguistic behavior is expected after longer and/or intense language exposure. An important finding is the type of non-target-like preterit forms produced by the learners. Specifically, this level showed the use of preterit forms that were the result of paradigm overgeneralization (i.e., applying the past morpheme of an *-ar* verb to an *-er/-ir* verb: See Example 44) and of person and number mismatches (i.e., using a past morpheme that typically refers to a certain person-number with another person-number combination: see Example 45).

44. *Yo* ***comé*** *desayuno.* (paradigm overgeneralization: the *-ar* paradigm past morpheme for 1st person singular *-é* is used with an *-er* verb such as *comer* "eat" instead of the morpheme *-í*)
    "I **ate** breakfast."
45. *Yo* ***comió*** *desayuno* (person-number disagreement: the *-er* paradigm past morpheme for 1st person singular *-é* is substituted with that of the 3rd person singular *-ió*)

An examination of the linguistic predictors of past form use helps to further describe Stage Two. The substantial increasing frequency of use of the preterit and its ensuing status as a preferred past form show that the form is starting to specialize in meaning to the extent that it is significantly

conditioned by perfective meaning, the one canonically ascribed to this form. It is clear that the learner is able to make this form-meaning mapping from initial acquisition stages, and as will be discussed subsequently, this mapping is maintained, reinforced, and strengthened across course-levels as proposed by VanPatten and Williams (2004).

An examination of the WCT data revealed that past form selection rates differed from the reported usage rates in the oral task, in line with previous research (Tracy-Ventura & Myles, 2015). A major difference was attested with respect to the preterit and the present forms, which showed increasing/decreasing trends in the frequencies of both selection and production of the forms, although the selection rates (preterit: 39%, present: 36%) were not as extreme as those in the oral task (preterit: 71%, present: 17%). In time 2, both the preterit and the present are used at similar rates (i.e., 39% and 37%, respectively). The much higher preterit usage rates in the oral task and the higher present form selection rates in the WCT are most likely the product of task type and/or mode type (Tracy-Ventura & Myles, 2015). For example, the written task manipulated canonical contexts of the present perfect, which were oftentimes selected to be expressed by the present form. The imperfect, on the other hand, was selected at similar rates as those at Time 1 (13.5% versus 15%, respectively) but it was selected at a higher rate than it was used (15% versus 7%).

Results also showed differences in terms of individual rates of production and selection. Specifically, whereas all the learners selected the imperfective in the WCT, only 40% of those same participants produced the form in the oral task. As we argued for Time 1 level, form selection should be cognitively easier than their spontaneous online production without planning time (Robinson, 2015) and should lead to more accurate answers (Bardovi-Harlig & Reynolds, 1995).

A look at the linguistic predictors of selection shows that the preterit at Time 2 was statistically conditioned by the foreground of the narrative. This is also an indication that the

preterit is being specialized in use at the discourse/text level as an encoder of grounding type. The learners, particularly, start to associate the form with sequenced past perfective situations that advance the storyline. Even though this confirms previous research on the essential role of discourse grounding in the use of TA morphology (Hopper, 1979; Salaberry, 2011), it also refutes previous findings about an increasing role of grounding with increasing proficiency (e.g., Bardovi-Harlig, 1998; Salaberry, 2011).

5.2.3 Stage three: 2nd semester

Stage three corresponds to the second semester level, where the imperfect and the present perfect forms are introduced. This is reflected in the increase in use of the imperfective form from 7% at Time 2 to 13% at this level and in the increasing number of learners that produced it (from 40% to 68%), as Appendix Table 174 illustrates (see Appendix D). With regard to the preterit, the rates of production decreased from 71% to 51%, approximating the target norm (62%) more closely. In fact, the learners moved from overproducing the form in the first semester at Time 2 to underproducing it in the second semester. This developmental stage is thus characterized by continued redistribution of forms. Thus, a great deal of instability is attested in the IL grammar, evidenced not only at the usage frequency level but at the well-formedness one. Particularly, results showed that both the preterit and the present substantially increased in terms of their non-target-like productions to 28% from 20% and 8%, respectively. Concomitantly, the non-target-like productions of the imperfect also increased sharply from 0% to 12%. An examination of the type of non-target-like production shows that paradigm overgeneralization and person-number mismatches are among the most frequent types, with the category “other” representing the highest frequency of use. These results can be interpreted in the light of the unstable verbal system, in

constant movement and change, incorporating new form-meaning combinations, which resulted in non-target-like forms that were a blend of stem and bound morphemes typical of other forms such as the subjunctive or a combination of two past forms (i.e., formal non-target-likeness).

An analysis of the WCT data pinpoints a differing selection pattern of past-time markers from the one offered by the oral task. In particular, the preterit was selected at the same rate as in the prior course-level (39%) and at a much lower rate than it was produced in the oral task. This can be explained as an effect of task type, with the WCT targeting the prototypical meanings of the imperfect and the perfect. Evidence of this is attested in the 50% increase in the selection rate of the imperfect at this course-level (i.e., from 15% to 28%) as well as the further decrease in the rates of present indicative selection (i.e., from 37% to 24%). Regarding the linguistic predictors of use, it is clear that the changing usage rates are evidence of an adaptive verbal system undergoing restructuring with important qualitative changes signaled by each form's specialization. In particular, the learners at this level significantly used the preterit to signal perfective meaning, in the foreground of the discourse, and with either the absence of adverbs or by certain classes of adverbs (i.e., connection, position, and contrast). Conversely, the imperfect revealed to be significantly conditioned by the background, whereas the perfect was significantly constrained by the foreground. In this sense, results indicate the crucial relevance that discourse grounding plays in the development of past morphology from the elementary levels. Furthermore, grounding maintained its significant role with the preterit being conditioned by the foreground, as well. Our data confirm Salaberry's (2011) results about the overwhelming role of grounding in the selection of past morphology.

5.2.4 Stages four and five: 3rd semester and 4th semester

A first look at Appendix Table 175 shows a similarity in the production rates of the past-time markers across the third and fourth course-levels, with the preterit being used over 50% of the time, and the imperfect and the present forms being used at almost the same rates. Similarly, both levels show similar percentages of participants producing the forms. This sameness in usage rates across both levels; however, does not entail that both groups of participants are going through the same developmental stage. A closer look at the rates of non-target-like productions shows important differences. In the first place, the preterit is the most difficult form to produce by the learners in the 3rd semester (i.e., 33% non-target-like preterit), followed by the present (23%), which shows an NTL rate similar to the one attested in the 4th semester (27%). Nevertheless, the NTL present indicative productions in the 4th semester represent the highest among the three forms. Furthermore, although the NTL preterit productions differ substantially in terms of rates, the NTL types are shared by both levels (i.e., other and paradigm overgeneralization). One can interpret that the learners at both levels are struggling with the same difficulty but at different rates, with higher level groups seemingly struggling less (14%). Nevertheless, and concurrently, this learner level shows evidence of being more challenged by the present indicative forms, which could be the result of the ever-changing verbal system of new incoming forms and the ensuing adaptation it entails. Let us remind the reader that the fourth semester is characterized by a highly-complex grammar curriculum which introduces the learner to the present perfect subjunctive, conditional clauses, etc. The learner is exposed to a myriad of verb constructions that make it easy for him/her to struggle with the most basic present forms, which have not been the focus of instruction since the first semester.

An examination of the predictors of use revealed that the three forms are significantly constrained in a similar way for the two groups. The preterit has acquired further specialization at both course-levels through three significant predictors of use; namely, Aktionsart, temporal reference, and narrative sub-type. In particular, the preterit is significantly conditioned by telic verbs, today and yesterday's temporal points, and foregrounded perfective situations. It is interesting to note that the use of the forms at both course-levels also share the same magnitude and strength of effect. Conversely, the imperfect, which has been gaining vitality by increasing in use and specializing in meaning, reflected in the form being significantly conditioned by atelic verbs and discourse background. Interestingly, at these two course-levels, the present seems to be competing with the preterit when it comes to telic foregrounded situations.

Appendix Table 175 shows a comparison of the WCT results between both course-levels. These results further show that, contrary to the oral task, the learners' performance in the WCT differed substantially between both course-levels. For example, the preterit was the most frequently selected verb form in both the 3rd semester (47%) and 4th semester (40%), although the latter showed a substantial decrease in selection rates. This result seems to be a corollary of a substantial increase in the selection rates of the present perfect (i.e., from 4% in the 3rd semester to 18% in the 4th semester). Specifically, these present perfect rates most similarly approximated the target NS norm (i.e.,18%). It is the second most frequent form in the 4th semester (40%). An ensuing observation indicates that the imperfect in the 3rd semester is selected at almost double the rate than it is in the 4th one (i.e., 33% versus 17%). Therefore, the 3rd semester more closely approximated the NS norm with regard to the preterit whereas the 4th semester did so regarding the perfect. One can observe that, although the subsequent semester levels show a lower selection rate of the perfect, it is clear that the form gains vitality from the 4th semester on. It is possible that

these differing rates of selection between these group levels further help in characterizing each developmental stage.

A look at the significant predictors of selection shows, in fact, that this could be the case, mostly when it comes to hesternal situations. Nevertheless, the fact that the present form is also significantly conditioned by irrelevant reference indicates that it is preferred across the prototypical present perfect contexts. Another interpretation when considering both selection rates and significant predictors is that for the 3rd semester level the preterit was preferred not only across telic, hodiernal-hesternal foregrounded situations but also across the manipulated situations that targeted the imperfective form. When the 4th semester level is examined, results show that the preterit is similarly conditioned as it is in the 3rd semester level, although the form is also preferred across the present perfect canonical meanings. Moreover, despite the similarities regarding the predictors of the present indicative selection between both levels, the form is also significantly constrained by irrelevant and hodiernal (today) contexts, fulfilling the canonical functions of the PP and thus also competing with the preterit regarding current relevance. An important developmental difference is thus attested: whereas in the 3rd semester the present competes with both the preterit and the imperfect, and is starting to compete with the perfect, in the 4th semester, the present competes with the perfect across current relevance and with the preterit across hodiernal contexts. It is clear then that the higher-level participants are readjusting the semantics of the present form using it in contexts that yield some sort of current-present meaning, rather than past.

5.2.5 Stage six: 5th/6th semester

Appendix Table 176 shows that the preterit is the preferred form (55%) and it is used with the same frequency as it was in the previous semester (4th) but by all the participants. At this stage (5th/6th semester), the preterit NTL productions decreased in frequency to 9% from 14% in the 4th semester, with a concomitant change in the order of frequency of the NTL types (i.e., person/number being more frequent followed by "other"). The imperfect, on the other hand, is more frequently produced at this level (26%), approximating more closely the target norm (28%) and has slightly lowered the rates of NTL productions (from 3.4% to 3%), although representing a non-significant change. Importantly, all the learners at this level are producing both preterit and imperfect. Finally, the present shows decreasing rates of use (from 16% to 11%), decreasing rates of participants producing the form (from 92% to 73%), and a substantial decrease in NTL productions (from 27% to 15%). When predictors of use are examined, one can observe that the preterit has maintained the same linguistic conditioning as in previous course-levels by being significantly predicted by perfective hodiernal and hesternal contexts in the foreground of the speaker's today and yesterday's activities. The imperfect, conversely, is significantly conditioned by the background of the narrative across pre-hesternal contexts (i.e., danger and childhood stories), also maintaining its specialization across proficiency levels.

An analysis of the WCT reveals that the participants at this level are selecting the preterit and imperfect at similar rates as the NSs, with the former form having substantially increased in frequency from 40% in the 4th semester to 47% now. The imperfect increased in selection rates but only slightly from 28% to 30% whereas the present continues its decrease. When compared to production, two major differences can be observed. First, the preterit is much more frequently produced than selected (57% versus 47%). Second, the imperfect form attested the opposite trend

being produced 26% of the time but being selected 30%. These results are explained in the light of a task effect, which seemingly targeted uses of the imperfect that are not as frequent in usage. Interestingly, the present was selected and used at similar rates.

In terms of the significant conditioning of past morphology selection, the forms maintained the same type of conditioning, with the preterit being significantly selected with telic foregrounded situations to describe the participants today and yesterday eventualities as well as those past situations that are currently relevant. In this sense, and as was already argued, the preterit by and large fulfills its canonical function, but it also seems to compete with the present perfect across its canonical meaning (i.e., current relevance) and sometimes with the present indicative regarding the same meaning. The imperfect, on the other hand, maintains its opposing profile by being significantly favored in pre-hesternal, hesternal, and hodiernal atelic situations in the background of the story.

5.2.6 Stage seven: 7th/8th semester

The last participant group, as indicated by Appendix Table 177, shows a slight increase in preterit use (from 55% to 57%) but does not yet reach the NS norm baseline (63%). Whereas the preterit and imperfect forms showed small increases in use, the present, on the other hand, showed a substantial decrease in production, which is an indication of the learners' higher proficiency levels, who do not need to rely on the form as the lower levels do. In this sense, this course-level shows a more mature and target-like Spanish verbal system. When linguistic conditioning is examined one can observe very few changes from the previous course-level. The preterit is highly significantly restricted by telic verbs that refer to the participants' today and yesterday's perfective situations in the foreground of the discourse, although these situations can also refer to the

speaker's more remote past. The imperfect, on the other hand, showed the opposite trend by being significantly constrained by atelic verbs used to express the learners' background situations of their childhood.

The WCT data shows that whereas the preterit increased its rate of selection, both the imperfect and the present forms decreased in selection frequencies, with the latter showing a greater change. It is interesting to note that the selection rates of these forms closely approximated those of the near-native-speaker group, except for the present indicative, which was more frequently selected by the learner group (8%: learners, 2%: NNSs). With regard to significant predictors, the preterit is still significantly conditioned by telic verbs in the foreground of hesternal and hodiernal time points, as well as by current relevance, varying with the perfect to express that meaning. The imperfect, revealed the opposite conditioning, significantly occurring across atelic backgrounded pre-hesternal and hesternal situations.

5.2.7 Stage seven: near-native and native-speaker instructors

The preterit and imperfect forms across both the near-native speaker group and the native-speaker one show that temporal adverbials are added as significant predictors of selection. Specifically, whereas the participants select the preterit when an adverb is used, they select the imperfect when there is no adverb. This is an important change since, as Salaberry (2011) sustained, the most competent subjects choose past morphology by examining the greater global function of the text rather than by staying at the phrasal level. When the NS and near-native speaker groups are compared in terms of their selection of the past markers, one can see that the near-native speakers' preterit use surpasses the NS rates. However, a major difference lies in the use of the present indicative, which is almost non-existent for the near-native speaker group but higher

among the NSs. It is argued that the NSs are using the present as a stylistic marker as a historic present. It is this particular result that helps to divide the groups in terms of development. What is claimed here is that the near-native speakers' lack of historic present use signals their non-native-likeness since this use of the form is triggered by the discourse context, largely found in informal spontaneous situations and is highly restricted in use, as opposed to the default preterit. It has been suggested that the historic present occurs in the complicating action, but our study found, in line with Silva-Corvalán (1983), that in fact, the present form is used at key moments of that action, the most climatic moments, giving this part of the narrative some nuanced pragmatic meaning (i.e., dramatic vividness). One last consideration that warrants attention is that past form use among the NSs is significantly conditioned by a larger number of linguistic predictors than it is among the near-native speaker instructors. Native-like production of past morphology thus occurs in highly-restricted linguistic contexts.

5.3 Final discussion of key constructs

5.3.1 The 4 acquisition processes (simplification, restructuring, overgeneralization, u-shaped behavior)

This section is an attempt to connect the results obtained in this research with the theoretical frameworks discussed in chapter 1. Since this study is basically an investigation on the acquisition of second language Spanish, it is deemed necessary to refer back to the four basic processes involved in the acquisition of languages, as explained by Ortega (2009). In particular, she sustains that the knowledge systems in the acquisition process are involved in building, revising,

expanding, and refining L2 representations and they do so by traversing important sub-processes like simplification, overgeneralization, restructuring, and u-shaped behavior (all of which have been defined and elaborated in chapter 1).

The first contribution this dissertation has made is offering further support for the involvement of such processes in the acquisition of instructed L2 Spanish. In this sense, our data confirmed that past-time expression within instructed learners proceeds in similar ways as it proceeds for L2 naturalistic learning cross-linguistically: from a pragmatic, to a lexical to a morphological stage (Dietrich et al., 1995; Klein & Purdue, 1987; Meisel, 1987). Nevertheless, due to the role of instruction in Spanish even prior to college level, our learners did not attest an absolute pragmatic stage defined by the use of discourse-pragmatic devices in the expression of past temporality. Our learners, in line with those of Bardovi-Harlig (2000), have shown that the aforementioned three stages were not absolute but each of them contained traces of the others. For example, whereas the lowest course-level (1st semester Time 1) amply relied on the chronological order of events (Meisel, 1987; Bardovi-Harlig, 1992), several of those events were also expressed by morphology either present or past. Moreover, a great number of students at this level also produced infinitive forms of verbs to refer to those situations. Our data show an interplay of means of expression taking place at each developmental stage with increasing native-likeness in the use of those devices together with increasing syntactic and/or morphological complexity (De Clerck & Housen, 2016), a by-product of cognitive complexity (Givón, 2009). Our results confirm Klein's (1995) claim that the permanent reorganization of the balance among the means of expression is a primordial part of language acquisition. In this sense, our data showed that the inventory of form-meaning pairings change with the addition of new ones to the IL system (Bardovi-Harlig, 2017), which permanently restructures itself (e.g., Ellis & Wulff, 2015b).

With respect to the four acquisition processes, our data showed that they are operative in our participant pool. The first one, simplification, refers to how learners simplify the L2 verbal system at initial stages and with emergent morphology. An example typically analyzed within this process is Andersen's (1984) One-to-one principle by which one form is associated to only one meaning. Our data showed participants exhibited a tendency toward simplification at initial stages, but it is important to clarify that the one-to-one principle was not categorically applied in our data. Appendix Table 167 (see Appendix D) shows the details of how each form was mapped to the different meanings at beginning levels. In the 1st semester at Time 1, one can observe that the present indicative was used to mark perfective meaning 74% of the time and it was largely used to express continuity (i.e., imperfectivity) as well. This provides evidence against Giacalone-Ramat and Banfi's (1990) results based on conversations with L1 Chinese naturalistic learners of Italian about personal experiences and life before emigrating, in which the present was the unmarked verbal form associated almost exclusively to imperfective habitual meaning when referring to the past.

Our data further showed that the preterit marks 25% of perfectivity and 10% of the continuous meanings, typically ascribed to the imperfect. At Time 2, after preterit instruction, the results indicated a change in the rates of use of the past markers as well as a change in trends, but despite perfectivity being largely expressed by the preterit, it was also expressed by the present. One possible piece of evidence in favor of a more solid pattern of simplification is the case of the imperfect, which was attested to express continuity and habituality at both time points in the 1st semester, with progressivity emerging in the 2nd semester but with the imperfect-progressive. It is possible that due to instruction effects, simplification processes were not fully operative at initial stages.

The second acquisition process discussed in Ortega (2009) is "overgeneralization", which refers to cases of overuse or underuse of a form. Our data showed a constant fluctuation in usage rates of the different TA markers, with the initial stages (i.e., the first semester) overusing the present indicative at Time 1 and the preterit at Time 2. This course-level was characterized by generalized overgeneralization, a sign of the instability of the learners' verbal system as a result of new forms entering the IL and the old ones having to reorganize, restructure and remap in terms of meaning/function. Our data confirmed previous cross-linguistic research findings regarding the use of default forms and high rates of overgeneralization. Another example of such a process of overgeneralization is the case of over-regularization. In the case of Spanish, two cases of overgeneralization; namely, over-regularization and paradigm overgeneralization were discussed in chapter 4 (see section 4.1.3.3, Table 4-12). Our results indicated that the former occurred more frequently at higher levels, whereas the latter occurred from initial stages. It was explained that this was a predicted finding if we consider that in order to regularize an irregular verb in Spanish, given the fact that the language has three verbal paradigms (i.e., *-ar, -er, -ir*), overregularization entails the learners' knowledge of the specific morphemes to mark past perfectivity/imperfectivity across person-number combinations.

This can be explained under Ellis's (2002) contention that the rules of language are structural regularities emerging from the learner's observation of the distributional features of the input. It is possible that due to an instruction effect, which emphasizes rule-formation and rule-application, the learner is exposed to a larger number of verbs that are regular, mostly at initial stages. Furthermore, since Spanish verbal morphemes encode several grammatical categories simultaneously across the three verbal paradigms, with the *-ar* being taught first, the learner will

show a tendency to use the past morphemes of that paradigm when learning the other verbal paradigms.

The third acquisition process involved in the development of past morphology was restructuring, defined by Ortega as a gradual or abrupt knowledge change of a qualitative nature but not necessarily involving increased accuracy. Figure 5-10 below illustrates the developmental changes attested across each stage which helps to account for the restructuring of the learners' verbal system including the NS level.

Let us start with preterit use. A look at Figure 5-10 and at the significant predictors of use indicates that restructuring occurred largely from the lowest course-level to the 3rd semester. These stages are characterized by significant changes in the rates of use as well as changes in the number of significant predictors that condition the form in both tasks. These stages show increasing specialization of the form being used across an increasing number of significant linguistic contexts. The restructuring process goes from a default stage where the present form is preferred across perfective and imperfective meanings, although no significant conditioning was attested for any of the forms. The second stage, after preterit instruction, was thus characterized by a significant increase of the form's rate of use and the addition of the first significant conditioning factor, i.e., perfectivity.

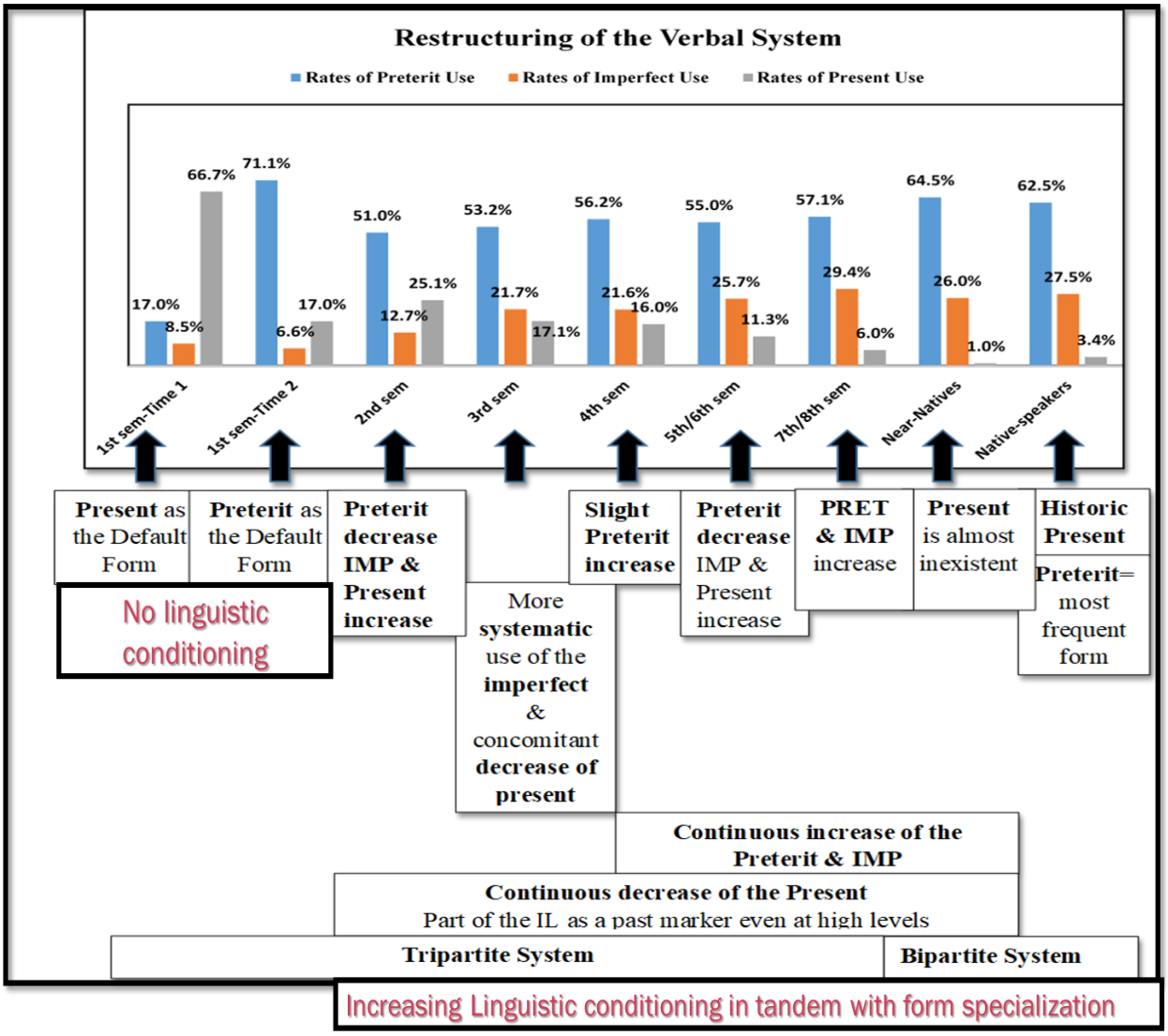


Figure 5-10. A snapshot of the development of the verbal system (oral prompt task).

The 2nd semester attests a significant decrease of preterit use, which starts to align more and more with the NS norm. At this stage, the preterit adds two significant predictors of use (i.e., adverbial modification and grounding). Specifically, connective and position adverbials on the one hand, and the foreground, on the other significantly constrain the use of preterit. The 3rd semester attests major restructuring in terms of linguistic predictors of use, with the drop of adverbial modification and the significant addition of temporal reference and narrative sub-type (i.e., preterit

is now significantly conditioned by hodiernal and hesternal reference as well as narratives about the speaker's yesterday and today). The subsequent levels maintained the preterit rates of use and the same significant predictors, with minor changes. The near-native speaker group dropped temporal reference and narrative sub-type whereas the NS group showed that all predictors were significant, yielding a highly constrained preterit. The imperfect showed the opposite trend from that attested for the preterit. The present indicative changed in terms of rates of use from overproduction in the 1st semester to almost no production at the highest levels of non-native Spanish (i.e., 1%), with NSs using it somewhat more frequently, despite still being quite infrequent.

An increase in syntactic complexity is also part of the qualitative changes, which was attested at the advanced levels and which reflected the encoding of more complex ideas and relationships within the narrative events. We saw that the NSs made use of linguistic devices in a target-like way, which was not attested in the learner groups (e.g., the use of infinitives and elided verbs).

For purposes of statistical simplification, the imperfect aspectual meanings were combined under imperfectivity, but a descriptive analysis yielded clear developmental changes that can be regarded as cases of restructuring. The form emerged with continuity and habituality and was used with them up to the 3rd semester, when progressivity emerged with the imperfect-progressive. It is in the 4th semester when the learners started to associate progressivity more frequently with the imperfect, although the meaning was largely expressed by the progressive.

The fourth and last process involved in the acquisition of languages, and which manifests itself as a by-product of restructuring, is U-shaped behavior, defined as a decline in performance as "more complex internal representations replace less complex ones" followed by an increase

again as skill becomes expertise (Lightbown, Spada, & Wallace, 1980; McLaughlin, 1990b). Taking this definition into consideration in the context of this study (i.e., the acquisition of past-time expression), one cannot help but wonder whether our learners' behavior at the different course-levels followed a U-shaped curve. This study, on the basis of the best methodologies from a combination of analytical approaches to TA acquisition, analyzed the development of past-time expression by examining rates of use and selection of the past markers by the groups and the individuals, the significant predictors, the roles of verb regularity and frequency, as well as the use of other linguistic devices. When rates of use and selection of past morphology are considered, one can see increasing use and selection across proficiency levels, at least with the preterit and imperfect, and a decreasing use of the present. Rates of this type do not seem to argue in favor of u-shaped behavior, on the contrary, our data showed a rather continuous monotonic function, which implied constant reorganization of the verbal system through incremental changes in the use of the two most frequent past markers. Notably, it can be argued that the imperfect form yielded a more steady incremental use than the preterit. At the same time, the preterit was substantially underused at Time 1 but peaked as the preferred form after instruction at Time 2, to decrease in use again and then minimally fluctuate but never reaching the NS norm.

When predictors of use are taken into account, the results indicated some sort of incremental linguistic conditioning, with the past forms not being significantly constrained at initial stages, then being minimally constrained, then adding more and more significant predictors, which approximates NS use. This also seems to confirm a linear process where predictors of use have an increasing influence, likely as the product of language experience.

What does seem to provide more evidence in favor of U-shaped linguistic behavior is the analysis of non-target-like production of the past forms. This u-shaped behavior is attested in terms

of formal accuracy as measured by the type and frequency of overregularized and/or overgeneralized forms. Our data confirm previous research in L2 English that found learners producing accurate irregular forms, then moving to a stage of overregularization of those forms, and finally producing the correct target-like forms (McLaughlin, 1990b). McLaughlin further explains that this type of u-shaped curve represents a developmental shift in morphological development characterized by a transition from exemplar-based representation to rule-based representation.

As can be seen in Appendix Figure 9 (see Appendix D), the use of the verbal forms starts with high formal accuracy, as time goes by, accuracy (i.e., form well-formedness) diminishes, and as the learner moves further into the more advanced levels, one can see that well-formedness increases. Such a U shaped-curve is attested in our data with regard to the preterit and the present markers, which confirms the complexities of the highly inflectional system of Spanish verbs and their many irregularities as well as the changes in verbal affixes according to person, number, gender, tense, and aspect. It is contended that as proficiency increases, more TA markers enter the IL, and more reorganization among the means of expression occurs, which certainly causes the learner's confusion regarding semantic mapping but also causing "morpho" difficulties. It is argued that establishing a form-meaning association at initial stages is followed by strengthening of that association (Van Patten & Williams, 2004), but this strengthening occurs as other markers are being learned, which can cause the learner to forget the target inflections. Our data showed the 3rd, 4th, and 5th semester most frequently struggled with target-like production, argued to be a by-product of the learner's verbal system expansion and accommodation and thus of restructuring in terms of McLaughlin's developmental shifts. The imperfect, on the other hand, shows more of a linear development, which is also interpreted as a by-product of its generalized regularity (Camps,

2005). Specifically, Camps argues that only three verbs are irregular in the Spanish imperfect form. It is important to note that change was always a part of the IL at each developmental level. Even when the IL showed non-significant increase in rates of use at some developmental points or the apparent stability of predictors of use, once a predictor has become significant in the IL, some movement, some reorganizational event was taking place.

5.3.2 Final remarks about the AH

Our data showed that the use of past markers in the oral task were initially and developmentally significantly conditioned by "aspectual meaning" (i.e., canonical function). This result questions the so-called "form precedes meaning" stage (Comajoan, 2013, p. 237). In fact, the statistical results indicate that the preterit emerged in the 1st semester at Time 2 (i.e., post preterit instruction) with their archetypal meaning of perfectivity. This supports the idea that, at least in instructed settings, and probably due to an instructional effect (i.e., explicit instruction, Ellis, 2008), the learner initially maps a form to its canonical meaning based on input and thus what emerges in the IL is a form-meaning combination (VanPatten & Williams, 2004). In other words, our data for all the markers investigated showed that a form and its meaning emerged simultaneously as a syncretic category, likely as the result of "declarative statements of pedagogical rules" about the target past forms (Ellis, 2008, p. 122). Our data further showed that "perfectivity' becomes a significant predictor of preterit immediately after the learners have received instruction on the form, which brought about a default preterit stage with the form being overproduced. Comajoan (2013) argues that overuse or underuse of a form signifies inappropriate use of such a form, and this consequently becomes confirmatory evidence of a stage in which form

precedes meaning. This may be true in those cases where research may have found an absolute default stage with categorical use of a form, which I am not aware exists. Our data show that a default preterit stage at Time 2 means that the form was used predominantly and much more frequently than other forms (i.e., 71%) but at no point of learner development or even at the NS level did we find categorical use of past morphology. As a consequence, I argue that an overused form will primarily be used across one meaning and it will certainly be used with others, but this cannot be an indication of "absence of meaning", as the argument of form precedes meaning seems to imply. Our data showed an association of forms with meanings, either correctly or incorrectly, and this is taken as further evidence against the claim that a form that precedes meaning is devoid of meaning.

Emergent morphology as form-meaning pairings, is, as was said in chapter 4 and again highlighted in chapter 5, reflected in the early significance level obtained by aspectual meaning as a predictor of past morphology. This result seems to point to a syncretism of form and meaning that is facilitated developmentally not only by token frequency (i.e., the number of times the learner encounters a certain form, Bybee, 2008) but also by type frequency (i.e., the number of verb types that are able to enter a certain form-meaning pairing, Bybee, 2008). Within type frequency, we tested the role of verb regularity or the lexical aspectual classes of verbs: do regular or irregular verbs or telic or atelic ones favor a specific past form? Our data showed that "telicity" was a significant predictor of preterit use since the third semester and up, gaining significance two semesters after the aspectual meaning of perfectivity did. It is my contention, on the basis of our results, that the learner first associates a form to a meaning, and only later does he find the "facilitators" of past form use in the social and/or linguistic context. Our data highlights the importance of telicity as one of several facilitators of the use of preterit as a form-meaning

combination. This dissertation argues, in line with cross-linguistic findings in first and second language acquisition studies (e.g., Bertinetto, 2012; McManus, 2013) that the learner develops dependent and syncretic rather than independent categories of aspect, temporality, and mood. Our data support the claim that prototypicality has a stronger influence on the development of L2 morphology once a form has specialized in terms of meaning mapping. A question that arises at this point is what this meaning that is connected to a form is. The canonical meaning of a form is its primary default function in text or discourse; hence, when past forms are mapped to meaning, reference is made to "viewpoint" meaning, the perspective that the speaker adopts/wants to adopt with respect to a certain situation-type (Smith, 1997). If the learner is said to associate a form to its canonical meaning (i.e., preterit-perfectivity), the association entails knowledge of propositional, sentential, or discourse motivations (i.e., the preterit is used for bounded situations at the discourse level). Then, I argue that telic verbs will facilitate this use of preterit due to the already discussed relevance and congruence cognitive principles (Andersen, 1993; Andersen & Shirai, 1994). The learners will tend to use the preterit in Spanish largely with telic verbs because it is cognitively easier since form-meaning pairing and the telic aspectual class share the same features of [+ telic] and [dynamic]. The punctual feature deserves further comment in our data. As was discussed in chapter 4 (section 4.3.3) and summarized in this chapter (section 5.1), the preterit in the oral task was similarly associated with achievements and accomplishments, with the latter being more frequent up to the 4th semester level. Furthermore, the highest learner preterit-telicity association took place in the 1st semester at Time 2, when the form reached a peak in rates of use also reaching the highest association with accomplishment verbs, followed by achievements, against the claims of the AH. Salaberry (1999) argued that the theoretical sub-division of telicity into these two verb categories was not empirically relevant in his Spanish data, and this seems to

apply to our Spanish data as well. Nevertheless, our results contradict those found in Camps (2005) based on written personal narratives among beginning learners of Spanish. His findings confirmed the effect of lexical aspect on the development of past morphology, as argued by the AH. Future research should look into this issue in more detail to find an explanation to some of the French and Spanish data with similar results to ours.

Possible explanations to our data patterning could lie in input effects and the makeup of the situation-types with which a certain Spanish class presents a student. It is important to acknowledge that in the first semester at Time 1, the present indicative is introduced in relation to routines, which are practiced with lists of verbs that are largely accomplishments (i.e., "take a shower", "have breakfast", "brush your teeth", etc.) so when the preterit is introduced, it is likely that the learners will use it with those same verbs. This is reasonable if we consider that two of the narratives were about yesterday and today's activities, which certainly prompted students to use such verbs.

Going back to the influence of telicity, but not punctuality, on the use of past morphology, our data provide evidence of it having a cognitive facilitative function in the mapping of form and meaning in actual discourse, helping increase the robustness of those form-meaning combinations (Van Patten & Williams, 2004). In other words, discourse intent or "narrative discourse" (e.g., the concatenation of real or fictive events in chronological order, Dahl, 1985, p. 112) triggers the use of the Spanish preterit with its concomitant basic/inherent meaning of perfectivity (i.e., completion). This form-primary meaning bundle seems to emerge and develop with telic verb types and with frequent use in the narrative discourse, gaining cognitive strength as the IL verbal system expands. This seems to find support in Andersen's (2002) claim that the early association between lexical aspect and past perfective is a consequence of humans' need to express their

intended meanings in ongoing discourse. A corollary of Andersen's claim is that the prototype for preterit does not emerge and/or develop in isolation but within a certain discourse/text context. Given this claim and our results, I propose the "coalition of aspects hypothesis" by which local and global semantics (i.e., 1. the inherent semantics of a verb and its arguments plus 2. propositional meaning, such as perfectivity/imperfectivity) drive the acquisition of past morphology. These two semantic levels should work jointly toward fortifying the connection between a form and its primary meaning, making it more and more robust in the IL. The coalition of telicity, regardless of the punctuality feature, and perfective meaning drives the acquisition of preterit, as atelicity plus imperfective meaning would drive the acquisition of the imperfect.

Furthermore, the idea of a coalition of two aspect types seems to be a perfect fit for a usage-based approach to language and language acquisition and would further explain the attested increasing effect of lexical aspect with increasing proficiency in our data and previous studies in L2 Spanish. The coalition of aspects hypothesis follows a usage-based theory of grammar in which language acquisition is based directly on experience with language. Since grammar emerges from usage (Bybee, 2008; Ellis 2013), it contains many details of cooccurrence as well as a record of the probabilities of occurrence and co-occurrence (Beckner et al., 2009). According to Ellis (2006), the learner's task is to learn the probability distribution P (interpretation|cue, context), the probability of an interpretation given a formal cue in a particular context, a mapping from form to meaning conditioned by context (p. 8). This means that the learner should work his way through the acquisition of past morphology by learning the probability of perfective past meaning (viewpoint/propositional meaning) given the preterit in combination with a telic verb in a certain discourse/text context (e.g., one that contains/requires sequenced events that move a story forward). The prediction is that as proficiency increases, language experience does too, and more

form-meaning pairings interpreted as perfective past are encountered more frequently, which helps in making these pairings more firm in the IL.

Nevertheless, one cannot help but wonder whether a coalition of aspects sufficiently drives morphosyntactic development. A consistent result in our data was the role of the foreground and the background as significant factors of use and selection of preterit and imperfect, respectively. Our data show that grounding yielded an overriding effect over lexical aspect from the lowest to the highest semester levels including the NS level. Therefore, one can argue that past morphology emerges and develops not only as a result of the partnership between lexical and viewpoint aspects within a certain discourse context but also as the result of the speaker's decision on how to present those situations in actual discourse. It seems fair, then, to claim that the development of past morphology in Spanish is driven by a three-way coalition: local aspect, global aspect, and discourse grounding (i.e., the aspect-grounding coalition hypothesis).

As discussed in chapter 2, some hypotheses about the acquisition of TA morphology have been alternatively proposed to the AH. Such is the case of the predication-effect hypothesis proposed by González (2013), which claims that past morphology develops on the basis of a two-way aspectual verb-argument classification (i.e., terminative versus durative predications). Her contention is that perfective past emerges with all predication types as a default form whereas the imperfective past does so with durative predications. Conversely, our hypothesis about the substantial coalition of aspect types in the development of past morphology builds from an integration of the claims made by the AH, the prototype account, and the predication-effect hypothesis. Our aspect-grounding coalition hypothesis proposes, in line with prototype theory in acquisition (Shirai & Andersen, 1995), that the preterit in Spanish (i.e., perfective past) will develop according to exemplars made up of bundles of semantically congruent features (i.e.,

completion/telicity). In this sense, we agree with Dahl's (1985) definition of the prototype of perfective past as being instantiated by a single event with a well-defined result or end-state. However, we reject the idea that the core prototype of perfective past is punctuality; instead we regard it as an empirical question. Based on our data findings that achievements and accomplishment verbs similarly cooccurred with the preterit across semester-levels, we argue that telicity (both punctual and durative or regardless of punctuality constraints) represents the prototype of the preterit. In sum, the dissertation results provide evidence in favor of a prototype of the Spanish preterit as consisting of the following best exemplar: telic situation type used to convey a foregrounded completed event in narrative discourse (i.e., an alliance of local aspect, global/discourse aspect, and discourse grounding).

5.3.3 Learnability problems, transferability, and L1 transfer

This section intends to discuss the challenges that the L2 Spanish learners were predicted to potentially face throughout their developing IL as a result of the differences and similarities in English and Spanish tense-aspect systems.

One major difficulty addressed in chapter 1 was the highly complex inflectional system in Spanish with portmanteau inflectional morphemes (i.e., inflections that cumulatively encode several grammatical categories) as opposed to a simpler verbal system in English (at least morphologically less sophisticated, De Clercq & Housen, 2016). Our data on non-target-like productions confirm our predictions about the complexity of learning a number of morphemes for the three most frequently used forms (i.e., present, preterit, and imperfect). This complexity was reflected in an increasing use of non-target-like forms as proficiency increased, reaching a peak in

the 4th semester, explained as the by-product of the myriad of morphemes that the learner has been learning and incorporating in the IL. One such case of non-target-like production was overgeneralization of verbal paradigm with the learner using the preterit morpheme corresponding to the 1st person singular of a different paradigm (e.g., *yo comé* instead of *yo comí*). The second case of overgeneralization attested was the use of a different person-number morpheme (e.g., *yo comió*, instead of *yo comí*) and the last case of overgeneralization was overregularization. It is important to note that all these overgeneralization cases have been also found to occur among children acquiring Spanish as L1 (Cuza, Pérez-Tattam, Barajas, Miller, & Sadowski, 2013; Kernan & Blount, 1966; Pérez-Pereira, 1989). The fact that Spanish is a more inflectionally complex language than English can be regarded as a source of high complexity that could affect learning among L2 learners with L1s that are morphologically less complex. However, this is just a possible scenario that represents an empirical question.

