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WORD ORDER IN NOMINAL STRUCTURES

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**PROGRAMA DE DOCTORADO EN
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TESIS DOCTORAL:

**ADQUISICIÓN DE SEGUNDAS LENGUAS CON
INSTRUCCIÓN
&
INFLUENCIA INTERLINGÜÍSTICA:
ORDEN DE PALABRAS EN ESTRUCTURAS NOMINALES**

Presentada por Eduardo Gómez Garzarán para optar
al grado de
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Dra. Raquel Fernández Fuertes
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A mis padres y a Titina.

colorless green ideas sleep furiously
(Chomsky 1957)

ABSTRACT

This dissertation analyzes the impact of two issues related to the field of Instructed Second Language Acquisition: length of exposure and explicit instruction. These issues are explored in the specific domain of noun modification in English by considering two structures: adjective-noun strings (ANs) and noun-noun compounds (NNs). To do so, the L2 English data of 96 L1 Spanish children are analyzed along three years as elicited via two written tasks: an acceptability judgment and a production task. Additional cross-sectional oral data are obtained in the last year by means of a director-matcher task. All the participants receive explicit instruction for ANs, as customary in the Spanish school context. A specific pedagogical program including explicit instruction on NNs is used with half of the participants, thus establishing two groups: the instruction group and the non-instruction group. Both groups include two age groups each, depending on the age at which participants were first tested (6 and 8-year-olds). This participants' taxonomy allows to measure the role of length of exposure to the L2 and to test the effectiveness of explicit instruction. The results show that length of exposure plays a role in the learning of ANs and NNs given the improvement of the participants' L2 knowledge for both structures along the three years. Furthermore, participants in the instruction group perform better than their non-instruction cohorts, and not only in the structures targeted in the explicit intervention, NNs, but also in ANs. In the convergence of the two main variables of explicit instruction and length of exposure, the results obtained in both the longitudinal written data and the cross-sectional oral data point to explicit instruction being more determinant than length of exposure. This study sheds further light into factors that are relevant to the L2 learning process in a school context, while it also contributes to the scarce existing literature on the acquisition of structures including noun modification in the form of ANs and NNs by L1 Spanish-L2 English children.

Keywords: noun modification, word order, Instructed Second Language Acquisition, length of exposure, types of instruction, oral and written data, L1 Spanish-L2 English children.

RESUMEN

Esta tesis doctoral analiza el impacto de dos aspectos relacionados con el campo de la Adquisición de Segundas Lenguas mediante Instrucción: el tiempo de exposición y la instrucción explícita. Estos aspectos se exploran haciendo uso de dos estructuras concretas que incluyen modificación nominal en inglés: secuencias de adjetivo-nombre (ANs) y compuestos nombre-nombre (NNs). Se ha testado el inglés como L2 de 96 niños con español como L1 a lo largo de tres años por medio de dos pruebas escritas: una prueba de juicios gramaticales y una prueba de producción. Se han obtenido datos transversales adicionales en el último año por medio de una prueba oral tipo *director-matcher*. En lo que respecta a la instrucción, todos los participantes recibieron instrucción explícita para las ANs, tal y como es habitual en el contexto escolar español. La mitad de los participantes recibieron instrucción explícita sobre los NNs a través de un programa pedagógico específicamente diseñado para tal fin. El uso de este programa permite la clasificación de los participantes en dos grupos: el grupo de instrucción y el grupo de no instrucción. Cada grupo incluye dos grupos de edad, dependiendo del momento en el que fueron testados por primera vez (6 y 8 años). Esta clasificación de los participantes permite medir el papel que juegan tanto el tiempo de exposición a la L2 como la eficacia de la instrucción explícita. Los resultados obtenidos muestran que el tiempo de exposición juega un papel determinante en el aprendizaje de las ANs y los NNs que se refleja en una mejoría en el conocimiento de la L2 por parte de los participantes para ambas estructuras a lo largo de los tres años de estudio. Además, los participantes del grupo de instrucción obtienen mejores resultados que sus equivalentes del grupo de no instrucción y no solo en las estructuras que son objeto del programa de instrucción explícita, los NNs, sino también en las ANs. Cuando se comparan las dos variables analizadas, el tiempo de exposición y la instrucción explícita, los resultados obtenidos apuntan a que es la instrucción explícita la que tiene un papel más determinante y esto se ha observado tanto en los datos longitudinales escritos como en los transversales orales. Este estudio contribuye a arrojar luz sobre algunos de los factores relevantes del proceso de aprendizaje de una L2 en contextos educativos, a la par que también contribuye a la escasa literatura existente sobre la adquisición de estructuras que incluyen modificación nominal en forma de ANs y NNs por niños de L1 español y L2 inglés.