Another important difficulty predicted to influence the acquisition process was a lack of one-to-one correspondence in the way tense and aspect are linguistically expressed in English and Spanish. One specific difficulty for the L1 English learner of Spanish was the reconfiguration process that these learners have to go through since the Spanish perfective and imperfective meanings are encoded in basically two past forms, whereas English can use only one (i.e., the simple past). Our data showed that, probably due to an instruction effect, such reconfiguration was not problematic as initially predicted. From the moment the imperfect is taught, the form starts to increase in use, and is appropriately mapped to imperfectivity. An examination of the sub-meanings of imperfectivity can help further tease apart the extent of the predicted difficulty. As was discussed in section 5.1.1, the imperfect at initial stages was mapped to continuity (i.e., continuous situations in the past without any process involved or open series of situations that

repeat themselves during some time) and habituality. Progressivity emerged in the 2nd semester but only with one token across the imperfect form and four with the imperfect-progressive. As proficiency increases, so do the tokens of progressive meaning but they show a tendency of association with the imperfect-progressive form. Whereas this trend is more categorical at initial stages, at higher levels the learners are able to map imperfect and progressivity together more frequently. Nevertheless, progressivity still largely preferred the progressive form even at the near-native level (61%). It seems that none of the learner levels was able to approximate the NS norm, which showed a true balance between the imperfect simple and progressive forms (49% and 48.3%, respectively). These results highlight the difficulty for the learners, even for the highly proficient near-native speaker instructors of Spanish, to find a balance in their mapping of progressivity. The fact that the L1 English speakers prefer to express progressivity with the progressive form is taken as evidence of transfer due to that being the case in English (i.e., progressivity can only be expressed by the progressive). Shirai (2019) sustains that "interlingual mapping" is one condition for transfer to occur. That is to say, transfer will likely occur if the L1-L2 association is simple. Our data on progressivity showed that the learners associated the imperfect-progressive in the TL as being the same as the English progressive, and thus this interlingual mapping hindered native-like expression of progressivity. Interestingly, this interlingual mapping is operative up to the near-native speaker instructor level. This result may point to the possibility that some transfer cases will be hard to eradicate even despite the strength of language experience and/or language instruction. It is important to mention here that Domínguez et al. (2017) predicted that feature reassembly (or reconfiguration in less generative terms) in the case of the imperfect in L2 Spanish would pose a major difficulty in the case of the imperfective sub-meaning of continuousness (i.e., stative situations) due to being expressed by the

simple past in English. In fact, the authors predicted that the L1 English learners of Spanish would find it challenging to remap continuousness to a type of marker that does not exist in English (i.e., the imperfect). This was not specifically confirmed by our data, which showed the imperfect being mapped to this meaning from initial stages. The authors also predicted an overuse of the preterit across continuous contexts that require the imperfect. This did not seem to be a major problem in our data, although the near-native speaker level yielded the highest rates of preterit even surpassing the NS norm. Nevertheless, it is quite likely that these higher preterit rates among the near-native speaker instructor group could be the result of a lower rate of historic present, when compared to the NS group. Future research should further look into this potential learnability issue.

This takes us to the last predicted difficulty, the movement from a stage where one form is mapped to one meaning to a stage of multifunctionality. Based on the presented data, specifically the results on the imperfect form just discussed, one can argue that overall the learners were able to map the canonical meanings of the past forms. Nevertheless, as we saw with progressivity, learners had a difficulty in associating it to the imperfect simple. Our data seem to point to an overriding effect of transfer in certain cases, which would hinder multifunctionality, even at very high proficiency levels. In other words, transfer seems to have a limiting effect to the degree of multifunctionality of a given form.

Another learnability problem, probably not related to L1 transfer, is the acquisition of historical present, which is a completely neglected area in SLA research. When the present indicative is analyzed, one can see that not even the highest levels were able to map it to its stylistic function in discourse as a historic present. This is further evidence in favor of the learners' difficulty in reaching full multifunctionality of the form. We argue that some meanings are not mapped or are mapped less frequently due to lack of exposure to samples of a certain form-

meaning pairing in a given context (e.g., present indicative-stylistic device). We further argue that some problems with multifunctionality are the result of an inability to overcome some L1 transfer effects (e.g., progressivity-imperfect form). It is also possible that the absence of present form use as a historic present lies in task effects rather than the learners' inability to map that meaning if we assume that students regard the oral task as being truly monologic and do not find it necessary to imagine an interlocutor as they narrate the targeted past events. Further research should investigate multifunctionality across both monologic and dialogic task conditions in order to determine whether the present is used historically across one task condition but not the other or under what conditions the L2 learners show difficulties in mapping a form to multiple functions.

5.4 Limitations and future directions

The current dissertation aimed at investigating the acquisition of past temporality in L2 Spanish through the examination of learners' use of past-time markers in oral and written narratives from initial through near native-speaker levels. An important goal was to scrutinize the emergent and developing morphology in terms of rates of past form use and selection as well as in terms of its linguistic and social conditioning. As was widely discussed in previous chapters, this dissertation used a tripartite methodology that combined the form-oriented, the meaning-oriented, and the variationist SLA approaches to second language acquisition. In this sense, the current dissertation offered a detailed picture of developing system of past-time reference through the incorporation of the three different analytical perspectives, which is novel for a study of this kind, since most of the prior research on TA morphology has usually focused on only one approach

(except for Kanwit, 2017, who studied future-time expression). But in fact, no other study has investigated past morphology through a combined methodology.

Despite its important contributions to the field of SLA, the current research met a series of limitations that should be addressed in future research for further generalization to larger populations. One such limitation was the insufficient data gathered regarding social variables. Since the NS instructors (n = 26) were from different countries of origin, it was not possible to obtain sufficient information about the use of past morphology according to the different Spanish varieties, although this was not the primary goal of the dissertation. The trends of the social variables described in chapter 4 were based on the few data available, which further prevented a statistical analysis of this social independent variable. Another limitation, also related to social aspects, was the uneven makeup of the participant groups in terms of gender and age, which again made it difficult to find tendencies in our data (e.g., women outnumbered men and participants were all around 20-21 years old, as is typical of undergraduates). It is undeniable that a genuine variationist study in SLA should aim at an analysis of both linguistic and social factors; therefore, future research should look into mending these issues.

Another limitation of the present study lies in the mixed methodological design, with data having been collected by and large synchronically large and by in order to track development of morphology, but with only the first semester level group having provided diachronic data. The goal was to test the hypothesis that preterit instruction would have an immediate effect on the learners' increased use of the form, which was confirmed. Nevertheless, it would be helpful to test the same type of instruction effect with the rest of the target forms (i.e., imperfect, the imperfect-

progressive, the perfect, and the preterit-progressive forms).[45] Clearly, future research should attempt to include both cross-sectional and longitudinal data points that can help tease apart the effect of explicit instruction of past form-meaning combinations on classroom settings. Systematic consideration of the role of grammar instruction in the acquisition of past morphology in L2 Spanish has not been widely researched. A more robust picture of TA morphology development in classroom settings can only be obtained by experiments with if pretest- and immediate and delayed posttests administered, which would provide an even more detailed view of the learners' past form use, development, and verbal system restructuring. Another limitation of the current dissertation was the choice of verbs for the written contextualized tasks. Specifically, their choice did not take into account the verbs' regularity or frequency in the input. Future research should control for them in order to prevent them from becoming potential extraneous variables with a possible effect on past form selection.[46] One last limitation was the non-inclusion of a movie-retell task. As was discussed in previous sections, TA markers' use differs according to text/task types. This dissertation included a comparison of personal narratives in the oral and written modes. However, future work can include the impersonal narrative in order to test the hypothesis that this narrative type prompts the use of fewer backgrounded events resulting in a decreased use of the

[45] One reason not to include diachronic data with the other forms was made on the basis of the already abundant information provided by the synchronic data for both the oral and written tasks. The addition of diachronic data would represent more data than can be managed in one dissertation.

[46] It is worth pointing out that the present study examined the effect of verb regularity and verb frequency on the use and selection of past morphology. Whereas the former was analyzed descriptively, the second one was included as a variable in statistical model II. Nevertheless, the WCT ended with an uneven number of frequent and less frequent verbs due to frequency not having been manipulated.

imperfect form. Finally, future research should systematically investigate the differences between non-native-speaker instructors and heritage speaker ones in order to obtain clearly differentiated TA profiles for each group. Moreover, it is important to avoid lumping all heritage speakers in one single category rather than by generation, length, and intensity of contact with Spanish in the household, etc.

With respect to overall future directions, it is important to advance the study of the acquisition of L2 Spanish past morphology by comparing different modes (i.e., oral and written), as was previously suggested. This dissertation was successful in this comparison through the examination of oral narratives and a written contextualized task. However, it is deemed necessary to further include analysis of a true written narrative, in which the learners have to write a story rather than select their preferred forms. This would allow for an exhaustive analysis of morphology and an improved description of the learners' TA profiles across stages as well as a more detailed characterization the learners' IL. Developmental sequences for a certain level on the basis of oral narrations may differ or not when written production enters the equation. A further future direction should examine and then compare sub-modes such as monologic versus dialogic narratives within the oral mode (Bardovi-Harlig, 2013). This examination can shed more light on the use of the present as a historic form to refer to past events by helping to further tease apart whether high-level and near-native speakers show evidence of this particular form-meaning mapping, which our study seems to refute. Another possible future direction is the investigation of L2 Spanish morphology following the proposed synergetic methodological approach, but which also expands the envelope of variation to include the perfect progressive forms and the past perfect. In a similar vein, and in line with previous L1 Spanish research, it would be important to examine the variation between the present perfect and the past perfect, mostly in contexts where the latter is required but

the former is produced. Furthermore, the inclusion of a larger number of past forms should also consider the analysis of the emergence and development of not only past referential meaning but also the special non-past ones such as that of "pragmatic softener" (Andersen, 2002). A final suggestion for future research is the investigation of the emergence and development of scarcely investigated "future-in-the-past" through an examination of the forms and constructions that are used to express such a meaning. It is essential to understand that the best picture of development of TA morphology should include an analysis of the expression of not only past-time reference but should also include the present and the future temporal point, which would enable better understanding and thus an even more detailed description of verbal system restructuring.

5.5 Conclusions

The current study has attempted to address the gaps and/or discrepancies in TA morphology research all through these years:

1. What is the best taxonomy of verbs to examine the role of aspect: one that focuses on termination versus durativity (González, 2013; González et al., 2012), one that centers on dynamicity contrast (e.g., Domínguez et al., 2013; Robison, 1990), or the Vendlerian four-way taxonomy? Is there empirical support in favor of a sub-division of telic verbs or should achievements and accomplishments be grouped as a single category of telic verbs?
2. Lexical aspect or grounding first and last? Are these influences the same across developmental stages?

4. Do factors affecting past morphology choice and use differ across task types and across proficiency levels? What is the best inclusive description of the acquisition process of past temporality?
5. Do beginner levels show an initial, categorical use of a default form for past reference? Is there evidence in favor of the DPTH (Salaberry, 1999), supported by the use of a default form at beginning stages of acquisition?

Elucidating the lack of agreement in findings was one of the central goals of the current dissertation. This dissertation contributed to providing an answer to the lingering questions listed above (i.e., 1-4). The answers are summarized below.

1. Taxonomy of verbal predicates (a.k.a., lexical aspect)

This dissertation found differing effects of lexical aspect according to task types. The within-semantic-category analysis in the oral prompt task supports a three-way classification of lexical aspect. Specifically, both achievements and accomplishments behaved similarly showing the same type of effect by overwhelmingly occurring with the preterit and highly dispreferring the present and the imperfect. Our Spanish data confirm the claim about the overriding effect of telicity (i.e., inherent completion/endpoint) proposed by Salaberry (1998). The oral data also showed differing effects of states and activities with the former primordially associating with both the imperfect and then the preterit whereas activities were largely used with the preterit. Based on these patterns, the proposed taxonomy of aspect is one that combines the features of telicity and dynamicity:

a. Telic verbs (achievements and accomplishments)
b. Dynamic atelic verbs (activities)
c. Non-dynamic atelic verbs (states)

It seems apparent that our proposed taxonomy bears resemblance with the one proposed by Domínguez et al. (2012) on the basis of dynamicity constraints. However, our taxonomy combines both the telic and the dynamic features of verbs and considers that past morphology develops with verbs that are +/- telic and +/- dynamic (e.g., preterit largely develops with [+ telic] and [+ dynamic] later extending to [-telic] and [- dynamic]; the imperfect largely develops with [-telic] and [-dynamic]). In this sense, our proposed taxonomy seems to be similar to the one used in Salaberry (1999).

The written contextualized task, a controlled elicitation task that manipulated lexical aspect, yielded somewhat different results: achievements were largely selected with the preterit, with the three other classes lagging behind; the imperfect was largely selected with accomplishments with activities and states competing for second place, and achievement verbs substantially remaining behind. It seems that the best taxonomy of aspect stemming from this task could be one based on durativity constraints: the preterit is increasingly associated with punctual verbs whereas the imperfect seems to develop with durative situation types.

2. Lexical aspect versus grounding effects

Our oral and written data showed a significant effect of both grounding and lexical aspect. However, whereas grounding yielded an earlier significant effect (2nd semester) and maintained it through all course-levels up to the near-native speaker and NS groups, telicity became a significant predictor of preterit use in the 3rd semester but lost significance at the 5th/6th semester level regaining it in the subsequent semester. Lexical aspect seemed, thus, to have a more unstable and weaker effect than grounding when ranges are compared (see Appendix C.1.) This seems to provide evidence about the overriding effect of grounding in the development of past morphology (Salaberry, 2011). However, we found that this overriding effect was a consistent steady influence

that overrode aspect from the 2nd semester on, as opposed to Salaberry (2011), who found an increasing effect of grounding with increasing proficiency. These results bear utter importance in the description of the development of past morphology in Spanish supporting Bardovi-Harlig's (1994) contention that the use of L2 past morphology serves to differentiate narrative grounds, namely, foreground and background. We further argued that from very initial stages the learner seems to establish a connection between form and meaning refuting the hypothesis that form precedes meaning (Comajoan, 2005) but also proposing that telicity cannot have an influence on the use of past morphology without prior meaning mapping (i.e., viewpoint meaning), in line with McManus (2013). This led to the proposal of the "aspect coalition hypothesis": preterit acquisition is driven by the alliance of local-level aspect (i.e., telic verbal predicates) and global-level aspect (i.e., the actual perspective of a verbal predicate in actual discourse: perfectivity).

3. Acquisition process of past temporality: factors and task effects

a. Factors. Our dissertation contributed a detailed trajectory of how the expression of past temporality proceeds across levels when taking into account rates of past form use and significant predictors. Our data support previous findings on the use of default forms, the present and the past forms (pre and post preterit instruction, respectively) in emergent past morphology followed by changing rates of use reflecting the restructuring of the verbal system, which increasingly stabilize increasingly approximating the NS norm. Besides rates of past form usage, the acquisition process shows movement from less to more formal accuracy, stronger form-meaning mappings, as well as an increasing number of linguistic predictors significantly affecting the choice of past morphology: aspectual meaning, lexical aspect, grounding, temporal adverbial and temporal reference. We can conclude that the best picture of the acquisition process is one that is inclusive of as many

predictors as possible and not one that only includes one or two, which can only provide a restricted account of acquisition.

b. Task effects. The current dissertation also contributed an answer to the question of the effect of task type but most importantly, our data provided very important results regarding narrative sub-type. It is not only a personal narrative type that triggers a certain TA distribution but the sub-type of personal narrative. Our data showed that the yesterday and today's narratives were treated as mere recapitulations of a certain day's activities and so preterit was favored with them. The imperfect, as the canonical encoder of background, was favored across the childhood and danger stories. Although the written narrative type yielded higher rates of imperfect and lower rates of preterit across participants, this observation was explained by task type, as selection being easier than actual production. Therefore, any investigation of TA morphology should always consider task type, narrative sub-type and mode (Bardovi-Harlig, 2017, 2013) if full understanding of the development of the IL is the goal "because this is the only way to see the full variety of occurrences of a given structure and the full range of conditions under which they occur" (Geeslin, 2011, p. 506).

4. Default forms

Following Schwenter and Torres-Cacollous (2008), "a default expression is the one whose meaning is felt to be more usual, more normal, less specific than that of the alternative form" (p. 2). Our research found, at initial stages of acquisition, very high rates of use of the present form (67%: 1st semester- Time 1) prior to preterit instruction, and the preterit (71%: 1st semester-Time 2), after preterit instruction. Despite not being used categorically, the present and the preterit high usage rates lead us to claim that these markers were used as default forms in discourse at beginning

stages. The use of the present as a predominant past-time reference marker confirms previous research in L2 Spanish past morphology (e.g., Hasbún, 1995; Ramsay, 1990). The predominant use of the preterit at Time 2 seems to provide evidence in favor of the DPTH (Salaberry, 1999), which argues that at beginning stages "learners use a default marker of past tense" (p. 170). As a consequence of default form usage, this dissertation has also found support in favor of the lexical insensitivity hypothesis (Tong & Shirai, 2016) with present and preterit frequently occurring with all aspectual verb classes at beginning stages (i.e., 1st semester). One last important finding about these default past tense markers is the verb types with which they were used (i.e., highly frequent verbs). In particular, the default present indicative at Time 1 and the default the preterit at Time 2 largely occurred with the verbs *ser, estar, tener, ir,* ranked among the five most frequently used verbs by these groups. Worthy of consideration is the fact that these verbs are considered among the most frequent ones by Davies (2018). This leads us to hypothesize that the default forms are used with those verbs as a byproduct of classroom and textbook input.

This dissertation was motivated by the paucity of acquisitional data on past-time expression in L2 Spanish that would be the result of a multi-analytical approach exhibiting the combination of the most traditional and successful methodologies in the study of TA morphology. All the previous studies on past morphology in Spanish have provided analysis of one or two predictors of past morphology usage. In particular, and following the leadership of Kanwit (2014, 2017), this dissertation set off its investigation by adopting a multi-methodological approach via the combination of the concept-oriented, form-oriented, and variationist research traditions. To date, there has not been any concept-oriented, form-oriented, or variationist study, less so one that has used a synergetic approach on the acquisition of past temporality in instructed L2 Spanish which has examined the full range of forms and expressive devices across a large number of course-level

groups. Therefore, a comprehensive analysis of the expression of past temporality across proficiency levels was performed yielding a more detailed account of the process from the lexical-pragmatic stage to the morphological one. This inclusive envelope of variation, in line with the concept-oriented approach, benefits from being complemented with a variationist methodology that allows us to examine the linguistic conditioning of each past form at each developmental point. In this respect, the variationist approach, whose tenet is based on the principle of multiple causation (Bayley, 2005; Kanwit, 2017; Shirai, 2004) was a good way to overcome the limitations of the one-factor view on language acquisition common among many research frameworks. As Bayley (2005) states, explaining IL variation as a result of a single factor is to ignore the complexities of SLA and we found, in line with Ortega (2009), that the studied multiple factors, the multiple dimensions of L2 acquisition, conspire to shape the learner's IL and its development.

In sum, I argue in favor of a tripartite analytical approach inclusive of research traditions and different elicitation procedures in one single research study since it is only through a synergetic approach that the acquisition process can be deeply investigated from different aspects that provide a better understanding of L2 acquisition. A neat microanalysis of TA morphology (Kanwit, 2017) can only be obtained by combining the strengths of expert methodologies that have traditionally investigated this topic through a consideration of a plethora of learner data points (i.e., rates of use, predictors of use, descriptive analyses of the trajectory of form-meaning associations across proficiency).

Appendix A Data collection instruments (chapter 3)

Appendix A.1 Information about the verbs used in the written contextualized preference task

Appendix Table 1. Specific information pertaining to each of the verbs in the written contextualized task.

Spanish verb	English verb	Morphological regularity	Telicity	Vendlerian Classification
1. Ir	Go	Irregular	Telic	Accomplishment
2. Comer	Eat	Regular	Atelic	Activity
3. Cocinar	Cook	Regular	Atelic	Activity
4. Hacer	Do/Make	Irregular (1^{st}-plural preterit) Regular (1^{st}-plural present and imperfect)	Telic	Accomplishment
5. Llegar	Arrive	Semi-irregular (1^{st}-singular preterit)	Telic	Achievement
6. Ayudar	Help	Regular	Atelic	Activity
7. Sentir	Feel	Regular	Atelic	state
8. Estornudar	Sneeze	Regular	Telic	Achievement
9. Traer	Bring	Irregular (3^{rd}-singular)	Telic	Achievement
10. Parecer	Seem	Regular	Atelic	State
11. Ser	Be	Irregular	Atelic	State
12. Disfrutar	Enjoy	Regular	Atelic	State
13. Preparar	Prepare	Regular	Telic	Accomplishment
14. Dar	Give	Regular (for the tenses and in the task)	Telic	Achievement
15. Buscar	Look for	Irregular (3^{rd}-singular preterit)	Atelic	Activity
16. Encontrar	Find	Regular	Telic	Achievement
17. Levantarse	Get up	Regular	Telic	Achievement
18. Llamar	Call	Regular	Telic	Achievement
19. Elegir	Choose	Regular	Telic	Achievement
20. Contar	Tell	Regular	Atelic	Activity

21. Reir	Laugh	Irregular (1st-singular present)	Atelic	Activity
22. Charlar	Talk	Regular	Atelic	Activity
23. Estar	Be	Irregular	Atelic	state
24. Tomar	Take	Regular	Telic	Accomplishment
25. Viajar	Travel	Regular	Atelic	Activity
26. Conocer	Get to know/meet	Irregular	Telic	Achievement
27. Terminar	Finish	Regular	Telic	Achievement
28. Ser	Be	Irregular	Atelic	State
29. Tener	Have	Irregular	Atelic	State
30. Graduarse	Graduate	Regular	Telic	Achievement
31. Trabajar	Work	Regular	Atelic	Activity
32. Cumplir	Accomplish	Regular	Telic	Accomplishment

Appendix A.2 Written contextualized preference task (Spanish version)

Dear participant,

The purpose of this research study is to examine the acquisition of Spanish in the US. If you are willing to participate, our questionnaire will ask about your background (e.g., age, knowledge of other languages, etc.), and will require that you read a story with blank spaces for which you will be given options to choose. There are not necessarily correct answers, but instead preferences to indicate. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. This is an entirely anonymous questionnaire, and so your responses will not be identifiable in any way. All responses are confidential, and results will be kept under lock and key. Your participation is voluntary, and you may withdraw from this project at any time. This study is being conducted by Virginia Terán, who can be reached at 412-495-6238 or vit14@pitt.edu, if you have any questions.

The story starts here. Select the verb that you prefer. There are no correct or incorrect answers!

Aún recuerdo las vacaciones de invierno con mi familia durante mi niñez. Yo **1.** _____ a la casa de mis abuelos todos los domingos.

a. fui
b. voy

c. iba
d. he ido

2. _____ súper bien porque mi abuela siempre **3.** _____ tan rico.

a. Comí
b. He comido
c. Como
d. Comía

a. cocina
b. cocinaba
c. ha cocinado
d. cocinó

e.

Mi abuela escuchaba todas las preguntas que los nietos le **4.** _____ sobre la comida y sus exquisitas recetas.

a. hemos hecho
b. hicimos
c. hacíamos
d. hacemos

Recuerdo un día especial, el de mi cumpleaños número 9 en la casa de mis abuelos. Yo **5.** _____

a. llegaba
b. llego
c. llegué
d. he llegado

y en medio de abrazos de feliz cumpleaños todos me **6.** _____ a abrir los regalos,

a. ayudan
b. ayudaban
c. ayudaron
d. han ayudado

excepto mi abuelo que se **7.** _____ enfermo

a. sentía
b. siente
c. ha sentido
d. sintió

y **8.** _____ durante 1 minuto sin parar!

a. estornudó
b. estornudaba
c. estornuda
d. ha estornudado

Ahora mis abuelos no tienen una casa grande, por eso vamos a lo de mis tíos para ver a mi familia todos los domingos. Ayer, mi prima **9.** _____ a su novio, Pablo,

a. trajo
b. traía

c. ha traído
d. trae

que **10.** _____un poco extraño y cuyo caso **11.** _____muy interesante al final de ese día.

a. ha parecido
b. parece
c. pareció
d. parecía

a. es
b. era
c. ha sido
d. fue

Todos **12.** _____ del almuerzo que mi tía y mi abuela **13.** _____ese día,

a. disfrutaron
b. disfrutaban
c. han disfrutado
d. disfrutan

a. han preparado
b. preparan
c. prepararon
d. preparaban

f.

cuando de repente mi prima miró alrededor mientras se **14.** _____ cuenta que Pablo no estaba en la mesa.

a. da
b. daba
c. ha dado
d. dio

Después de unos minutos, mi tío lo **15.** _____ por toda la casa

a. buscó
b. buscaba
c. busca
d. ha buscado

pero no lo **16.** _____ por ningún lado.

a. encontró
b. ha encontrado
c. encontraba
d. encuentra

Mi prima al final lo vio. ¿En dónde? Mirando el partido de fútbol en la televisión. Claro.

Ahora estoy pensando en las actividades pasadas del día de hoy.

Esta mañana mientras me **17.** _____ de la cama, mi abuela me **18.** _____al celular para invitarme a tomar un café en el centro.

a. levanto
b. levantaba
c. he levantado

a. llamaba
b. llamó
c. llama
d. ha llamado

d. levanté

En el bar, mi abuela **19. _____**una mesa para sentarnos y me **20.**_____ las historias más importantes de su vida.

a. ha elegido
b. elegía
c. eligió
d. elige

a. contaba
b. contó
c. cuenta
d. ha contado

g.

Yo me **21. _____**de las anécdotas graciosas de la familia.

a. reí
b. río
c. he reído
d. reía

¡Qué lindo día hoy! Lo más interesante es que yo **22. _____**con mi abuela toda la mañana.

a. charlaba
b. charlo
c. charlé
d. he charlado

Estos buenos momentos sucedieron cuando **23.** _____en el bar,

a. hemos estado
b. estamos
c. estábamos
d. estuvimos

a. hemos estado
b. estamos
c. estábamos
d. estuvimos

mientras mi abuela **24.** _____un café y yo un jugo de naranja.

a. tomó
b. toma
c. tomaba
d. ha tomado

Y ahora en la cama por dormirme también pienso en mi vida en general.

Pienso que no **25. _____**por el mundo y nunca **26. _____**otras culturas y personas de otros países.

a. viajé
b. he viajado
c. viajaba
d. viajo

a. he conocido
b. conozco
c. conocí
d. conocía

Recién **27.** _____la Universidad y me siento feliz porque es una nueva etapa en mi vida y seguramente mi futuro trabajo me va a permitir viajar.

a. terminaba
b. terminé
c. he terminado
d. termino

Como siempre **28. _____** una persona aventurera, no tengo dudas de que me anime a vivir en el exterior. Sigo sin poder dormir y por eso sigo pensando.

a. fui
b. soy
c. era
d. he sido

Hasta ahora **29. _____** suerte. Me **30. _____** con notas buenas.

a. he tenido
b. tengo
c. tuve
d. tenía

a. gradué
b. he graduado
c. gradúo
d. graduaba

31. _____para pagar mis estudios y pienso que **32.** _____gran parte de mis objetivos.

a. Trabajaba
b. He trabajado
c. Trabajé
d. Trabajo

a. he cumplido
b. cumplía
c. cumplo
d. cumplí

Fin

Appendix A.3 Written contextualized preference task (English version)

Dear participant,

The purpose of this research study is to examine the acquisition of Spanish in the US. If you are willing to participate, our questionnaire will ask about your background (e.g., age, knowledge of other languages, etc.), and will require that you read a story with blank spaces for which you will be given options to choose. There are not necessarily correct answers, but instead

preferences to indicate. There are no foreseeable risks associated with this project, nor are there any direct benefits to you. This is an entirely anonymous questionnaire, and so your responses will not be identifiable in any way. All responses are confidential, and results will be kept under lock and key. Your participation is voluntary, and you may withdraw from this project at any time. This study is being conducted by Virginia Terán, who can be reached at 412-495-6238 or vit14@pitt.edu, if you have any questions.

The story starts here. Select the verb that you prefer. There are no correct or incorrect answers!

I still remember my winter vacations with my family during my childhood. I **1.** _____ to my grandparents' house every Sunday.

a. went
b. used to go
c. have gone
d. go

2. I _____ very well because my granny always **3.** _____ delicious meals.

a. ate
b. have eaten
c. eat
d. used to eat

a. cooks
b. used to cook
c. has cooked
d. cooked

My granny listened carefully to all the questions that her grandkids always **4.** _____ about the food and her amazing receipes.

a. have made
b. made
c. used to make
d. make

I remember a very special day, my 9th birthday at my grandparents' house. I **5.** _____

a. used to arrive
b. arrive
c. arrived
d. have arrived

and among everyone's hugs, they **6.** _____ to open the gifts,

a. help
b. used to help
c. helped

d. have helped

except for my grandfather who **7. _____** enfermo

a. used to feel
b. feels
c. has felt
d. felt

and **8. _____** for one minute non-stop!

a. sneezed
b. would sneeze
c. sneezes
d. has sneezed

Now my grandparents don't have a big house, so we go to our uncle's house to see my family on Sundays. Yesterday, my cousin **9.** _____ her boyfriend, Pablo,

a. brought
b. used to bring/was bringing
c. has brought
d. brings

who **10.** _____kind of weird and whose case **11.** _____very interesting at the end of that day.

a. has seemed
b. seems
c. seemed
d. would seem

a. is
b. used to be
c. has been
d. was

Everyone **12. _____** the lunch that my aunt and granny **13. _____**ese día,

a. enjoyed
b. was enjoying
c. has enjoyed
d. enjoy

a. have prepared
b. prepare
c. preparared
d. were preparing

h.

When suddenly my cousin looked around as she **14. _____** that Pablo was not at the table.

a. realizes
b. was realizing
c. has realized
d. realized

After some time, my uncle **15.** _____ around the house

a. buscó
b. buscaba
c. busca

d. ha buscado

but **16. _____** anywhere.

a. Did not find
b. Has not found
c. Was not finding
d. Does not find

My cousin finally saw him. Where? Watching the game, obviously.

Now I'm thinking about today's activities.

This morning as I **17.** _____ from bed, my granny **18. _____**to invite me out for a coffee downtown.

a. get up
b. was getting up
c. have gotten up
d. got up

a. was calling
b. called
c. calls
d. has called

At the coffee shop, she **19. _____**a table for us to sit down and she **20.** _____ the most important stories of her life.

a. has chosen
b. was choosing
c. chose
d. chooses

a. was telling
b. told
c. tells
d. has told

I **21.** _____about the funny family stories.

a. laughed
b. laugh
c. have laughed
d. was laughing

What a beautiful day today! The most important thing is that I **22. _____**with my granny all morning long.

a. was talking
b. talk
c. talked
d. have talked

These good times happened when we **23.** _____at the coffee shop,

a. have been
b. are
c. would be
d. were

While my granny **24.** _____an orange juice and me a coffee.

a. drank
b. drinks
c. was drinking

d. has drunk

And now in bed I'm thinking about life in general.

I think that I **25. _____**all over the world and that I never **26. _____**other cultures and people from other countries.

a. travelled
b. have travelled
c. used to travel
d. travel

a. Have gotten to know
b. know
c. got to know
d. used to know

Recently I **27. _____**School and I feel happy about this new stage of my life and most likely my future job will enable me to travel.

a. was finishing
b. finished
c. have finished
d. finish

As usual, I **28. _____** an adventurous person, I don't doubt I'll try to live abroad. I still can't seem to fall asleep and I keep on thinking.

a. was
b. am
c. used to be
d. have been

Until now I **29. _____ l**uck I **30. _____** with good grades.

a. have had
b. have
c. had
d. used to have

a. graduated
b. have graduated
c. graduate
d. used to graduate

I **31. _____**to work for my student loans and I think that I **32. _____**most of my goals.

a. used to work
b. have worked
c. worked
d. work

a. have accomplished
b. used to accomplish
c. accomplish
d. accomplished

Appendix A.4 Grammar test (Spanish version)

- **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.

a. hablo
b. hablar
c. hablando

Yo, por mi parte, _____ vegetariana.

a. soy
b. estoy
c. tengo

Cuando voy a eventos sociales, como por ejemplo fiestas, bodas o bailes, espero que _____ comida vegetariana allí.

a. hay
b. haya
c. sea

Algunas personas dicen que _____ representa un inconveniente proveer _____,

a. le
b. los
c. les

a. lo
b. la
c. le

pero yo creo que no _____ que ser así. De hecho, la comida vegetariana es muy fácil _____ preparar.

a. tiene
b. tenga
c. tengo

a. en
b. a
c. de

Y cuando no _____ ofrece, puede ser _____ gran problema.

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.

a. tuvo
b. tenia
c. tuviera

Yo creo que si me _____ tocado a mí dar la fiesta,

a. hubiera
b. habría
c. había

no _____ dado ni la mitad de lo que _____ allí.

a. hubiera **a. era**
b. habría **b. había**
c. había **c. hubiera**

Pero pronto me _____ cuenta que él no había preparado nada vegetariano.

a. doy
b. daba
c. di

Yo no pongo problemas por ese tipo de cosas, pero una amiga _____ sí _____ hace.

a. mía **a. le**
b. mi **b. se**
c. de mí **c. lo**

_____ a quejarse en frente de todo el mundo,

a. Empezó
b. Empezaba
c. Empezado

mientras el anfitrión sólo _____ la escena con _____ boca abierta.

a. miró **a. su**
b. miraba **b. una**
c. miraría **c. la**

Yo le dije a mi amiga que _____ de causar tanto escándalo, pero no me puso atención.

a. dejaba
b. deje
c. dejara

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, ¿no?”

a. prepararé
b. prepararía
c. preparara

Appendix A.5 Grammar test (English version)

- **Read the story below about a Hispanic female college student and select the answer that best completes each sentence.**

I think it's very interesting _____ about eating habits with people.

a. talk

b. to talk

c. talking

As for me, I _____ vegetarian. When I attend social events, such as parties or wedding parties

a. have
b. am
c. is

I hope there _____ vegetarian food there. Some people say that _____ inconvenient

a. is **a. it's**

b. will be **b. they're**

c. be **c. we're**

to provide _____, but I believe it doesn't _____ to be that way.

a. it **a. have**

b. them **b. has**

c. her **c. tengo**

In fact, vegetarian food is very easy _____ prepare. And when _____ offered, it can be _____ great problem.

a. to **a. it isn'ta. a**

b. in **b. we aren'tb. an**

c. of **c. she isn't c. the**

I remember a time when I _____ to a birthday party and it_____ being a disaster.

a. went **a. ended up**

b. was going **b. would end up**

c. go **c. resulting**

The party _____ at a friend's house, and he had invited a bunch of people.

a. used to be

b. was

c. were

It surprised me because _____ a grad student with little money, he _____ a great selection of food for the guests.

a. between	**a. had**
b. for	**b. used to have**
c. as	**c. would have**

I think that if I _____ thrown the party, I _____ given half of what there _____ there.

a. had	**a. would have**	**a. was**
b. would have	**b. have**	**b. used to be**
c. have	**c. had**	**c. had been**

But soon I _____ that he had not made anything vegetarian.

a. was	**a. notice**
b. used to be	**b. would notice**
c. had been	**c. noticed**

I don't mind things like that, but a friend of _____ does _____. She _____ to complain in front of everyone

a. mine	**a. care**	**a. started**
b. my	**b. cares**	**b. would start**
c. me	**c. cared**	**c. had started**

while the host only _____ at the scene with_____ open mouth. I told my friend ____such a fuss

a. watched	**a. his**	**a. stop**
b. would watch	**b. a**	**b. to stop**
c. has watched	**c. the**	**c. stopped**

but he didn't pay attention. In the end the host said: "Next time I throw a party, I_____ something vegetarian." And then I told my friend: "better late than never, right?"

a. will make

b. would make

c. made

Appendix A.6 Personal background questionnaire for learner groups

1. How old are you? _____
2. What's your gender?
    a) Male
    b) Female
    c) Other: _____ (If you'd like to list it)
3. What's your ethnicity?
    a) White
    b) Black/African-American
    c) Hispanic, Latino
    d) Native American/Alaska Native/ Hawaiian Native
    e) Other: _____
4. Where did you grow up/spent most of your youth? _____
5. What's your first language (the language you learned as a baby and as a child and which you feel most comfortable using)? _____. If you are bilingual and speak two languages with the same native-like proficiency, list them _____
6. Are you a heritage speaker (raised in a home where a non-majority language is spoken and which you are at least somewhat proficient in)? If "yes", state the language.
    - Yes _____ / No
7. Does anyone speak Spanish in your family? _____
8. How many years in High School and semesters at the University did you study Spanish? Do not include the current semester.
    - Years of Spanish in High School: _____
    - Semesters of Spanish at University: _____
9. Do you think formal education or family upbringing gave you valuable asset for you to succeed at University? Why (not)?
    _____
    _____
10. What's the Spanish language course you are currently taking this semester?
    a) Elementary Span 0001
    b) Elementary Span 0002

c) Intermediate Span 0003
d) Intermediate Span 0004
e) Spanish 0025
f) Spanish 0020

11. What's your perceived proficiency in Spanish on the following scale?

a) Highest proficiency
b) Very good proficiency
c) Mid proficiency
d) Low proficiency
e) Lowest proficiency

12. Do you speak other languages? Yes / No

Languages you speak **Level** (how well you speak/write)
(Apart from your English and Spanish)

_____ _____
_____ _____

13. Have you ever spent more than two weeks in a Spanish speaking country? Yes / No If "yes", indicate where you did the Program(s), the corresponding semester and year and for how long.

1. Location 2. _____ __ 3. _____ _	4. Purpose 5. -Study Abroad/ Vacation/Other____ ___ 6. -Study Abroad/ Vacation/Other____ ___	7. Year 8. ____ __ 9. ____ __	10. Length of time 11. _____ __ 12. _____ __

14. Are you planning on participating in a study abroad program in the future? Where? How long? Yes / No

Location Length of your stay

_____ _____
_____ _____

15. How interested are you in other cultures and languages?

a) Highly
b) Moderately
c) Not at all

16. Why are you studying Spanish? Check off all reasons that apply.

a) University requirement
b) Minor in Spanish

c) Major in Spanish

d) Future use in career

e) Travel

f) Eventual Study Abroad

g) Because of a friend/family that speaks Spanish

h) Others: _____

17. What type of exposure to Spanish do you have outside the classroom?

    1. Conversation
    2. Music
    3. Movies/ TV
    4. Reading
    5. Others: _____

18. How much Spanish do you use outside the classroom (in any form)?

    _____
    _____

19. What are the most valuable characteristics in an instructor that you think helped/can help you become a better user of Spanish?

    _____
    _____

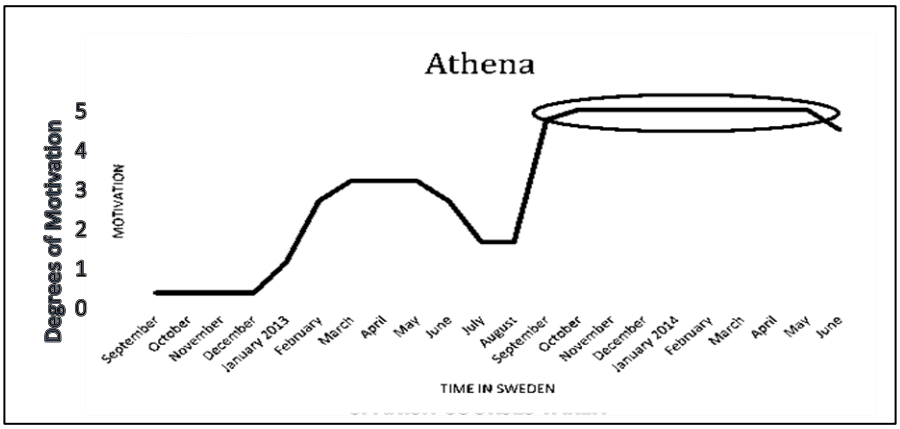
20. Do you think there is a dialect of Spanish that is especially prestigious? If so, explain your choice.

    _____
    _____

21. In the following chart, you are asked to plot how motivated (see categories below) you were in the learning process across the Spanish courses you have taken. If there are <u>any periods of sustained high/low motivation</u>, indicate them by means of <u>a flat line</u>. Then, write a short paragraph explaining your choice. An example of a motivation plot is given below.

0=no motivation 1= slightly motivated 2=fairly motivated 3= motivated 4= very motivated 5= highly motivated

Example:



Appendix A.7 Personal background questionnaire for NS and near NS groups (Spanish version)

1. Indicá tu edad. _____
2. Elegí el género con el que te identificás.

    d) Masculino
    e) Femenino
    f) Otro: _____

3. Indicá tu ocupación o profesión. _____
4. Lugar de nacimiento (Indicá ciudad y país).

    _____

5. ¿Durante qué periodo de tiempo has vivido en tu ciudad/país?

    _____

6. ¿Has vivido en otro país? Elegí tu respuesta. En caso afirmativo, indicá el lugar y el tiempo que has vivido allí.

SI		NO
País:	Periodo:	
País:	Periodo:	

7. ¿Hace cuánto tiempo vivís en Pittsburgh?

_____

8. ¿Cuál es tu lengua materna?

a. Ingles b. Español

9. ¿Hablás otros idiomas? Sí No

- Listá los idiomas que hablás a parte del español: _____

10. ¿Qué cursos de español has enseñado en la Universidad de Pittsburgh?

g) Elementary Span 0001
h) Spanish 0015
i) Elementary Span 0002
j) Intermediate Span 0003
k) Intermediate Span 0004
l) Spanish 0025/0020
m) Curso de contenido (ej., Spanish Applied Ling/Intro to Hispanic Literature, etc.)
n) Otro: _____

11. ¿Qué características te parecen más valiosas en un instructor para ayudar a los alumnos a ser mejores usuarios de la lengua española? Explica.

_____
_____

12. En tu experiencia como instructor de español, ¿qué características/qué perfil tienen los mejores alumnos, aquellos más responsables que logran cumplir con los objetivos del curso?

_____
_____

13. ¿Qué características (ej.: tipo de educación recibida) te parecen las más valiosas en los alumnos para tener éxito en un curso de español o en la universidad?

_____
_____

Solo para <u>no nativos</u> de español.

14. ¿Cuántos años has aprendido español?

_____

Fín

Appendix A.8 Personal background questionnaire for NS and near NS groups (English version)

1. Indicate your age. _____
2. Choose the gender you identify yourself with.

   g) Man
   h) Woman
   i) Other: _____

3. Indicate your profesión/occupation. _____
4. Birthplace (Indicate city and country).

_____

5. During which period of time did you live in your state/country?

_____

6. Have you lived abroad? Indicate where and how long you lived there.

YES		NO
Country:	Period:	
Country:	Period:	

7. How long have you been living in Pittsburgh?

_____

8. Which is your first language?

a. English b. Spanish

9. Do you speak other languages? Yes No

- List the languages you speak besides Spanish _____

10. Which of the following classes have you taught at the Universidad de Pittsburgh?

o) Spanish 0001
p) Spanish 0015
q) Spanish 0002
r) Spanish 0003
s) Intermediate Span 0004
t) Spanish 0025/0020
u) Content course (ej., Spanish Applied Linguistics/Intro to Hispanic Literature, etc.)
v) Others: _____

11. Which characteristics or traits are the most valuable to help students to become better language users? Explain.
_____
_____

12. As a Spanish TA/TF, which are the defining characteristics of the best students, those that are able to comply with the class requirements?
_____
_____

13. What are the most valuable features in someone trying to enter school?
_____
_____

Only for non-native speakers.