Palabras clave: modificación nominal, orden de palabras, Adquisición de Segundas Lenguas mediante Instrucción, tiempo de exposición, tipos de instrucción, datos orales y escritos, niños L1 español-L2 inglés.

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CHAPTER 1: INTRODUCTION

Thesis by compendium of publications: presentation

This doctoral dissertation aims at contributing to the Second Language Acquisition (SLA) subfield referred to as Instructed Second Language Acquisition (ISLA) with two main foci under analysis: i) the effectiveness of language teaching in terms of the type of instruction used (*e.g.*, Goo *et al*., 2015; Norris & Ortega, 2000; Spada & Tomita, 2010); and ii) the effects of length exposure to a second language (L2) (*e.g.*, García Mayo, 2003; Muñoz, 2011; Shojamanesh *et al.*, 2018).

In order to contribute to this field, this investigation focuses on a specific target construction (the determiner phrase (DP)); it is concerned with a specific target population (child L2 English learners); and it involves data from three experimental tasks (acceptability judgment, guided production and free production). More specifically, and within the DP domain, the two target structures are the following: adjective-noun strings (ANs), as in (1), and noun-noun compounds (NNs), as in (2).

    (1) a. white **snow** $A_{modifier}$ + $\mathbf{N_{head}}$

        b. ***nieve*** *blanca* $\mathbf{N_{head}}$ + $A_{modifier}$

    (2) a. police **dog** $N_{modifier}$ + $\mathbf{N_{head}}$

        b. ***perro*** *policía* $\mathbf{N_{head}}$ + $N_{modifier}$

These structures exhibit a different word order directionality in the two languages involved in this study: English (the target language under investigation and the L2 of the participants) and Spanish (the first language (L1) of the participants). In English, on the one hand, the head is the element to the right, both in the case of ANs (*snow* in 1a) and in the case of NNs (*dog* in 2a). This makes English a right-headed language. In Spanish, on the other hand, the head element in both structures appears in initial position (*i.e.*, the

head is the element to the left): the noun *nieve* 'snow' in (1b) and the noun *perro* 'dog' in (2b). This makes Spanish a left-headed language.

The participants in this investigation are L1 Spanish-L2 English children, between ages 5 and 11, who are learning English in a school context in Spain. Four groups have been established according to the age of the participants (younger and older) and to whether they have received a specifically designed pedagogical intervention comprising explicit instruction on NNs (instruction and non-instruction).

Data from the child participants have been elicited during three consecutive years by means of three experimental tasks. In the acceptability judgment task (AJT), participants had to rate a set of DPs using a 1-to-4 scale presented via emoticons; the experimental structures involved both ANs and NNs. The written guided production task (PRT) included pictures that favor the production of ANs and NNs. Participants in the oral free production task, a director-matcher task (DMT), had to play a boardgame with the investigator; the pictures included in the game required participants to produce ANs and NNs.

This PhD dissertation is structured and organized as a compendium of publications according to the current legislation which regulates how to present and defend a doctoral thesis in the University of Valladolid (approved by the Governing Board in the June 13rd session of 2016, June 15th BOCYL, number 114). A dissertation of this sort is made up of a minimum of three scientific articles (co)-authored by the student while enrolled in the PhD program. Under this modality, the PhD dissertation must include a justification of the relationship between the publications presented and their joint relevance, the objectives and the methodology used. Thus, the following three publications (two journal

articles and a book chapter) comprise the main body of this dissertation and can be found in Chapter 5 [1]:

1. Gómez Garzarán, E., & Fernández Fuertes, R. (2020). Is explicit instruction effective? The learning of English noun-noun and adjective-noun structures by L1 Spanish school children. *Culture and education, 32(2)*, 299-339. https://doi.org/10.1080/11356405.2020.1741872

2. Fernández Fuertes, R., Gómez Garzarán, E., Mujcinovic, S., & Mañas Navarrete, I. (2022). When teaching works and time helps: Noun modification in L2 English school children. *Open linguistics, 8*, 475-495. https://doi.org/10.1515/opli-2022-0219