14. ¿How long have you taken Spanish classes/have you studied Spanish?

_____

Appendix B Verb frequencies (chapter 3)

Appendix B.1 Raw and relative frequencies (sample from Tucumán Spanish, GREAT conference, Terán, 2018)

Appendix Table 2. Raw and relative frequencies.

Verb	English translation	Raw Frequency	Relative Frequency	Frequency
Ser	Be	127	9.6	freq
Ir	Go	101	7.6	freq
Decir	Tell/say	71	5.4	freq
Estar	Be	62	4.7	freq
Hacer	Do/make	61	4.6	freq
Tener	Have	50	3.8	freq
Venir	Come	38	2.9	freq
Levantar	Get up	33	2.5	freq
Llegar	Arrive	32	2.4	freq
Volver	Come back	28	2.1	freq
Salir	Go out	26	2.0	freq
Ver	See/watch	25	1.9	freq
Pasar	Go through	21	1.6	freq
Dejar	Leave	18	1.4	freq
Quedar	Stay	17	1.3	freq
Comer	Eat	16	1.2	freq
Poner	Put	16	1.2	freq
Dar	Give	14	1.1	freq
Haber	There be	13	1.0	freq
Sentir	Feel	13	1.0	freq
Terminar	Finish	13	1.0	freq
Buscar	Look for	12	0.9	infreq
Empezar	Begin/start	12	0.9	infreq
Llevar	Take	12	0.9	infreq
Bajar	Go down	11	0.8	infreq
Comprar	Buy	11	0.8	infreq

Appendix B.2 Type and token frequencies for preterit, imperfect, and present (sample from rioplatense Spanish NS corpus, Terán, 2018)

Appendix Table 3. Type and token frequencies.

Verbs	**English translation**	**Imperfective**		**Present**		**Preterit**		**Total**	
		N	%	N	%	N	%	N	%
1. Ser	Be	20	**55,60%**	1	2,8%	15	41,7%	**36**	100%
2. Estar	Be	18	**64,30%**	0	0	10	35,70%	**28**	100%
3. Tener	Have	18	**66,70%**	0	0	9	33,30%	**27**	100%
4. Hacer	Do/make	3	12,50%	1	4,20%	20	**83,30%**	**24**	100%
5. Decir	Say/tell	3	15,80%	8	**42,10%**	8	**42,10%**	**19**	100%
6. Ir	Go	3	20%	0	0	12	**80%**	**15**	100%
7. Levantarse	Get up	0	0	0	0	14	**100%**	**14**	100%
8. Salir	Go out	3	23,10%	1	7,70	9	**69,20%**	**13**	100%
9. Irse	Leave	2	15,40%	0	0	11	**84,60%**	**13**	100%
10. Haber	There be	11	**100%**	0	0	0	0	**11**	100%
11. Empezar	Start/begin	0	0	2	20%	8	**80%**	**10**	100%
12. Pasar	Go through	1	10%	1	10%	8	**80%**	**10**	100%
13. Volver	Come back	1	11,10%	0	0	8	**88,90%**	**9**	100%
14. Ponerse	Put on	0	0	2	25%	6	**75%**	**8**	100%
15. Venir	Come	2	25%	3	**37,50%**	**3**	**37,50%**	**8**	100%
16. Ver	See/watch	2	28,60%	1	14,30%	4	**57,10%**	**7**	100%
17. Comer	Eat	0	0	0	0	6	**100%**	**6**	100%
18. Llevar	Take	1	16,70%	1	16,70%	4	**66,70%**	**6**	100%
19. Querer	Want	5	**83,30%**	0	0	1	16,70%	**6**	100%
20. Tomar	Drink	0	0	0	0	6	**100%**	**6**	100%
Desayunar	Have breakfast	0	0	0	0	5	100%	5	100%
Poner	Put	0	0	4	80%	1	20%	5	100%
Quedar	Stay	2	40%	2	40%	1	20%	5	100%
TOTAL		**131**	**28%**	**43**	**9,20%**	**294**	**62,80%**	**468**	100%

Appendix C Chapter 4

Appendix C.1 Regression analysis-models I and II (oral prompt task)

Appendix C.1.1 Regression analysis: preterit versus present / present versus preterit comparison

Appendix Table 4. Significant predictors of preterit in the oral prompt task (model I).

1st semester - Time 1				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.12)				
Background	0.49	62	89%	[0.62]
Foreground	-0.49	105	74%	[0.38]
Temporal reference (p = 0.36)				
hodiernal-hesternal	0.26	64	80%	[0.56]
Prehesternal	-0.26	103	80%	[0.44]
Aktionsart (p = 0.45)				
Atelic	0.2	101	84%	[0.55]
Telic	-0.2	66	73%	[0.45]
Temporal adverbial (p = 0.67)				
Conn-pos-cont	0.12	91	77%	[0.53]
No adverb	-0.12	76	83%	[0.47]
Clause type (p = 0.86)				
Subordinate	0.07	23	87%	[0.52]
Main	-0.07	144	78%	[0.48]
		Total N = 167	Overall rate 80%	
Subject (random)				
Random St. Dev	1.43			
Fixed R^2 = 0.05	Random R^2 = 0.36	Total R^2 = 0.41	Log likelihood -73.4	

1st semester - Time 1				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
1st semester - Time 1				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.12)				
Background	0.49	62	89%	[0.62]
Foreground	-0.49	105	74%	[0.38]
Temporal reference (p = 0.36)				
hodiernal-hesternal	0.26	64	80%	[0.56]
Prehesternal	-0.26	103	80%	[0.44]
Aktionsart (p = 0.45)				
Atelic	0.2	101	84%	[0.55]
Telic	-0.2	66	73%	[0.45]
Temporal adverbial (p = 0.67)				
Conn-pos-cont	0.12	91	77%	[0.53]
No adverb	-0.12	76	83%	[0.47]
Clause type (p = 0.86)				
Subordinate	0.07	23	87%	[0.52]
Main	-0.07	144	78%	[0.48]
		Total N = 167	Overall rate 80%	
Subject (random)				
Random St. Dev	1.43			
Fixed R^2 = 0.05	Random R^2 = 0.36	Total R^2 = 0.41	Log likelihood -73.4	

Appendix Table 5. Significant predictors of present in the oral prompt task (model I).

1st semester -Time 2				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.15)				
Foreground	0.56	101	84%	[0.64]

1st semester -Time 2				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Background	-0.56	19	63%	[0.36]
Aktionsart (p = 0.2)				
Telic	0.43	69	87%	[0.61]
Atelic	-0.43	51	73%	[0.39]
Clause type (p = 0.3)				
Subordinate	0.66	10	90%	[0.66]
Main	-0.66	110	80%	[0.34]
Temporal reference (p = 0.3)				
Prehesternal	0.36	69	80%	[0.59]
hodiernal-hesternal	-0.36	51	82%	[0.41]
Temporal adverbial (p = 0.8)				
Conn-pos-cont	0.08	74	80%	[0.52]
No adverb	-0.08	46	83%	[0.48]
		Total N = 120	Overall rate 81%	
Subject (random)				
Random St. Dev	1.07			
Fixed R^2 = 0.10	Random R^2 = 0.23	Total R^2 = 0.33	Log likelihood -52.26	

Appendix Table 6. Significant predictors of present in the oral prompt task (Model I).

1st semester -Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.15)				
Background	0.56	19	37%	[0.64]
Foreground	-0.56	101	16%	[0.36]
Aktionsart (p = 0.2)				
Atelic	0.43	51	27%	[0.61]
Telic	-0.43	69	13%	[0.39]
Clause type (p = 0.3)				
Main	0.66	110	20%	[0.66]

1st semester -Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Subordinate	-0.66	10	10%	[0.34]
Temporal reference (p = 0.3)				
hodiernal-hesternal	0.36	51	18%	[0.59]
Prehesternal	-0.36	69	20%	[0.41]
Temporal adverbial (p = 0.8)				
No adverb	0.08	46	17%	[0.52]
Conn-pos-cont	-0.08	74	20%	[0.48]
		Total N = 120	Overall rate 19%	
Subject (random)				
Random St. Dev	1.07			
Fixed R^2 = 0.10	Random R^2 = 0.23	Total R^2 = 0.33	Log likelihood -52.26	

Appendix Table 7. Significant predictors of present in the oral prompt task (model I).

1st semester -Time 1 and Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Time (p = 3.9e-06)				
1	1.44	167	80%	**0.81**
2	-1.44	120	19%	0.19
				Range 62
Grounding (p = 0.041)				
Background	0.5	81	77%	**0.62**
Foreground	-0.5	206	46%	0.38
				Range 24
Aktionsart (p = 0.16)				
Atelic	0.29	152	65%	[0.57]
Telic	-0.29	135	42%	[0.43]
Temporal reference (p = 0.18)				
hodiernal-hesternal	0.28	115	52%	[0.57]

1st semester -Time 1 and Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
prehesternal	-0.28	172	56%	[0.43]
Clause type (p = 0.71)				
Main	0.12	254	53%	[0.53]
Subordinate	-0.12	33	64%	[0.47]
Temporal adverbial (p = 0.83)				
Conn-pos-cont	0.04	165	52%	[0.51]
No adverb	-0.04	122	58%	[0.49]
		Total N = 287	Overall rate 54%	
Subject (random)				
Random St. Dev	1.27			
Fixed R^2 = 0.36	Random R^2 = 0.21	Total R^2 = 0.57	Log likelihood -126.41	

Appendix Table 8. Significant predictors of present in the oral prompt task (model II).

1st semester -Time 1 and Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Time (p = 4.8e-06)				
1	1.44	167	80%	**0.81**
2	-1.44	120	19%	0.19
				Range 62
Aspectual meaning (p = 0.0033)				
continuity	0.69	78	77%	**0.67**
perfectivity	-0.69	209	46%	0.33
				Range 34
Narrative type (p = 0.42)				
hoy-ayer	0.34	115	52%	[0.59]
niñez	-0.16	85	60%	[0.46]
peligro	-0.18	87	52%	[0.45]
Frequency ranges (p = 0.88)				
higher frequency	0.05	267	55%	[0.51]

1st semester -Time 1 and Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
lower-mid frequency	-0.05	20	45%	[0.49]
		Total N = 287	Overall rate 54%	
Subject (random)				
Random St. Dev	1.31			
Fixed R^2 = 0.35	Random R^2 = 0.22	Total R^2 = 0.57	Log likelihood -126.43	

Appendix Table 9. Significant predictors of present in the oral prompt task (model I).

2nd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.2e-17)				
Foreground	1.38	512	75%	**0.8**
Background	-1.38	107	21%	0.2
				Range 60
Temporal adverbial (p = 0.0017)				
Conn-pos	0.7	364	72%	**0.67**
No adverb	0.53	227	61%	**0.63**
duration-contrast	-1.23	28	25%	0.23
				Range 44
Clause type (p = 0.015)				
Subordinate	0.53	54	63%	**0.63**
Main	-0.53	565	66%	0.37
				Range 26
Temporal reference (p = 0.057)				
Hesternal	0.33	231	76%	[0.58]
Prehesternal	0.17	306	58%	[0.54]
Hodiernal	-0.5	82	66%	[0.38]
Aktionsart (p = 0.13)				
Telic	0.2	355	75%	[0.55]
Atelic	-0.2	264	54%	[0.45]
		Total N = 619	Overall rate 66%	

2nd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Subject (random)				
Random St. Dev	1.2			
Fixed R^2 = 0.25	Random R^2 = 0.23	Total R^2 = 0.48	Log likelihood -294.68	

Appendix Table 10. Significant predictors of preterit in the oral prompt task (model II).

2nd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual meaning (p = 4.4e-19)				
perfectivity	1.35	521	74%	**0.79**
continuity-progressivity	-1.35	98	20%	0.21
				Range 58
Narrative type (p = 0.1)				
ayer	0.39	233	76%	[0.6]
peligro	0.07	159	59%	[0.52]
niñez	-0.04	146	57%	[0.49]
hoy	-0.42	81	65%	[0.4]
Frequency ranges (p = 0.27)				
higher frequency	0.22	569	66%	[0.55]
lower-mid frequency	-0.22	50	64%	[0.45]
		Total N = 619	Overall rate 66%	
Subject (random)				
Random St. Dev	1.23			
Fixed R^2 = 0.19	Random R^2 = 0.25	Total R^2 = 0.44	Log likelihood -306.25	

Appendix Table 11. Significant predictors of preterit in the oral prompt task (model I).

3rd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.00046)				

3rd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Foreground	0.67	365	81%	**0.66**
Background	-0.67	72	51%	0.34
				Range 32
Temporal Reference (p = 0.02)				
Hesternal	0.57	187	84%	**0.64**
Prehesternal	0	170	67%	0.5
Hodiernal	-0.58	80	75%	0.36
				Range 28
Aktionsart (p = 0.058)				
Telic	0.32	254	83%	[0.58]
Atelic	-0.32	183	66%	[0.42]
Clause Type (p = 0.17)				
Subordinate	0.32	57	68%	[0.58]
Main	-0.32	380	77%	[0.42]
Temporal Adverbial (p = 0.23)				
Dur-freq	0.27	12	83%	[0.57]
Conn-pos-cont	0.19	311	78%	[0.55]
No adverb	-0.46	114	68%	[0.39]
		Total N = 437	Overall rate 76%	
Subject (random)				
Random St. Dev	1.49			
Fixed R^2 = 0.12	Random R^2 = 0.36	Total R^2 = 0.48	Log likelihood -185.54	

Appendix Table 12. Significant predictors of preterit in the oral prompt task. (model II).

3rd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 3e-04)				
perfectivity	0.72	372	80%	**0.67**
continuity-progressivity	-0.72	65	52%	0.33
				Range 34

Narrative Type (p = 0.062)				
hoy-ayer	0.36	267	81%	[0.59]
niñez	0.12	80	68%	[0.53]
peligro	-0.49	90	67%	[0.38]
Frequency Ranges (p = 0.19)				
lower-mid frequency	0.38	36	86%	[0.59]
higher frequency	-0.38	401	75%	[0.41]
		Total N = 437	Overall rate 76%	
Subject (random)				
Random St. Dev	1.39			
Fixed R^2 = 0.09	Random R^2 = 0.33	Total R^2 = 0.42	Log likelihood -192.03	

Appendix Table 13. Significant predictors of preterit in the oral prompt task (model I).

3rd semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.00046)				
Background	0.67	72	49%	**0.66**
Foreground	-0.67	365	19%	0.34
				Range 32
Temporal Reference (p = 0.02)				
Hodiernal	0.58	80	25%	**0.64**
Prehesternal	0	170	33%	0.5
Hesternal	-0.57	187	16%	0.36
				Range 28
Aktionsart (p = 0.058)				
Atelic	0.32	183	34%	[0.58]
Telic	-0.32	254	17%	[0.42]
Clause Type (p = 0.17)				
Main	0.32	380	23%	[0.58]
Subordinate	-0.32	57	32%	[0.42]
Temporal Adverbial (p = 0.23)				
No adverb	0.46	114	32%	[0.61]
Conn-pos-cont	-0.19	311	22%	[0.45]

3rd semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Dur-freq	-0.27	12	17%	[0.43]
		Total N = 437	Overall rate 24%	
Subject (random)				
Random St. Dev	1.49			
Fixed R^2 = 0.12	Random R^2 = 0.36	Total R^2 = 0.48	Log likelihood -185.54	

Appendix Table 14. Significant predictors of present in the oral prompt task (model II).

3rd semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 3e-04)				
continuity-progressivity	0.72	65	48%	**0.67**
perfectivity	-0.72	372	20%	0.33
				Range 34
Narrative Type (p = 0.062)				
peligro	0.49	90	33%	[0.62]
niñez	-0.12	80	32%	[0.47]
hoy-ayer	-0.36	267	19%	[0.41]
Frequency Ranges (p = 0.19)				
higher frequency	0.38	401	25%	[0.59]
lower-mid frequency	-0.38	36	14%	[0.41]
		Total N = 437	Overall rate 24%	
Subject (random)				
Random St. Dev	1.39			
Fixed R^2 = 0.09	Random R^2 = 0.33	Total R^2 = 0.42	Log likelihood -192.03	

Appendix Table 15. Significant predictors of present in the oral prompt task (model I).

4th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1e-08)				
Foreground	0.92	555	86%	**0.71**
Background	-0.92	127	45%	0.29
				Range 42
Temporal Reference (p = 0.0082)				
hodiernal-hesternal	0.35	376	88%	**0.59**
Prehesternal	-0.35	306	67%	0.41
				Range 18
Aktionsart (p = 0.015)				
Telic	0.34	420	87%	**0.58**
Atelic	-0.34	262	65%	0.42
				Range 16
Temporal Adverbial (p = 0.32)				
No adverb	0.15	176	71%	[0.54]
Conn-pos-cont	-0.15	506	81%	[0.46]
Clause Type (p = 0.64)				
Main	0.09	597	80%	[0.52]
Subordinate	-0.09	85	67%	[0.48]
		Total N = 682	Overall rate 78%	
Subject (random)				
Random St. Dev	1.53			
Fixed R^2 = 0.17	Random R^2 = 0.35	Total R^2 = 0.52	Log likelihood -264.54	

Appendix Table 16. Significant predictors of preterit in the oral prompt task (model II).

4th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 3e-16)				
perfectivity	1.27	596	86%	**0.78**
continuity-progressivity	-1.27	86	27%	0.22

				Range 56
Narrative Type (p = 0.021)				
ayer-hoy	0.47	376	88%	**0.62**
peligro	-0.23	171	68%	0.44
niñez	-0.24	135	64%	0.44
				Range 18
Frequency Ranges (p = 0.65)				
lower-mid frequency	0.12	53	85%	[0.53]
higher frequency	-0.12	629	78%	[0.47]
		Total N = 682	Overall rate 78%	
Subject (random)				
Random St. Dev	1.37			
Fixed R^2 = 0.17	Random R^2 = 0.30	Total R^2 = 0.47	Log likelihood -262.94	

Appendix Table 17. Significant predictors of preterit in the oral prompt task (model I).

5th/6th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 2.1e-08)				
Foreground	1.31	311	89%	**0.79**
Background	-1.31	40	38%	0.21
				Range 58
Temporal Adverbial (p = 0.13)				
No adverb	0.36	89	79%	[0.59]
Conn-pos-cont	-0.36	262	85%	[0.41]
Temporal Reference (p = 0.17)				
hodiernal-hesternal	0.25	208	89%	[0.56]
Prehesternal	-0.25	143	75%	[0.44]
Clause Type (p = 0.19)				
Main	0.35	300	85%	[0.59]
Subordinate	-0.35	51	71%	[0.41]
Aktionsart (p = 0.6)				
Telic	0.1	204	90%	[0.53]
Atelic	-0.1	147	73%	[0.47]

5th/6th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
		Total N = 351	Overall rate 83%	
Subject (random)				
Random St. Dev	0.92			
Fixed R^2 = 0.18	Random R^2 = 0.17	Total R^2 = 0.35	Log likelihood -124.77	

Appendix Table 18. Significant predictors of preterit in the oral prompt task (model II).

5th/6th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 1.9e-12)				
perfectivity	1.64	319	89%	**0.84**
continuity	-1.64	32	22%	0.16
				Range 68
Narrative Type (p = 0.44)				
ayer-hoy	0.18	208	89%	[0.54]
niñez	0.16	63	83%	[0.54]
peligro	-0.34	80	69%	[0.42]
Frequency Ranges (p = 0.99)				
higher frequency	0.01	333	84%	[0.5]
lower-mid frequency	-0.01	18	72%	[0.5]
		Total N = 351	Overall rate 83%	
Subject (random)				
Random St. Dev	0.9			
Fixed R^2 = 0.20	Random R^2 = 0.16	Total R^2 = 0.36	Log likelihood -119.52	

Appendix Table 19. Significant predictors of preterit in the oral prompt task (model I).

7th/8th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.0089)				

7th/8th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Hesternal	0.41	265	95%	**0.6**
Hodiernal	0.22	123	94%	**0.55**
Prehesternal	-0.63	277	85%	0.35
				Range 25
Grounding (p = 0.037)				
Foreground	0.38	531	93%	**0.59**
Background	-0.38	134	81%	0.41
				Range 18
Clause Type (p = 0.08)				
Main	0.34	563	92%	[0.58]
Subordinate	-0.34	102	84%	[0.42]
Aktionsart (p = 0.2)				
Telic	0.21	425	94%	[0.55]
Atelic	-0.21	240	85%	[0.45]
Temporal Adverbial (p = 0.21)				
No adverb	0.23	176	90%	[0.56]
Conn-pos-cont	-0.23	489	91%	[0.44]
		Total N = 665	Overall rate 91%	
Subject (random)				
Random St. Dev	0.89			
Fixed R^2 = 0.13	Random R^2 = 0.17	Total R^2 = 0.30	Log likelihood -179.08	

Appendix Table 20. Significant predictors of preterit in the oral prompt task (model II).

7th/8th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 2.2e-09)				
perfectivity	1.41	635	93%	**0.8**
continuity-progressive	-1.41	30	40%	0.2
				Range 60
Narrative Type (p = 0.016)				

hoy-ayer	0.5	389	95%	**0.62**
niñez	0.04	123	89%	**0.51**
peligro	-0.54	153	81%	0.37
				Range 25
Frequency Ranges (p = 0.49)				
higher frequency	0.2	619	91%	[0.55]
low-mid frequency	-0.2	46	89%	[0.45]
		Total N = 665	Overall rate 91%	
Subject (random)				
Random St. Dev	0.85			
Fixed R^2 = 0.14	Random R^2 = 0.15	Total R^2 = 0.29	Log likelihood -166.19	

Appendix Table 21. Significant predictors of preterit in the oral prompt task (model I).

NS-NNS instructors				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 4.8e-25)				
Hodiernal	1.09	434	99%	**0.75**
Hesternal	1.05	749	99%	**0.74**
Prehesternal	-2.14	900	91%	0.1
				Range 65
Clause Type (p = 0.016)				
Subordinate	0.46	300	97%	**0.61**
Main	-0.46	1783	96%	0.39
				Range 22
Grounding (p = 0.59)				
Background	0.1	317	96%	[0.52]
Foreground	-0.1	1766	96%	[0.48]
Aktionsart (p = 0.68)				
Atelic	0.06	536	95%	[0.52]
Telic	-0.06	1547	96%	[0.48]
Temporal Adverbial (p = 0.99)				
conn-cont-pos	0	1336	96%	[0.5]
No adverb	0	747	97%	[0.5]

NS-NNS instructors				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
		Total N = 2083	Overall rate 96%	
Subject (random)				
Random St. Dev	2			
Fixed R^2 = 0.25	Random R^2 = 0.41	Total R^2 = 0.66	Log likelihood -237.73	

Appendix Table 22. Significant predictors of preterit in the oral prompt task (model II).

NS-NNS instructors				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Narrative Type (p = 4.8e-21)				
hoy	1.53	434	99%	**0.82**
ayer	1.44	749	99%	**0.81**
niñez	-1.35	317	93%	0.21
peligro	-1.62	583	90%	0.17
				Range 65
Aspectual Meaning (p = 1.1e-06)				
perfectivity	1.47	2048	96%	**0.81**
continuity-progressivity	-1.47	35	66%	0.19
				Range 62
Frequency Ranges (p = 0.76)				
lower-mid frequency	0.07	212	97%	[0.52]
higher frequency	-0.07	1871	96%	[0.48]
		Total N = 2083	Overall rate 96%	
Subject (random)				
Random St. Dev	2.13			
Fixed R^2 = 0.24	Random R^2 = 0.44	Total R^2 = 0.68	Log likelihood -228.92	

Appendix C.1.2 Regression analysis: preterit versus imperfect comparison

Appendix Table 23. Significant predictors of preterit in the oral prompt task (model I).

1st semester -Time 1 and Time 2				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aktionsart (p = 0.0032)				
Telic	1.5	80	98%	**0.82**
Atelic	-1.5	77	69%	0.18
				Range 64
Clause type (p = 0.0084)				
Main	1.32	134	89%	**0.79**
Subordinate	-1.32	23	52%	0.21
				Range 58
Grounding (p = 0.025)				
Foreground	0.99	118	95%	**0.73**
Background	-0.99	39	49%	0.27
				Range 46
Time (p = 0.13)				
2	0.98	106	92%	[0.73]
1	-0.98	51	67%	[0.27]
Temporal reference (p = 0.15)				
hodiernal-hesternal	0.95	56	98%	[0.72]
Prehesternal	-0.95	101	75%	[0.28]
Temporal adverbial (p = 0.32)				
No adverb	0.44	68	75%	[0.61]
Connective-position-contrast	-0.44	89	90%	[0.39]
		Total N = 157	Overall rate 83%	
Subject (random)				
Random St. Dev	1.86			
Fixed R^2 = 0.60	Random R^2 = 0.20	Total R^2 = 0.80	Log likelihood -37.49	

Appendix Table 24. Significant predictors of preterit in the oral prompt task (model II).

1st semester -Time 1 and Time 2				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual meaning (p = 1.7e-09)				
perfectivity	2.32	116	97%	**0.91**
continuity	-2.32	41	44%	0.09
				Range 82
Narrative type (p = 0.13)				
niñez	0.69	45	76%	[0.67]
hoy-ayer	0.2	56	98%	[0.55]
peligro	-0.88	56	75%	[0.29]
Time (p = 0.16)				
2	0.75	106	92%	[0.68]
1	-0.75	51	67%	[0.32]
		Total N =157	Overall rate 83%	
Subject (random)				
Random St. Dev	1.41			
Fixed R^2 = 0.52	Random R^2 = 0.18	Total R^2 = 0.70	Log likelihood -35.88	

Appendix Table 25. Significant predictors of preterit in the oral prompt task. (model I).

2nd semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1e-35)				
Foreground	2.88	401	96%	**0.95**
Background	-2.88	111	21%	0.05
				Range 90
Temporal Adverbial (p = 0.024)				
Connective-position	0.92	303	86%	**0.71**
No adverb	-0.31	197	71%	0.42
duration-contrast	-0.61	12	58%	0.35
				Range 36
Clause Type (p = 0.05)				
Subordinate	0.57	64	53%	[0.64]
Main	-0.57	448	83%	[0.36]
Aktionsart (p = 0.39)				
Telic	0.26	282	94%	[0.56]
Atelic	-0.26	230	62%	[0.44]
Temporal Reference (p = 0.58)				
Prehesternal	0.27	262	68%	[0.57]
Hesternal	0.25	191	92%	[0.56]
Hodiernal	-0.52	59	92%	[0.37]
		Total N = 512	Overall rate 80%	
Subject (random)				
Random St. Dev	1.71			
Fixed R^2 = 0.51	Random R^2 = 0.23	Total R^2 = 0.74	Log likelihood -108.12	

Appendix Table 26. Significant predictors of preterit in the oral prompt task (model II).

2nd semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 3.1e-48)				
perfectivity	2.98	407	95%	**0.95**
continuity-progressivity	-2.98	105	19%	0.05
				Range 90
Frequency Ranges (p = 0.38)				
higher frequency	0.33	477	79%	[0.58]
lower-mid frequency	-0.33	35	91%	[0.42]
Narrative Type (p = 0.62)				
peligro	0.5	137	69%	[0.62]
niñez	-0.03	125	66%	[0.49]
ayer	-0.06	193	92%	[0.48]
hoy	-0.42	57	93%	[0.4]
		Total N = 512	Overall rate 80%	
Subject (random)				
Random St. Dev	1.47			
Fixed R^2 = 0.50	Random R^2 = 0.20	Total R^2 = 0.70	Log likelihood -115.18	

Appendix Table 27. Significant predictors of preterit in the oral prompt task (model II).

3rd semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 4.5e-36)				
perfectivity	2	320	93%	**0.88**
continuity-progressivity	-2	146	23%	0.12
				Range 76
Narrative Type (p = 8.1e-09)				
hoy-ayer	1.51	231	94%	**0.82**

3rd semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
peligro	-0.69	112	54%	0.33
niñez	-0.82	123	44%	0.31
				Range 51
Frequency Ranges (p = 0.21)				
lower-mid frequency	0.53	34	91%	[0.63]
higher frequency	-0.53	432	69%	[0.37]
		Total N = 466	Overall rate 71%	
Subject (random)				
Random St. Dev	0.95			
Fixed R^2 = 0.62	Random R^2 = 0.08	Total R^2 = 0.70	Log likelihood -131.14	

Appendix Table 28. Significant predictors of preterit in the oral prompt task. (model I)

4th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 4.4e-38)				
Foreground	2.12	495	96%	**0.89**
Background	-2.12	237	24%	0.11
				Range 78
Aktionsart (p = 9.7e-08)				
Telic	1.04	387	94%	**0.74**
Atelic	-1.04	345	49%	0.26
				Range 48
Temporal Reference (p = 9.9e-07)				
hodiernal-hesternal	0.95	348	95%	**0.72**
Prehesternal	-0.95	384	53%	0.28
				Range 44
Temporal Adverbial (p = 0.094)				
No adverb	0.32	221	57%	[0.58]

4th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Connective-position-contrast	-0.32	511	80%	[0.42]
Clause Type (p = 0.78)				
Main	0.06	606	79%	[0.51]
Subordinate	-0.06	126	45%	[0.49]
		Total N = 732	Overall rate 73%	
Subject (random)				
Random St. Dev	1.67			
Fixed R^2 = 0.62	Random R^2 = 0.18	Total R^2 = 0.80	Log likelihood -157.95	

Appendix Table 29. Significant predictors of preterit in the oral prompt task (model II).

4th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 3.3e-81)				
perfectivity	3.19	524	97%	**0.96**
continuity-progressivity	-3.19	208	11%	0.04
				Range 92
Narrative Type (p = 0.27)				
ayer-hoy	0.43	348	95%	[0.61]
niñez	-0.02	182	48%	[0.49]
peligro	-0.41	202	58%	[0.4]
Frequency Ranges (p = 0.89)				
higher frequency	0.06	682	72%	[0.51]
lower-mid frequency	-0.06	50	90%	[0.49]
		Total N = 732	Overall rate 73%	
Subject (random)				
Random St. Dev	1.55			
Fixed R^2 = 0.62	Random R^2 = 0.16	Total R^2 = 0.78	Log likelihood -124.08	

Appendix Table 30. Significant predictors of preterit in the oral prompt task (model I).

5th/6th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.3e-40)				
Foreground	2.96	284	98%	**0.95**
Background	-2.96	139	11%	0.05
				Range 90
Temporal Reference (p = 0.00026)				
hodiernal-hesternal	1.06	196	94%	**0.74**
Prehesternal	-1.06	227	47%	0.26
				Range 48
Temporal Adverbial (p = 0.098)				
No adverb	0.54	139	50%	[0.63]
Connective-position-contrast	-0.54	284	78%	[0.37]
Aktionsart (p = 0.15)				
Telic	0.44	200	92%	[0.61]
Atelic	-0.44	223	48%	[0.39]
Clause Type (p = 0.35)				
Main	0.32	336	76%	[0.58]
Subordinate	-0.32	87	41%	[0.42]
		Total N = 423	Overall rate 69%	
Subject (random)				
Random St. Dev	0.95			
Fixed R^2 = 0.75	Random R^2 = 0.06	Total R^2 = 0.81	Log likelihood -67.71	

Appendix Table 31. Significant predictors of preterit in the oral prompt task (model II).

5th/6th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 4.9e-58)				
perfectivity	2.98	294	97%	**0.95**
continuity	-2.98	129	5%	0.05

				Range 90
Narrative Type (p = 0.043)				
ayer-hoy	1.00	196	94%	**0.73**
peligro	-0.46	104	53%	0.39
niñez	-0.54	123	42%	0.37
				Range 36
Frequency Ranges (p = 0.21)				
lower-mid frequency	0.75	19	68%	[0.68]
higher frequency	-0.75	404	69%	[0.32]
		Total N = 423	Overall rate 69%	
Subject (random)				
Random St. Dev	0.24			
Fixed R^2 = 0.75	Random R^2 = 0.01	Total R^2 = 0.76	Log likelihood -63.54	

Appendix Table 32. Significant predictors of preterit in the oral prompt task (model I).

7th/8th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.7e-32)				
Foreground	1.35	535	93%	**0.79**
Background	-1.35	380	29%	0.21
				Range 58
Aktionsart (p = 1.3e-09)				
Telic	0.78	431	93%	**0.69**
Atelic	-0.78	484	42%	0.31
				Range 38
Temporal Reference (p = 1e-07)				
Hodiernal	0.63	130	89%	**0.65**
Hesternal	0.26	304	83%	**0.56**
Prehesternal	-0.89	481	49%	0.29
				Range 36
Clause Type (p = 0.35)				
Main	0.12	729	71%	[0.53]

7th/8th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Subordinate	-0.12	186	46%	[0.47]
Temporal Adverbial (p = 0.67)				
Connective-position-contrast	0.05	619	72%	[0.51]
No adverb	-0.05	296	53%	[0.49]
		Total N = 915	Overall rate 66%	
Subject (random)				
Random St. Dev	0.76			
Fixed R^2 = 0.57	Random R^2 = 0.07	Total R^2 = 0.64	Log likelihood -320.25	

Appendix Table 33. Significant predictors of preterit in the oral prompt task (model II).

7th/8th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 2.7e-147)				
perfectivity	3.42	622	95%	**0.97**
continuity-progressive	-3.42	293	4%	0.03
				Range 94
Narrative Type (p = 0.0089)				
peligro	0.71	224	55%	**0.67**
hoy-ayer	0.05	435	85%	**0.51**
niñez	-0.75	256	43%	0.32
				Range 35
Frequency Ranges (p = 0.47)				
higher frequency	0.22	861	65%	[0.56]
low-mid frequency	-0.22	54	76%	[0.44]
		Total N = 915	Overall rate 66%	
Subject (random)				
Random St. Dev	0.88			
Fixed R^2 = 0.73	Random R^2 = 0.05	Total R^2 = 0.78	Log likelihood -159.49	

Appendix Table 34. Significant predictors of preterit in the oral prompt task (model I).

Near Native Speaker Instructors				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.45e-47)				
Foreground	1.93	548	96%	**0.87**
Background	-1.93	355	33%	0.13
				Range 74
Aktionsart (p = 6.96e-33)				
Telic	1.50	515	93%	**0.82**
Atelic	-1.50	388	42%	0.18
				Range 64
Temporal Adverbial (p = 0.18)				
Connective-position-contrast	0.18	581	78%	[0.54]
No adverb	-0.18	322	59%	[0.45]
Temporal Reference (p=0.33)				
Hodiernal	0.42	140	84%	[0.60]
Hesternal	-0.18	262	85%	[0.45]
Pre-Hesternal	-0.24	501	60%	[0.44]
Clause Type (p = 0.43)				
Main	0.11	707	78%	[0.53]
Subordinate	-0.11	196	48%	[0.47]
		Total N = 903	Overall rate 71%	
Subject (random)				
Random St. Dev	0.85			
Fixed R^2 = 0.71	Random R^2 = 0.05	Total R^2 = 0.92	Log likelihood -227.02	

Appendix Table 35. Significant predictors of preterit in the oral prompt task (model II).

Near native speaker instructors				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p =7.44e2)				
perfectivity	4.17	647	98%	**0.98**
Continuity-progressivity	-4.17	256	3%	0.02
				Range 98
Frequency Ranges (p = 0.363)				
low-mid frequency	0.50	70	88%	[0.62]
higher frequency	-0.50	833	70%	[0.38]
Narrative Type (p = 0.395)				
peligro	0.75	274	63%	[0.68]
ayer	-0.12	262	85%	[0.47]
niñez	-0.30	227	57%	[0.43]
hoy	-0.32	140	84%	[0.42]
		Total N = 903	Overall rate 71%	
Subject (random)				
Random St. Dev	0.81			
Fixed R^2 = 0.78	Random R^2 = 0.04	Total R^2 = 0.98	Log likelihood -83.92	

Appendix Table 36. Significant predictors of preterit in the oral prompt task (model I).

Native speaker instructors				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 4.32e-166)				
Foreground	2.55	1177	99%	**0.93**
Background	-2.55	775	24%	0.07
				Range 92
Aktionsart (p = 1.66e-11)				
Telic	0.62	1118	90%	**0.65**
Atelic	-0.62	834	42%	0.35
				Range 30

Native speaker instructors				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p=7.45e-08)				
Hesternal	0.43	613	85%	**0.61**
Hodiernal	0.26	360	87%	**0.56**
Pre-Hesternal	-0.69	979	53%	0.33
				Range 28
Temporal Adverbial (p = 0.0342)				
Connective-position-contrast	0.19	1082	76%	**0.55**
No adverb	-0.19	834	61%	0.45
				Range 10
Clause Type (p = 0.0667)				
Main	0.11	707	78%	[0.53]
Subordinate	-0.11	196	48%	[0.47]
		Total N = 1952	Overall rate 69%	
Subject (random)				
Random St. Dev	0.34			
Fixed R^2 = 0.75	Random R^2 = 0.01	Total R^2 = 0.92	Log likelihood -444.46	

Appendix Table 37. Significant predictors of preterit in the oral prompt task (model II).

Native speaker instructors				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p < 0.001)				
perfectivity	3.98	1357	98%	**0.98**
Continuity-progressivity	-3.98	595	3%	0.02
				Range 98
Frequency Ranges (p = 0.52)				
low-mid frequency	0.24	156	92%	[0.56]
higher frequency	-0.24	1796	67%	[0.44]
Narrative Type (p = 0.53)				
ayer	0.75	613	85%	[0.60]

Native speaker instructors				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
hoy	-0.12	360	87%	[0.51]
peligro	-0.30	623	57%	[0.46]
niñez	-0.32	356	46%	[0.43]
		Total N = 1952	Overall rate 69%	
Subject (random)				
Random St. Dev	0.50			
Fixed R^2 = 0.80	Random R^2 = 0.01	Total R^2 = 0.98	Log likelihood -172.36	

Appendix C.1.3 Regression analysis: imperfect versus present/present versus imperfect comparison

Appendix Table 38. Significant predictors of preterit in the oral prompt task (model I).

1st semester- Time 1				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.13)				
Background	0.95	70	21%	[0.72]
Foreground	-0.95	80	2%	[0.28]
Clause Type (p = 0.31)				
Subordinate	0.59	26	23%	[0.64]
Main	-0.59	124	9%	[0.36]
Aktionsart (p = 0.49)				
Atelic	0.45	100	15%	[0.61]
Telic	-0.45	50	4%	[0.39]
Temporal Adverbial (p = 0.62)				
No adverb	0.35	73	14%	[0.59]

1st semester- Time 1				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Connective-position-contrast	-0.35	77	9%	[0.41]
Temporal Reference (p = 0.68)				
hodiernal-hesternal	0.33	52	2%	[0.58]
Prehesternal	-0.33	98	16%	[0.42]
		Total N = 150	Overall rate 11%	
Subject (random)				
Random St. Dev	4.23			
Fixed R^2 = 0.09	Random R^2 = 0.77	Total R^2 = 0.86	Log likelihood -28.54	

Appendix Table 39. Significant predictors of imperfect in the oral prompt task (model II).

1st semester - Time 1				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 0.015)				
continuity	1.37	67	22%	**0.80**
perfectivity	-1.37	83	2%	0.2
				Range 60
Narrative Type (p = 1000)				
peligro	0.49	47	21%	[0.62]
hoy-ayer	0.4	52	2%	[0.6]
niñez	-0.89	51	12%	[0.29]
		Total N = 150	Overall rate 11%	
Subject (random)				
Random St. Dev	3.54			
Fixed R^2 = 0.42	Random R^2 = 0.46	Total R^2 = 0.88	Log likelihood -29.14	

Appendix Table 40. Significant predictors of imperfect in the oral prompt task (model I).

1st semester -Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Clause Type (p = 0.049)				
Subordinate	3.42	6	83%	**0.97**
Main	-3.42	26	15%	0.03
				Range 94
Temporal Reference (p = 0.4)				
Prehesternal	13.77	23	39%	[> 0.99]
hodiernal-hesternal	-13.77	9	0%	[< 0.01]
Temporal Adverbial (p = 0.73)				
Connective-position-contrast	0.51	17	12%	[0.63]
No adverb	-0.51	15	47%	[0.37]
Aktionsart (p = 0.78)				
Atelic	13.08	23	39%	[> 0.99]
Telic	-13.08	9	0%	[< 0.01]
Grounding (p = 0.95)				
Foreground	0.84	20	20%	[0.7]
Background	-0.84	12	42%	[0.3]
		Total N = 32	Overall rate 28%	
Subject (random)				
Random St. Dev	4.41			
Fixed R^2 = 0.96	Random R^2 = 0.03	Total R^2 = 0.99	Log likelihood -8.8	

Appendix Table 41. Significant predictors of imperfect in the oral prompt task (model II).

1st semester -Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 0.33)				
continuity	1.31	16	50%	[0.79]
perfectivity	-1.31	16	6%	[0.21]
Frequency Ranges (p = 0.51)				

1st semester -Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
higher frequency	10.65	31	29%	[> 0.99]
lower-mid frequency	-10.65	1	0%	[< 0.01]
Narrative Type (p = 1000)				
peligro	7.95	12	33%	[> 0.99]
niñez	6.12	11	45%	[> 0.99]
hoy-ayer	-14.07	9	0%	[< 0.01]
		Total N = 32	Overall rate 28%	
Subject (random)				
Random St. Dev	3.81			
Fixed R^2 = 0.87	Random R^2 = 0.11	Total R^2 = 0.98	Log likelihood -10.63	

Appendix Table 42. Significant predictors of imperfect in the oral prompt task (model I).

1st semester -Time 1 and Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Clause Type (p = 0.088)				
Subordinate	0.87	32	34%	[0.71]
Main	-0.87	150	10%	[0.29]
Aktionsart (p = 0.2)				
Atelic	0.78	123	20%	[0.68]
Telic	-0.78	59	3%	[0.32]
Grounding (p = 0.27)				
Background	0.56	82	24%	[0.64]
Foreground	-0.56	100	6%	[0.36]
Time (p = 0.38)				
2	0.93	32	28%	[0.72]
1	-0.93	150	11%	[0.28]
Temporal Adverbial (p = 0.5)				
No adverb	0.38	88	19%	[0.59]

1st semester -Time 1 and Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Connective-position-contrast	-0.38	94	10%	[0.41]
Temporal Reference (p = 0.7)				
Prehesternal	0.28	121	21%	[0.57]
hodiernal-hesternal	-0.28	61	2%	[0.43]
		Total N = 182	Overall rate 14%	
Subject (random)				
Random St. Dev	3.68			
Fixed R^2 = 0.19	Random R^2 = 0.65	Total R^2 = 0.84	Log likelihood -40.11	

Appendix Table 43. Significant predictors of imperfect in the oral prompt task (model I).

1st semester -Time 1 and Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 0.0025)				
continuity	1.48	83	28%	**0.81**
perfectivity	-1.48	99	3%	0.19
				Range 62
Narrative Type (p = 0.26)				
peligro	0.77	59	24%	[0.68]
hoy-ayer	-0.23	61	2%	[0.44]
niñez	-0.54	62	18%	[0.37]
Time (p = 0.4)				
2	0.79	32	28%	[0.69]
1	-0.79	150	11%	[0.31]
		Total N = 182	Overall rate 14%	
Subject (random)				
Random St. Dev	3.28			
Fixed R^2 = 0.18	Random R^2 = 0.63	Total R^2 = 0.81	Log likelihood -41.34	

Appendix Table 44. Significant predictors of imperfect in the oral prompt task (model I).

2nd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 7e-09)				
Background	1.61	172	51%	**0.83**
Foreground	-1.61	143	11%	0.17
				Range 66
Clause Type (p = 0.068)				
Subordinate	0.43	50	60%	[0.61]
Main	-0.43	265	28%	[0.39]
Aktionsart (p = 0.32)				
Atelic	0.28	210	42%	[0.57]
Telic	-0.28	105	15%	[0.43]
Temporal Reference (p = 0.62)				
Prehesternal	0.12	212	40%	[0.53]
hodiernal-hesternal	-0.12	103	19%	[0.47]
Temporal Adverbial (p = 0.72)				
Connective-position-contrast	0.07	169	27%	[0.52]
No adverb	-0.07	146	40%	[0.48]
		Total N = 315	Overall rate 33%	
Subject (random)				
Random St. Dev	2.29			
Fixed R^2 = 0.30	Random R^2 = 0.43	Total R^2 = 0.73	Log likelihood -135.48	

Appendix Table 45. Significant predictors of imperfect in the oral prompt task (model II).

2nd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 5.2e-13)				
continuity-progressivity	1.69	163	52%	**0.84**
perfectivity	-1.69	152	12%	0.16
				Range 68
Narrative Type (p = 0.59)				
peligro	0.26	108	40%	[0.57]
niñez	-0.03	105	40%	[0.49]
hoy-ayer	-0.23	102	19%	[0.44]
		Total N = 315	Overall rate 33%	
Subject (random)				
Random St. Dev	2.24			
Fixed R^2 = 0.28	Random R^2 = 0.43	Total R^2 = 0.71	Log likelihood -139.45	

Appendix Table 46. Significant predictors of imperfect in the oral prompt task (model I).

3rd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aktionsart (p = 0.00029)				
Atelic	1.1	188	66%	**0.75**
Telic	-1.1	53	19%	0.25
				Range 50
Grounding (p = 0.011)				
Background	0.6	137	74%	**0.65**
Foreground	-0.6	104	32%	0.35
				Range 30
Temporal Reference (p = 0.057)				
Prehesternal	0.53	177	68%	[0.63]

3rd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
hodiernal-hesternal	-0.53	64	22%	[0.37]
Clause Type (p = 0.2)				
Subordinate	0.37	63	71%	[0.59]
Main	-0.37	178	51%	[0.41]
Temporal Adverbial (p = 0.3)				
Dur-freq	0.88	11	82%	[0.71]
No adverb	-++++0.22	105	66%	[0.44]
Conn-pos-cont	-0.66	125	46%	[0.34]
		Total N = 241	Overall rate 56%	
Subject (random)				
Random St. Dev	2.22			
Fixed R^2 = 0.29	Random R^2 = 0.43	Total R^2 = 0.72	Log likelihood -102.96	

Appendix Table 47. Significant predictors of imperfect in the oral prompt task (model II).

3rd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 5.1e-08)				
continuity-progressivity	1.28	143	78%	**0.78**
perfectivity	-1.28	98	23%	0.22
				Range 56
Narrative Type (p = 0.053)				
peligro	0.45	82	63%	[0.61]
niñez	0.39	95	73%	[0.6]
hoy-ayer	-0.83	64	22%	[0.3]
		Total N = 241	Overall rate 56%	
Subject (random)				
Random St. Dev	1.84			
Fixed R^2 = 0.28	Random R^2 = 0.37	Total R^2 = 0.65	Log likelihood -104.32	

Appendix Table 48. Significant predictors of imperfect in the oral prompt task (model I).

4th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.6e-07)				
Background	1.06	250	72%	**0.74**
Foreground	-1.06	98	19%	0.26
				Range 48
Aktionsart (p = 0.079)				
Atelic	0.36	269	65%	[0.59]
Telic	-0.36	79	29%	[0.41]
Clause Type (p = 0.69)				
Subordinate	0.07	97	71%	[0.52]
Main	-0.07	251	52%	[0.48]
Temporal Reference (p = 0.74)				
Prehesternal	0.08	282	64%	[0.52]
hodiernal-hesternal	-0.08	66	29%	[0.48]
Temporal Adverbial (p = 0.82)				
No adverb	0.04	147	65%	[0.51]
Conn-pos-cont	-0.04	201	51%	[0.49]
		Total N = 348	Overall rate 57%	
Subject (random)				
Random St. Dev	1.43			
Fixed R^2 = 0.21	Random R^2 = 0.30	Total R^2 = 0.51	Log likelihood -174.35	

Appendix Table 49. Significant predictors of imperfect in the oral prompt task (model II).

4th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 5.1e-19)				
continuity-progressivity	1.86	248	75%	**0.87**
perfectivity	-1.86	100	14%	0.13

				Range 74
Narrative Type (p = 0.14)				
ayer-hoy	0.41	66	29%	[0.6]
niñez	0.08	143	66%	[0.52]
peligro	-0.49	139	61%	[0.38]
Frequency Ranges (p = 0.57)				
lower-mid frequency	0.26	13	38%	[0.56]
higher frequency	-0.26	335	58%	[0.44]
		Total N = 348	Overall rate 57%	
Subject (random)				
Random St. Dev	1.62			
Fixed R^2 = 0.30	Random R^2 = 0.31	Total R^2 = 0.61	Log likelihood -157.33	

Appendix Table 50. Significant predictors of imperfect in the oral prompt task (model I).

5th/6th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 4.2e-08)				
Background	1.58	149	83%	**0.83**
Foreground	-1.58	41	17%	0.17
				Range 66
Temporal Reference (p = 0.064)				
Prehesternal	0.59	156	77%	[0.64]
hodiernal-hesternal	-0.59	34	32%	[0.36]
Aktionsart (p = 0.57)				
Telic	0.19	36	44%	[0.55]
Atelic	-0.19	154	75%	[0.45]
Temporal Adverbial (p = 0.84)				
Conn-pos-cont	0.06	102	61%	[0.51]
No adverb	-0.06	88	78%	[0.49]
Clause Type (p = 0.87)				
Main	0.05	124	65%	[0.51]
Subordinate	-0.05	66	77%	[0.49]
		Total N = 190	Overall rate 69%	

5th/6th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Subject (random)				
Random St. Dev	1.14			
Fixed R^2 = 0.32	Random R^2 = 0.19	Total R^2 = 0.51	Log likelihood -80.67	

Appendix Table 51. Significant predictors of imperfect in the oral prompt task (model II).

5th/6th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 1.5e-07)				
continuity	1.34	147	83%	**0.79**
perfectivity	-1.34	43	21%	0.21
				Range 58
Narrative Type (p = 0.00049)				
niñez	1.19	82	87%	**0.77**
peligro	-0.27	74	66%	0.43
ayer-hoy	-0.92	34	32%	0.28
				Range 49
Frequency Ranges (p = 0.14)				
higher frequency	0.61	179	70%	[0.65]
lower-mid frequency	-0.61	11	55%	[0.35]
		Total N = 190	Overall rate 69%	
Subject (random)				
Random St. Dev	0.76			
Fixed R^2 = 0.41	Random R^2 = 0.09	Total R^2 = 0.50	Log likelihood -79.28	

Appendix Table 52. Significant predictors of imperfect in the oral prompt task (model I).

7th/8th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 2.1e-07)				
Background	1.14	296	92%	**0.76**
Foreground	-1.14	76	53%	0.24
				Range 52
Aktionsart (p = 0.0027)				
Atelic	0.69	314	89%	**0.67**
Telic	-0.69	58	55%	0.33
				Range 34
Clause Type (p = 0.17)				
Main	0.32	256	82%	[0.58]
Subordinate	-0.32	116	86%	[0.42]
Temporal Adverbial (p = 0.28)				
No adverb	0.23	156	88%	[0.56]
Conn-pos-cont	-0.23	216	80%	[0.44]
Temporal Reference (p = 0.65)				
Hesternal	0.33	63	81%	[0.58]
Prehesternal	-0.1	288	85%	[0.48]
Hodiernal	-0.24	21	67%	[0.44]
		Total N = 372	Overall rate 84%	
Subject (random)				
Random St. Dev	1.18			
Fixed R^2 = 0.25	Random R^2 = 0.22	Total R^2 = 0.47	Log likelihood -125.07	

Appendix Table 53. Significant predictors of imperfect in the oral prompt task (model II).

7th/8th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 2.4e-21)				

continuity-progressive	2.01	299	94%	**0.88**
perfectivity	-2.01	73	41%	0.12
				Range 76
Narrative Type (p = 0.0031)				
hoy-ayer	0.68	84	77%	**0.66**
niñez	0.3	159	92%	**0.58**
peligro	-0.99	129	78%	0.27
				Range 39
Frequency Ranges (p = 0.62)				
low-mid frequency	0.2	18	72%	[0.55]
higher frequency	-0.2	354	84%	[0.45]
		Total N = 372	Overall rate 84%	
Subject (random)				
Random St. Dev	1.25			
Fixed R^2 = 0.37	Random R^2 = 0.20	Total R^2 = 0.57	Log likelihood -105.33	

Appendix Table 54. Significant predictors of present in the oral prompt task (model I).

7th/8th semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 2.1e-07)				
Foreground	1.14	76	47%	**0.76**
Background	-1.14	296	8%	0.24
				Range 52
Aktionsart (p = 0.0027)				
Telic	0.69	58	45%	**0.67**
Atelic	-0.69	314	11%	0.33
				Range 34
Clause Type (p = 0.17)				
Subordinate	0.32	116	14%	[0.58]
Main	-0.32	256	18%	[0.42]
Temporal Adverbial (p = 0.28)				
Conn-pos-cont	0.23	216	20%	[0.56]
No adverb	-0.23	156	12%	[0.44]

7th/8th semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.65)				
Hodiernal	0.24	21	33%	[0.56]
Prehesternal	0.1	288	15%	[0.52]
Hesternal	-0.33	63	19%	[0.42]
		Total N = 372	Overall rate 16%	
Subject (random)				
Random St. Dev	1.18			
Fixed R^2 = 0.25	Random R^2 = 0.22	Total R^2 = 0.47	Log likelihood -125.07	

Appendix Table 55. Significant predictors of present in the oral prompt task (model II).

7th/8th semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 2.4e-21)				
perfectivity	2.01	73	59%	**0.88**
continuity-progressive	-2.01	299	6%	0.12
				Range 76
Narrative Type (p = 0.0031)				
peligro	0.99	129	22%	**0.73**
niñez	-0.3	159	8%	0.42
hoy-ayer	-0.68	84	23%	0.34
				Range 39
Frequency Ranges (p = 0.62)				
higher frequency	0.2	354	16%	[0.55]
low-mid frequency	-0.2	18	28%	[0.45]
		Total N = 372	Overall rate 16%	
Subject (random)				
Random St. Dev	1.25			
Fixed R^2 = 0.37	Random R^2 = 0.20	Total R^2 = 0.57	Log likelihood -105.33	

Appendix Table 56. Significant predictors of imperfect in the oral prompt task (model I).

NS-NNS instructors				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.7e-34)				
Background	2.5	841	98%	**0.92**
Foreground	-2.5	103	30%	0.08
				Range 84
Aktionsart (p = 0.028)				
Atelic	0.52	736	97%	**0.63**
Telic	-0.52	208	71%	0.37
				Range 26
Temporal Reference (p = 0.071)				
Hodiernal	0.72	72	96%	[0.67]
Hesternal	0.21	136	96%	[0.55]
Prehesternal	-0.92	736	89%	[0.28]
Clause Type (p = 0.12)				
Subordinate	0.4	377	98%	[0.6]
Main	-0.4	567	86%	[0.4]
Temporal Adverbial (p = 0.68)				
conn-cont-pos	0.1	447	87%	[0.52]
No adverb	-0.1	497	95%	[0.48]
		Total N = 944	Overall rate 91%	
Subject (random)				
Random St. Dev	1.38			
Fixed R^2 = 0.42	Random R^2 = 0.21	Total R^2 = 0.63	Log likelihood -103.35	

Appendix Table 57. Significant predictors of imperfect in the oral prompt task (model II).

NS-NNS instructors				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 6.8e-53)				

continuity-progressivity	2.88	840	99%	**0.95**
perfectivity	-2.88	104	29%	0.05
				Range 90
Narrative Type (p = 0.00076)				
hoy	1.49	72	96%	**0.82**
ayer	0.37	136	96%	**0.59**
niñez	-0.29	310	93%	0.43
peligro	-1.57	426	87%	0.17
				Range 65
Frequency Ranges (p = 1)				
higher frequency	0	918	91%	[0.5]
lower-mid frequency	0	26	77%	[0.5]
		Total N = 944	Overall rate 91%	
Subject (random)				
Random St. Dev	1.73			
Fixed R^2 = 0.41	Random R^2 = 0.28	Total R^2 = 0.69	Log likelihood -98.2	

Appendix Table 58. Significant predictors of present in the oral prompt task (model I).

NS-NNS instructors				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.7e-34)				
Foreground	2.5	103	70%	**0.92**
Background	-2.5	841	2%	0.08
				Range 84
Aktionsart (p = 0.028)				
Telic	0.52	208	29%	**0.63**
Atelic	-0.52	736	3%	0.37
				Range 26
Temporal Reference (p = 0.071)				
Prehesternal	0.92	736	11%	[0.72]
Hesternal	-0.21	136	4%	[0.45]
Hodiernal	-0.72	72	4%	[0.33]
Clause Type (p = 0.12)				

NS-NNS instructors				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Main	0.4	567	14%	[0.60]
Subordinate	-0.4	377	2%	[0.40]
Temporal Adverbial (p = 0.68)				
No adverb	0.1	497	5%	[0.52]
Conn-cont-pos	-0.1	447	13%	[0.48]
		Total N = 944	Overall rate 9%	
Subject (random)				
Random St. Dev	1.38			
Fixed R^2 = 0.42	Random R^2 = 0.21	Total R^2 = 0.63	Log likelihood -103.35	

Appendix Table 59. Significant predictors of present in the oral prompt task (model II).

NS-NNS instructors				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aspectual Meaning (p = 6.8e-53)				
perfectivity	2.88	104	71%	**0.95**
continuity-progressivity	-2.88	840	1%	0.05
				Range 90
Narrative Type (p = 0.00076)				
peligro	1.57	426	13%	**0.83**
niñez	0.29	310	7%	**0.57**
ayer	-0.37	136	4%	0.41
hoy	-1.49	72	4%	0.18
				Range 65
Frequency Ranges (p = 1)				
higher frequency	0	918	9%	[0.5]
lower-mid frequency	0	26	23%	[0.5]
		Total N = 944	Overall rate 9%	
Subject (random)				
Random St. Dev	1.73			
Fixed R^2 = 0.41	Random R^2 = 0.28	Total R^2 = 0.69	Log likelihood -98.2	

Appendix C.2 Regression analysis-model I (written contextualized task)

Appendix C.2.1 Regression analysis: preterit versus imperfect comparison

Appendix Table 60. Significant predictors of preterit in the written contextualized task (model I).

1st semester - Time 1				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Adverbial (p = 0.021)				
Yes	0.43	74	65%	**0.61**
No	-0.43	75	48%	0.39
				Range 22
Aktionsart (p = 0.16)				
Atelic	0.27	65	63%	[0.57]
Telic	-0.27	84	51%	[0.43]
Temporal Reference (p = 0.25)				
Prehesternal	0.59	29	69%	[0.64]
Hesternal	0.12	51	57%	[0.53]
Hodiernal	-0.2	29	55%	[0.45]
Irrelevant	-0.51	40	48%	[0.38]
Grounding (p = 0.75)				
Foreground	0.06	82	59%	[0.52]
Background	-0.06	67	54%	[0.48]
		Total N = 149	Overall rate 56%	
Subject (random)				
Random St. Dev	0.77			
Fixed R^2 = 0.09	Random R^2 = 0.14	Total R^2 = 0.23	Log likelihood -93.89	

Appendix Table 61. Significant predictors of preterit in the written contextualized task (model I).

1st semester - Time 2				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.0014)				
Foreground	0.58	101	81%	**0.64**
Background	-0.58	88	62%	0.36
				Range 28
Temporal Reference (p = 0.069)				
Prehesternal	0.6	42	83%	[0.65]
Hesternal	0.26	55	76%	[0.56]
Irrelevant	-0.12	51	69%	[0.47]
Hodiernal	-0.74	41	61%	[0.32]
Aktionsart (p = 0.34)				
Atelic	0.17	93	75%	[0.54]
Telic	-0.17	96	70%	[0.46]
Temporal Adverbial (p = 0.62)				
Yes	0.09	92	75%	[0.52]
No	-0.09	97	70%	[0.48]
		Total N = 189	Overall rate 72%	
Subject (random)				
Random St. Dev	0.68			
Fixed R^2 = 0.14	Random R^2 = 0.10	Total R^2 = 0.24	Log likelihood -100.83	

Appendix Table 62. Significant predictors of preterit in the written contextualized task (model I).

2nd semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.025)				
Foreground	0.19	317	63%	**0.55**
Background	-0.19	308	54%	0.45
				Range 10
Temporal Reference (p = 0.087)				
Hodiernal	0.32	163	66%	[0.58]
Irrelevant	-0.01	144	58%	[0.5]
Hesternal	-0.04	156	58%	[0.49]
Prehesternal	-0.27	162	52%	[0.43]
Temporal Adverbial (p = 0.18)				
No	0.11	305	61%	[0.53]
Yes	-0.11	320	56%	[0.47]
Aktionsart (p = 0.31)				
Telic	0.08	313	61%	[0.52]
Atelic	-0.08	312	56%	[0.48]
		Total N = 625	Overall rate 58%	
Subject (random)				
Random St. Dev	0.3			
Fixed R^2 = 0.03	Random R^2 = 0.03	Total R^2 = 0.06	Log likelihood -416.03	

Appendix Table 63. Significant predictors of preterit in the written contextualized task (model I).

3rd semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 6.8e-09)				
Foreground	0.5	340	70%	**0.62**
Background	-0.5	312	49%	0.38
				Range 24
Aktionsart (p = 1.1e-07)				

Telic	0.46	337	69%	**0.61**
Atelic	-0.46	315	50%	0.39
				Range 22
Temporal Reference (p = 3.7e-05)				
Hesternal	0.67	170	72%	**0.66**
Hodiernal	0.1	173	62%	**0.52**
Prehesternal	-0.34	194	53%	0.42
Irrelevant	-0.42	115	50%	0.4
				Range 26
Temporal Adverbial (p = 0.54)				
No	0.05	330	61%	[0.51]
Yes	-0.05	322	59%	[0.49]
		Total N = 652	Overall rate 60%	
Subject (random)				
Random St. Dev	0.56			
Fixed R^2 = 0.15	Random R^2 = 0.07	Total R^2 = 0.22	Log likelihood -393.59	

Appendix Table 64. Significant predictors of preterit in the written contextualized task (model I).

4th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 7.2e-10)				
Foreground	0.45	492	68%	**0.61**
Background	-0.45	425	48%	0.39
				Range 22
Temporal Reference (p = 2.3e-07)				
Hesternal	0.44	249	67%	**0.61**
Hodiernal	0.13	240	62%	**0.53**
Irrelevant	0.04	143	62%	**0.51**
Prehesternal	-0.62	285	46%	0.35
				Range 26
Aktionsart (p = 1.9e-05)				
Telic	0.31	468	65%	**0.58**
Atelic	-0.31	449	51%	0.42
				Range 16
Temporal Adverbial (p = 0.16)				

No	0.1	455	61%	[0.53]
Yes	-0.1	462	55%	[0.47]
		Total N = 917	Overall rate 58%	
Subject (random)				
Random St. Dev	0.56			
Fixed R^2 = 0.12	Random R^2 = 0.08	Total R^2 = 0.20	Log likelihood -568.31	

Appendix Table 65. Significant predictors of preterit in the written contextualized task (model I).

5th/6th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 2e-08)				
Foreground	0.58	245	73%	**0.64**
Background	-0.58	222	47%	0.36
				Range 28
Temporal Reference (p = 1e-06)				
Hesternal	0.65	127	75%	**0.66**
Irrelevant	0.28	64	69%	**0.57**
Hodiernal	-0.08	136	60%	0.48
Prehesternal	-0.85	140	44%	0.3
				Range 36
Aktionsart (p = 0.00064)				
Telic	0.36	235	68%	**0.59**
Atelic	-0.36	232	53%	0.41
				Range 18
Temporal Adverbial (p = 0.53)				
Yes	0.07	224	62%	[0.52]
No	-0.07	243	60%	[0.48]
		Total N = 467	Overall rate 61%	
Subject (random)				
Random St. Dev	0.52			
Fixed R^2 = 0.19	Random R^2 = 0.06	Total R^2 = 0.25	Log likelihood -274.7	

Appendix Table 66. Significant predictors of preterit in the written contextualized task (model I).

7th/8th semester				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 4e-10)				
Foreground	0.66	264	77%	**0.66**
Background	-0.66	212	49%	0.34
				Range 32
Temporal Reference (p = 4.5e-07)				
Hesternal	0.43	135	73%	**0.61**
Hodiernal	0.35	142	70%	**0.59**
Irrelevant	0.13	59	76%	**0.53**
Prehesternal	-0.91	140	45%	0.29
				Range 32
Aktionsart (p = 0.00089)				
Telic	0.35	254	70%	**0.59**
Atelic	-0.35	222	57%	0.41
				Range 18
Temporal Adverbial (p = 0.57)				
Yes	0.06	228	65%	[0.52]
No	-0.06	248	63%	[0.48]
		Total N = 476	Overall rate 64%	
Subject (random)				
Random St. Dev	0.28			
Fixed R^2 = 0.21	Random R^2 = 0.02	Total R^2 = 0.23	Log likelihood -269.42	

Appendix Table 67. Significant predictors of preterit in the written contextualized task (model I).

Near-native speakers				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.3e-09)				
Foreground	0.98	122	80%	**0.73**
Background	-0.98	113	44%	0.27

				Range 46
Temporal Reference (p = 5.9e-09)				
Hesternal	1.25	72	83%	**0.78**
Irrelevant	0.26	26	77%	**0.56**
Hodiernal	-0.1	65	62%	0.48
Prehesternal	-1.41	72	38%	0.2
				Range 58
Temporal Adverbial (p = 0.045)				
Yes	0.33	117	68%	**0.58**
No	-0.33	118	58%	0.42
				Range 16
Aktionsart (p = 0.075)				
Telic	0.29	123	68%	[0.57]
Atelic	-0.29	112	56%	[0.43]
		Total N = 235	Overall rate 63%	
Subject (random)				
Random St. Dev	0.32			
Fixed R^2 = 0.41	Random R^2 = 0.01	Total R^2 = 0.42	Log likelihood -115.72	

Appendix Table 68. Significant predictors of preterit in the written contextualized task (model I).

Native-Speakers				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 5.5e-23)				
Foreground	1.17	256	79%	**0.76**
Background	-1.17	218	36%	0.24
				Range 52
Temporal Reference (p = 5.7e-16)				
Irrelevant	1.65	51	92%	**0.84**
Hesternal	0.25	139	69%	**0.56**
Hodiernal	-0.13	141	62%	0.47
Prehesternal	-1.77	143	35%	0.15
				Range 69
Temporal Adverbial (p = 1.2e-12)				
Yes	0.86	228	72%	**0.7**
No	-0.86	246	48%	0.3

				Range 40
Aktionsart (p = 0.0061)				
Telic	0.33	248	65%	**0.58**
Atelic	-0.33	226	53%	0.42
		Total N = 474	Overall rate 59%	*Range 16*
Subject (random)				
Random St. Dev	0			
Fixed R^2 = 0.52	Random R^2 = 0.00	Total R^2 = 0.52	Log likelihood -214.04	

Appendix Table 69. Significant predictors of preterit in the written contextualized task (model I).

Native and Near-native Speakers				
preterit vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 1.6e-30)				
Foreground	1.08	378	79%	**0.75**
Background	-1.08	331	39%	0.25
				Range 50
Temporal Reference (p = 1.6e-22)				
Irrelevant	1.02	77	87%	**0.74**
Hesternal	0.62	211	74%	**0.65**
Hodiernal	-0.07	206	62%	0.48
Prehesternal	-1.57	215	36%	0.17
				Range 57
Temporal Adverbial (p = 9.4e-12)				
Yes	0.65	345	70%	**0.66**
No	-0.65	364	51%	0.34
				Range 32
Aktionsart (p = 0.0015)				
Telic	0.3	371	66%	**0.58**
Atelic	-0.3	338	54%	0.42
		Total N = 709	Overall rate 60%	*Range 16*
Subject (random)				
Random St. Dev	0.15			
Fixed R^2 = 0.46	Random R^2 = 0.00	Total R^2 = 0.46	Log likelihood -338.87	

Appendix C.2.2 Regression analysis: preterit versus present comparison

Appendix Table 70. Significant predictors of preterit in the written contextualized task (model I).

1st semester - Time 1				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.053)				
Foreground	0.26	182	26%	[0.57]
Background	-0.26	194	19%	[0.43]
Temporal Reference (p = 0.07)				
Hesternal	0.47	94	31%	[0.62]
Irrelevant	0.2	84	23%	[0.55]
Prehesternal	-0.23	98	20%	[0.44]
Hodiernal	-0.44	100	16%	[0.39]
Temporal Adverbial (p = 0.34)				
Yes	0.13	198	24%	[0.53]
No	-0.13	178	20%	[0.47]
Aktionsart (p = 0.37)				
Telic	0.12	177	24%	[0.53]
Atelic	-0.12	199	21%	[0.47]
		Total N = 376	Overall rate 22%	
Subject (random)				
Random St. Dev	0.98			
Fixed R^2 = 0.05	Random R^2 = 0.22	Total R^2 = 0.27	Log likelihood -178.88	

Appendix Table 71. Significant predictors of present in the written contextualized task (model I).

1st semester - Time 1				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.053)				
Background	0.26	194	81%	[0.57]
Foreground	-0.26	182	74%	[0.43]

Temporal Reference (p = 0.07)				
Hodiernal	0.44	100	84%	[0.61]
Prehesternal	0.23	98	80%	[0.56]
Irrelevant	-0.2	84	77%	[0.45]
Hesternal	-0.47	94	69%	[0.38]
Temporal Adverbial (p = 0.34)				
No	0.13	178	80%	[0.53]
Yes	-0.13	198	76%	[0.47]
Aktionsart (p = 0.37)				
Atelic	0.12	199	79%	[0.53]
Telic	-0.12	177	76%	[0.47]
		Total N = 376	Overall rate 78%	
Subject (random)				
Random St. Dev	0.98			
Fixed R^2 = 0.05	Random R^2 = 0.22	Total R^2 = 0.27	Log likelihood -178.88	

Appendix Table 72. Significant predictors of preterit in the written contextualized task (model I).

1st semester - Time 2				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.0024)				
Foreground	0.45	137	60%	**0.61**
Background	-0.45	129	43%	0.39
				Range 22
Temporal Reference (p = 0.034)				
Hesternal	0.58	68	62%	**0.64**
Irrelevant	0.16	62	56%	**0.54**
Prehesternal	-0.1	72	49%	0.48
Hodiernal	-0.64	64	39%	0.34
				Range 30
Aktionsart (p = 0.37)				
Atelic	0.13	134	52%	[0.53]
Telic	-0.13	132	51%	[0.47]
Temporal Adverbial (p = 0.9)				
No	0.02	130	52%	[0.5]

Yes	-0.02	136	51%	[0.5]
		Total N = 266	Overall rate 52%	
Subject (random)				
Random St. Dev	1.46			
Fixed R^2 = 0.07	Random R^2 = 0.37	Total R^2 = 0.44	Log likelihood -150.14	

Appendix Table 73. Significant predictors of present in the written contextualized task (model I).

1st semester - Time 2				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Grounding (p = 0.0024)				
Background	0.45	129	57%	**0.61**
Foreground	-0.45	137	40%	0.39
				Range 22
Temporal Reference (p = 0.034)				
Hodiernal	0.64	64	61%	**0.66**
Prehesternal	0.1	72	51%	**0.52**
Irrelevant	-0.16	62	44%	0.46
Hesternal	-0.58	68	38%	0.36
				Range 30
Aktionsart (p = 0.37)				
Telic	0.13	132	49%	[0.53]
Atelic	-0.13	134	48%	[0.47]
Temporal Adverbial (p = 0.9)				
Yes	0.02	136	49%	[0.5]
No	-0.02	130	48%	[0.5]
		Total N = 266	Overall rate 48%	
Subject (random)				
Random St. Dev	1.46			
Fixed R^2 = 0.07	Random R^2 = 0.37	Total R^2 = 0.44	Log likelihood -150.14	

Appendix Table 74. Significant predictors of present in the written contextualized task (model I).

2nd semester
present vs preterit

Factor groups	Log odds	N	%	Factor weight
Temporal Reference (p = 0.26)				
Irrelevant	0.22	142	42%	[0.56]
Prehesternal	0.14	143	41%	[0.53]
Hesternal	-0.16	140	35%	[0.46]
Hodiernal	-0.2	162	34%	[0.45]
Aktionsart (p = 0.29)				
Atelic	0.1	295	41%	[0.52]
Telic	-0.1	292	35%	[0.48]
Grounding (p = 0.34)				
Background	0.09	278	40%	[0.52]
Foreground	-0.09	309	36%	[0.48]
Temporal Adverbial (p = 0.52)				
No	0.06	305	39%	[0.51]
Yes	-0.06	282	37%	[0.49]
		Total N = 587	Overall rate 38%	
Subject (random)				
Random St. Dev	0.77			
Fixed R^2 = 0.01	Random R^2 = 0.15	Total R^2 = 0.16	Log likelihood -371.61	

Appendix Table 75. Significant predictors of preterit in the written contextualized task (model I).

2nd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.26)				
Hodiernal	0.2	162	66%	[0.55]
Hesternal	0.16	140	65%	[0.54]
Prehesternal	-0.14	143	59%	[0.47]
Irrelevant	-0.22	142	58%	[0.44]
Aktionsart (p = 0.29)				
Telic	0.1	292	65%	[0.52]
Atelic	-0.1	295	59%	[0.48]
Grounding (p = 0.34)				
Foreground	0.09	309	64%	[0.52]

Background	-0.09	278	60%	[0.48]
Temporal Adverbial (p = 0.52)				
Yes	0.06	282	63%	[0.51]
No	-0.06	305	61%	[0.49]
		Total N = 587	Overall rate 62%	
Subject (random)				
Random St. Dev	0.77			
Fixed R^2 = 0.01	Random R^2 = 0.15	Total R^2 = 0.16	Log likelihood -371.61	

Appendix Table 76. Significant predictors of preterit in the written contextualized task (model I).

3rd semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 3.8e-16)				
Irrelevant	1.7	128	55%	**0.85**
Hodiernal	-0.14	139	23%	0.47
Hesternal	-0.39	152	19%	0.4
Prehesternal	-1.17	116	12%	0.24
				Range 61
Aktionsart (p = 0.00028)				
Atelic	0.45	243	35%	**0.61**
Telic	-0.45	292	21%	0.39
				Range 22
Grounding (p = 0.00079)				
Background	0.42	233	35%	**0.6**
Foreground	-0.42	302	21%	0.4
				Range 20
Temporal Adverbial (p = 0.42)				
Yes	0.1	266	29%	[0.53]
No	-0.1	269	25%	[0.47]
		Total N = 535	Overall rate 27%	
Subject (random)				
Random St. Dev	1.4			
Fixed R^2 = 0.21	Random R^2 = 0.30	Total R^2 = 0.51	Log likelihood -229.12	

Appendix Table 77. Significant predictors of preterit in the written contextualized task (model I).

3rd semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 3.8e-16)				
Prehesternal	1.17	116	88%	**0.76**
Hesternal	0.39	152	81%	**0.6**
Hodiernal	0.14	139	77%	**0.53**
Irrelevant	-1.7	128	45%	0.15
				Range 61
Aktionsart (p = 0.00028)				
Telic	0.45	292	79%	**0.61**
Atelic	-0.45	243	65%	0.39
				Range 22
Grounding (p = 0.00079)				
Foreground	0.42	302	79%	**0.6**
Background	-0.42	233	65%	0.4
				Range 20
Temporal Adverbial (p = 0.42)				
No	0.1	269	75%	[0.53]
Yes	-0.1	266	71%	[0.47]
		Total N = 535	Overall rate 73%	
Subject (random)				
Random St. Dev	1.4			
Fixed R^2 = 0.21	Random R^2 = 0.30	Total R^2 = 0.51	Log likelihood -229.12	

Appendix Table 78. Significant predictors of present in the written contextualized task (model I).

4th semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 1.8e-16)				
Irrelevant	1.39	177	50%	**0.8**
Hodiernal	-0.02	196	24%	0.49
Prehesternal	-0.46	158	18%	0.39

Hesternal	-0.91	192	12%	0.29
				Range 51
Aktionsart (p = 1.2e-06)				
Atelic	0.5	348	34%	**0.62**
Telic	-0.5	375	19%	0.38
				Range 24
Grounding (p = 0.00043)				
Background	0.36	303	33%	**0.59**
Foreground	-0.36	420	21%	0.41
				Range 18
Temporal Adverbial (p = 0.065)				
Yes	0.19	362	29%	[0.55]
No	-0.19	361	23%	[0.45]
		Total N = 723	Overall rate 26%	
Subject (random)				
Random St. Dev	1.11			
Fixed R^2 = 0.21	Random R^2 = 0.21	Total R^2 = 0.42	Log likelihood -327.89	

Appendix Table 79. Significant predictors of preterit in the written contextualized task (model I).

4th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 1.8e-16)				
Hesternal	0.91	192	88%	**0.71**
Prehesternal	0.46	158	82%	**0.61**
Hodiernal	0.02	196	76%	**0.51**
Irrelevant	-1.39	177	50%	0.2
				Range 51
Aktionsart (p = 1.2e-06)				
Telic	0.5	375	81%	**0.62**
Atelic	-0.5	348	66%	0.38
				Range 24
Grounding (p = 0.00043)				
Foreground	0.36	420	79%	**0.59**
Background	-0.36	303	67%	0.41

				Range 18
Temporal Adverbial (p = 0.065)				
No	0.19	361	77%	[0.55]
Yes	-0.19	362	71%	[0.45]
		Total N = 723	Overall rate 74%	
Subject (random)				
Random St. Dev	1.11			
Fixed R^2 = 0.21	Random R^2 = 0.21	Total R^2 = 0.42	Log likelihood -327.89	

Appendix Table 80. Significant predictors of present in the written contextualized task (model I).

5th/6th semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 2e-10)				
Irrelevant	1.81	83	47%	**0.86**
Hesternal	-0.39	109	13%	0.4
Hodiernal	-0.57	93	12%	0.36
Prehesternal	-0.85	68	9%	0.3
				Range 56
Aktionsart (p = 0.0097)				
Atelic	0.43	167	26%	**0.61**
Telic	-0.43	186	15%	0.39
				Range 22
Temporal Adverbial (p = 0.03)				
Yes	0.36	180	23%	**0.59**
No	-0.36	173	16%	0.41
				Range 18
Grounding (p = 0.061)				
Background	0.31	142	26%	[0.58]
Foreground	-0.31	211	16%	[0.42]
		Total N = 353	Overall rate 20%	
Subject (random)				
Random St. Dev	1.07			
Fixed R^2 = 0.25	Random R^2 = 0.19	Total R^2 = 0.44	Log likelihood -131.86	

Appendix Table 81. Significant predictors of preterit in the written contextualized task (model I).

5th/6th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 2e-10)				
Prehesternal	0.85	68	91%	**0.7**
Hodiernal	0.57	93	88%	**0.64**
Hesternal	0.39	109	87%	**0.6**
Irrelevant	-1.81	83	53%	0.14
				Range 56
Aktionsart (p = 0.0097)				
Telic	0.43	186	85%	**0.61**
Atelic	-0.43	167	74%	0.39
				Range 22
Temporal Adverbial (p = 0.03)				
No	0.36	173	84%	**0.59**
Yes	-0.36	180	77%	0.41
				Range 18
Grounding (p = 0.061)				
Foreground	0.31	211	84%	[0.58]
Background	-0.31	142	74%	[0.42]
		Total N = 353	Overall rate 80%	
Subject (random)				
Random St. Dev	1.07			
Fixed R^2 = 0.25	Random R^2 = 0.19	Total R^2 = 0.44	Log likelihood -131.86	

Appendix Table 82. Significant predictors of present in the written contextualized task (model I).

7th/8th semester				
present vs preterit				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 1e-11)				
Irrelevant	2.23	76	41%	**0.9**
Prehesternal	-0.37	69	9%	0.41
Hesternal	-0.9	104	6%	0.29

Hodiernal	-0.95	106	6%	0.28
				Range 62
Aktionsart (p = 1.4e-07)				
Atelic	1.11	166	23%	**0.75**
Telic	-1.11	189	5%	0.25
				Range 50
Grounding (p = 0.00028)				
Background	0.75	135	23%	**0.68**
Foreground	-0.75	220	8%	0.32
				Range 36
Temporal Adverbial (p = 0.062)				
Yes	0.39	181	18%	[0.6]
No	-0.39	174	10%	[0.4]
		Total N = 355	Overall rate 14%	
Subject (random)				
Random St. Dev	0.82			
Fixed R^2 = 0.48	Random R^2 = 0.08	Total R^2 = 0.56	Log likelihood -89.89	

Appendix Table 83. Significant predictors of preterit in the written contextualized task (model I).

7th/8th semester				
preterit vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 1e-11)				
Hodiernal	0.95	106	94%	**0.72**
Hesternal	0.9	104	94%	**0.71**
Prehesternal	0.37	69	91%	**0.59**
Irrelevant	-2.23	76	59%	0.1
				Range 62
Aktionsart (p = 1.4e-07)				
Telic	1.11	189	95%	**0.75**
Atelic	-1.11	166	77%	0.25
				Range 50
Grounding (p = 0.00028)				
Foreground	0.75	220	92%	**0.68**
Background	-0.75	135	77%	0.32

				Range 36
Temporal Adverbial (p = 0.062)				
No	0.39	174	90%	[0.6]
Yes	-0.39	181	82%	[0.4]
		Total N = 355	Overall rate 86%	
Subject (random)				
Random St. Dev	0.82			
Fixed R^2 = 0.48	Random R^2 = 0.08	Total R^2 = 0.56	Log likelihood -89.89	

Appendix C.2.3 Regression analysis: imperfect versus present comparison

Appendix Table 84. Significant predictors of imperfect in the written contextualized task (model I).

1st semester - Time 1				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.0024)				
Hesternal	0.63	87	25%	**0.65**
Irrelevant	0.5	86	24%	**0.62**
Hodiernal	-0.39	97	13%	0.4
Prehesternal	-0.74	87	10%	0.32
				Range 33
Aktionsart (p = 0.0074)				
Telic	0.39	175	23%	**0.6**
Atelic	-0.39	182	13%	0.4
				Range 20
Temporal Adverbial (p = 0.028)				
No	0.33	181	22%	**0.58**
Yes	-0.33	176	15%	0.42
				Range 16
Grounding (p = 0.33)				
Foreground	0.14	168	20%	[0.54]
Background	-0.14	189	16%	[0.46]

		Total N = 357	Overall rate 18%	
Subject (random)				
Random St. Dev	0.66			
Fixed R^2 = 0.14	Random R^2 = 0.09	Total R^2 = 0.23	Log likelihood -155.26	

Appendix Table 85. Significant predictors of present in the written contextualized task (model I).

1st semester - Time 1				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.0024)				
Prehesternal	0.74	87	90%	**0.68**
Hodiernal	0.39	97	87%	**0.6**
Irrelevant	-0.5	86	76%	0.38
Hesternal	-0.63	87	75%	0.35
				Range 33
Aktionsart (p = 0.0074)				
Atelic	0.39	182	87%	**0.6**
Telic	-0.39	175	77%	0.4
				Range 20
Temporal Adverbial (p = 0.028)				
Yes	0.33	176	85%	**0.58**
No	-0.33	181	78%	0.42
				Range 16
Grounding (p = 0.33)				
Background	0.14	189	84%	[0.54]
Foreground	-0.14	168	80%	[0.46]
		Total N = 357	Overall rate 82%	
Subject (random)				
Random St. Dev	0.66			
Fixed R^2 = 0.14	Random R^2 = 0.10	Total R^2 = 0.24	Log likelihood -155.26	

Appendix Table 86. Significant predictors of imperfect in the written contextualized task (model I).

1st semester - Time 2				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**

Temporal Reference (p = 0.06)				
Irrelevant	0.5	43	37%	[0.62]
Hesternal	0.42	39	33%	[0.6]
Hodiernal	-0.04	55	29%	[0.49]
Prehesternal	-0.88	44	16%	[0.29]
Temporal Adverbial (p = 0.18)				
No	0.25	91	32%	[0.56]
Yes	-0.25	90	26%	[0.44]
Grounding (p = 0.33)				
Background	0.19	107	31%	[0.55]
Foreground	-0.19	74	26%	[0.45]
Aktionsart (p = 0.4)				
Telic	0.16	94	31%	[0.54]
Atelic	-0.16	87	26%	[0.46]
		Total N = 181	Overall rate 29%	
Subject (random)				
Random St. Dev	1.04			
Fixed R^2 = 0.08	Random R^2 = 0.22	Total R^2 = 0.30	Log likelihood -98.35	

Appendix Table 87. Significant predictors of present in the written contextualized task (model I).