3. Fernández Fuertes, R., Gómez Garzarán, E., & Mañas Navarrete, I. (2020). Noun-noun compounds in a game task: What child data can tell us about teaching practices. In M. Planelles, A. Foucart, & J. M. Liceras (Eds.), *Current perspectives in language teaching and learning in multicultural contexts* (pp. 481-501). Cizur Menor: Thomson Reuters Aranzadi. https://doi.org/10.32029/2605-4655.14.01.2020

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[1] The institutional filiation of the co-authors of these publications is as follows:
- Raquel Fernández Fuertes: associate professor at the English Department, University of Valladolid.
- Iban Mañas Navarrete: assistant professor at the Spanish, Modern, and Classical Philology at the University of the Balearic Islands (formerly part-time professor at the Department of Teaching of Language, Literature, and Social Science, University of Barcelona).
- Sonja Mujcinovic: assistant professor at the English Department, University of Valladolid (formerly part-time professor).

In order to comply with the University of Valladolid PhD School regulations, the following documents are provided: written consent from the three co-authors in order to use these publications as part of this dissertation (<link>), and information regarding indexation and impact for each of these publications (<link>).

Table 1 briefly presents the content of each of the publications in terms of the structures being focused, the tasks being used to elicit the data, and the time at which the participants were tested.

Table 1. Content of each of the publications

	Publication#1	Publication#2	Publication#3
Structures	ANs & NNs	ANs & NNs	NNs
Tasks	PRT & AJT	AJT	DMT
Years	1	2-3	3

As in table 1, the two structures that have been targeted –ANs and NNs– are analyzed and compared in publication#1 and publication#2, while publication#3 is concerned with NNs. As per the data elicitation methods, publication#1 deals with the data collected via the two written tasks –PRT and AJT–. AJT results appear in publication#2, while publication#3 focuses on the semi-guided oral task, the DMT. As indicated above, this is a three-year longitudinal investigation and, therefore, data have been collected at three moments: years 1, 2, and 3. These are targeted in the three publications but while publication#1 and publication#3 focus on a specific time (year 1 and year 3, respectively), publication#2 offers a two-year longitudinal approach by comparing data collected in year 2 and in year 3.

The present investigation offers a contribution to SLA research in general and ISLA research in particular in three respects. Firstly, the design of this study allows to put together two issues that are normally dealt with separately: type of instruction and length of exposure. Dealing with two instruction groups (*i.e.*, instruction and non-instruction) and analyzing data from different acquisition stages (*i.e.*, year 1, 2 and 3) allows us to address not only the potential effects of type of instruction and length of exposure, but also the potential interaction between type of instruction and length of exposure.

Secondly, this study offers an analysis of two structures that are typically dealt with separately in acquisition research: ANs and NNs. Putting them together contributes a more refined approach to how noun modification proceeds in the case of L2 English children.

And thirdly, this study follows a multitask and bimodal approach, a type of approach that in experimental investigations is sometimes considered as "distressingly rare" in the SLA field (Doughty & Long, 2003, p. 3). Indeed, the combination of judgment and production data, as well as of oral and written data, together with the overarching longitudinal approach, offers a more complete picture of the L2 English acquisition process.

The main aim of this investigation is to account for, on the one hand, the effectiveness of teaching practices and their potential effects in the learning process, and, on the other hand, how these practices can benefit from investigation. That is, teaching practices are targeted in ISLA research, and, in its turn, research can feed back into teaching practices. This constant dialogue between teaching and research is, in fact, much needed under the assumption that, following Ferrero (2020), the implementation of changes in teaching practices and teaching policies should be based on solid empirical investigations and experimental evidence.

With regard to the results obtained, the findings point to the fact that explicit instruction –in the form of the specifically designed pedagogical intervention– and general length of exposure to the L2 –as formal school input– seem to contribute to the development of L2 knowledge. This is so for the two structures under consideration and for the groups of participants under analysis. Nevertheless, in the convergence of both variables, it is the former, explicit instruction, the one that seems to take the lead and be more determinant in the overall L2 progress. In other words, explicit instruction rather

than length of exposure is proven to be more effective in making participants behave more native-like.