1st semester - Time 2				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.06)				
Prehesternal	0.88	44	84%	[0.71]
Hodiernal	0.04	55	71%	[0.51]
Hesternal	-0.42	39	67%	[0.4]
Irrelevant	-0.5	43	63%	[0.38]
Temporal Adverbial (p = 0.18)				
Yes	0.25	90	74%	[0.56]
No	-0.25	91	68%	[0.44]
Grounding (p = 0.33)				
Foreground	0.19	74	74%	[0.55]
Background	-0.19	107	69%	[0.45]

Aktionsart (p = 0.4)				
Atelic	0.16	87	74%	[0.54]
Telic	-0.16	94	69%	[0.46]
		Total N = 181	Overall rate 71%	
Subject (random)				
Random St. Dev	1.04			
Fixed R^2 = 0.08	Random R^2 = 0.22	Total R^2 = 0.30	Log likelihood -98.35	

Appendix Table 88. Significant predictors of imperfect in the written contextualized task (model I).

2nd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Adverbial (p = 0.25)				
Yes	0.12	244	58%	[0.53]
No	-0.12	238	50%	[0.47]
Grounding (p = 0.35)				
Background	0.09	254	56%	[0.52]
Foreground	-0.09	228	52%	[0.48]
Aktionsart (p = 0.55)				
Telic	0.06	225	55%	[0.52]
Atelic	-0.06	257	53%	[0.48]
Temporal Reference (p = 0.63)				
Hesternal	0.14	114	57%	[0.53]
Prehesternal	0.12	137	57%	[0.53]
Irrelevant	-0.12	120	51%	[0.47]
Hodiernal	-0.14	111	50%	[0.46]
		Total N = 482	Overall rate 54%	
Subject (random)				
Random St. Dev	0.84			
Fixed R^2 = 0.01	Random R^2 = 0.17	Total R^2 = 0.18	Log likelihood -313.9	

Appendix Table 89. Significant predictors of present in the written contextualized task (model I).

2nd semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Adverbial (p = 0.25)				
No	0.12	238	50%	[0.53]
Yes	-0.12	244	42%	[0.47]
Grounding (p = 0.35)				
Foreground	0.09	228	48%	[0.52]
Background	-0.09	254	44%	[0.48]
Aktionsart (p = 0.55)				
Atelic	0.06	257	47%	[0.52]
Telic	-0.06	225	45%	[0.48]
Temporal Reference (p = 0.63)				
Hodiernal	0.14	111	50%	[0.54]
Irrelevant	0.12	120	49%	[0.53]
Prehesternal	-0.12	137	43%	[0.47]
Hesternal	-0.14	114	43%	[0.47]
		Total N = 482	Overall rate 46%	
Subject (random)				
Random St. Dev	0.84			
Fixed R^2 = 0.01	Random R^2 = 0.17	Total R^2 = 0.18	Log likelihood -313.9	

Appendix Table 90. Significant predictors of imperfect in the written contextualized task (model I).

3rd semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 6e-13)				
Prehesternal	1.71	106	87%	**0.85**
Hodiernal	0.01	98	67%	0.5
Hesternal	-0.16	76	62%	0.46
Irrelevant	-1.56	127	45%	0.17
				Range 68

Grounding (p = 0.67)				
Foreground	0.07	166	61%	[0.52]
Background	-0.07	241	66%	[0.48]
Aktionsart (p = 0.83)				
Telic	0.03	167	63%	[0.51]
Atelic	-0.03	240	65%	[0.49]
Temporal Adverbial (p = 0.96)				
No	0.01	197	65%	[0.5]
Yes	-0.01	210	63%	[0.5]
		Total N = 407	Overall rate 64%	
Subject (random)				
Random St. Dev	2.25			
Fixed R^2 = 0.16	Random R^2 = 0.51	Total R^2 = 0.67	Log likelihood -169.8	

Appendix Table 91. Significant predictors of present in the written contextualized task (model I).

3rd semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 6e-13)				
Irrelevant	1.56	127	55%	**0.83**
Hesternal	0.16	76	38%	**0.54**
Hodiernal	-0.01	98	33%	0.5
Prehesternal	-1.71	106	13%	0.15
				Range 68
Grounding (p = 0.67)				
Background	0.07	241	34%	[0.52]
Foreground	-0.07	166	39%	[0.48]
Aktionsart (p = 0.83)				
Atelic	0.03	240	35%	[0.51]
Telic	-0.03	167	37%	[0.49]
Temporal Adverbial (p = 0.96)				
Yes	0.01	210	37%	[0.5]
No	-0.01	197	35%	[0.5]
		Total N = 407	Overall rate 36%	
Subject (random)				

Random St. Dev	2.25			
Fixed R^2 = 0.16	Random R^2 = 0.51	Total R^2 = 0.67	Log likelihood -169.8	

Appendix Table 92. Significant predictors of imperfect in the written contextualized task (model I).

4th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 2.6e-19)				
Prehesternal	1	183	85%	**0.73**
Hesternal	0.57	105	77%	**0.64**
Hodiernal	-0.05	138	66%	0.49
Irrelevant	-1.53	144	38%	0.18
				Range 55
Aktionsart (p = 0.35)				
Telic	0.1	235	70%	[0.53]
Atelic	-0.1	335	65%	[0.47]
Temporal Adverbial (p = 0.39)				
Yes	0.09	312	66%	[0.52]
No	-0.09	258	68%	[0.48]
Grounding (p = 0.72)				
Background	0.04	324	69%	[0.51]
Foreground	-0.04	246	65%	[0.49]
		Total N = 570	Overall rate 67%	
Subject (random)				
Random St. Dev	0.99			
Fixed R^2 = 0.19	Random R^2 = 0.19	Total R^2 = 0.38	Log likelihood -299.9	

Appendix Table 93. Significant predictors of present in the written contextualized task (model I).

4th semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 2.6e-19)				
Irrelevant	1.53	144	62%	**0.82**
Hodiernal	0.05	138	34%	**0.51**
Hesternal	-0.57	105	23%	0.36

Prehesternal	-1	183	15%	0.27
				Range 55
Aktionsart (p = 0.35)				
Atelic	0.1	335	35%	[0.53]
Telic	-0.1	235	30%	[0.47]
Temporal Adverbial (p = 0.39)				
No	0.09	258	32%	[0.52]
Yes	-0.09	312	34%	[0.48]
Grounding (p = 0.72)				
Foreground	0.04	246	35%	[0.51]
Background	-0.04	324	31%	[0.49]
		Total N = 570	Overall rate 33%	
Subject (random)				
Random St. Dev	0.99			
Fixed R^2 = 0.19	Random R^2 = 0.19	Total R^2 = 0.38	Log likelihood -299.9	

Appendix Table 94. Significant predictors of imperfect in the written contextualized task (model I).

5th/6th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 2e-13)				
Prehesternal	2.01	84	93%	**0.88**
Hodiernal	0.49	65	83%	**0.62**
Hesternal	-0.39	46	70%	0.4
Irrelevant	-2.11	59	34%	0.11
				Range 77
Grounding (p = 0.08)				
Background	0.35	154	76%	[0.59]
Foreground	-0.35	100	67%	[0.41]
Temporal Adverbial (p = 0.16)				
No	0.28	126	78%	[0.57]
Yes	-0.28	128	67%	[0.43]
Aktionsart (p = 0.92)				
Atelic	0.02	151	72%	[0.51]
Telic	-0.02	103	74%	[0.49]

		Total N = 254	Overall rate 72%	
Subject (random)				
Random St. Dev	1.38			
Fixed R^2 = 0.34	Random R^2 = 0.24	Total R^2 = 0.58	Log likelihood -98.49	

Appendix Table 95. Significant predictors of present in the written contextualized task (model I).

5th/6th semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 2e-13)				
Irrelevant	2.11	59	66%	**0.89**
Hesternal	0.39	46	30%	**0.6**
Hodiernal	-0.49	65	17%	0.38
Prehesternal	-2.01	84	7%	0.12
				Range 77
Grounding (p = 0.08)				
Foreground	0.35	100	33%	[0.59]
Background	-0.35	154	24%	[0.41]
Temporal Adverbial (p = 0.16)				
Yes	0.28	128	33%	[0.57]
No	-0.28	126	22%	[0.43]
Aktionsart (p = 0.92)				
Telic	0.02	103	26%	[0.51]
Atelic	-0.02	151	28%	[0.49]
		Total N = 254	Overall rate 28%	
Subject (random)				
Random St. Dev	1.38			
Fixed R^2 = 0.34	Random R^2 = 0.24	Total R^2 = 0.58	Log likelihood -98.49	

Appendix Table 96. Significant predictors of imperfect in the written contextualized task (model I).

7th/8th semester				
imperfect vs present				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 1.1e-10)				

Prehesternal	1.15	83	93%	**0.76**
Hodiernal	0.64	48	88%	**0.65**
Hesternal	0.47	43	86%	**0.62**
Irrelevant	-2.26	45	31%	0.09
				Range 67
Aktionsart (p = 0.0049)				
Telic	0.72	85	88%	**0.67**
Atelic	-0.72	134	71%	0.33
				Range 34
Temporal Adverbial (p = 0.081)				
No	0.4	108	84%	[0.6]
Yes	-0.4	111	71%	[0.4]
Grounding (p = 0.76)				
Background	0.08	139	78%	[0.52]
Foreground	-0.08	80	78%	[0.48]
		Total N = 219	Overall rate 78%	
Subject (random)				
Random St. Dev	1.02			
Fixed R^2 = 0.38	Random R^2 = 0.15	Total R^2 = 0.53	Log likelihood -76.91	

Appendix Table 97. Significant predictors of present in the written contextualized task (model I).

7th/8th semester				
present vs imperfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 1.1e-10)				
Irrelevant	2.26	45	69%	**0.91**
Hesternal	-0.47	43	14%	0.38
Hodiernal	-0.64	48	12%	0.35
Prehesternal	-1.15	83	7%	0.24
				Range 67
Aktionsart (p = 0.0049)				
Atelic	0.72	134	29%	**0.67**
Telic	-0.72	85	12%	0.33
				Range 34
Temporal Adverbial (p = 0.081)				
Yes	0.4	111	29%	[0.6]

No	-0.4	108	16%	[0.4]
Grounding (p = 0.76)				
Foreground	0.08	80	22%	[0.52]
Background	-0.08	139	22%	[0.48]
		Total N = 219	Overall rate 22%	
Subject (random)				
Random St. Dev	1.02			
Fixed R^2 = 0.38	Random R^2 = 0.15	Total R^2 = 0.53	Log likelihood -76.91	

Appendix C.2.4 Regression analysis: preterit versus perfect comparison

Appendix Table 98. Significant predictors of preterit in the written contextualized task (model I).

1st semester				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.0044)				
Hesternal	1.5	33	88%	**0.82**
Hodiernal	0.41	23	70%	**0.6**
Irrelevant	-0.87	34	56%	0.29
Prehesternal	-1.04	33	61%	0.26
				Range 56
Temporal Adverbial (p = 0.0063)				
Yes	0.75	64	75%	**0.68**
No	-0.75	59	61%	0.32
				Range 36
Grounding (p = 0.06)				
Background	0.53	51	71%	[0.63]
Foreground	-0.53	72	67%	[0.37]
Aktionsart (p = 0.26)				
Atelic	0.3	58	71%	[0.57]
Telic	-0.3	65	66%	[0.43]
		Total N = 123	Overall rate 68%	

Subject (random)				
Random St. Dev	1.64			
Fixed R^2 = 0.22	Random R^2 = 0.35	Total R^2 = 0.57	Log likelihood -59.78	

Appendix Table 99. Significant predictors of preterit in the written contextualized task (model I).

1st semester - Time 2				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Aktionsart (p = 0.59)				
Telic	0.12	82	82%	[0.53]
Atelic	-0.12	89	79%	[0.47]
Grounding (p = 0.72)				
Foreground	0.08	102	80%	[0.52]
Background	-0.08	69	80%	[0.48]
Temporal Reference (p = 0.73)				
Hesternal	0.41	49	86%	[0.6]
Prehesternal	-0.01	44	80%	[0.5]
Irrelevant	-0.16	45	78%	[0.46]
Hodiernal	-0.24	33	76%	[0.44]
Temporal Adverbial (p = 0.85)				
No	0.04	85	80%	[0.51]
Yes	-0.04	86	80%	[0.49]
		Total N = 171	Overall rate 80%	
Subject (random)				
Random St. Dev	1.17			
Fixed R^2 = 0.02	Random R^2 = 0.29	Total R^2 = 0.31	Log likelihood -78.1	

Appendix Table 100. Significant predictors of preterit in the written contextualized task (model I).

2nd semester				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 0.0012)				
Hodiernal	0.62	121	88%	**0.65**
Prehesternal	0.52	95	88%	**0.63**

Hesternal	-0.54	118	77%	0.37
Irrelevant	-0.6	112	74%	0.35
				Range 30
Grounding (p = 0.15)				
Foreground	0.2	236	84%	[0.55]
Background	-0.2	210	79%	[0.45]
Aktionsart (p = 0.15)				
Atelic	0.2	207	85%	[0.55]
Telic	-0.2	239	79%	[0.45]
Temporal Adverbial (p = 0.95)				
No	0	226	82%	[0.5]
Yes	0	220	81%	[0.5]
		Total N = 446	Overall rate 82%	
Subject (random)				
Random St. Dev	1.26			
Fixed R^2 = 0.08	Random R^2 = 0.30	Total R^2 = 0.38	Log likelihood -186.45	

Appendix Table 101. Significant predictors of preterit in the written contextualized task (model I).

3rd semester				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 8.2e-12)				
Prehesternal	14.16	102	100%	> 0.99
Hodiernal	-3.19	110	97%	0.04
Hesternal	-4.45	132	93%	0.01
Irrelevant	-6.52	81	72%	< 0.01
				Range NA
Grounding (p = 0.00018)				
Foreground	0.85	250	95%	**0.7**
Background	-0.85	175	87%	0.3
				Range 40
Aktionsart (p = 0.081)				
Telic	0.4	249	93%	[0.6]
Atelic	-0.4	176	90%	[0.4]
Temporal Adverbial (p = 0.48)				

No	0.16	219	92%	[0.54]
Yes	-0.16	206	92%	[0.46]
		Total N = 425	Overall rate 92%	
Subject (random)				
Random St. Dev	1.29			
Fixed R^2 = 0.93	Random R^2 = 0.02	Total R^2 = 0.95	Log likelihood -81.02	

Appendix Table 102. Significant predictors of preterit in the written contextualized task (model I).

4th semester				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 6.5e-17)				
Prehesternal	1.05	153	85%	**0.74**
Hodiernal	0.17	198	75%	**0.54**
Hesternal	0.06	231	73%	**0.51**
Irrelevant	-1.28	192	46%	0.22
				Range 52
Grounding (p = 1.3e-09)				
Foreground	0.54	426	78%	**0.63**
Background	-0.54	348	58%	0.37
				Range 26
Aktionsart (p = 0.29)				
Telic	0.1	437	70%	[0.52]
Atelic	-0.1	337	69%	[0.48]
Temporal Adverbial (p = 0.72)				
Yes	0.03	360	71%	[0.51]
No	-0.03	414	67%	[0.49]
		Total N = 774	Overall rate 69%	
Subject (random)				
Random St. Dev	0.9			
Fixed R^2 = 0.19	Random R^2 = 0.16	Total R^2 = 0.35	Log likelihood -404.79	

Appendix Table 103. Significant predictors of preterit in the written contextualized task (model I).

5th/6th semester				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 4.6e-18)				
Hodiernal	1.06	87	94%	**0.74**
Prehesternal	0.72	68	91%	**0.67**
Hesternal	0.48	106	90%	**0.62**
Irrelevant	-2.26	93	47%	0.09
				Range 65
Grounding (p = 1e-05)				
Foreground	0.73	204	87%	**0.67**
Background	-0.73	150	70%	0.33
				Range 34
Temporal Adverbial (p = 0.021)				
No	0.39	178	81%	**0.6**
Yes	-0.39	176	78%	0.4
				Range 20
Aktionsart (p = 0.35)				
Telic	0.16	201	79%	[0.54]
Atelic	-0.16	153	81%	[0.46]
		Total N = 354	Overall rate 80%	
Subject (random)				
Random St. Dev	0.51			
Fixed R^2 = 0.41	Random R^2 = 0.04	Total R^2 = 0.45	Log likelihood -126.63	

Appendix Table 104. Significant predictors of preterit in the written contextualized task (model I).

7th/8th semester				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 5.5e-32)				
Hodiernal	1.93	104	96%	**0.87**
Hesternal	0.75	109	90%	**0.68**
Prehesternal	0.72	69	91%	**0.67**

Irrelevant	-3.4	107	42%	0.03
				Range 84
Grounding (p = 1.1e-17)				
Foreground	1.69	224	90%	**0.84**
Background	-1.69	165	63%	0.16
				Range 68
Aktionsart (p = 7.1e-05)				
Telic	0.74	219	82%	**0.68**
Atelic	-0.74	170	75%	0.32
				Range 36
Temporal Adverbial (p = 0.0017)				
No	0.59	196	80%	**0.64**
Yes	-0.59	193	77%	0.36
		Total N = 389	Overall rate 79%	*Range 28*
Subject (random)				
Random St. Dev	0.29			
Fixed R^2 = 0.70	Random R^2 = 0.00	Total R^2 = 0.70	Log likelihood -103.23	

Appendix Table 105. Significant predictors of preterit in the written contextualized task (model I).

Native and Near-native Speakers				
preterit vs perfect				
Factor groups	**Log odds**	**N**	**%**	**Factor weight**
Temporal Reference (p = 5e-68)				
Prehesternal	1.86	78	99%	**0.86**
Hesternal	1.78	161	97%	**0.86**
Hodiernal	0.78	138	93%	**0.69**
Irrelevant	-4.42	206	33%	0.01
				Range 85
Grounding (p = 3.9e-15)				
Foreground	1.3	353	85%	**0.79**
Background	-1.3	230	56%	0.21
				Range 58
Aktionsart (p = 9.9e-08)				
Telic	0.91	307	80%	**0.71**
Atelic	-0.91	276	66%	0.29
				Range 42

Temporal Adverbial (p = 0.0085)				
No	0.45	253	73%	**0.61**
Yes	-0.45	330	74%	0.39
		Total N = 583	Overall rate 73%	*Range 22*
Subject (random)				
Random St. Dev	1.13			
Fixed R^2 = 0.72	Random R^2 = 0.08	Total R^2 = 0.80	Log likelihood -142.85	

Appendix C.3 Interaction between Aktionsart and grounding across past forms (oral prompt task & written contextualized task)

Appendix C.3.1 Interaction between Aktionsart and grounding across past forms (oral prompt task)

Appendix Table 106. 1st semester Time 1.

ATELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	13	51	6	70
		%	86.7	59.3	37.5	**59.8**
	Foreground	N	2	35	10	47
		%	13.3	40.7	62.5	**40.2**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	2	4	1	7
		%	100.0	8.3	5.6	**10.3**
	Foreground	N	0	44	17	61
		%	0.0	91.7	94.4	**89.7**
			100%	**100%**	**100%**	**100%**

Appendix Table 107. 1st semester Time 2.

ATELIC			Imperfect	Present	Preterit	Total
	Background	N	5	7	11	23
		%	55.6	50.0	28.9	**37.7**
	Foreground	N	4	7	27	38
		%	44.4	50.0	71.1	**62.3**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	0	0	1	1
		%	0.0	0.0	1.6	**1.4**
	Foreground	N	0	9	62	71
		%	0.0	100.0	98.4	**98.6**
			100%	**100%**	**100%**	**100%**

Appendix Table 108. 2nd semester.

ATELIC			Imperfect	Present	Preterit	Total
	Background	N	86	76	22	184
		%	94.5	60.3	15.7	**51.5**
	Foreground	N	5	50	118	173
		%	5.5	39.7	84.3	**48.5**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	6	9	2	17
		%	35.3	10.3	0.7	**4.3**
	Foreground	N	11	78	293	382
		%	64.7	89.7	99.3	**95.7**
			100%	**100%**	**100%**	**100%**

Appendix Table 109. 3rd semester.

ATELIC			Imperfect	Present	Preterit	Total
	Background	N	97	32	23	152
		%	77.6	50.8	19.2	**49.4**
	Foreground	N	28	31	97	156
		%	22.4	49.2	80.8	**50.6**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	5	3	14	22
		%	50.0	7.0	6.6	**8.3**
	Foreground	N	5	40	197	242
		%	50.0	93.0	93.4	**91.7**
			100%	**100%**	**100%**	**100%**

Appendix Table 110. 4th semester.

ATELIC			Imperfect	Present	Preterit	Total
	Background	N	165	65	43	273
		%	91.7	67.0	24.9	**60.7**
	Foreground	N	15	32	130	177
		%	8.3	33.0	75.1	**39.3**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	23	5	17	45
		%	82.1	8.9	4.6	**9.9**
	Foreground	N	5	51	353	409
		%	17.9	91.1	95.4	**90.1**
			100%	**100%**	**100%**	**100%**

Appendix Table 111. 5th/6th semester.

ATELIC			Imperfect	Present	Preterit	Total
	Background	N	113	25	13	151
		%	95.8	61.0	11.7	**55.9**
	Foreground	N	5	16	98	119
		%	4.2	39.0	88.3	**44.1**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	16	1	3	20
		%	80.0	5.0	1.6	**8.9**
	Foreground	N	4	19	182	205
		%	20.0	95.0	98.4	**91.1**
			100%	**100%**	**100%**	**100%**

Appendix Table 112. 7th/8th semester.

ATELIC			Imperfect	Present	Preterit	Total
	Background	N	256	20	80	356
		%	91.8	57.1	39.0	**68.6**
	Foreground	N	23	15	125	163
		%	8.2	42.9	61.0	**31.4**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	15	5	29	49
		%	46.9	19.2	7.3	**10.7**
	Foreground	N	17	21	370	408
		%	53.1	80.8	92.7	**89.3**
			100%	**100%**	**100%**	**100%**

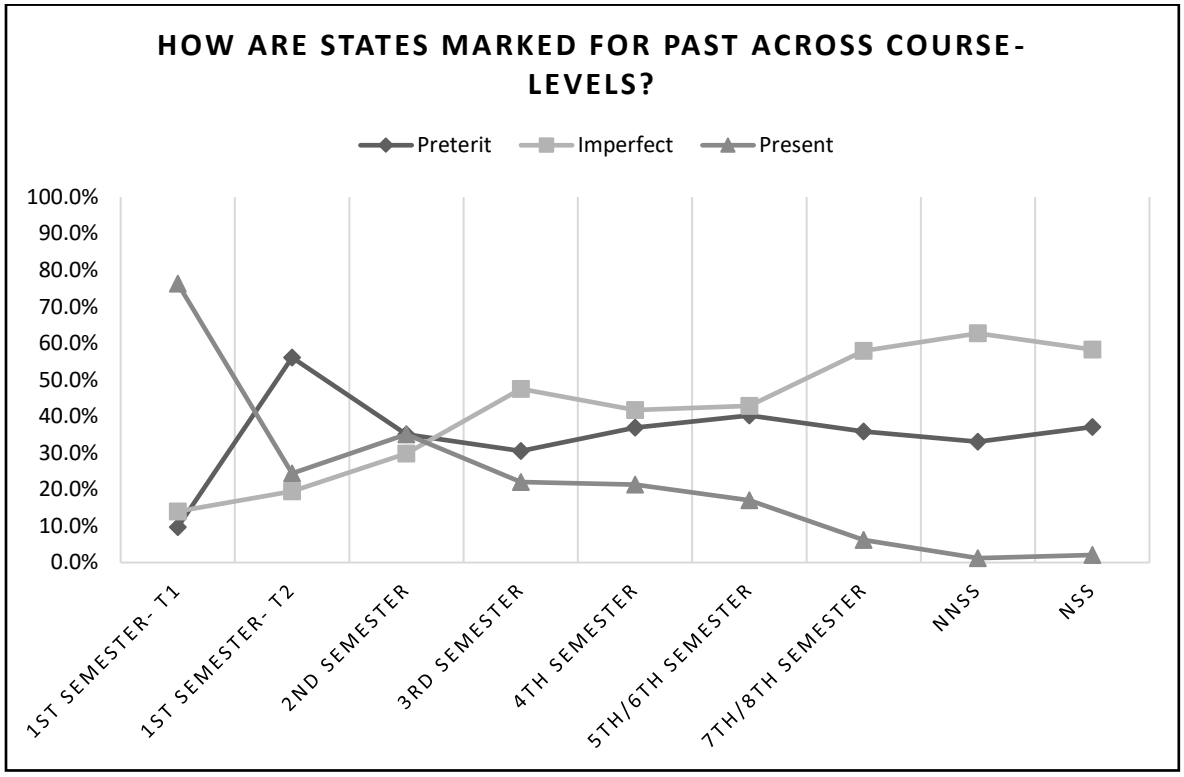
Appendix Table 113. Native-speaker instructors.

ATELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	477	9	105	591
		%	98.4	42.9	30.1	**69.1**
	Foreground	N	8	12	244	264
		%	1.6	57.1	69.9	**30.9**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	111	2	82	195
		%	96.5	3.5	8.2	**16.6**
	Foreground	N	4	55	921	980
		%	3.5	96.5	91.8	**83.4**
			100%	**100%**	**100%**	**100%**

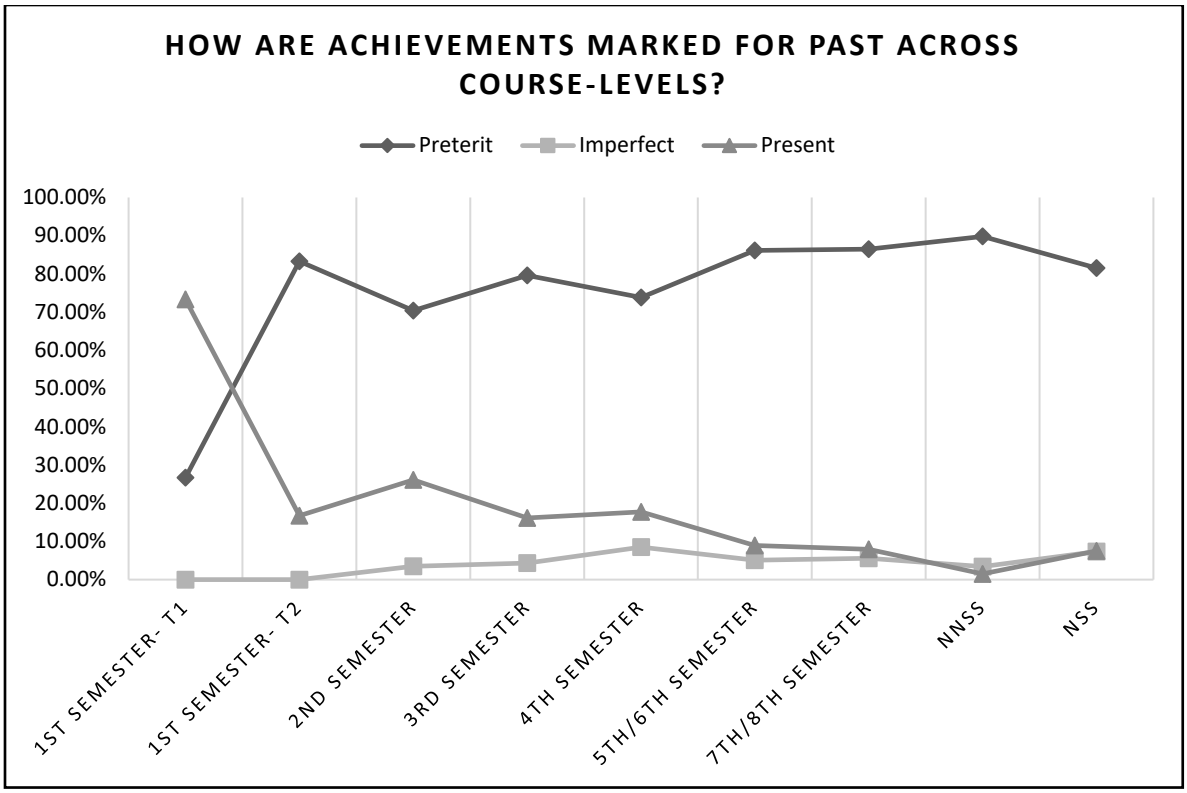
Appendix Table 114. Near-native-speaker instructors.

ATELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	210	3	44	257
		%	92.9	75.0	27.2	**65.6**
	Foreground	N	16	1	118	135
		%	7.1	25.0	72.8	**34.4**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	29	0	72	101
		%	90.6	0.0	14.9	**19.5**
	Foreground	N	3	4	411	418
		%	9.4	100.0	85.1	**80.5**
			100%	**100%**	**100%**	**100%**

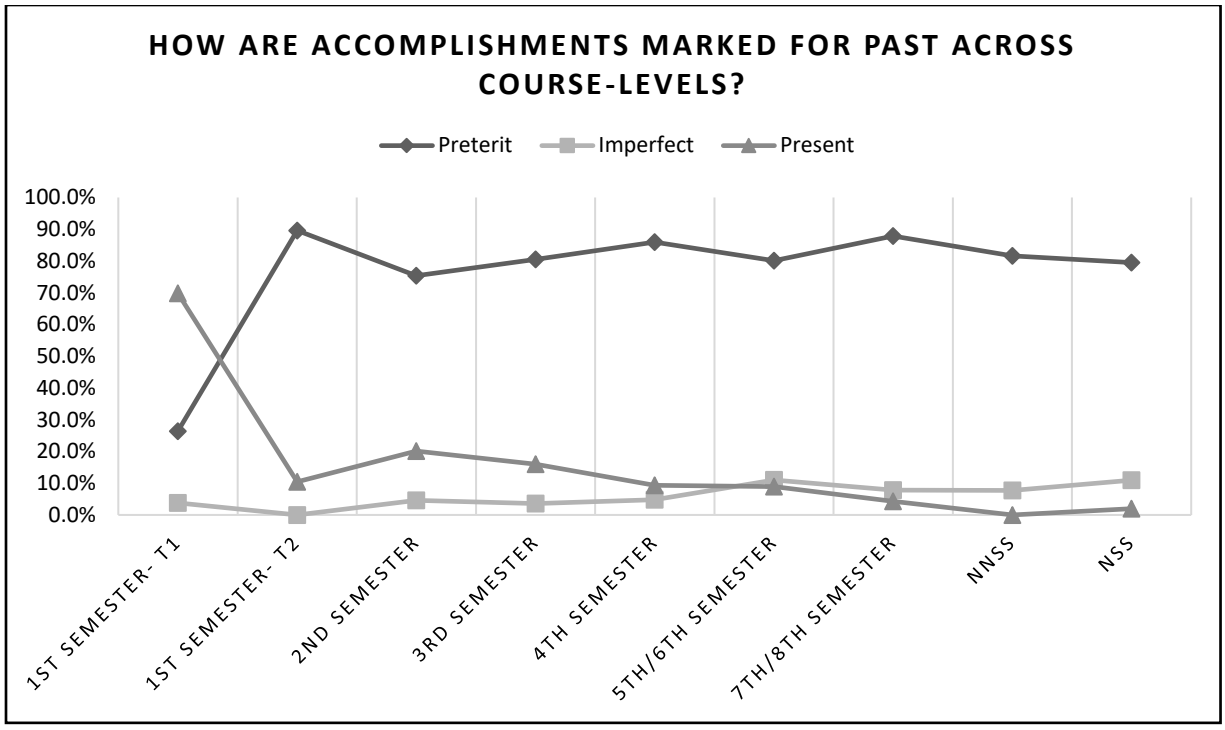
Appendix C.3.2 True-within-semantic-verb category analysis (oral prompt task)



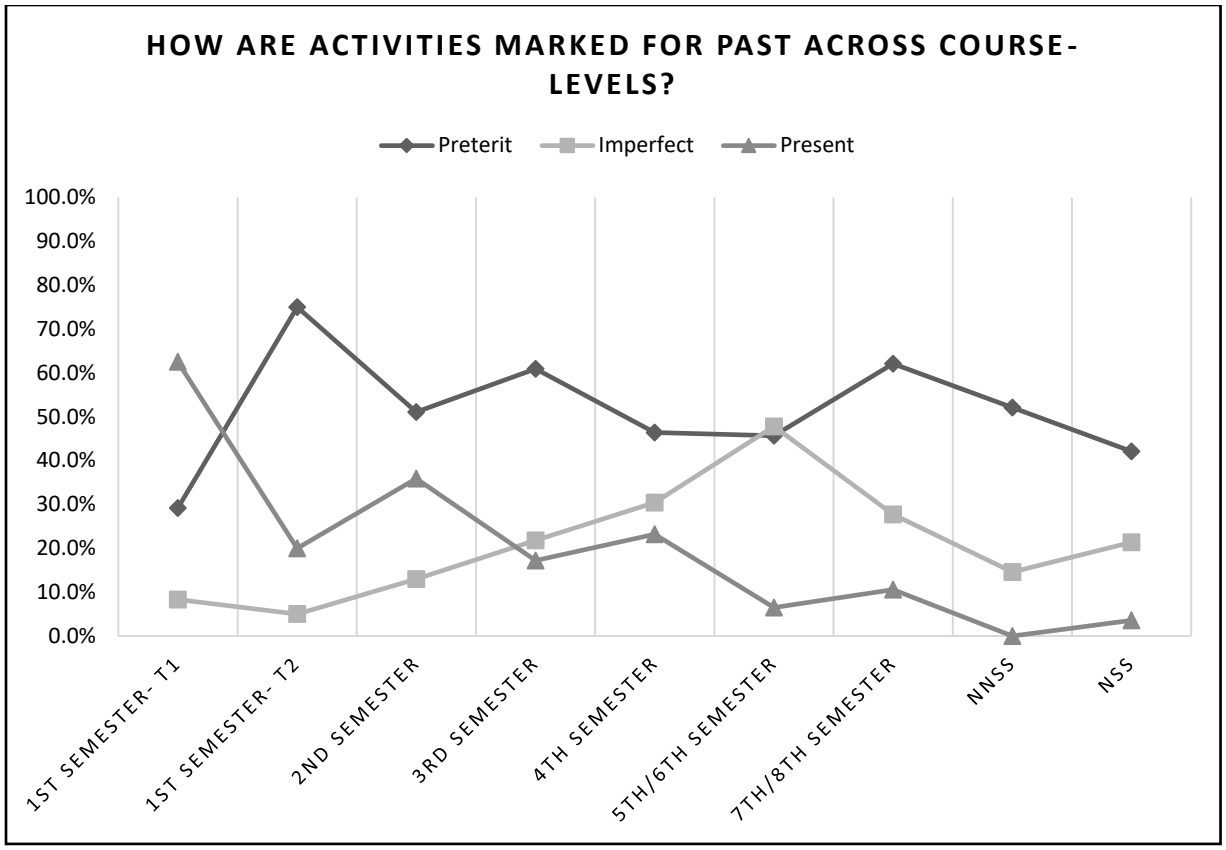
Appendix Figure 1. State verbs across past form use.



Appendix Figure 2. Achievement verbs across past form use.



Appendix Figure 3. Accomplishment verbs across past form use.



Appendix Figure 4. Activity verbs across past form use.

Appendix C.3.3 Interaction between Aktionsart and grounding across past forms (written contextualized task)

Appendix Table 115. Interactional effects across group levels.

Group				Imperfect	Perfect	Present	Preterit	Total
Spanish 1 (1st semester) Time 1	ATELIC	Background	N	11	3	87	19	120
			%	9.2%	2.5%	72.5%	15.8%	100.0%
		within past form	%	45.8%	17.6%	55.1%	46.3%	50.0%
		% of Total		4.6%	1.3%	36.3%	7.9%	50.0%
		Foreground	N	13	14	71	22	120
			%	10.8%	11.7%	59.2%	18.3%	100.0%
		within past form	%	54.2%	82.4%	44.9%	53.7%	50.0%
		% of Total		5.4%	5.8%	29.6%	9.2%	50.0%
	TELIC	Background	N	20	12	71	17	120
			%	16.7%	10.0%	59.2%	14.2%	100.0%
		within past form	%	48.8%	54.5%	53.0%	39.5%	50.0%
		% of Total		8.3%	5.0%	29.6%	7.1%	50.0%
		Foreground	N	21	10	63	26	120
			%	17.5%	8.3%	52.5%	21.7%	100.0%
		within past form	%	51.2%	45.5%	47.0%	60.5%	50.0%
		% of Total		8.8%	4.2%	26.3%	10.8%	50.0%
Spanish 1 (1st semester) Time 2	ATELIC	Background	N	14	6	38	30	88
			%	15.9%	6.8%	43.2%	34.1%	100.0%
		within past form	%	60.9%	31.6%	59.4%	42.9%	50.0%
		% of Total		8.0%	3.4%	21.6%	17.0%	50.0%
		Foreground	N	9	13	26	40	88
			%	10.2%	14.8%	29.5%	45.5%	100.0%
		within past form	%	39.1%	68.4%	40.6%	57.1%	50.0%
		% of Total		5.1%	7.4%	14.8%	22.7%	50.0%
	TELIC	Background	N	19	8	36	25	88
			%	21.6%	9.1%	40.9%	28.4%	100.0%
		within past form	%	65.5%	53.3%	55.4%	37.3%	50.0%
		% of Total		10.8%	4.5%	20.5%	14.2%	50.0%
		Foreground	N	10	7	29	42	88
			%	11.4%	8.0%	33.0%	47.7%	100.0%

		within past form	%	34.5%	46.7%	44.6%	62.7%	50.0%
		% of Total		5.7%	4.0%	16.5%	23.9%	50.0%
Spanish 2 (2nd semester)	ATELIC	Background	N	74	15	59	84	232
			%	31.9%	6.5%	25.4%	36.2%	100.0%
		within past form	%	54.0%	46.9%	49.2%	48.0%	50.0%
		% of Total		15.9%	3.2%	12.7%	18.1%	50.0%
		Foreground	N	63	17	61	91	232
			%	27.2%	7.3%	26.3%	39.2%	100.0%
		within past form	%	46.0%	53.1%	50.8%	52.0%	50.0%
		% of Total		13.6%	3.7%	13.1%	19.6%	50.0%
	TELIC	Background	N	68	29	53	82	232
			%	29.3%	12.5%	22.8%	35.3%	100.0%
		within past form	%	55.3%	59.2%	52.0%	43.2%	50.0%
		% of Total		14.7%	6.3%	11.4%	17.7%	50.0%
		Foreground	N	55	20	49	108	232
			%	23.7%	8.6%	21.1%	46.6%	100.0%
		within past form	%	44.7%	40.8%	48.0%	56.8%	50.0%
		% of Total		11.9%	4.3%	10.6%	23.3%	50.0%
Spanish 3 (3rd semester)	ATELIC	Background	N	90	9	50	59	208
			%	43.3%	4.3%	24.0%	28.4%	100.0%
		within past form	%	57.7%	52.9%	59.5%	37.1%	50.0%
		% of Total		21.6%	2.2%	12.0%	14.2%	50.0%
		Foreground	N	66	8	34	100	208
			%	31.7%	3.8%	16.3%	48.1%	100.0%
		within past form	%	42.3%	47.1%	40.5%	62.9%	50.0%
		% of Total		15.9%	1.9%	8.2%	24.0%	50.0%
	TELIC	Background	N	70	14	31	93	208
			%	33.7%	6.7%	14.9%	44.7%	100.0%
		within past form	%	66.0%	77.8%	50.8%	40.3%	50.0%
		% of Total		16.8%	3.4%	7.5%	22.4%	50.0%
		Foreground	N	36	4	30	138	208
			%	17.3%	1.9%	14.4%	66.3%	100.0%
		within past form	%	34.0%	22.2%	49.2%	59.7%	50.0%
		% of Total		8.7%	1.0%	7.2%	33.2%	50.0%
	ATELIC	Background	N	122	62	58	94	336

			%	36.3%	18.5%	17.3%	28.0%	100.0%
		within past form	%	56.0%	58.5%	49.6%	40.7%	50.0%
		% of Total		18.2%	9.2%	8.6%	14.0%	50.0%
		Foreground	N	96	44	59	137	336
			%	28.6%	13.1%	17.6%	40.8%	100.0%
		within past form	%	44.0%	41.5%	50.4%	59.3%	50.0%
		% of Total		14.3%	6.5%	8.8%	20.4%	50.0%
Spanish 4 (4th semester)		Background	N	101	84	43	108	336
			%	30.1%	25.0%	12.8%	32.1%	100.0%
		within past form	%	61.6%	63.2%	60.6%	35.5%	50.0%
		% of Total		15.0%	12.5%	6.4%	16.1%	50.0%
	TELIC	Foreground	N	63	49	28	196	336
			%	18.8%	14.6%	8.3%	58.3%	100.0%
		within past form	%	38.4%	36.8%	39.4%	64.5%	50.0%
		% of Total		9.4%	7.3%	4.2%	29.2%	50.0%
		Background	N	66	14	25	47	152
			%	43.4%	9.2%	16.4%	30.9%	100.0%
		within past form	%	61.1%	48.3%	58.1%	37.9%	50.0%
		% of Total		21.7%	4.6%	8.2%	15.5%	50.0%
	ATELIC	Foreground	N	42	15	18	77	152
			%	27.6%	9.9%	11.8%	50.7%	100.0%
		within past form	%	38.9%	51.7%	41.9%	62.1%	50.0%
Spanish 25 (5th/6th semester)		% of Total		13.8%	4.9%	5.9%	25.3%	50.0%
		Background	N	51	31	12	58	152
			%	33.6%	20.4%	7.9%	38.2%	100.0%
		within past form	%	67.1%	73.8%	44.4%	36.5%	50.0%
		% of Total		16.8%	10.2%	3.9%	19.1%	50.0%
	TELIC	Foreground	N	25	11	15	101	152
			%	16.4%	7.2%	9.9%	66.4%	100.0%
		within past form	%	32.9%	26.2%	55.6%	63.5%	50.0%
		% of Total		8.2%	3.6%	4.9%	33.2%	50.0%
		Background	N	61	26	26	39	152
			%	40.1%	17.1%	17.1%	25.7%	100.0%
Medical Spanish and Spanish Applied Linguistics	ATELIC	within past form	%	64.2%	60.5%	66.7%	30.7%	50.0%
		% of Total		20.1%	8.6%	8.6%	12.8%	50.0%
		Foreground	N	34	17	13	88	152

(7th/8th semester)			%	22.4%	11.2%	8.6%	57.9%	100.0%
		within past form	%	35.8%	39.5%	33.3%	69.3%	50.0%
		% of Total		11.2%	5.6%	4.3%	28.9%	50.0%
	TELIC	Background	N	47	35	5	65	152
			%	30.9%	23.0%	3.3%	42.8%	100.0%
		within past form	%	62.7%	87.5%	50.0%	36.3%	50.0%
		% of Total		15.5%	11.5%	1.6%	21.4%	50.0%
		Foreground	N	28	5	5	114	152
			%	18.4%	3.3%	3.3%	75.0%	100.0%
		within past form	%	37.3%	12.5%	50.0%	63.7%	50.0%
		% of Total		9.2%	1.6%	1.6%	37.5%	50.0%
Near native instructors	ATELIC	Background	N	91	53	13	59	216
			%	42.1%	24.5%	6.0%	27.3%	100.0%
		within past form	%	65.0%	57.0%	6.0%	32.2%	50.1%
		% of Total		21.1%	12.3%	3.0%	13.7%	50.1%
		Foreground	N	49	40	2	124	215
			%	22.8%	18.6%	0.9%	57.7%	100.0%
		within past form	%	35.0%	43.0%	0.9%	67.8%	49.9%
		% of Total		11.4%	9.3%	0.5%	28.8%	49.9%
	TELIC	Background	N	98	48	1	70	217
			%	45.2%	22.1%	0.5%	32.3%	100.0%
		within past form	%	77.8%	77.4%	100.0%	28.6%	50.0%
		% of Total		22.6%	11.1%	0.2%	16.1%	50.0%
		Foreground	N	28	14	0	175	217
			%	12.9%	6.5%	0.0%	80.6%	100.0%
		within past form	%	22.2%	22.6%	0.0%	71.4%	50.0%
		% of Total		6.5%	3.2%	0.0%	40.3%	50.0%

Appendix Table 116. Interactional effects among the native and near-native-speaker instructors.

ATELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	687	12	149	848
		%	96.6	48.0	29.2	**68.0**
	Foreground	N	24	13	362	399
		%	3.4	52.0	70.8	**32.0**
			100%	**100%**	**100%**	**100%**
TELIC			**Imperfect**	**Present**	**Preterit**	**Total**
	Background	N	140	2	154	296
		%	95.2	3.3	10.4	**17.5**
	Foreground	N	7	59	1332	1398
		%	4.8	96.7	89.6	**82.5**
			100%	**100%**	**100%**	**100%**

Appendix C.4 Measures of frequency

Appendix C.4.1 Most frequently produced verbs across forms and course-levels

Appendix Table 117. Most frequently produced verbs across forms and course-levels.

1st semester-Time 1	1st semester-Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	NNSs	NSs
Ser	**Ir/se**	**Ir**	**Ser**	**Ser**	**Ir**	**Ser**	**Estar**	**Ser**
Ir	**Ser**	**Ser**	**Ir /se**	**Ir**	**Ser**	**Tener**	**Tener**	**Tener**
Tener	**Tener**	**Estar**	**Tener**	**Tener**	**Tener**	**Ir**	**Ser**	**Estar**
Estar	**Comer**	**Comer**	Levantar /se	**Estar**	**Estar**	**Estar**	**Ir /se**	**Ir/se**
Comer	**Estar**	**Tener**	**Comer**	**Hacer**	**Hacer**	**Haber**	**Hacer**	**Hacer**
Gustar	Levantar/se	**Despertar /se**	**Estar**	**Comer**	Levantar /se	Empezar	Empezar	Decir/se
Poder	**Hacer**	Jugar	Jugar	Levantar /se	**Comer**	**Hacer**	Dar	Empezar
Despertar/se	Tomarse	Estudiar	Dormir /se	Poder	**Poder**	**Despertar /se**	Ver	Pasar
Jugar	Caer	Mirar	Estudiar	Dormir /se	**Haber**	**Comer**	Pasar	Llegar
Estudiar	Correr	Dormir /se	Duchar /se	Tomar	Regresar	Regresar	Decir /se	Dar
Dormir	Desayunar	Ver	Ver	**Despertar /se**	Dar	Saber	**Despertar /se**	Salir
Hacer	**Despertar/se**	Levantar /se	Gustar	Gustar	Decir	Tomar	Querer	Ver
Pasar	Estudiar	Desayunar	Salir	Regresar	Dormir	Dar	Preparar /se	**Despertar/se**
Querer	Golpear	**Pensar**	**Despertar /se**	Estudiar	Saber	Volver	Venir /se	Venir/se
Vivir	Montar	**Hacer**	Asistir	Decir	Caminar	Jugar	**Haber**	**Poder**
Disfrutar	**Poder**	Querer	Cepillar /se	Necesitar	Empezar	Necesitar	Llegar	Preparar/se
Duchar/se	Ver		**Hacer**	Querer	Pasar	Pasar	Comer	Querer
Escribir	Dormir		Mirar	Caminar	Terminar	**Poder**	Dormir /se	**Haber**

Estacionar	Lastimar		Decir	Duchar /se	Tomar			Poner/se
Nadar	Llegar		Correr	Poner	Visitar			Levantar/se
Recordar	Mirar		Manejar	Ver				Comer
Tomar	Nadar		Necesitar					Tomar
	Pasar		Romper					
	Trabajar		Encontrar					

Appendix C.4.2 Token and type frequency of verbs (oral prompt task)

Appendix Table 118. Token and type frequency of past form. (1st semester -Time 1)

Verb	Relative Freq	Imperfect		Present		Preterit		Total	
	%	N	%	N	%	N	%	N	%
Ser	17.8	7	21.2	23	**69.7**	3	9.1	33	100
Ir	12.4	0	0.0	14	**60.9**	9	39.1	23	100
Tener	10.3	3	15.8	13	**68.4**	3	15.8	19	100
Estar	7.6	3	21.4	11	**78.6**	0	0.0	14	100
Comer	5.9	0	0.0	10	**90.9**	1	9.1	11	100
Gustar	4.3	0	0.0	5	**62.5**	3	37.5	8	100
Poder	4.3	0	0.0	8	**100**	0	0.0	8	100
Despertar/se	2.7	0	0.0	4	**80.0**	1	20.0	5	100
Jugar	2.7	2	**40.0**	1	20.0	2	**40.0**	5	100
Estudiar	2.2	0	0.0	3	**75.0**	1	25.0	4	100
Dormir	1.6	0	0.0	2	**66.7**	1	33.3	3	100
Hacer	1.6	1	33.3	2	**66.7**	0	0.0	3	100
Pasar	1.6	0	0.0	1	33.3	2	**66.7**	3	100
Querer	1.6	0	0.0	3	**100**	0	0.0	3	100
Vivir	1.6	0	0.0	3	**100**	0	0.0	3	100
Disfrutar	1.1	0	0.0	1	**50.0**	1	**50.0**	2	100
Duchar/se	1.1	0	0.0	2	**100**	0	0.0	2	100
Escribir	1.1	0	0.0	2	**100**	0	0.0	2	100
Estacionar	1.1	0	0.0	2	**100**	0	0.0	2	100
Nadar	1.1	0	0.0	2	**100**	0	0.0	2	100
Recordar	1.1	0	0.0	2	**100**	0	0.0	2	100
Tomar	1.1	0	0.0	2	**100**	0	0.0	2	100
Acostar/se	0.5	0	0.0	1	100	0	0.0	1	100
Afectar/se	0.5	0	0.0	0	0.0	1	100	1	100

Ahogar/se	0.5	0	0.0	1	100	0	0.0	1	100
Aprender	0.5	0	0.0	1	100	0	0.0	1	100
Cenar	0.5	0	0.0	0	0.0	1	100	1	100
Comprar	0.5	0	0.0	0	0.0	1	100	1	100
Enseñar	0.5	0	0.0	1	100	0	0.0	1	100
Golpear	0.5	0	0.0	0	0.0	1	100	1	100
Lastimar	0.5	0	0.0	0	0.0	1	100	1	100
Levantar/se	0.5	0	0.0	1	100	0	0.0	1	100
Llamar	0.5	0	0.0	1	100	0	0.0	1	100
Llegar	0.5	0	0.0	1	100	0	0.0	1	100
Llevar	0.5	1	100	0	0.0	0	0.0	1	100
Mirar	0.5	0	0.0	1	100	0	0.0	1	100
Montar	0.5	0	0.0	1	100	0	0.0	1	100
Ofrecer	0.5	0	0.0	1	100	0	0.0	1	100
Olvidar	0.5	0	0.0	1	100	0	0.0	1	100
Pensar	0.5	0	0.0	1	100	0	0.0	1	100
Poner	0.5	0	0.0	1	100	0	0.0	1	100
Practicar	0.5	0	0.0	0	0.0	1	100	1	100
Salvar	0.5	0	0.0	1	100	0	0.0	1	100
Suceder	0.5	0	0.0	0	0.0	1	100	1	100
Terminar	0.5	0	0.0	1	100	0	0.0	1	100
Trabajar	0.5	0	0.0	1	100	0	0.0	1	100
Ver	0.5	0	0.0	1	100	0	0.0	1	100
Volver	0.5	0	0.0	1	100	0	0.0	1	100

Appendix Table 119. Token and type frequency of past form (1st semester-Time 2).

Verb	Relative Freq	Imperfect		Present		Preterit		Total	
	%	N	%	N	%	N	%	N	%
Ir/se	15.0	0	0.0	2	10.0	18	90.0	20	100
Ser	15.0	4	20.0	6	30.0	10	50.0	20	100
Tener	5.3	1	14.3	0	0.0	6	85.7	7	100
Comer	4.5	0	0.0	2	33.3	4	66.7	6	100
Estar	4.5	1	16.7	1	16.7	4	66.7	6	100
Levantar/se	3.8	0	0.0	2	40.0	3	60.0	5	100
Hacer	3.0	0	0.0	0	0.0	4	100	4	100
Tomarse	3.0	0	0.0	0	0.0	4	100	4	100
Caer	2.3	0	0.0	0	0.0	3	100	3	100
Correr	2.3	0	0.0	0	0.0	3	100	3	100
Desayunar	2.3	0	0.0	0	0.0	3	100	3	100
Despertar/se	2.3	0	0.0	0	0.0	3	100	3	100
Estudiar	2.3	0	0.0	2	66.7	1	33.3	3	100
Golpear	2.3	0	0.0	0	0.0	3	100	3	100
Montar	2.3	0	0.0	0	0.0	3	100	3	100
Poder	2.3	1	33.3	1	33.3	1	33.3	3	100
Ver	2.3	0	0.0	3	100	0	0.0	3	100
Dormir	1.5	0	0.0	1	50.0	1	50.0	2	100
Lastimar	1.5	0	0.0	0	0.0	2	100	2	100
Llegar	1.5	0	0.0	0	0.0	2	100	2	100
Mirar	1.5	0	0.0	0	0.0	2	100	2	100
Nadar	1.5	0	0.0	0	0.0	2	100	2	100
Pasar	1.5	0	0.0	0	0.0	2	100	2	100
Trabajar	1.5	1	50.0	1	50.0	0	0.0	2	100
Ahogar	0.8	0	0.0	1	100	0	0.0	1	100
Ayudar	0.8	0	0.0	0	0.0	1	100	1	100
Caminar	0.8	0	0.0	0	0.0	1	100	1	100
Cocinar	0.8	0	0.0	0	0.0	1	100	1	100

Coger	0.8	0	0.0	0	0.0	1	100	1	100
Dar	0.8	0	0.0	0	0.0	1	100	1	100
Disfrutar	0.8	0	0.0	0	0.0	1	100	1	100
Jugar	0.8	0	0.0	0	0.0	1	100	1	100
Lavar	0.8	0	0.0	0	0.0	1	100	1	100
Lesionar	0.8	0	0.0	0	0.0	1	100	1	100
Limpiar	0.8	0	0.0	0	0.0	1	100	1	100
Parar	0.8	0	0.0	1	100	0	0.0	1	100
Regresar	0.8	0	0.0	0	0.0	1	100	1	100
Salir	0.8	0	0.0	0	0.0	1	100	1	100
Soler	0.8	1	100	0	0.0	0	0.0	1	100
Traer	0.8	0	0.0	0	0.0	1	100	1	100
Venir	0.8	0	0.0	0	0.0	1	100	1	100
Viajar	0.8	0	0.0	0	0.0	1	100	1	100
Visitar	0.8	0	0.0	0	0.0	1	100	1	100
Volver	0.8	0	0.0	0	0.0	1	100	1	100

Appendix Table 120. Token and type frequency of past form (2nd semester).

Verb	**Relative Freq**	**Imperfect**		**Present**		**Preterit**		**Total**	
	%	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Ir	15.9	1	0.8	15	12.5	104	86.7	120	100
Ser	13.4	32	31.7	32	31.7	37	36.6	101	100
Estar	7.1	28	51.9	12	22.2	14	25.9	54	100
Comer	5.6	3	7.1	12	28.6	27	64.3	42	100
Tener	4.5	13	38.2	7	20.6	14	41.2	34	100
Despertar /se	3.2	0	0.0	7	29.2	17	70.8	24	100
Jugar	2.5	5	26.3	7	36.8	7	36.8	19	100
Estudiar	2.4	1	5.6	6	33.3	11	61.1	18	100
Mirar	2.4	2	11.1	5	27.8	11	61.1	18	100
Dormir /se	2.1	2	12.5	9	56.3	5	31.3	16	100

Ver	2.0	0	0.0	8	53.3	7	46.7	15	100
Levantar /se	1.6	0	0.0	2	16.7	10	83.3	12	100
Desayunar	1.3	1	10.0	2	20.0	7	70.0	10	100
Pensar	1.3	0	0.0	7	70.0	3	30.0	10	100
Hacer	1.1	1	12.5	3	37.5	4	50.0	8	100
Querer	1.1	0	0.0	4	50.0	4	50.0	8	100
Romper /se	0.8	0	0.0	3	50.0	3	50.0	6	100
Conducir	0.7	2	40.0	0	0.0	3	60.0	5	100
Perder	0.7	0	0.0	0	0.0	5	100	5	100
Trabajar	0.7	0	0.0	2	40.0	3	60.0	5	100
vivir	0.7	0	0.0	3	60.0	2	40.0	5	100
Caminar	0.5	0	0.0	0	0.0	4	100	4	100
Cocinar	0.5	0	0.0	2	50.0	2	50.0	4	100
Correr	0.5	0	0.0	2	50.0	2	50.0	4	100
Duchar /se	0.5	1	25.0	1	25.0	2	50.0	4	100
Haber	0.5	1	25.0	1	25.0	2	50.0	4	100
Hablar	0.5	0	0.0	3	75.0	1	25.0	4	100
Llevar	0.5	0	0.0	0	0.0	4	100	4	100
Montar	0.5	2	50.0	1	25.0	1	25.0	4	100
Poner /se	0.5	0	0.0	2	50.0	2	50.0	4	100
Terminar	0.5	0	0.0	1	25.0	3	75.0	4	100
Tomar	0.5	0	0.0	1	25.0	3	75.0	4	100
Traer	0.5	0	0.0	2	50.0	2	50.0	4	100
Ayudar	0.4	0	0.0	0	0.0	3	100	3	100
Cenar	0.4	0	0.0	1	33.3	2	66.7	3	100
Comprar	0.4	1	33.3	0	0.0	2	66.7	3	100
Dar	0.4	0	0.0	1	33.3	2	66.7	3	100
Decir	0.4	0	0.0	0	0.0	3	100	3	100
Encantar	0.4	0	0.0	1	33.3	2	66.7	3	100
Entrar	0.4	0	0.0	0	0.0	3	100	3	100
Escribir	0.4	0	0.0	1	33.3	2	66.7	3	100
Ganar	0.4	1	33.3	0	0.0	2	66.7	3	100

Lavar /se	0.4	0	0.0	2	66.7	1	33.3	3	100
Nadar	0.4	1	33.3	1	33.3	1	33.3	3	100
Saber	0.4	0	0.0	3	100	0	0.0	3	100
Salir	0.4	1	33.3	1	33.3	1	33.3	3	100
Sentir /se	0.4	0	0.0	0	0.0	3	100	3	100
Stay	0.4	0	0.0	0	0.0	3	100	3	100
Tocar	0.4	0	0.0	1	33.3	2	66.7	3	100
Acostar /se	0.3	1	50.0	1	50.0	0	0.0	2	100
Almorzar	0.3	0	0.0	1	50.0	1	50.0	2	100
Atender	0.3	0	0.0	2	100	0	0.0	2	100
Beber	0.3	0	0.0	0	0.0	2	100	2	100
Caer /se	0.3	0	0.0	1	50.0	1	50.0	2	100
Conocer	0.3	0	0.0	0	0.0	2	100	2	100
Doler	0.3	1	50.0	0	0.0	1	50.0	2	100
Empezar	0.3	0	0.0	2	100	0	0.0	2	100
Encontrar	0.3	0	0.0	0	0.0	2	100	2	100
Go	0.3	0	0.0	0	0.0	2	100	2	100
Hurt	0.3	0	0.0	0	0.0	2	100	2	100
Limpiar /se	0.3	0	0.0	1	50.0	1	50.0	2	100
Maquillar /se	0.3	0	0.0	2	100	0	0.0	2	100
Open	0.3	0	0.0	0	0.0	2	100	2	100
Pasar	0.3	0	0.0	0	0.0	2	100	2	100
Poder	0.3	1	50.0	0	0.0	1	50.0	2	100
Preguntar	0.3	0	0.0	2	100	0	0.0	2	100
Soler	0.3	2	100	0	0.0	0	0.0	2	100
Usar	0.3	0	0.0	0	0.0	2	100	2	100
Vestir / se	0.3	0	0.0	0	0.0	2	100	2	100
Visitar	0.3	0	0.0	0	0.0	2	100	2	100
Volver	0.3	0	0.0	0	0.0	2	100	2	100
Wait	0.3	2	100	0	0.0	0	0.0	2	100
Wake up	0.3	0	0.0	0	0.0	2	100	2	100
Win	0.3	0	0.0	0	0.0	2	100	2	100

Acariciar	0.1	0	0.0	0	0.0	1	100	1	100
Ahogar	0.1	0	0.0	1	100	0	0.0	1	100
Alfombrar /se	0.1	0	0.0	0	0.0	1	100	1	100
Andar	0.1	0	0.0	1	100	0	0.0	1	100
Aprender	0.1	0	0.0	0	0.0	1	100	1	100
Are	0.1	0	0.0	0	0.0	1	100	1	100
Asistir	0.1	0	0.0	1	100	0	0.0	1	100
Bajar /se	0.1	0	0.0	0	0.0	1	100	1	100
Bañar	0.1	0	0.0	0	0.0	1	100	1	100
Beat	0.1	0	0.0	0	0.0	1	100	1	100
Break	0.1	0	0.0	0	0.0	1	100	1	100
Celebrar	0.1	0	0.0	0	0.0	1	100	1	100
Chocar	0.1	0	0.0	0	0.0	1	100	1	100
Climb	0.1	0	0.0	0	0.0	1	100	1	100
Completar	0.1	0	0.0	1	100	0	0.0	1	100
Consumir	0.1	0	0.0	0	0.0	1	100	1	100
Crecer	0.1	0	0.0	0	0.0	1	100	1	100
Deber	0.1	0	0.0	1	100	0	0.0	1	100
Descansar	0.1	0	0.0	0	0.0	1	100	1	100
Desembalar	0.1	0	0.0	0	0.0	1	100	1	100
Ejercitar	0.1	0	0.0	0	0.0	1	100	1	100
Empacar	0.1	0	0.0	0	0.0	1	100	1	100
Enojar	0.1	0	0.0	0	0.0	1	100	1	100
Escuchar	0.1	0	0.0	0	0.0	1	100	1	100
Estrellar /se	0.1	0	0.0	0	0.0	1	100	1	100
Exit	0.1	0	0.0	0	0.0	1	100	1	100
Graduar /se	0.1	0	0.0	0	0.0	1	100	1	100
Gritar	0.1	0	0.0	0	0.0	1	100	1	100
Hide	0.1	0	0.0	0	0.0	1	100	1	100
Hit	0.1	0	0.0	0	0.0	1	100	1	100
Hold	0.1	0	0.0	0	0.0	1	100	1	100
Impactar	0.1	0	0.0	0	0.0	1	100	1	100

Incendiar	0.1	0	0.0	0	0.0	1	100	1	100
Lastimar/se	0.1	0	0.0	0	0.0	1	100	1	100
Leer	0.1	0	0.0	0	0.0	1	100	1	100
Llamar /se	0.1	0	0.0	1	100	0	0.0	1	100
Lose	0.1	0	0.0	0	0.0	1	100	1	100
Manejar	0.1	0	0.0	0	0.0	1	100	1	100
Marear /se	0.1	0	0.0	1	100	0	0.0	1	100
Matar	0.1	0	0.0	0	0.0	1	100	1	100
Morir	0.1	0	0.0	0	0.0	1	100	1	100
Nacer	0.1	0	0.0	0	0.0	1	100	1	100
Pick	0.1	0	0.0	0	0.0	1	100	1	100
Pintar	0.1	0	0.0	0	0.0	1	100	1	100
Practicar	0.1	0	0.0	0	0.0	1	100	1	100
Re-entrar	0.1	0	0.0	0	0.0	1	100	1	100
Recibir	0.1	0	0.0	1	100	0	0.0	1	100
Recordar	0.1	1	100	0	0.0	0	0.0	1	100
Regresar	0.1	0	0.0	1	100	0	0.0	1	100
Remember	0.1	0	0.0	1	100	0	0.0	1	100
Take	0.1	0	0.0	0	0.0	1	100	1	100
Tell	0.1	0	0.0	0	0.0	1	100	1	100
Tirar	0.1	0	0.0	0	0.0	1	100	1	100
Tratar	0.1	0	0.0	0	0.0	1	100	1	100
Turn	0.1	0	0.0	1	100	0	0.0	1	100
Viajar	0.1	0	0.0	0	0.0	1	100	1	100
voltear	0.1	0	0.0	0	0.0	1	100	1	100

Appendix Table 121. Token and type frequency of past form (3rd semester).

Verb	Relative Freq	Imperfect		Imp-prog		Present		Preterit		Total	
	%	N	%	N	%	N	%	N	%	N	%

Ser	16.8	38	39.2	1	1.0	24	24.7	34	35.1	97	100
Ir /se	12.6	5	6.9	0	0.0	4	5.6	63	87.5	72	100
Tener	9.1	33	63.5	0	0.0	6	11.5	13	25.0	52	100
Levantar /se	4.9	1	3.6	0	0.0	8	28.6	19	67.9	28	100
Comer	4.7	1	3.7	0	0.0	11	40.7	15	55.6	27	100
Estar	4.0	15	65.2	0	0.0	4	17.4	4	17.4	23	100
Jugar	3.0	7	35.0	3	15.0	4	20.0	6	30.0	20	100
Dormir /se	2.4	0	0.0	2	12.5	2	12.5	12	75.0	16	100
Estudiar	2.3	1	7.7	0	0.0	0	0.0	12	92.3	13	100
Duchar /se	2.1	0	0.0	0	0.0	2	16.7	10	83.3	12	100
Ver	2.1	0	0.0	0	0.0	2	16.7	10	83.3	12	100
Gustar	1.9	8	72.7	0	0.0	3	27.3	0	0.0	11	100
Salir	1.6	0	0.0	0	0.0	1	11.1	8	88.9	9	100
Despertar /se	1.4	0	0.0	0	0.0	2	25.0	6	75.0	8	100
Asistir	1.2	0	0.0	0	0.0	0	0.0	7	100	7	100
Cepillar /se	1.2	0	0.0	0	0.0	2	28.6	5	71.4	7	100
Hacer	1.2	0	0.0	0	0.0	0	0.0	7	100	7	100
Mirar	1.2	0	0.0	0	0.0	3	42.9	4	57.1	7	100
Decir	1.2	1	14.3	0	0.0	2	28.6	4	57.1	7	100
Correr	1.0	0	0.0	0	0.0	2	33.3	4	66.7	6	100
Manejar	1.0	2	33.3	3	50.0	0	0.0	1	16.7	6	100
Necesitar	1.0	1	16.7	0	0.0	2	33.3	3	50.0	6	100
Romper	1.0	0	0.0	0	0.0	0	0.0	6	100	6	100
Encontrar	0.9	2	40.0	0	0.0	0	0.0	3	60.0	5	100
Pasar	0.9	2	40.0	0	0.0	1	20.0	2	40.0	5	100
Poder	0.9	2	40.0	0	0.0	3	60.0	0	0.0	5	100
Poner /se	0.9	0	0.0	0	0.0	2	40.0	3	60.0	5	100
Trabajar	0.9	0	0.0	0	0.0	1	20.0	4	80.0	5	100
Vestir /se	0.9	0	0.0	0	0.0	1	20.0	4	80.0	5	100
Cocinar	0.7	0	0.0	0	0.0	0	0.0	4	100	4	100
Haber	0.7	3	75.0	0	0.0	1	25.0	0	0.0	4	100
Leer	0.7	0	0.0	1	25.0	1	25.0	2	50.0	4	100

Caer /se	0.5	0	0.0	0	0.0	0	0.0	3	100	3	100
Caminar	0.5	1	33.3	0	0.0	2	66.7	0	0.0	3	100
Comprar	0.5	0	0.0	0	0.0	0	0.0	3	100	3	100
Maquillar /se	0.5	0	0.0	0	0.0	1	33.3	2	66.7	3	100
Nacer	0.5	0	0.0	0	0.0	0	0.0	3	100	3	100
Doler	0.3	1	50.0	0	0.0	0	0.0	1	50.0	2	100
Encantar	0.3	1	50.0	0	0.0	1	50.0	0	0.0	2	100
Escribir	0.3	0	0.0	0	0.0	1	50.0	1	50.0	2	100
Ganar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
Gritar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
Lavar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
Llamar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
llegar	0.3	0	0.0	0	0.0	1	50.0	1	50.0	2	100
Montar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
Pensar	0.3	1	50.0	1	50.0	0	0.0	0	0.0	2	100
Recordar	0.3	1	50.0	0	0.0	1	50.0	0	0.0	2	100
Sentar	0.3	2	100	0	0.0	0	0.0	0	0.0	2	100
Sentir	0.3	0	0.0	1	50.0	0	0.0	1	50.0	2	100
Tocar	0.3	0	0.0	0	0.0	1	50.0	1	50.0	2	100
Tomar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
Visitar	0.3	0	0.0	0	0.0	0	0.0	2	100	2	100
Adorar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Amar	0.2	0	0.0	0	0.0	1	100	0	0.0	1	100
Arreglar/se	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Asustar /se	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Aterrizar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Buscar	0.2	0	0.0	0	0.0	1	100	0	0.0	1	100
Celebrar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Conducir	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Conseguir	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Creer	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Cumplir	0.2	0	0.0	1	100	0	0.0	0	0.0	1	100

Dar	0.2	0	0.0	1	100	0	0.0	0	0.0	1	100
Dejar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Empezar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Enamorar /se	0.2	0	0.0	1	100	0	0.0	0	0.0	1	100
Entrar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Experienciar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Hablar	0.2	0	0.0	1	100	0	0.0	0	0.0	1	100
Invitar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Llevar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Llorar	0.2	0	0.0	1	100	0	0.0	0	0.0	1	100
Mudar /se	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Nadar	0.2	1	100	0	0.0	0	0.0	0	0.0	1	100
Ocurrir	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Oir	0.2	1	100	0	0.0	0	0.0	0	0.0	1	100
Pasear	0.2	1	100	0	0.0	0	0.0	0	0.0	1	100
Practicar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Preguntar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Querer	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Recibir	0.2	0	0.0	0	0.0	1	100	0	0.0	1	100
Regresar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Responder	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Saber	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Seguir	0.2	1	100	0	0.0	0	0.0	0	0.0	1	100
Soñar	0.2	1	100	0	0.0	0	0.0	0	0.0	1	100
Telefonear	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Traer	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Viajar	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100
Vivir	0.2	0	0.0	0	0.0	1	100	0	0.0	1	100
Volver	0.2	0	0.0	0	0.0	0	0.0	1	100	1	100

Appendix Table 122. Token and type frequency of past form (4th semester).

Verb	Relative Freq	Imperfect		Present		Preterit		Total	
	%	N	%	N	%	N	%	N	%
Ser	16.0	57	39.3	28	19.3	60	41.4	145	100
Ir	15.3	7	5.1	7	5.1	124	89.9	138	100
Tener	10.0	40	44.4	14	15.6	36	40.0	90	100
Estar	5.1	29	63.0	7	15.2	10	21.7	46	100
Hacer	2.8	2	8.0	6	24.0	17	68.0	25	100
Comer	2.5	2	8.7	4	17.4	17	73.9	23	100
Levantar /se	2.2	0	0.0	3	15.0	17	85.0	20	100
Poder	1.8	2	12.5	12	75.0	2	12.5	16	100
Dormir /se	1.7	2	13.3	4	26.7	9	60.0	15	100
Tomar	1.5	0	0.0	3	21.4	11	78.6	14	100
Despertar /se	1.4	0	0.0	3	23.1	10	76.9	13	100
Gustar	1.4	10	76.9	2	15.4	1	7.7	13	100
Regresar	1.4	0	0.0	0	0.0	13	100	13	100
Estudiar	1.3	2	16.7	4	33.3	6	50.0	12	100
Decir	1.1	0	0.0	3	30.0	7	70.0	10	100
Necesitar	1.1	1	10.0	1	10.0	8	80.0	10	100
Querer	1.1	7	70.0	2	20.0	1	10.0	10	100
Caminar	1.0	2	22.2	1	11.1	6	66.7	9	100
Duchar /se	1.0	0	0.0	0	0.0	9	100	9	100
Poner	1.0	0	0.0	2	22.2	7	77.8	9	100
ver	1.0	1	11.1	0	0.0	8	88.9	9	100
Comprar	0.9	2	25.0	0	0.0	6	75.0	8	100
Jugar	0.9	6	75.0	1	12.5	1	12.5	8	100
Hablar	0.8	0	0.0	0	0.0	7	100	7	100
Pasar	0.8	2	28.6	1	14.3	4	57.1	7	100
Saber	0.8	3	42.9	1	14.3	3	42.9	7	100
Terminar	0.8	0	0.0	0	0.0	7	100	7	100
Caer	0.7	0	0.0	1	16.7	5	83.3	6	100
Cepillar/se	0.7	0	0.0	3	50.0	3	50.0	6	100

Haber	0.7	0	0.0	5	83.3	1	16.7	6	100
Acostar /se	0.6	1	20.0	2	40.0	2	40.0	5	100
Conocer	0.6	0	0.0	3	60.0	2	40.0	5	100
Correr	0.6	2	40.0	0	0.0	2	40.0	5	100
Dar	0.6	2	40.0	3	60.0	0	0.0	5	100
Encontrar	0.6	0	0.0	0	0.0	5	100	5	100
Lavar /se	0.6	0	0.0	0	0.0	5	100	5	100
Llamar	0.6	2	40.0	2	40.0	1	20.0	5	100
Mirar	0.6	1	20.0	0	0.0	4	80.0	5	100
Realizar	0.6	0	0.0	0	0.0	5	100	5	100
Salir	0.6	0	0.0	2	40.0	3	60.0	5	100
Vestir /se	0.6	0	0.0	0	0.0	5	100	5	100
Viajar	0.6	1	20.0	0	0.0	4	80.0	5	100
Volver	0.6	1	20.0	0	0.0	4	80.0	5	100
Empezar	0.4	0	0.0	0	0.0	4	100	4	100
Leer	0.4	0	0.0	0	0.0	4	100	4	100
Maquillar /se	0.4	0	0.0	0	0.0	4	100	4	100
Pensar	0.4	1	25.0	0	0.0	3	75.0	4	100
Trabajar	0.4	3	75.0	0	0.0	1	25.0	4	100
Usar	0.4	0	0.0	2	50.0	2	50.0	4	100
Vivir	0.4	3	75.0	1	25.0	0	0.0	4	100
Conducir	0.3	1	33.3	0	0.0	2	66.7	3	100
Desayunar	0.3	0	0.0	0	0.0	3	100	3	100
Doler	0.3	1	33.3	2	66.7	0	0.0	3	100
Encantar	0.3	2	66.7	1	33.3	0	0.0	3	100
Entender	0.3	0	0.0	1	33.3	2	66.7	3	100
Reunir /se	0.3	0	0.0	0	0.0	3	100	3	100
Robar	0.3	0	0.0	0	0.0	3	100	3	100
Venir	0.3	0	0.0	2	66.7	1	33.3	3	100
Almorzar	0.2	0	0.0	0	0.0	2	100	2	100
Aprender	0.2	0	0.0	0	0.0	2	100	2	100
Cenar	0.2	0	0.0	0	0.0	2	100	2	100

Chocar	0.2	0	0.0	0	0.0	2	100	2	100
Despedir/se	0.2	0	0.0	0	0.0	2	100	2	100
Divertir	0.2	0	0.0	0	0.0	2	100	2	100
Ganar	0.2	1	50.0	0	0.0	1	50.0	2	100
Lastimar /se	0.2	0	0.0	2	100	0	0.0	2	100
Llevar	0.2	1	50.0	1	50.0	0	0.0	2	100
Manejar	0.2	0	0.0	0	0.0	2	100	2	100
Mover	0.2	0	0.0	0	0.0	2	100	2	100
Pagar	0.2	1	50.0	0	0.0	1	50.0	2	100
Practicar	0.2	0	0.0	1	50.0	1	50.0	2	100
Preguntar	0.2	1	50.0	1	50.0	0	0.0	2	100
Probar	0.2	1	50.0	1	50.0	0	0.0	2	100
Quedar	0.2	0	0.0	1	50.0	1	50.0	2	100
Resolver	0.2	0	0.0	0	0.0	2	100	2	100
Traer	0.2	0	0.0	0	0.0	2	100	2	100
Abrir	0.1	0	0.0	0	0.0	1	100	1	100
Arrestar	0.1	0	0.0	0	0.0	1	100	1	100
Atender	0.1	0	0.0	0	0.0	1	100	1	100
Ayudar	0.1	0	0.0	1	100	0	0.0	1	100
Beber	0.1	0	0.0	0	0.0	1	100	1	100
Buscar	0.1	0	0.0	0	0.0	1	100	1	100
Cerrar	0.1	0	0.0	0	0.0	1	100	1	100
Chatear	0.1	1	100	0	0.0	0	0.0	1	100
Cocinar	0.1	0	0.0	0	0.0	1	100	1	100
Completar	0.1	0	0.0	0	0.0	1	100	1	100
Comprender	0.1	0	0.0	1	100	0	0.0	1	100
Conseguir	0.1	0	0.0	0	0.0	1	100	1	100
Construir	0.1	0	0.0	1	100	0	0.0	1	100
Continuar	0.1	1	100	0	0.0	0	0.0	1	100
Convertir	0.1	0	0.0	0	0.0	1	100	1	100
Disfrutar	0.1	1	100	0	0.0	0	0.0	1	100
Entrar	0.1	0	0.0	0	0.0	1	100	1	100

Escribir	0.1	0	0.0	1	100	0	0.0	1	100
Experimentar	0.1	0	0.0	0	0.0	1	100	1	100
Llegar	0.1	0	0.0	1	100	0	0.0	1	100
Llorar	0.1	0	0.0	0	0.0	1	100	1	100
Marcar	0.1	0	0.0	0	0.0	1	100	1	100
Montar	0.1	0	0.0	1	100	0	0.0	1	100
Morir /se	0.1	0	0.0	0	0.0	1	100	1	100
Odiar	0.1	0	0.0	0	0.0	1	100	1	100
Olvidar	0.1	0	0.0	0	0.0	1	100	1	100
Organizar	0.1	0	0.0	0	0.0	1	100	1	100
Participar	0.1	0	0.0	0	0.0	1	100	1	100
Peinar /se	0.1	0	0.0	0	0.0	1	100	1	100
Pertenecer	0.1	0	0.0	0	0.0	1	100	1	100
Preparar /se	0.1	0	0.0	1	100	0	0.0	1	100
Recibir	0.1	0	0.0	0	0.0	1	100	1	100
Responder	0.1	0	0.0	1	100	0	0.0	1	100
Romper	0.1	0	0.0	0	0.0	1	100	1	100
Saltar	0.1	0	0.0	1	100	0	0.0	1	100
Secar /se	0.1	0	0.0	0	0.0	1	100	1	100
Temer	0.1	0	0.0	0	0.0	1	100	1	100
Tocar	0.1	1	100	0	0.0	0	0.0	1	100
visitar	0.1	1	100	0	0.0	0	0.0	1	100

Appendix Table 123. Token and type frequency of past form (5th/6th semester).

Verb	Relative Freq	Imperfect		Present		Preterit		Total	
	%	N	%	N	%	N	%	N	%
Ir	15.8	8	10.3	5	6.4	65	83.3	78	100
Ser	15.8	24	30.8	15	19.2	39	50.0	78	100
Tener	12.3	27	44.3	3	4.9	31	50.8	61	100
Estar	4.6	20	87.0	0	0.0	3	13.0	23	100

Hacer	3.0	2	13.3	2	13.3	11	73.3	15	100
Levantar /se	2.6	0	0.0	1	7.7	12	92.3	13	100
Comer	2.0	0	0.0	1	10.0	9	90.0	10	100
Poder	2.0	1	10.0	6	60.0	3	30.0	10	100
Haber	1.6	2	25.0	4	50.0	2	25.0	8	100
Regresar	1.6	1	12.5	0	0.0	7	87.5	8	100
Dar	1.4	2	28.6	0	0.0	5	71.4	7	100
Decir	1.2	0	0.0	0	0.0	6	100	6	100
Dormir	1.2	0	0.0	1	16.7	5	83.3	6	100
Saber	1.2	2	33.3	3	50.0	1	16.7	6	100
Caminar	1.0	0	0.0	2	40.0	3	60.0	5	100
Empezar	1.0	1	20.0	0	0.0	4	80.0	5	100
Pasar	1.0	1	20.0	0	0.0	4	80.0	5	100
Terminar	1.0	0	0.0	1	20.0	4	80.0	5	100
Tomar	1.0	0	0.0	1	20.0	4	80.0	5	100
Visitar	1.0	3	60.0	0	0.0	2	40.0	5	100
Decidir	0.8	0	0.0	0	0.0	4	100	4	100
Despertar /se	0.8	0	0.0	0	0.0	4	100	4	100
Jugar	0.8	4	100	0	0.0	0	0.0	4	100
Mirar	0.8	0	0.0	1	25.0	3	75.0	4	100
Necesitar	0.8	2	50.0	1	25.0	1	25.0	4	100
Vestir /se	0.8	0	0.0	0	0.0	4	100	4	100
Viajar	0.8	4	100	0	0.0	0	0.0	4	100
Vivir	0.8	4	100	0	0.0	0	0.0	4	100
Correr	0.6	3	100	0	0.0	0	0.0	3	100
Estudiar	0.6	0	0.0	0	0.0	3	100	3	100
Gustar	0.6	1	33.3	1	33.3	1	33.3	3	100
Hablar	0.6	0	0.0	0	0.0	3	100	3	100
Llamar /se	0.6	2	66.7	1	33.3	0	0.0	3	100
Nadar	0.6	2	66.7	0	0.0	1	33.3	3	100
Ocurrir	0.6	1	33.3	0	0.0	2	66.7	3	100
Pensar	0.6	2	66.7	0	0.0	1	33.3	3	100

Querer	0.6	3	100	0	0.0	0	0.0	3	100
Romper /se	0.6	0	0.0	1	33.3	2	66.7	3	100
Salir	0.6	0	0.0	0	0.0	3	100	3	100
Venir	0.6	1	33.3	1	33.3	1	33.3	3	100
Ver	0.6	1	33.3	0	0.0	2	66.7	3	100
Acostar /se	0.4	0	0.0	0	0.0	2	100	2	100
Aprender	0.4	0	0.0	1	50.0	1	50.0	2	100
Cansar /se	0.4	0	0.0	0	0.0	2	100	2	100
Cepillar /se	0.4	0	0.0	0	0.0	2	100	2	100
Cocinar	0.4	1	50.0	0	0.0	1	50.0	2	100
Comprar	0.4	1	50.0	0	0.0	1	50.0	2	100
Disfrutar	0.4	0	0.0	0	0.0	2	100	2	100
Duchar /se	0.4	0	0.0	0	0.0	2	100	2	100
Entender	0.4	1	50.0	1	50.0	0	0.0	2	100
Golpear	0.4	0	0.0	0	0.0	2	100	2	100
Gritar	0.4	1	50.0	0	0.0	1	50.0	2	100
Pedir	0.4	0	0.0	2	100	0	0.0	2	100
Quedar /se	0.4	0	0.0	0	0.0	2	100	2	100
Recibir	0.4	0	0.0	1	50.0	1	50.0	2	100
Trabajar	0.4	1	50.0	0	0.0	1	50.0	2	100
Traer	0.4	0	0.0	0	0.0	2	100	2	100
Afectar	0.2	0	0.0	1	100	0	0.0	1	100
Almorzar	0.2	0	0.0	0	0.0	1	100	1	100
Asistir	0.2	0	0.0	0	0.0	1	100	1	100
Asustar /se	0.2	0	0.0	0	0.0	1	100	1	100
Bañar /se	0.2	0	0.0	0	0.0	1	100	1	100
Beber	0.2	0	0.0	0	0.0	1	100	1	100
Cantar	0.2	0	0.0	0	0.0	1	100	1	100
Comenzar	0.2	0	0.0	0	0.0	1	100	1	100
Conducir	0.2	1	100	0	0.0	0	0.0	1	100
Conocer	0.2	0	0.0	1	100	0	0.0	1	100
Costar	0.2	0	0.0	1	100	0	0.0	1	100

Encantar	0.2	1	100	0	0.0	0	0.0	1	100
Escuchar	0.2	0	0.0	0	0.0	1	100	1	100
Existir	0.2	1	100	0	0.0	0	0.0	1	100
Experienciar	0.2	0	0.0	1	100	0	0.0	1	100
Hundir	0.2	0	0.0	0	0.0	1	100	1	100
Incluir	0.2	0	0.0	0	0.0	1	100	1	100
Lastimar /se	0.2	0	0.0	0	0.0	1	100	1	100
Llegar	0.2	0	0.0	0	0.0	1	100	1	100
Llevar	0.2	1	100	0	0.0	0	0.0	1	100
Montar	0.2	1	100	0	0.0	0	0.0	1	100
Morir	0.2	0	0.0	0	0.0	1	100	1	100
Olvidar	0.2	0	0.0	0	0.0	1	100	1	100
Parecer	0.2	1	100	0	0.0	0	0.0	1	100
Pegar	0.2	0	0.0	0	0.0	1	100	1	100
Pelear	0.2	1	100	0	0.0	0	0.0	1	100
Pretender	0.2	1	100	0	0.0	0	0.0	1	100
Reír	0.2	1	100	0	0.0	0	0.0	1	100
Relajar	0.2	0	0.0	1	100	0	0.0	1	100
Reunir /se	0.2	0	0.0	0	0.0	1	100	1	100
Sentir	0.2	0	0.0	0	0.0	1	100	1	100
Sorprender /se	0.2	0	0.0	0	0.0	1	100	1	100
Subir	0.2	0	0.0	0	0.0	1	100	1	100

Appendix Table 124. Token and type frequency of past form (7th/8th semester).