This dissertation is organized in six different chapters. In Chapter 2 the formal framework of the overall study is presented. This involves the ISLA context and the two target nominal constructions. Thus, a presentation of the main ISLA concepts is done, with a focus on those related to the investigation: cross-linguistic influence, type of instruction, and input with a special emphasis on length of exposure. This is followed by a formal description of the two nominal structures (*i.e.*, ANs and NNs) with a focus on the word order issue that makes English and Spanish differ (*i.e.*, head directionality). A brief account of the most relevant studies concerning the acquisition of both ANs and NNs appears in Chapter 3, as a summary of what can be found in the three publications. The research methodology followed, which is fully developed in each of the three publications, is outlined in Chapter 4. This includes information on the participants' linguistic profile, a description of the specifically designed pedagogical intervention program implemented with half of the participants (*i.e.*, the instruction group), the tasks used to elicit the data, and the research questions and hypotheses that have guided the overall investigation. In Chapter 5, the three publications are included as the results of the investigation. These appear as they were presented for final publication after the corresponding double-blind peer review processes, as per the University of Valladolid PhD School regulations, each publication including their corresponding references section. Chapter 6 comprises the conclusions reached and points to potential further work that can be derived from the present investigation. The references of the all the works referred to along the main body of this dissertation appear at the end of the document, followed by a list of abbreviations.

CHAPTER 2: FORMAL FRAMEWORK

This investigation stems from a series of general questions related to whether it is worthy investing time in teaching grammar in the L2 subject in the school context. In particular, and when dealing with the acquisition of English as an L2, some of the concerns that teachers have include whether to teach grammar or rather not. On the one hand, just the exposure to the L2, depending on the amount and the type of input, can be enough to progress on the learning of a language and incorporate certain aspects of grammar that differ from those of the L1 (Krashen, 1982, 2003). If, on the other hand, teaching grammar is indeed an adequate choice, testing whether using a more specialized type of exposure in the form of specific instruction –either an explicit or implicit approach– would be relevant (*e.g.*, Norris & Ortega, 2000; Piggott *et al.*, 2020; Spada & Tomita, 2010). In order to address and contribute to this debate on the role of instruction and the teaching of grammar, the focus in this dissertation is set on a particular grammatical construction: noun premodification in the case of both adjective-noun strings (ANs) and noun-noun compounds (NNs). This chapter is, thus, concerned with both axes: the presentation of the ISLA framework and the formal description of the two noun premodification constructions that are targeted.

2.1 Instructed second language acquisition (ISLA)

As indicated and developed more in depth in publication#1 and publication#3, ISLA is a subfield of SLA that investigates the effects of the systematic manipulation of different variables or conditions that may have an impact in the L2 learning process. In other words, ISLA aims at studying the optimal way in which the learning-teaching process of another language can take place given the important shift of focus from

nativelikeness to intelligibility, comprehensibility and communicative competence as goals of L2 instruction (*e.g.*, Juanggo, 2017; Muñoz, 2008).

The main considerations of the ISLA field are the different types of instruction used in the manipulation of learning environments and learning processes, and the different instructional contexts. Other relevant factors are the different learning mechanisms among which the processing and internalization of input, the handling of L2 knowledge, and the production of L2 output are included (*e.g.*, Loewen, 2015; Loewen & Sato, 2017). Other more student-centered variables include learning styles, motivation, or age.

It could be claimed that the bottom line of the learning-teaching process scrutinized in ISLA is to obtain a better final attainment in the L2 through a faster as possible rate of learning. The existing cross-linguistic differences and similarities between the two languages in contact (*i.e.*, the student's L1 and the L2 being learnt) can respectively hinder and speed up this process. Thus, instruction together with exposure to the language to be learnt can be means to both reduce the negative effects and foster the positive ones of the existing cross-linguistic influence (CLI) in a language-in-contact scenario.

The issues under consideration in the present study are the following three: i) the concept of CLI and how the L1 properties may shape the learning of the L2 properties; ii) the concept of instruction and its main types (meaning-focused and form-focused, *i.e.*, the implicit-explicit dichotomy); and iii) the concept of input with a special emphasis on length of exposure to the L2.

CLI can be defined as the influence that one language has on the other in the mind of a speaker of different languages. CLI has been explored in various linguistic domains,

but the morpho-syntactic level has been the focus of most investigations (Serratrice, 2013).