Verb	Relative Freq	Imperfect		Present		Preterit		Total	
	%	N	%	N	%	N	%	N	%
Ser	16.3	79	49.7	5	3.1	75	47.2	159	100
Tener	11.6	61	54.0	3	2.7	49	43.4	113	100
Ir	10.5	6	5.8	2	1.9	95	92.2	103	100
Estar	7.4	58	80.6	7	9.7	7	9.7	72	100

Haber	2.5	15	62.5	6	25.0	3	12.5	24	100
Empezar	2.3	0	0.0	1	4.5	21	95.5	22	100
Hacer	2.1	2	9.5	1	4.8	18	85.7	21	100
Despertar /se	1.9	0	0.0	1	5.3	18	94.7	19	100
Comer	1.7	1	5.9	0	0.0	16	94.1	17	100
Regresar	1.7	1	5.9	1	5.9	15	88.2	17	100
Saber	1.2	7	58.3	2	16.7	3	25.0	12	100
Tomar	1.2	1	8.3	0	0.0	11	91.7	12	100
Dar	1.1	0	0.0	2	18.2	9	81.8	11	100
Volver	1.1	0	0.0	0	0.0	11	100	11	100
Jugar	1.0	7	70.0	0	0.0	3	30.0	10	100
Necesitar	1.0	9	90.0	0	0.0	1	10.0	10	100
Pasar	1.0	2	20.0	1	10.0	7	70.0	10	100
Poder	1.0	6	60.0	1	10.0	3	30.0	10	100
Caer	0.9	1	11.1	1	11.1	7	77.8	9	100
Decir	0.9	2	22.2	1	11.1	6	66.7	9	100
Levantar /se	0.9	0	0.0	1	11.1	8	88.9	9	100
Mirar	0.9	1	11.1	1	11.1	7	77.8	9	100
Salir	0.9	0	0.0	1	11.1	8	88.9	9	100
Pensar	0.8	3	37.5	1	12.5	4	50.0	8	100
Comprar	0.7	0	0.0	1	14.3	6	85.7	7	100
Desayunar	0.7	0	0.0	0	0.0	7	100	7	100
Estudiar	0.7	0	0.0	2	28.6	5	71.4	7	100
Gustar	0.7	5	71.4	1	14.3	1	14.3	7	100
Hablar	0.7	3	42.9	2	28.6	2	28.6	7	100
Llegar	0.7	2	28.6	0	0.0	5	71.4	7	100
Aprender	0.6	1	16.7	0	0.0	5	83.3	6	100
Trabajar	0.6	1	16.7	2	33.3	3	50.0	6	100
Venir	0.6	0	0.0	0	0.0	6	100	6	100
Asistir	0.5	0	0.0	0	0.0	5	100	5	100
Dormir /se	0.5	0	0.0	0	0.0	5	100	5	100
Duchar /se	0.5	0	0.0	2	40.0	3	60.0	5	100

Leer	0.5	1	20.0	0	0.0	4	80.0	5	100
Llamar	0.5	0	0.0	2	40.0	3	60.0	5	100
Llevar	0.5	0	0.0	1	20.0	4	80.0	5	100
Ver	0.5	0	0.0	0	0.0	5	100	5	100
Caminar	0.4	0	0.0	0	0.0	4	100	4	100
Conocer	0.4	2	50.0	1	25.0	1	25.0	4	100
Decidir	0.4	0	0.0	0	0.0	4	100	4	100
Recibir	0.4	1	25.0	0	0.0	3	75.0	4	100
Viajar	0.4	3	75.0	0	0.0	1	25.0	4	100
Vivir	0.4	4	100	0	0.0	0	0.0	4	100
Acostar /se	0.3	0	0.0	0	0.0	3	100	3	100
Cepillar /se	0.3	0	0.0	0	0.0	3	100	3	100
Coger	0.3	0	0.0	0	0.0	3	100	3	100
Correr	0.3	0	0.0	0	0.0	3	100	3	100
Dejar	0.3	0	0.0	0	0.0	3	100	3	100
Entender	0.3	0	0.0	0	0.0	3	100	3	100
Entrar	0.3	0	0.0	0	0.0	3	100	3	100
Intentar	0.3	0	0.0	0	0.0	3	100	3	100
Morir	0.3	0	0.0	0	0.0	3	100	3	100
Parar	0.3	0	0.0	0	0.0	3	100	3	100
Querer	0.3	2	66.7	1	33.3	0	0.0	3	100
Sentir	0.3	1	33.3	0	0.0	2	66.7	3	100
Subir	0.3	0	0.0	0	0.0	3	100	3	100
Terminar	0.3	0	0.0	0	0.0	3	100	3	100
Vestir /se	0.3	0	0.0	1	33.3	2	66.7	3	100
Abrir	0.2	1	50.0	1	50.0	0	0.0	2	100
Ayudar	0.2	0	0.0	0	0.0	2	100	2	100
Bajar	0.2	0	0.0	0	0.0	2	100	2	100
Cocinar	0.2	2	100	0	0.0	0	0.0	2	100
Conducir	0.2	0	0.0	0	0.0	2	100	2	100
Descansar	0.2	0	0.0	0	0.0	2	100	2	100
Despedir	0.2	0	0.0	0	0.0	2	100	2	100

Discutir	0.2	0	0.0	0	0.0	2	100	2	100
Encontrar	0.2	0	0.0	0	0.0	2	100	2	100
Ganar	0.2	0	0.0	0	0.0	2	100	2	100
Limpiar	0.2	1	50.0	0	0.0	1	50.0	2	100
Luchar	0.2	1	50.0	0	0.0	1	50.0	2	100
Notar	0.2	0	0.0	0	0.0	2	100	2	100
Ocurrir	0.2	0	0.0	0	0.0	2	100	2	100
Preguntar	0.2	0	0.0	0	0.0	2	100	2	100
Quedar	0.2	2	100	0	0.0	0	0.0	2	100
Quedar /se	0.2	0	0.0	0	0.0	2	100	2	100
Sacar	0.2	1	50.0	0	0.0	1	50.0	2	100
Sobrevivir	0.2	0	0.0	0	0.0	2	100	2	100
Traer	0.2	1	50.0	0	0.0	1	50.0	2	100
Visitar	0.2	1	50.0	0	0.0	1	50.0	2	100
Acabar	0.1	0	0.0	0	0.0	1	100	1	100
Agarrar	0.1	0	0.0	0	0.0	1	100	1	100
Almorzar	0.1	0	0.0	0	0.0	1	100	1	100
Amar	0.1	1	100	0	0.0	0	0.0	1	100
Amarrar	0.1	0	0.0	0	0.0	1	100	1	100
Apagar	0.1	1	100	0	0.0	0	0.0	1	100
Asustar	0.1	0	0.0	0	0.0	1	100	1	100
Asustar/se	0.1	0	0.0	0	0.0	1	100	1	100
Atrever	0.1	0	0.0	0	0.0	1	100	1	100
Bañar/se	0.1	0	0.0	0	0.0	1	100	1	100
Beber	0.1	0	0.0	0	0.0	1	100	1	100
Caber	0.1	1	100	0	0.0	0	0.0	1	100
Casar /se	0.1	0	0.0	0	0.0	1	100	1	100
Celebrar	0.1	0	0.0	0	0.0	1	100	1	100
Cenar	0.1	0	0.0	0	0.0	1	100	1	100
Chequear	0.1	0	0.0	0	0.0	1	100	1	100
Continuar	0.1	0	0.0	0	0.0	1	100	1	100
Convertir /se	0.1	0	0.0	1	100	0	0.0	1	100

Crash	0.1	0	0.0	0	0.0	1	100	1	100
Creer	0.1	1	100	0	0.0	0	0.0	1	100
Demorar	0.1	0	0.0	0	0.0	1	100	1	100
Desaparecer	0.1	0	0.0	1	100	0	0.0	1	100
Destruir	0.1	1	100	0	0.0	0	0.0	1	100
Disfrutar	0.1	0	0.0	0	0.0	1	100	1	100
Divertir	0.1	1	100	0	0.0	0	0.0	1	100
Divorciar /se	0.1	0	0.0	0	0.0	1	100	1	100
Doler	0.1	1	100	0	0.0	0	0.0	1	100
Durar	0.1	0	0.0	0	0.0	1	100	1	100
Echar	0.1	0	0.0	1	100	0	0.0	1	100
Encantar	0.1	1	100	0	0.0	0	0.0	1	100
Escribir	0.1	0	0.0	0	0.0	1	100	1	100
Escuchar	0.1	0	0.0	0	0.0	1	100	1	100
Explicar	0.1	0	0.0	0	0.0	1	100	1	100
Forzar	0.1	0	0.0	0	0.0	1	100	1	100
Golpear	0.1	0	0.0	0	0.0	1	100	1	100
Inspirar	0.1	0	0.0	0	0.0	1	100	1	100
Lavar	0.1	0	0.0	0	0.0	1	100	1	100
Mandar	0.1	0	0.0	0	0.0	1	100	1	100
Manejar	0.1	1	100	0	0.0	0	0.0	1	100
Maquillar /se	0.1	0	0.0	1	100	0	0.0	1	100
Nacer	0.1	0	0.0	0	0.0	1	100	1	100
Obtener	0.1	0	0.0	0	0.0	1	100	1	100
Oir	0.1	1	100	0	0.0	0	0.0	1	100
Olvidar /se	0.1	0	0.0	0	0.0	1	100	1	100
Organizar	0.1	1	100	0	0.0	0	0.0	1	100
Parecer	0.1	0	0.0	0	0.0	1	100	1	100
Poner	0.1	0	0.0	0	0.0	1	100	1	100
Practicar	0.1	0	0.0	0	0.0	1	100	1	100
Prender	0.1	1	100	0	0.0	0	0.0	1	100
Preocupar	0.1	0	0.0	0	0.0	1	100	1	100

Preparar /se	0.1	0	0.0	0	0.0	1	100	1	100
Puntar	0.1	0	0.0	0	0.0	1	100	1	100
Quemar	0.1	0	0.0	0	0.0	1	100	1	100
Recoger	0.1	0	0.0	0	0.0	1	100	1	100
Recordar	0.1	0	0.0	0	0.0	1	100	1	100
Relajar	0.1	0	0.0	0	0.0	1	100	1	100
Robar	0.1	0	0.0	0	0.0	1	100	1	100
Salvar	0.1	0	0.0	0	0.0	1	100	1	100
Secar /se	0.1	0	0.0	0	0.0	1	100	1	100
Shower	0.1	0	0.0	0	0.0	1	100	1	100
Tocar	0.1	0	0.0	0	0.0	1	100	1	100
Usar	0.1	0	0.0	1	100	0	0.0	1	100
vender	0.1	0	0.0	0	0.0	1	100	1	100

Appendix Table 125. Token and type frequency of past form (near native-speaker group).

Verb	Relative Freq	Imperfect		Imperfect Prog.		Other		Perfect		Preterit		Preterit Prog.		Total	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Estar	7.8	57	73.1	3	3.8	1	1.3	0	0.0	16	20.5	1	1.3	78	100
Tener	7.7	43	55.8	1	1.3	0	0.0	1	1.3	32	41.6	0	0.0	77	100
Ser	6.4	42	65.6	0	0.0	2	3.1	1	1.6	19	29.7	0	0.0	64	100
Ir /se	5.8	0	0.0	1	1.7	1	1.7	1	1.7	55	94.8	0	0.0	58	100
Hacer	3.3	2	6.1	3	9.1	0	0.0	2	6.1	25	75.8	1	3.0	33	100
Empezar	3.1	0	0.0	0	0.0	1	3.2	0	0.0	29	93.5	1	3.2	31	100
Dar	2.9	1	3.4	0	0.0	1	3.4	0	0.0	27	93.1	0	0.0	29	100
Ver	2.7	1	3.7	2	7.4	0	0.0	0	0.0	24	88.9	0	0.0	27	100
Pasar	2.4	3	12.5	0	0.0	0	0.0	1	4.2	19	79.2	1	4.2	24	100
Decir /se	2.1	0	0.0	0	0.0	0	0.0	0	0.0	21	100	0	0.0	21	100
Despertar/se	2.0	0	0.0	0	0.0	0	0.0	2	10.0	18	90.0	0	0.0	20	100
Querer	1.8	16	88.9	0	0.0	1	5.6	0	0.0	1	5.6	0	0.0	18	100
Preparar /se	1.7	0	0.0	1	5.9	0	0.0	0	0.0	16	94.1	0	0.0	17	100

Venir /se	1.7	4	23.5	0	0.0	0	0.0	1	5.9	11	64.7	1	5.9	17	100
Haber	1.5	13	86.7	0	0.0	1	6.7	0	0.0	1	6.7	0	0.0	15	100
Llegar	1.5	0	0.0	0	0.0	0	0.0	1	6.7	13	86.7	1	6.7	15	100
Comer	1.4	0	0.0	1	7.1	1	7.1	0	0.0	12	85.7	0	0.0	14	100
Dormir /se	1.4	0	0.0	4	28.6	2	14.3	0	0.0	7	50.0	1	7.1	14	100
Llevar	1.2	6	50.0	0	0.0	0	0.0	0	0.0	6	50.0	0	0.0	12	100
Salir	1.2	0	0.0	0	0.0	1	8.3	0	0.0	11	91.7	0	0.0	12	100
Hablar	1.1	1	9.1	2	18.2	0	0.0	0	0.0	8	72.7	0	0.0	11	100
Poder	1.1	4	36.4	0	0.0	0	0.0	0	0.0	7	63.6	0	0.0	11	100
Saber	1.1	11	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	11	100
Cocinar	1.0	1	10.0	0	0.0	0	0.0	0	0.0	9	90.0	0	0.0	10	100
Vivir	1.0	7	70.0	2	20.0	0	0.0	0	0.0	1	10.0	0	0.0	10	100
Llamar /se	0.9	0	0.0	1	11.1	0	0.0	0	0.0	8	88.9	0	0.0	9	100
Regresar	0.9	0	0.0	0	0.0	1	11.1	0	0.0	8	88.9	0	0.0	9	100
Parar /se	0.8	1	12.5	0	0.0	0	0.0	0	0.0	7	87.5	0	0.0	8	100
Terminar	0.8	0	0.0	0	0.0	1	12.5	0	0.0	7	87.5	0	0.0	8	100
Acostar /se	0.7	1	14.3	0	0.0	0	0.0	0	0.0	6	85.7	0	0.0	7	100
Levanter /se	0.7	0	0.0	0	0.0	0	0.0	0	0.0	7	100	0	0.0	7	100
Quedar /se	0.7	1	14.3	0	0.0	0	0.0	0	0.0	6	85.7	0	0.0	7	100
Robar	0.7	0	0.0	0	0.0	0	0.0	0	0.0	7	100	0	0.0	7	100
Volver	0.7	0	0.0	0	0.0	0	0.0	0	0.0	7	100	0	0.0	7	100
Aprovechar	0.6	1	16.7	0	0.0	0	0.0	0	0.0	5	83.3	0	0.0	6	100
Enseñar	0.6	0	0.0	0	0.0	0	0.0	1	16.7	5	83.3	0	0.0	6	100
Esperar	0.6	1	16.7	2	33.3	2	33.3	0	0.0	1	16.7	0	0.0	6	100
Poner /se	0.6	0	0.0	0	0.0	0	0.0	0	0.0	6	100	0	0.0	6	100
Conducir	0.5	0	0.0	3	60.0	0	0.0	1	20.0	1	20.0	0	0.0	5	100
Decidir	0.5	0	0.0	0	0.0	0	0.0	0	0.0	5	100	0	0.0	5	100
Dejar	0.5	1	20.0	0	0.0	1	20.0	0	0.0	3	60.0	0	0.0	5	100
Desayunar	0.5	0	0.0	0	0.0	0	0.0	1	20.0	4	80.0	0	0.0	5	100
Jugar	0.5	2	40.0	0	0.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100
Leer	0.5	0	0.0	0	0.0	0	0.0	1	20.0	4	80.0	0	0.0	5	100
Limpiar	0.5	1	20.0	1	20.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100

Pedir	0.5	0	0.0	0	0.0	0	0.0	0	0.0	5	100	0	0.0	5	100
Pensar	0.5	2	40.0	0	0.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100
Subir /se	0.5	1	20.0	0	0.0	0	0.0	0	0.0	4	80.0	0	0.0	5	100
Tomar	0.5	0	0.0	0	0.0	1	20.0	0	0.0	4	80.0	0	0.0	5	100
Contar	0.4	0	0.0	0	0.0	0	0.0	2	50.0	2	50.0	0	0.0	4	100
Escribir	0.4	1	25.0	0	0.0	0	0.0	0	0.0	3	75.0	0	0.0	4	100
Perder	0.4	0	0.0	0	0.0	0	0.0	0	0.0	4	100	0	0.0	4	100
Preguntar	0.4	0	0.0	0	0.0	0	0.0	0	0.0	4	100	0	0.0	4	100
sentir	0.4	3	75.0	0	0.0	0	0.0	0	0.0	1	25.0	0	0.0	4	100
Acabar	0.3	0	0.0	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0	3	100
Acercar/se	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Almorzar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Andar	0.3	0	0.0	2	66.7	0	0.0	0	0.0	1	33.3	0	0.0	3	100
Aprender	0.3	0	0.0	1	33.3	0	0.0	1	33.3	1	33.3	0	0.0	3	100
Bajar /se	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Cenar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Compartir	0.3	3	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100
Comprar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Encontrar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Gustar	0.3	3	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100
Intentar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Mandar	0.3	0	0.0	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0	3	100
Marcar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Notar	0.3	2	66.7	0	0.0	0	0.0	0	0.0	1	33.3	0	0.0	3	100
Organizar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
seguir	0.3	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	2	66.7	3	100
Suceder	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Trabajar	0.3	0	0.0	1	33.3	0	0.0	0	0.0	2	66.7	0	0.0	3	100
Usar	0.3	1	33.3	0	0.0	0	0.0	0	0.0	2	66.7	0	0.0	3	100
Vestir /se	0.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
atrasar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Calmar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100

Celebrar	0.2	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Cepillar/se	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Coger	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Colgar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Conseguir	0.2	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	2	100
Creer	0.2	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Cruzar	0.2	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Duchar /se	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Durar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Estudiar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Llorar	0.2	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Llover	0.2	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Maquillar /se	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Mirar	0.2	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Reconocer	0.2	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Tardar /se	0.2	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Tocar	0.2	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Abrazar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Aguantar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Alegrar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Apuntar	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Arreglar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Atender	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Ayudar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Bañar /se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Beber	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Buscar	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Cambiar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Caminar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100
Causar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Charlar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100
Chequear	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100

Conocer	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Contestar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Continuar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Corregir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Costar	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Crear	0.1	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Crecer	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Cuidar	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Cumplir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Devolver /se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Dictar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Diseñar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Disfrutar	0.1	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Distanciar	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Divorciar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Doler	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Echar	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Editar	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Encender	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Enojar /se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Entender	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Entrar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Escandalizar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Escuchar	0.1	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Explorar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Fijar /se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Frenar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Hornear	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Ignorar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Implorar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Ingresar	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Juntar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Lamer	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Lavar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Manejar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Meditar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Meter	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Mostrar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Necesitar	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Olvidar	0.1	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Parecer	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Parquear	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Permitir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Pitar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Practicar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Prestar	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Quebrar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Quitar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Recibir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Recoger	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Reflexionar	0.1	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Reir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Responder	0.1	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Reunir/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Revisar	0.1	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Romper	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Sacar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Salvar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Sentar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Separar	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Sorprender	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Traer	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Traumatizar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Tropezar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Vender	0.1	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Visitar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Appendix Table 126. Token and type frequency of past form (native-speaker group).

Verb	Relative Freq	Imperfect		Imperfect Prog.		Other		Perfect		Present		Preterit		Preterit Prog.		Total	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Ser	10.0	178	56.0	0	0.0	1	0.3	2	0.6	5	1.6	132	41.5	0	0.0	318	100
Tener	7.0	137	61.7	2	0.9	0	0.0	6	2.7	4	1.8	73	32.9	0	0.0	222	100
Estar	6.3	151	75.9	6	3.0	0	0.0	0	0.0	2	1.0	38	19.1	2	1.0	199	100
Ir/se	5.6	16	9.0	5	2.8	2	1.1	1	0.6	0	0.0	154	86.5	0	0.0	178	100
Hacer	3.9	19	15.3	8	6.5	0	0.0	7	5.6	0.	0.0	85	68.5	5	4.0	124	100
Decir/se	2.4	4	5.3	1	1.3	0	0.0	0	0.0	15	19.7	56	73.7	0	0.0	76	100
Empezar	2.2	2	2.8	1	1.4	0	0.0	0	0.0	5	7.0	62	87.3	1	1.4	71	100
Pasar	2.0	4	6.3	1	1.6	0	0.0	4	6.3	1	1.6	52	81.3	2	3.1	64	100
Llegar	2.0	1	1.6	1	1.6	0	0.0	2	3.2	2	3.2	56	88.9	1	1.6	63	100
Dar	2.0	5	8.1	0	0.0	1	1.6	0	0.0	0	0.0	55	88.7	1	1.6	62	100
Salir	1.8	4	7.1	0	0.0	2	3.6	0	0.0	1	1.8	44	78.6	5	8.9	56	100
Ver	1.8	5	8.9	3	5.4	1	1.8	0	0.0	2	3.6	41	73.2	4	7.1	56	100
Despertar/se	1.6	0	0.0	0	0.0	1	1.9	3	5.8	0	0.0	48	92.3	0	0.0	52	100
Venir/se	1.4	12	27.3	0	0.0	0	0.0	1	2.3	0	0.0	30	68.2	1	2.3	44	100
Poder	1.3	20	48.8	0	0.0	0	0.0	0	0.0	0	0.0	21	51.2	0	0.0	41	100
Preparar/se	1.3	1	2.4	1	2.4	0	0.0	0	0.0	0	0.0	39	95.1	0	0.0	41	100
Querer	1.3	36	87.8	0	0.0	0	0.0	0	0.0	2	4.9	3	7.3	0	0.0	41	100
Haber	1.3	35	87.5	0	0.0	0	0.0	0	0.0	1	2.5	4	10.0	0	0.0	40	100
Poner/se	1.2	1	2.6	0	0.0	0	0.0	0	0.0	1	2.6	37	94.9	0	0.0	39	100
Levantar/se	1.2	0	0.0	0	0.0	0	0.0	0	0.0	1	2.7	36	97.3	0	0.0	37	100
Comer	1.1	1	2.8	2	5.6	1	2.8	1	2.8	0	0.0	31	86.1	0	0.0	36	100
Tomar	1.1	4	11.4	0	0.0	1	2.9	0	0.0	0	0.0	29	82.9	1	2.9	35	100
Terminar	0.9	2	6.7	0	0.0	1	3.3	0	0.0	0	0.0	27	90.0	0	0.0	30	100
Sentir	0.9	12	41.4	1	3.4	0	0.0	0	0.0	2	6.9	14	48.3	0	0.0	29	100
Quedar/se	0.9	5	18.5	2	7.4	0	0.0	0	0.0	0	0.0	17	63.0	3	11.1	27	100
Dormir/se	0.8	1	4.0	4	16.0	2	8.0	0	0.0	0	0.0	17	68.0	1	4.0	25	100
Hablar	0.8	3	12.0	2	8.0	0	0.0	0	0.0	0	0.0	17	68.0	3	12.0	25	100

Volver	0.8	0	0.0	1	4.0	0	0.0	0	0.0	0	0.0	24	96.0	0	0.0	25	100
Jugar	0.8	8	33.3	9	37.5	0	0.0	0	0.0	0	0.0	6	25.0	1	4.2	24	100
Pensar	0.8	9	37.5	1	4.2	0	0.0	0	0.0	1	4.2	13	54.2	0	0.0	24	100
Llevar	0.7	10	43.5	0	0.0	0	0.0	0	0.0	0	0.0	12	52.2	1	4.3	23	100
Vivir	0.7	16	69.6	4	17.4	0	0.0	1	4.3	0	0.0	2	8.7	0	0.0	23	100
Saber	0.7	21	95.5	0	0.0	0	0.0	0	0.0	0	0.0	1	4.5	0	0.0	22	100
Leer	0.6	1	5.0	0	0.0	0	0.0	1	5.0	0	0.0	17	85.0	1	5.0	20	100
Parar/se	0.6	2	11.1	0	0.0	0	0.0	1	5.6	2	11.1	13	72.2	0	0.0	18	100
Encontrar	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	17	100	0	0.0	17	100
Cocinar	0.5	1	6.3	0	0.0	0	0.0	0	0.0	0	0.0	15	93.8	0	0.0	16	100
Llamarse	0.5	3	18.8	1	6.3	0	0.0	0	0.0	0	0.0	12	75.0	0	0.0	16	100
Seguir	0.5	1	6.3	0	0.0	0	0.0	0	0.0	1	6.3	2	12.5	12	75.0	16	100
Subir/se	0.5	2	12.5	0	0.0	0	0.0	0	0.0	0	0.0	14	87.5	0	0.0	16	100
Enseñar	0.5	0	0.0	0	0.0	1	0.0	1	6.7	0	0.0	14	93.3	0	0.0	15	100
Decidir	0.4	1	7.1	0	0.0	0	0.0	0	0.0	0	0.0	13	92.9	0	0.0	14	100
Gustar	0.4	9	64.3	0	0.0	0	0.0	0	0.0	0	0.0	5	35.7	0	0.0	14	100
Regresar	0.4	0	0.0	0	0.0	1	7.1	0	0.0	0	0.0	13	92.9	0	0.0	14	100
Desayunar	0.4	0	0.0	0	0.0	0	0.0	1	7.7	0	0.0	12	92.3	0	0.0	13	100
Acostar/se	0.4	1	8.3	0	0.0	0	0.0	0	0.0	0	0.0	11	91.7	0	0.0	12	100
Dejar	0.4	1	8.3	0	0.0	1	8.3	0	0.0	1	8.3	9	75.0	0	0.0	12	100
Almorzar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	11	100	0	0.0	11	100
Bañar/se	0.3	0	0.0	0	0.0	1	9.1	0	0.0	0	0.0	10	90.9	0	0.0	11	100
Caminar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	10	90.9	1	9.1	11	100
Comprar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	11	100	0	0.0	11	100
Cruzar	0.3	2	18.2	3	27.3	0	0.0	0	0.0	1	9.1	5	45.5	0	0.0	11	100
Esperar	0.3	3	27.3	5	45.5	2	18.2	0	0.0	0	0.0	1	9.1	0	0.0	11	100
Trabajar	0.3	0	0.0	2	18.8	0	0.0	1	9.1	0	0.0	7	63.6	1	9.1	11	100
Contar	0.3	0	0.0	1	10.0	0	0.0	2	20.0	0	0.0	7	70.0	0	0.0	10	100
Entrar	0.3	0	0.0	1	10.0	0	0.0	0	0.0	0	0.0	9	90.0	0	0.0	10	100
Parecer	0.3	4	40.0	0	0.0	0	0.0	0	0.0	0	0.0	6	60.0	0	0.0	10	100
Preguntar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	1	10.0	9	90.0	0	0.0	10	100
Tratar	0.3	2	20.0	1	10.0	0	0.0	0	0.0	1	10.0	6	60.0	0	0.0	10	100

Acercar/se	0.3	0	0.0	0	0.0	0	0.0	0	0.0	2	22.2	7	77.8	0	0.0	9	100
Caer	0.3	2	22.2	0	0.0	0	0.0	0	0.0	1	11.1	6	66.7	0	0.0	9	100
Mandar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	1	11.1	8	88.9	0	0.0	9	100
Mirar	0.3	3	33.3	0	0.0	0	0.0	0	0.0	2	22.2	3	33.3	1	11.1	9	100
Pedir	0.3	0	0.0	0	0.0	0	0.0	1	11.1	0	0.0	8	88.9	0	0.0	9	100
Tocar	0.3	3	33.3	0	0.0	0	0.0	0	0.0	2	22.2	4	44.4	0	0.0	9	100
Vestir/se	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	9	100	0	0.0	9	100
Cenar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	100	0	0.0	8	100
Conducir	0.3	1	12.5	3	37.5	0	0.0	1	12.5	0	0.0	3	37.5	0	0.0	8	100
Duchar/se	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	100	0	0.0	8	100
Intentar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	100	0	0.0	8	100
Lavar/se	0.3	1	12.5	0	0.0	0	0.0	0	0.0	0	0.0	7	87.5	0	0.0	8	100
Lograr	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	100	0	0.0	8	100
Necesitar	0.3	8	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	100
Revisar	0.3	0	0.0	1	12.5	0	0.0	0	0.0	0	0.0	5	62.5	2	25.0	8	100
Robar	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	100	0	0.0	8	100
Bajar/se	0.2	0	0.0	0	0.0	0	0.0	1	14.3	0	0.0	6	85.7	0	0.0	7	100
Cambiar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	100	0	0.0	7	100
Corregir	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	85.7	1	14.3	7	100
Costar	0.2	2	28.6	0	0.0	0	0.0	0	0.0	0	0.0	5	71.4	0	0.0	7	100
Recoger	0.2	3	42.9	0	0.0	0	0.0	0	0.0	0	0.0	4	57.1	0	0.0	7	100
Abrir	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100	0	0.0	6	100
Andar	0.2	2	33.3	2	33.3	0	0.0	0	0.0	0	0.0	2	33.3	0	0.0	6	100
Aparecer	0.2	1	16.7	0	0.0	0	0.0	0	0.0	2	33.3	3	50.0	0	0.0	6	100
Aprender	0.2	0	0.0	2	33.3	0	0.0	2	33.3	0	0.0	2	33.3	0	0.0	6	100
Aprovechar	0.2	1	16.7	0	0.0	0	0.0	0	0.0	0	0.0	5	83.3	0	0.0	6	100
Buscar	0.2	0	0.0	3	50.0	0	0.0	0	0.0	0	0.0	3	50.0	0	0.0	6	100
Conseguir	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	16.7	5	83.3	0	0.0	6	100
Estudiar	0.2	2	33.3	0	0.0	0	0.0	0	0.0	1	16.7	3	50.0	0	0.0	6	100
Manejar	0.2	3	50.0	1	16.7	0	0.0	0	0.0	0	0.0	2	33.3	0	0.0	6	100
Ocurrir	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	16.7	5	83.3	0	0.0	6	100
Quitar	0.2	2	33.3	0	0.0	0	0.0	0	0.0	0	0.0	4	66.7	0	0.0	6	100

Sacar	0.2	1	16.7	0	0.0	0	0.0	0	0.0	0	0.0	5	83.3	0	0.0	6	100
Sentar/se	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100	0	0.0	6	100
Suceder	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100	0	0.0	6	100
Acabar	0.2	1	20.0	0	0.0	0	0.0	0	0.0	2	40.0	2	40.0	0	0.0	5	100
Agarrar	0.2	1	20.0	1	20.0	0	0.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100
Atender	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	100	0	0.0	5	100
Ayudar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	100	0	0.0	5	100
Beber	0.2	1	20.0	1	20.0	0	0.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100
Echar	0.2	2	40.0	0	0.0	0	0.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100
Escribir	0.2	1	20.0	0	0.0	0	0.0	0	0.0	0	0.0	4	80.0	0	0.0	5	100
Escuchar	0.2	0	0.0	0	0.0	0	0.0	1	20.0	0	0.0	4	80.0	0	0.0	5	100
Explicar	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	100	0	0.0	5	100
Limpiar	0.2	1	20.0	1	20.0	0	0.0	0	0.0	0	0.0	3	60.0	0	0.0	5	100
Notar	0.2	3	60.0	0	0.0	0	0.0	0	0.0	0	0.0	2	40.0	0	0.0	5	100
Perder	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	100	0	0.0	5	100
Apagar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100	0	0.0	4	100
Cepillar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100	0	0.0	4	100
Conversar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	50.0	2	50.0	4	100
Creer	0.1	4	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100
Entender	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100	0	0.0	4	100
Llorar	0.1	1	25.0	3	75.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100
Meter	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	25.0	3	75.0	0	0.0	4	100
NA	0.1	0	0.0	0	0.0	4	100	0	0.0	0	0.0	0	0.0	0	0.0	4	100
Olvidar	0.1	1	25.0	0	0.0	0	0.0	1	25.0	0	0.0	2	50.0	0	0.0	4	100
Organizar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	100	0	0.0	4	100
Practicar	0.1	3	75.0	0	0.0	0	0.0	0	0.0	0	0.0	1	25.0	0	0.0	4	100
Usar	0.1	2	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	50.0	0	0.0	4	100
Acompañar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Alcanzar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Apuntar	0.1	0	0.0	1	33.3	0	0.0	1	33.3	0	0.0	1	33.3	0	0.0	3	100
Arrastrar	0.1	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	0	0.0	3	100
Arreglar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100

Asustar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Coger	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Colgar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Compartir	0.1	3	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100
Cubrir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Devolver/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Doblar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0	3	100
Doler	0.1	1	33.3	0	0.0	0	0.0	0	0.0	1	33.3	1	33.3	0	0.0	3	100
Durar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Funcionar	0.1	1	33.3	0	0.0	0	0.0	0	0.0	2	66.7	0	0.0	0	0.0	3	100
Gritar	0.1	1	33.3	0	0.0	0	0.0	0	0.0	2	66.7	0	0.0	0	0.0	3	100
Marcar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Prender	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Recibir	0.1	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	2	66.7	0	0.0	3	100
Romper	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Servir	0.1	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	2	66.7	0	0.0	3	100
Sonar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0	3	100
Tardar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0.0	3	100
Traer	0.1	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	2	66.7	0	0.0	3	100
Alistar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Apretar	0.1	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Atacar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Atracar	0.1	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Atrasar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Botar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Calmar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Celebrar	0.1	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Comenzar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	2	100
Conectar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Conocer	0.1	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Continuar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0	2	100
Crecer	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100

Cumplir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Desmayar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Dirigir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Disfrutar	0.1	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Emborrachar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Enojar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Entregar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Entrevistar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Enviar	0.1	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Fluir	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Golpear	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	2	100
Iniciar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Invitar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Llover	0.1	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Maquillar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Molestar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Mostrar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	2	100
Ocupar	0.1	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Ofrecer	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Pagar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Pegar	0.1	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100
Peinar/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Prestar	0.1	0	0.0	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Reaccionar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Reconocer	0.1	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	2	100
Regañar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Reunir/se	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Separar	0.1	1	50.0	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100
Soler	0.1	2	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100
Tirar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0.0	2	100
Tropezar	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	2	100
Abandonar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Abrazar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Aburrir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Acariciar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Acceder	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Accidentar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Aceptar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Acordar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Acudir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Afeitar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Agachar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Aguantar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Ahogar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Alegrar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Alterar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Alternar	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Alzar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Amenazar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Anotar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Aplaudir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Aplicar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Apoyar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Aproximar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Arranchar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Ascender	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Asistir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Aterrizar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Brincar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Bromear	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Calentar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Cantar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Causar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Cerrar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100

Charlar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100
Chequear	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Citar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Cobrar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Comprobar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Confesar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Consolar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Contactar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Contestar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Correr	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Crear	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Cuidar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Desbaratar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Desesperar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	1	100
Despegar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Detener	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Dictar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Dignar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Diseñar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Disgregar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Dislocar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Distanciar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Divorciar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Editar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Emocionar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Empacar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Enamorar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Encantar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Encender	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Enfocar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Enfrentar/se	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Enhebrar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100

Enjabonar/se	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Escandalizar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Escapar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Escoger	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Estacionar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Estirar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Evacuar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Explorar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Extender	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Fijar/se	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Frecuentar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Frenar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Gastar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Girar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Guardar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Guiar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Hallar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Hornear	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Ignorar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Implorar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Importar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Imprimir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Inclinar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Influir	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Ingresar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Juntar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Lamer	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Lanzar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Meditar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Mezclar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Moler	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Morir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Mover	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Odiar	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Ordenar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Parquear	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Participar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Partir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Permitir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Perseguir	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Pitar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Plantar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Preferir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Preocupar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Presionar	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Probar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Quebrar/se	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Realizar	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	100
Recordar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Recorrer	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Reflexionar	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Reir	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Repasar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Resbalar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Resistir	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Responder	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Resultar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Retar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Retirar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Revolcar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Rodar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	0	0.0	1	100
Sacudir/se	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Saludar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Salvar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Sorprender	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Sospechar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Tender	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Textear	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Traumatizar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Tumbar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100
Vender	0.0	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100
Visitar	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0.0	1	100

Appendix C.4.3 Verb frequency and strength of association with past forms across course-levels (oral prompt task)

Appendix Table 127. Verbs with highest relative frequencies most strongly associated with each past form (oral prompt task).

Past Form	1st semester Time 1	1st semester Time 2	2nd semester	3rd semester	4th semester	5th/6th semester	7th/8th semester	Near native speakers	Native speakers
PRETERIT	Pasar	Hacer	Ir	Asistir	Regresar	Decir	Volver	Decir /se	Levantar/se
	Disfrutar	Tomarse	Levantar /se	Hacer	Duchar /se	Levantar/se	Empezar	Ir /se	Preparar/se
		Caer	Despertar/se	Romper	Ir	Comer	Despertar /se	Preparar /se	Poner/se
		Correr	Desayunar	Estudiar	ver	Regresar	Comer	Empezar	Despertar/se
		Desayunar	Comer	Salir	Levantar /se	Ir	Ir	Dar	Llegar
		Despertar/se	Estudiar	Ir /se	Necesitar	Dormir	Tomar	Salir	Dar
		Golpear	Mirar	Duchar/se	Tomar	Empezar	Regresar	Despertar/se	Empezar
		Montar	Hacer	Ver	Poner	Pasar	Hacer	Cocinar	Ir/se
		Lastimar	Querer	Dormir/se	Despertar /se	Terminar	Dar	Ver	Comer
		Llegar	Ir	Despertar/se	Comer	Tomar	Pasar	Llegar	Tomar
IMPERF	Jugar	Trabajar	Estar	Gustar	Gustar	Estar	Necesitar	Saber	Querer
			Tener	Estar	Querer	Visitar	Estar	Querer	Haber
				Tener	Estar		Jugar	Haber	Estar
							Haber	Estar	Tener
							Poder	Vivir	Ser

							Saber	Ser	
							Tener	Tener	
							Ser	Llevar	
PRESENT	Poder	Ver	Pensar	Mirar	Poder	Poder			
	Querer	Estudiar	Dormir /se	Comer		Saber			
	Vivir	Dormir	Ver			Haber			
	Duchar/se	Trabajar	Querer						
	Escribir	Levantar/se							
	Estacionar								
	Nadar								
	Recordar								
	Tomar								
	Comer								

Appendix C.4.4 Token and type frequency of regular and irregular preterit and imperfect across course-levels (oral prompt task)

Regular morphology

Appendix Table 128. Type and token frequency of regular preterit morphology (1st semester-Time 1).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	9	75%	13	81%	1st pl.	-amos	0	0%	0	0%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	--	0	--
	3rd	-ó	3	25%	3	19%	2nd/3rd pl.	-aron	0	0%	0	0%
	Total		12	100%	16	100%	Total		0	0%	0	0%
-er/ir verbs	1st sg.	-í	2	67%	2	67%	1st pl.	-imos	0	0%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	1	33%	1	33%	2nd/3rd pl.	-ieron	0	0%	0	0%
	Total		3	100%	3	100%	Total		0	0%	0	0%

Appendix Table 129. Type and token frequency of regular imperfect morphology (1st semester-Time 1).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	3	100%	4	100%	1st pl.	-ábamos	0	0%	0	0%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	2	0%	0	0%
	Total		3	100%	4	100%	Total		2	0%	0	0%
-er/ir verbs	1st /3rd sg.	-ía	2	100%	4	100%	1st pl.	-íamos	0	0%	0	0%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	0	0%
	Total		2	100%	4	100%	Total		0	0%	0	0%

Appendix Table 130. Type and token frequency of regular preterit morphology (1st semester-Time 2).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	18	95%	27	96%	1st pl.	-amos	7	70%	8	73%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	1	5%	1	4%	2nd/3rd pl.	-aron	3	30%	3	27%
	Total		19	100%	28	100%	Total		10	100%	11	100%
-er/ir verbs	1st sg.	-í	6	86%	10	91%	1st pl.	-imos	2	67%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	1	14%	1	9%	2nd/3rd pl.	-ieron	1	33%	0	0%
	Total		7	100%	11	100%	Total		3	100%	0	0%

Appendix Table 131. Type and token frequency of regular imperfect morphology (1st semester-Time 2).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	2	100%	2	100%	1st pl.	-ábamos	0	0%	0	0%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	0	0%	0	0%
	Total		2	100%	2	100%	Total		0	0%	0	0%
-er/ir verbs	1st /3rd sg.	-ía	3	100%	3	100%	1st pl.	-íamos	0	0%	0	0%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	0	0%
	Total		3	100%	3	100%	Total		0	0%	0	0%

Appendix Table 132. Type and token frequency of regular preterit morphology (2nd semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	43	69%	98	80%	1st pl.	-amos	11	100%	17	100%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	19	31%	25	20%	2nd/3rd pl.	-aron	0	0%	0	0%
	Total		62	100%	123	100%	Total		11	100%	17	100%
-er/ir verbs	1st sg.	-í	17	81%	44	92%	1st pl.	-imos	10	91%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	4	19%	4	8%	2nd/3rd pl.	-ieron	1	9%	0	0%
	Total		21	100%	48	100%	Total		11	100%	0	0%

Appendix Table 133. Type and token frequency of regular imperfect morphology (2nd semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	10	100%	36	100%	1st pl.	-ábamos	6	86%	8	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	1	14%	0	0%
	Total		10	100%	36	100%	Total		7	100%	8	100%
-er/ir verbs	1st /3rd sg.	-ía	9	100%	23	100%	1st pl.	-íamos	6	100%	3	75%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	1	25%
	Total		9	100%	23	100%	Total		6	100%	4	100%

Appendix Table 134. Type and token frequency of regular preterit morphology (3rd semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	29	78%	82	80%	1st pl.	-amos	5	45%	7	50%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	8	22%	20	20%	2nd/3rd pl.	-aron	6	55%	7	50%
	Total		37	100%	102	100%	Total		11	100%	14	100%
-er/ir verbs	1st sg.	-í	16	52%	48	62%	1st pl.	-imos	3	60%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	15	48%	29	38%	2nd/3rd pl.	-ieron	2	40%	0	0%
	Total		31	100%	77	100%	Total		5	100%	0	0%

Appendix Table 135. Type and token frequency of regular imperfect morphology (3rd semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	18	100%	41	100%	1st pl.	-ábamos	5	83%	7	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	1	17%	0	0%
	Total		18	100%	41	100%	Total		6	100%	7	100%
-er/ir verbs	1st /3rd sg.	-ía	8	100%	77	100%	1st pl.	-íamos	5	100%	0	0%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	2	100%
	Total		8	100%	77	100%	Total		5	100%	2	100%

Appendix Table 136. Type and token frequency of regular preterit morphology (4th semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	45	68%	137	81%	1st pl.	-amos	9	90%	12	92%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	21	32%	33	19%	2nd/3rd pl.	-aron	1	10%	1	8%
	Total		66	100%	170	100%	Total		10	100%	13	100%
-er/ir verbs	1st sg.	-í	21	81%	59	92%	1st pl.	-imos	8	67%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	5	19%	5	8%	2nd/3rd pl.	-ieron	4	33%	0	0%

	Total		26	100%	64	100%	Total		12	100%	0	0%

Appendix Table 137. Type and token frequency of regular imperfect morphology (4th semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	22	100%	67	100%	1st pl.	-ábamos	5	63%	5	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	3	38%	0	0%
	Total		22	100%	67	100%	Total		8	100%	5	100%
-er/ir verbs	1st /3rd sg.	-ía	10	100%	56	100%	1st pl.	-íamos	5	100%	7	78%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	2	22%
	Total		10	100%	56	100%	Total		5	100%	9	100%

Appendix Table 138. Type and token frequency of regular preterit morphology (5th/6th semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	45	57%	156	71%	1st pl.	-amos	21	78%	33	85%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	34	43%	63	29%	2nd/3rd pl.	-aron	6	22%	6	15%
	Total		79	100%	219	100%	Total		27	100%	39	100%
-er/ir verbs	1st sg.	-í	28	62%	104	80%	1st pl.	-imos	8	80%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	17	38%	26	20%	2nd/3rd pl.	-ieron	2	20%	0	0%
	Total		45	100%	130	100%	Total		10	100%	0	0%

Appendix Table 139. Type and token frequency of regular imperfect morphology (5th/6th semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	24	100%	84	100%	1st pl.	-ábamos	15	79%	21	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	4	21%	0	0%
	Total		24	100%	84	100%	Total		19	100%	21	100%
-er/ir verbs	1st /3rd sg.	-ía	13	100%	115	100%	1st pl.	-íamos	15	100%	14	82%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%

	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	3	18%
	Total		13	100%	115	100%	Total		15	100%	17	100%

Appendix Table 140. Type and token frequency of regular preterit morphology (7th/8th semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	26	63%	57	78%	1st pl.	-amos	10	100%	11	100%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	15	37%	16	22%	2nd/3rd pl.	-aron	0	0%	0	0%
	Total		41	100%	73	100%	Total		10	100%	11	100%
-er/ir verbs	1st sg.	-í	14	70%	27	75%	1st pl.	-imos	4	80%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	6	30%	9	25%	2nd/3rd pl.	-ieron	1	20%	0	0%
	Total		20	100%	36	100%	Total		5	100%	0	0%

Appendix Table 141. Type and token frequency of regular imperfect morphology (7th/8th semester).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	17	100%	39	100%	1st pl.	-ábamos	8	80%	12	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	2	20%	0	0%
	Total		17	100%	39	100%	Total		10	100%	12	100%
-er/ir verbs	1st /3rd sg.	-ía	15	100%	46	100%	1st pl.	-íamos	8	100%	3	75%

	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	1	25%
	Total		15	100%	46	100%	Total		8	100%	4	100%

Appendix Table 142. Type and token frequency of regular preterit morphology (native-speaker instructors).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	103	63%	412	76%	1st pl.	-amos	38	57%	60	61%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	60	37%	129	24%	2nd/3rd pl.	-aron	29	43%	38	39%
	Total		163	100%	541	100%	Total		67	100%	98	100%
-er/ir verbs	1st sg.	-í	144	84%	155	76%	1st pl.	-imos	16	67%	0	0%
	2nd sg.	-iste	1	1%	1	0%	--	--	0	0%	0	0%
	3rd	-ió	26	15%	48	24%	2nd/3rd pl.	-ieron	8	33%	0	0%
	Total		171	100%	204	100%	Total		24	100%	0	0%

Appendix Table 143. Type and token frequency of regular imperfect morphology (native-speaker instructors).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	49	100%	152	100%	1st pl.	-ábamos	8	44%	22	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	10	56%	0	0%
	Total		49	100%	152	100%	Total		18	100%	22	100%

-er/ir verbs	1st /3rd sg.	-ía	33	100%	205	100%	1st pl.	-íamos	8	100%	24	73%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	9	27%
	Total		33	100%	205	100%	Total		8	100%	33	100%

Appendix Table 144. Type and token frequency of regular preterit morphology (near-native-speaker instructors).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st sg.	-é	60	63%	179	72%	1st pl.	-amos	26	70%	33	59%
	2nd sg.	-aste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ó	35	37%	70	28%	2nd/3rd pl.	-aron	11	30%	23	41%
	Total		95	100%	249	100%	Total		37	100%	56	100%
-er/ir verbs	1st sg.	-í	21	60%	73	77%	1st pl.	-imos	11	69%	0	0%
	2nd sg.	-iste	0	0%	0	0%	--	--	0	0%	0	0%
	3rd	-ió	14	40%	22	23%	2nd/3rd pl.	-ieron	5	31%	0	0%
	Total		35	100%	95	100%	Total		16	100%	0	0%

Appendix Table 145. Type and token frequency of regular imperfect morphology (native-speaker instructors).

Paradigm	Grammatical Person	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Past Morpheme	Nb of Diff. Verbs		Nb of Tokens	
			N	%	N	%			N	%	N	%
-ar verbs	1st /3rd sg.	-aba	22	100%	75	100%	1st pl.	-ábamos	6	60%	13	100%
	2nd sg.	-abas	0	0%	0	0%	--	--	--	--	--	--
	--	--	--	--	--	--	2nd/3rd pl.	-aban	4	40%	0	0%
	Total		22	100%	75	100%	Total		10	100%	13	100%
-er/ir verbs	1st /3rd sg.	-ía	17	100%	98	100%	1st pl.	-íamos	6	100%	13	76%
	2nd sg.	-ías	0	0%	0	0%	--	-íais	0	0%	0	0%
	--	--	--	--	--	--	2nd/3rd pl.	-ían	0	0%	4	24%
	Total		17	100%	98	100%	Total		6	100%	17	100%

Irregular morphology

Appendix Table 146. Type and token frequency of irregular preterit morphology (1st semester-Time 1).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	3rd	0	0%	0	0%	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st sg.	3	75%	12	92%	1st pl.	1	50%	1	50%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	1	25%	1	8%	2nd/3rd pl.	1	50%	1	50%

	Total	4	100%	13	100%	Total	2	100%	2	100%

Appendix Table 147. Type and token frequency of irregular imperfect morphology (1st semester-Time 1).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	1	100%	7	100%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	1	100%	7	100%	Total	0	0%	0	0%

Appendix Table 148. Type and token frequency of irregular preterit morphology (1st semester-Time 2).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	1	50%	2	67%	1st pl.	1	50%	1	50%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	1	50%	1	33%	2nd/3rd pl.	1	50%	1	50%
	Total	2	100%	3	100%	Total	2	100%	2	100%
-er/ir verbs	1st sg.	6	67%	17	61%	1st pl.	3	43%	9	69%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	3	33%	11	39%	2nd/3rd pl.	4	57%	4	31%
	Total	9	100%	28	100%	Total	7	100%	13	100%

Appendix Table 149. Type and token frequency of irregular imperfect morphology (1st semester-Time 2).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	1	100%	4	100%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%

	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	1	100%	4	100%	Total	0	0%	0	0%

Appendix Table 150. Type and token frequency of irregular preterit morphology (2nd semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	1	50%	8	57%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	1	50%	6	43%	2nd/3rd pl.	1	100%	2	100%
	Total	2	100%	14	100%	Total	1	100%	2	100%
-er/ir verbs	1st sg.	8	47%	82	52%	1st pl.	4	100%	16	100%
	2nd	1	6%	1	1%	--	0	0%	0	0%
	3rd	8	47%	74	47%	2nd/3rd pl.	0	0%	0	0%
	Total	17	100%	157	100%	Total	4	100%	16	100%

Appendix Table 151. Type and token frequency of irregularimperfect morphology (2nd semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%

-er/ir verbs	1st /3rd sg.	2	100%	32	100%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	1	100%	1	100%
	Total	2	100%	32	100%	Total	1	100%	1	100%

Appendix Table 152. Type and token frequency of irregular preterit morphology (3rd semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	2	100%	5	100%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	0	0%	0	0%	2nd/3rd pl.	0	0%	0	0%
	Total	2	100%	5	100%	Total	0	0%	0	0%
-er/ir verbs	1st sg.	7	50%	61	52%	1st pl.	3	60%	7	78%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	7	50%	57	48%	2nd/3rd pl.	2	40%	2	22%
	Total	14	100%	118	100%	Total	5	100%	9	100%

Appendix Table 153. Type and token frequency of irregular imperfect morphology (3rd semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	2	100%	41	100%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	2	100%	2	100%
	Total	2	100%	41	100%	Total	2	100%	2	100%

Appendix Table 154. Type and token frequency of irregular preterit morphology (4th semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	2	50%	8	5%	1st pl.	1	100%	1	100%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	2	50%	141	95%	2nd/3rd pl.	0	0%	0	0%
	Total	4	100%	149	100%	Total	1	100%	1	100%
-er/ir verbs	1st sg.	9	45%	4	5%	1st pl.	6	60%	34	87%
	2nd	0	0%	0	0%	--	0	0%	0	0%

	3rd	11	55%	83	95%	2nd/3rd pl.	4	40%	5	13%
	Total	20	100%	87	100%	Total	10	100%	39	100%

Appendix Table 155. Type and token frequency of irregular imperfect morphology (4th semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	3	100%	58	100%	1st pl.	1	50%	2	29%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	1	50%	5	71%
	Total	3	100%	58	100%	Total	2	100%	7	100%

Appendix Table 156. Type and token frequency of irregular preterit morphology (5th/6th semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	2	67%	4	67%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	1	33%	2	33%	2nd/3rd pl.	2	100%	2	100%
	Total	3	100%	6	100%	Total	2	100%	2	100%

-er/ir verbs	1st sg.	8	53%	89	63%	1st pl.	4	67%	18	90%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	7	47%	52	37%	2nd/3rd pl.	2	33%	2	10%
	Total	15	100%	141	100%	Total	6	100%	20	100%

Appendix Table 157. Type and token frequency of irregular imperfect morphology (5th/6th semester).

Paradigm	**Grammatical Person**	**Nb of Diff. Verbs**		**Nb of Tokens**		**Grammatical persons**	**Nb of Diff. Verbs**		**Nb of Tokens**	
		N	**%**	**N**	**%**		**N**	**%**	**N**	**%**
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	3	100%	27	100%	1st pl.	1	50%	5	83%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	1	50%	1	17%
	Total	3	100%	27	100%	Total	2	100%	6	100%

Appendix Table 158. Type and token frequency of irregular preterit morphology (7th/8th semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	3	60%	7	50%	1st pl.	1	100%	2	100%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	2	40%	7	50%	2nd/3rd pl.	0	0%	0	0%
	Total	5	100%	14	100%	Total	1	100%	2	100%
-er/ir verbs	1st sg.	9	45%	119	54%	1st pl.	6	50%	30	70%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	11	55%	101	46%	2nd/3rd pl.	6	50%	13	30%
	Total	20	100%	220	100%	Total	12	100%	43	100%

Appendix Table 159. Type and token frequency of irregular imperfect morphology (7th/8th semester).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	2	100%	80	100%	1st pl.	2	67%	3	60%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	1	33%	2	40%
	Total	2	100%	80	100%	Total	3	100%	5	100%

Appendix Table 160. Type and token frequency of irregular preterit morphology (native-speaker instructors).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	2	33%	22	54%	1st pl.	2	50%	5	50%
	2nd sg.	1	17%	1	2%	--	0	0%	0	0%
	3rd	3	50%	18	44%	2nd/3rd pl.	2	50%	5	50%
	Total	6	100%	41	100%	Total	4	100%	10	100%
-er/ir verbs	1st sg.	10	53%	211	57%	1st pl.	7	50%	40	74%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	9	47%	157	43%	2nd/3rd pl.	7	50%	14	26%
	Total	19	100%	368	100%	Total	14	100%	54	100%

Appendix Table 161. Type and token frequency of irregular imperfect morphology (native-speaker instructors).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	3	100%	130	100%	1st pl.	3	50%	9	35%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	3	50%	17	65%
	Total	3	100%	130	100%	Total	6	100%	26	100%

Appendix Table 162. Type and token frequency of irregular preterit morphology (near-native-speaker instructors).

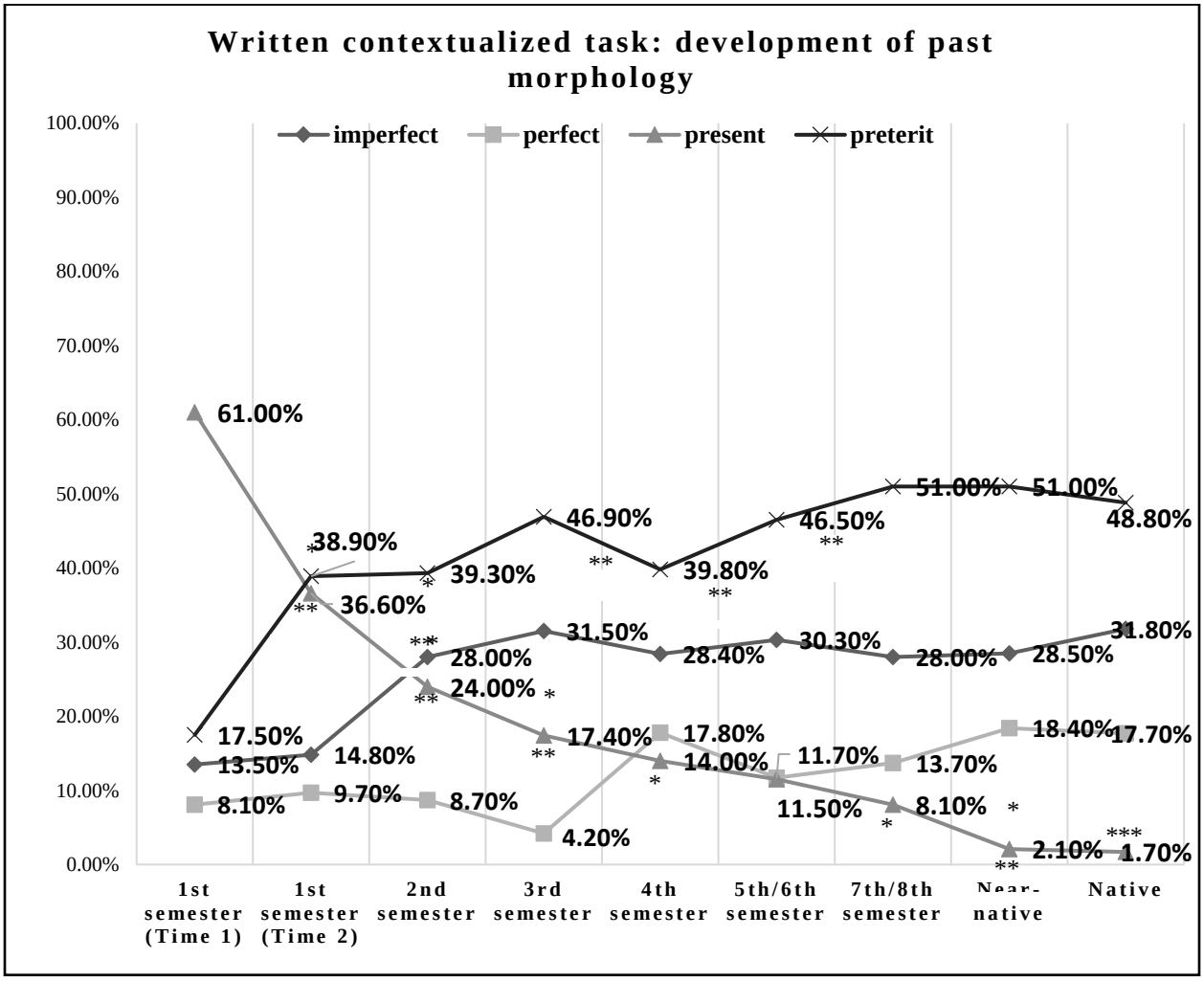
Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st sg.	3	60%	28	74%	1st pl.	2	50%	4	67%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	3rd	2	40%	10	26%	2nd/3rd pl.	2	50%	2	33%
	Total	5	100%	38	100%	Total	4	100%	6	100%
-er/ir verbs	1st sg.	9	64%	83	60%	1st pl.	4	33%	23	58%
	2nd	0	0%	0	0%	--	0	0%	0	0%
	3rd	5	36%	56	40%	2nd/3rd pl.	8	67%	17	43%
	Total	14	100%	139	100%	Total	12	100%	40	100%

Appendix Table 163. Type and token frequency of irregular preterit morphology (near-native-speaker instructors).

Paradigm	Grammatical Person	Nb of Diff. Verbs		Nb of Tokens		Grammatical persons	Nb of Diff. Verbs		Nb of Tokens	
		N	%	N	%		N	%	N	%
-ar verbs	1st /3rd sg.	0	0%	0	0%	1st pl.	0	0%	0	0%
	2nd sg.	0	0%	0	0%	--	0	--	0	--
	--	--	--	--	--	2nd/3rd pl.	0	0%	0	0%
	Total	0	0%	0	0%	Total	0	0%	0	0%
-er/ir verbs	1st /3rd sg.	2	100%	39	100%	1st pl.	1	50%	1	25%
	2nd sg.	0	0%	0	0%	--	0	0%	0	0%
	--	--	--	--	--	2nd/3rd pl.	1	50%	3	75%

	Total	2	100%	39	100%	Total	2	100%	4	100%

Appendix D Chapter 5



Appendix Figure 5. Rates of past form selection (WCT).

Appendix Table 164. Chi-square comparisons between imperfect selection (WCT) and imperfect use (OP).

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
First semester: Time 1	681	3.46	1	> .05	-
*First semester: Time 2	489	6.078	1	< .05	0.22
***Second semester	1781	63.93	1	< .001	0.38
***Third semester	1454	17.17	1	< .001	0.22
***Fourth semester	2312	13.37	1	< .001	0.15
Fifth/sixth	1148	3.14	1	> .05	-
Seventh/eight	1676	0.25	1	> .05	-
Near natives	1168	0.73	1	> .05	-
*Native speakers	2893	4.79	1	< .05	0.08

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

Appendix Table 165. Chi-square comparison between present selection (WCT) and present use (OPT).

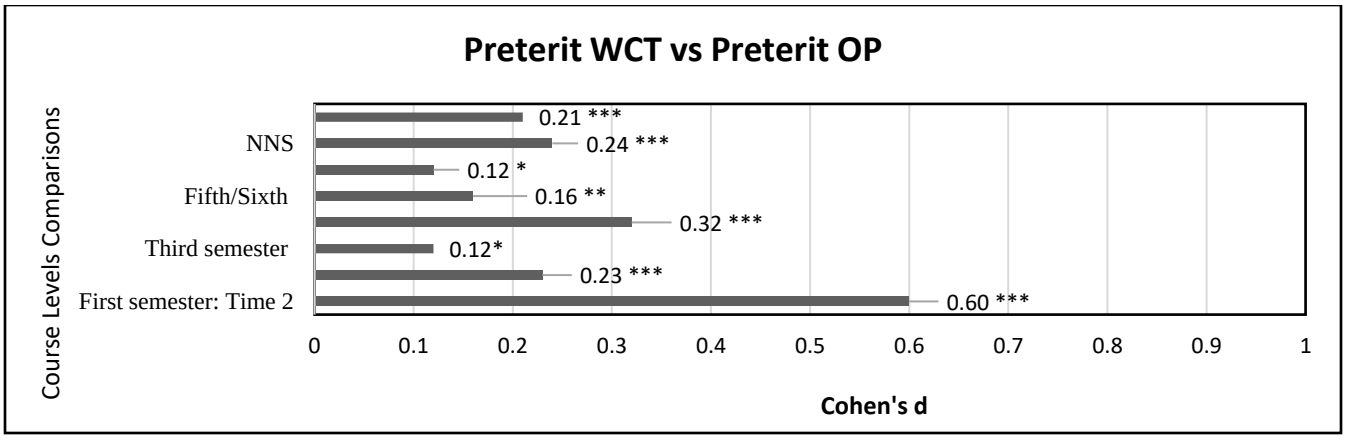
Comparison	N	χ^2	*df*	*p*	Cohen's *d*
First semester: Time 1	681	2.06	1	> .05	-
***First semester: Time 2	489	18.15	1	< .001	0.04
Second semester	1781	0.33	1	> .05	-
Third semester	1454	0.04	1	> .05	-
Fourth semester	2312	1.65	1	> .05	-
Fifth/sixth	1148	0.01	1	> .05	-
Seventh/eight	1676	3.48	1	> .05	-
Near natives	1168	3.27	1	> .05	-
*Native speakers	2893	4.33	1	< .05	0.08

**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).

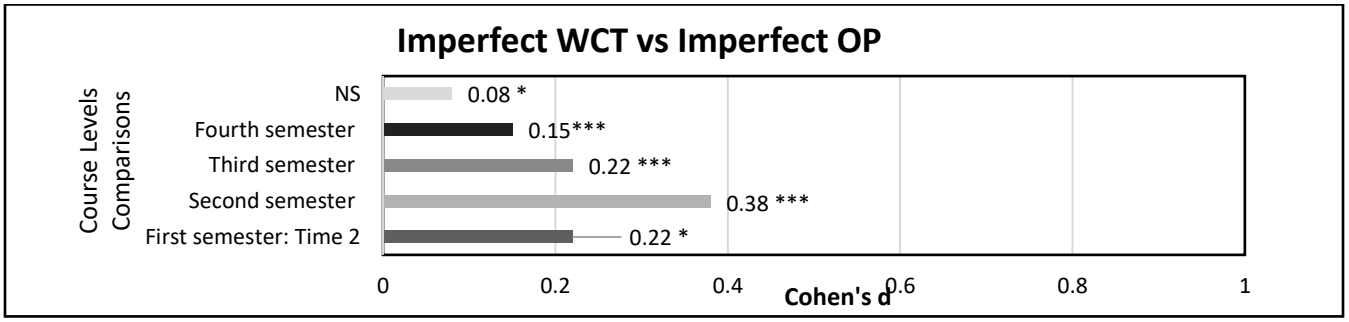
Appendix Table 166. Chi-square comparisons between preterit selection rates (WCT) and preterit usage rates (OP).

Comparison	N	χ^2	*df*	*p*	Cohen's *d*
First semester: Time 1	681	0.34E	1	= 0.85	-
***First semester: Time 2	489	40.17	1	< .001	0.60
***Second semester	1781	24.44	1	< .001	0.23
*Third semester	1454	5.72	1	< .05	0.12
***Fourth semester	2312	59.24	1	< .001	0.32
**Fifth/sixth	1148	7.82	1	< .01	0.16
* Seventh/eight semester	1676	6.05	1	< .05	0.12
*** Near natives	1168	16.37	1	< .001	0.24
*** Native speakers	2893	32.15	1	< .001	0.21

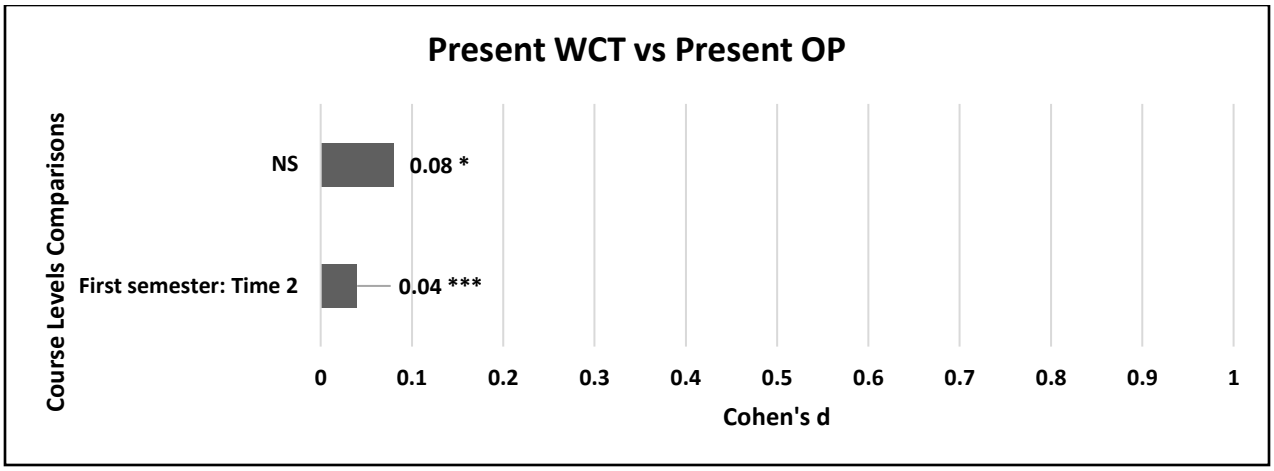
**$p < 0.01$, ***$p < 0.001$, Cohen's *d* values (Wilson, 2001) are generally interpreted as small (0.2), medium (0.5), or large (0.8) effects (Plonsky & Oswald, 2014).



Appendix Figure 6. Cohen's d values for the significant chi-square comparisons regarding the preterit across task types.



Appendix Figure 7. Cohen's d values for the significant chi-square comparisons regarding the imperfect across tasks.



Appendix Figure 8. Cohen's d values for the significant chi-square comparisons regarding the present across task types.

Appendix Table 167. Aspectual meaning across past morphology usage (1st semester group).

Past Forms	**1st semester- Time 1**	**Aspectual Meaning**		**Total**
		Continuity	**Perfectivity**	
Imperfect	Count	15	2	17
	% within Aspectual meaning	20.30%	1.80%	9.20%
Present	Count	52	81	133
	% within Aspectual meaning	**70.30%**	**73.60%**	**72.30%**
Preterit	Count	7	27	34
	% within Aspectual meaning	9.50%	24.50%	18.50%
Total	Count	74	110	184
	% within Aspectual meaning	100.00%	100.00%	100.00%
Past Forms	**1st semester- Time 2**	**Aspectual Meaning**		**Total**
		Continuity	**Perfectivity**	
Imperfect	Count	8	1	9
	% within Aspectual meaning	**29.60%**	0.90%	6.80%
Other	Count	0	4	4
	% within Aspectual meaning	0.00%	3.80%	3.00%
Present	Count	8	15	23
	% within Aspectual meaning	**29.60%**	24.50%	18.50%
Preterit	Count	11	86	97
	% within Aspectual meaning	**40.70%**	**81.10%**	**72.90%**
Total	Count	27	106	133
	% within Aspectual meaning	100.00%	100.00%	100.00%

Appendix Table 168. The present perfect across current relevance and perfectivity in the NS and near-native speaker groups.

NATIVE-SPEAKER PARTICIPANTS (NS)					
OPT			**WCT**		
1.2% (27)			17.7% (102)		
Within AM	**Across AM**	**CR**	**Within AM**	**Across AM**	
69.2%	33%		64.6%	91.2%	
Within AM	**Across AM**	**PERFECTIVITY**	**Within AM**	**Across AM**	
1.2%	67%		2.3%	4.9%	
NON-NATIVE-SPEAKER PARTICIPANTS (NNS)					
OPT			**WCT**		
2% (20)			18.4% (53)		
Within AM	**Across AM**	**CR**	**Within AM**	**Across AM**	
50%	5%		63.9%	86.8%	
Within AM	**Across AM**	**PERFECTIVITY**	**Within AM**	**Across AM**	
2.8%	95%		3.7%	7.5%	

Appendix Table 169. NS past morphology use across temporal reference (OPT).

Past Forms	**NS group**	**Temporal Reference**				**Total**
		Hesternal	**Hodiernal**	**Irrelevant**	**Pre-hesternal**	
Imperfect	Count	93	47	0	460	600
	% within Aspectual meaning	14.3%	12.3%	0.0%	40.7%	27.6%
Imp-Prog	Count	8	2	0	50	60
	% within Aspectual meaning	1.2%	0.5%	0.0%	4.4%	2.8%
Other	Count	2	4	0	4	10
	% within Aspectual meaning	0.3%	1.0%	0.0%	0.4%	0.5%
Perfect	Count	4	11	7	5	27

	% within Aspectual meaning	0.6%	**2.9%**	**100.0%**	0.4%	**1.2%**
Present	Count	2	2	0	74	78
	% within Aspectual meaning	0.3%	0.5%	0.0%	6.5%	3.6%
Preterit	Count	520	313	0	519	1352
	% within Aspectual meaning	**79.8%**	**81.7%**	0.0%	45.9%	**62.2%**
Pret-Prog	Count	23	4	0	18	45
	% within Aspectual meaning	3.5%	1.0%	0.0%	1.6%	2.1%
Total	Count	652	383	7	1130	2172
	% within Aspectual meaning	100.00%	100.00%	100.00%	100.00%	100.00%

Appendix Table 170. Near-native speaker past morphology use across temporal reference (OPT).

Past Forms	NNS group	Temporal Reference				Total
		Hesternal	Hodiernal	Irrelevant	Pre-hesternal	
Imperfect	Count	38	22	0	198	258
	% within Aspectual meaning	13.5%	13.3%	0.0%	36.1%	25.8%
Imp-Prog	Count	7	3	0	31	41
	% within Aspectual meaning	2.5%	1.8%	0.0%	5.6%	4.1%
Other	Count	8	1	0	7	16
	% within Aspectual meaning	2.8%	0.6%	0.0%	1.3%	1.6%
Perfect	Count	1	15	1	3	20
	% within Aspectual meaning	0.4%	9.0%	50.0%	0.5%	2.0%
Present	Count	3	1	0	4	8
	% within Aspectual meaning	1.1%	0.6%	0.0%	0.7%	0.8%
Preterit	Count	224	118	1	302	645
	% within Aspectual meaning	79.4%	71.1%	50.0%	55.0%	64.6%
Pret-Prog	Count	1	6	0	4	11

	% within Aspectual meaning	0.4%	3.6%	0.0%	0.7%	1.1%
Total	Count	282	166	2	549	999
	% within Aspectual meaning	100.00%	100.00%	100.00%	100.00%	100.00%

Appendix Table 171. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

1st semester level **Time 1**						
	ORAL PROMPT TASK			**WRITTEN CONTEXTUALIZED TASK**		
	Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Usage/Selection Rates	17%	8.5%	66.7%	17.5%	13.5%	61%
% participants producing & selecting each form	73%	45.4%	100%	100%	93.3%	100%
Non-Target-Like Rates	14.7%	17.7%	13.4%	NA	NA	NA
NTL types	Other					
Linguistic conditioning	**Preterit**	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Temporal Adv.	--	--	--	*X PRESENCE	*X ABSENCE	--
Aktionsart	--	--	--	--	--	--
Temporal Ref.	--	--	--	--	--	--
Grounding	--	--	--	--	--	--
Aspectual Meaning	--	--	--	--	--	--
Narrative Type	--	--	--	--	--	--
Frequency ranges	--	--	--	--	--	--

Appendix Table 172. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

1st semester level: Time 2						
	ORAL PROMPT TASK			WRITTEN CONTEXTUALIZED TASK		
	Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Rates	71%	6.6%	17%	39%	15%	36.6%
Individual rates	100%	40%	90%	100%	100%	91%
Non-Target-Like Rates	19.6%	0.0%	8.3%	NA	NA	NA
NTL types	• Paradigm overgeneralization • Person/Number					
Linguistic conditioning	**Preterit**	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Temporal Adv.	--	--	--	--	--	--
Aktionsart	--	--	--	--	--	--
Temporal Ref.	--	--	--	--	--	--
Grounding	--	--	--	**X FGD	**X BGD	--
Aspectual Meaning	*X PERFECTIVITY	--	--	--	--	--
Narrative Type	--	--	--	--	--	--
Frequency ranges	--	--	--	--	--	--

Appendix Table 173. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

2nd semester level						
	ORAL PROMPT TAST			**WRITTEN CONTEXTUALIZED TASK**		
	Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Rates	51%	12.7%	25%	39%	28%	24%
Individual rates	100%	67.6%	97%	100%	100%	100%
***Non-Target-Like Rates**	28%	12%	28%	NA	NA	NA
NTL types	• Other • Paradigm overgeneralization • Person/Number					
Linguistic conditioning						
Temporal Adv.	*X CONNECTIVE POSITION	*X NO ADV DURATION CONTRAST	--	--	--	--
Aktionsart	--	--	--	--	--	--
Temporal Ref.	--	--	--	--	--	--
Grounding	***X FGD	***X BGD	***X FGD	*X FGD	*X BGD	--
Aspectual Meaning	***X PERFECTIVITY	***X CONTINUITY PROG	--	--	--	--
Narrative Type	--	--	--	--	--	--
Frequency ranges	--	--	--	--	--	--

Appendix Table 174. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

	3rd semester level			4th semester level		
	ORAL PROMPT TAST					
	Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Rates	53%	21.7%	17%	56%	21.6%	16%
Individual rates	100%	84%	92%	96.1%	88.4%	92.3%
Non-Target-Like Rates	33%	0%	23.3%	13.7%	3.4%	27.3%
NTL types	• Other • Person/Number • Paradigm overgeneralization			• Other • Person/Number • Paradigm overgeneralization		
Linguistic conditioning	**Preterit**	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Temporal Adv.	--	--	--	--	--	--
Aktionsart	***X TELIC	***X ATELIC	***X TELIC	***X TELIC	***X ATELIC	--
Temporal Ref.	***X HODIERNAL HESTERNAL	***X PRE-HEST	--	***X HODIERNAL HESTERNAL	***X PRE-HEST	--
Grounding	***X FGD	***X BGD	*X FGD	***X FGD	***X BGD	***X FGD
Aspectual Meaning	***X PERFECTIVITY	***X CONTINUITY PROGRESSIVITY	--	***X PERFECTIVITY	***X CONTINUITY PROGRESSIVITY	--
Narrative Type	***X YESTERDAY TODAY	***X DANGER CHILDHOOD	--		--	--
Frequency ranges	--	--	--	--	--	--

Appendix Table 175. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

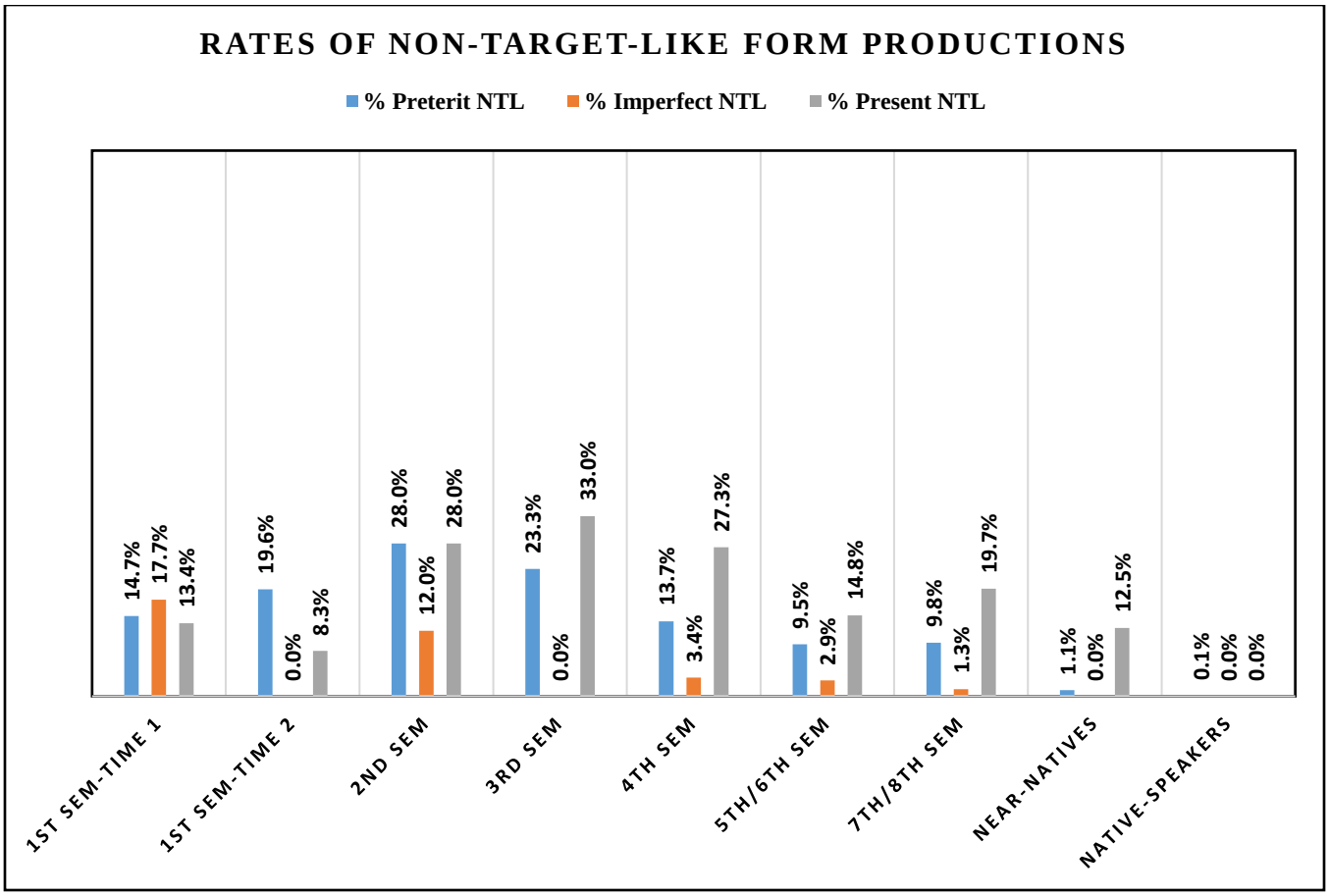
	3rd semester level			4th semester level		
	WRITTEN CONTEXTUALIZED TAST					
	Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Rates	47%	31.4%	17.4%	40%	28.4%	14.0%
Individual rates	96.1%	92%	96.1%	100%	100%	85.7%
Non-Target-Like Rates	NA	NA	NA	NA	NA	NA
NTL types	• Other • Person/Number • Paradigm overgeneralization			• Other • Person/Number • Paradigm overgeneralization		
Linguistic conditioning	**Preterit**	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Temporal Adv.	--	--	--	--	--	--
Aktionsart	***X TELIC	***X ATELIC	--	***X TELIC	***X ATELIC	--
Temporal Ref.	***X HESTERNAL HODIERNAL	***X PRE-HEST	***X IRRELEVANT HESTERNAL	***X HESTERNAL HODIERNAL IRRELEVANT	***X PRE-HEST HESTERNAL	***X IRRELEVANT HODIERNAL
Grounding	***X FGD	***X BGD	--	***X FGD	***X BGD	--
Aspectual Meaning	--	--	--	--	--	--
Narrative Type	--	--	--	--	--	--
Frequency ranges	--	--	--	--	--	--

Appendix Table 176. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

	5th / 6th semester level					
	ORAL PROMPT TAST			**WRITTEN CONTEXTUALIZED TASK**		
	Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Rates	55%	25.7%	11%	46.5%	30.3%	11.5%
Individual rates	100%	100%	73.3%	100%	100%	94.7%
Non-Target-Like Rates	9.5%	3%	14.8%	NA	NA	NA
NTL types	• Person/Number • Other					
Linguistic conditioning	**Preterit**	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
Temporal Adv.	--	--	--	--	--	--
Aktionsart	--	--	--	***X TELIC	***X ATELIC	--
Temporal Ref.	***X HODIERNAL HESTERNAL	***X PRE-HEST	--	***X HESTERNAL IRRELEVANT	***X PRE-HEST HODIERNAL	***X IRRELEVANT HESTERNAL
Grounding	***X FGD	***X BGD	***X FGD	***X FGD	***X BGD	--
Aspectual Meaning	***X PERFECTIVITY	***X CONTINUITY PROGRESSIVITY	--	--	--	--
Narrative Type	*X YESTERDAY TODAY	*X DANGER CHILDHOOD	--	--	--	--
Frequency ranges	--	--	--	--	--	--

Appendix Table 177. A summary of past form rates of use and selection, individual production, non-target-like rates and types, linguistic predictors.

		ORAL PROMPT TAST			WRITTEN CONTEXTUALIZED TASK		
		Preterit	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
7th/8th semester level	**Rates**	57%	29.4%	6%	50%	28%	8%
	Individual rates	100%	100%	82.6%	100%	100%	94.7%
	Non-Target-Like Rates	9.8%	1.3%	19.7%	NA	NA	NA
	NTL types	• Other • Paradigm overgeneralization					
	Linguistic conditioning	**Preterit**	**Imperfect**	**Present**	**Preterit**	**Imperfect**	**Present**
	Temporal Adv.	--	--	--	--	--	--
	Aktionsart	***X TELIC	***X ATELIC	**X TELIC	***X TELIC	***X ATELIC	**X ATELIC
	Temporal Ref.	***X HODIERNAL HESTERNAL	***X PRE-HEST	--	***X HESTERNAL HODIERNAL IRRELEVANT	***X PRE-HEST HODIERNAL HESTERNAL	***X IRRELEVANT
	Grounding	***X FGD	***X BGD	***X FGD	***X FGD	***X BGD	--
	Aspectual Meaning	***X PERFECTIVITY	***X CONTINUITY PROGRESSIVITY	--	--	--	--
	Narrative Type	**X DANGER YESTERDAY TODAY	**X NINEZ	--	--	--	--
	Frequency ranges	--	--	--	--	--	--



Appendix Figure 9. Rates of non-target-like form productions (OPT).

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