CLI has been said to either have a facilitating effect (*i.e.*, positive) or an interfering effect (*i.e.*, negative) (*e.g.*, Gathercole, 2016; Jarvis & Pavlenko, 2007; Odlin, 2003; Ringbom, 2007, 2016; Ringbom & Jarvis, 2009). When the two languages processed present similar configurations, CLI from the L1 into the L2 may have a positive effect making the learner produce the target L2 construction earlier and with a lower error rate. Conversely, if correspondences are assumed for structures that are not equivalent in the two languages, this may lead to ungrammaticality on the part of the learner, which, therefore, may be delaying the learning process and causing a higher error rate.

A language learning setting like the one in this investigation, in which a language-in-contact situation is given, is a good scenario to explore potential CLI effects from the L1 (Spanish, in this case) into the L2 (English, as the target language under study). Thus, both languages can be used as a source of information to manipulate the ISLA-related factors that can help improve the learning process.

As argued above, in an L2 formal instructional context, the aim is that the students immersed in a learning process improve their linguistic competence to the point that they reach the best intelligibility, comprehensibility and communicative competence, ideally matching native-like performance, in the target language (final attainment) as fast as possible (rate of learning) after a certain amount of time of exposure to L2 input. Therefore, instruction and length of exposure to the L2 input are two of the main ISLA-related variables that have proven to influence, in different degrees, the way in which students learn the L2 (*e.g.*, García Mayo, 2003; Goo *et al.*, 2015; Muñoz, 2011; Spada & Tomita, 2010; Shojamanesh *et al.*, 2018). These are, in fact, the other two target issues

addressed in our investigation with the aim of testing how influential they can be in the L2 learning process. Both are discussed below.

Instruction, examined in the three publications of this investigation, is a manipulable mechanism aimed at developing L2 knowledge, and, therefore, specific L2 features. Its main aim is the learning of certain linguistic traits that eventually lead to the improvement and development of L2 communicative competence.

Although for certain investigators there exist other forms (see publication#3 for R. Ellis's (2009) direct/indirect interventions dichotomy), two main types of instruction are typically considered: meaning-focused instruction –an implicit type of instruction–, and form-focused instruction –an explicit type of instruction–. These are briefly presented below.

Meaning-focused instruction is an implicit way of language learning based on the communicative language teaching approach. This traditional approach dates back several decades, for which Krashen (1981, 1982, 2003) is the most relevant advocate. Under Krashen's approach, learning should involve exposure to meaningful or comprehensible input (*i.e.*, messages that can be understood by the learner) as being the most relevant factor to progress in the acquisition of an L2. According to Krashen's (1977, 1981, 1982, 1985) Input Hypothesis, exposure to the target language in the form of 'i+1' would lead to its acquisition –being 'i' the level of the language already acquired and '1' a step beyond it–.

However, input alone does not derive into an optimal L2 production accuracy. Positions like Krashen's are refuted by investigations in Canadian immersion contexts (Lyster, 2007, 2018) in which longer periods of exposure to meaningful input are not enough to reach native-like performance, and in which some grammatical features of the L2 are not even developed. What does not seem to work in naturalistic situations

correlates with what also happens in L2 teaching-learning scenarios: The reliance on only implicit approaches does not seem to be sufficient to reach the expected proficiency or to approach the ideal native-like performance when certain linguistic issues are at stake (Sánchez, 2004).

In this respect, N. C. Ellis (1994, 2002b, as cited in 2005, p. 307) states that "many aspects of a second language are unlearnable –or at best are acquired very slowly– from implicit processes alone". The fact that implicit processes alone are not enough leads us to the second type of instruction: form-focused instruction.

The form-focused type of instruction is an explicit approach to the teaching and learning of an L2. Focus on form instruction was initially put forward by Long (1996) as a way to compensate for the lack of grammatical accuracy derived from meaning-focused scenarios, thus complementing that other type of instruction. Consequently, introducing moments of explicit instruction targeting linguistic forms during meaning-focused interactions would result in a better context to develop that expected linguistic competence in a more holistic way.

Therefore, in this type of instruction, direct interventions –*i.e.*, the explicit dimension of teaching–, as per Housen and Pierrard (2005), must be brought into the equation as something seemingly necessary (see publication#1 for their most important characteristics).

As already outlined above, implicit instruction alone is not sufficient to develop L2 competence. Explicit instruction is not without controversy either, since an explicit type of instruction more centered on form could be relegated to something with either a transitory effect (as in Harley, 1989; Tode, 2007; White, 1991), or ineffective due to the fact that what derives from such interventions does not lead to implicit knowledge or only functions for simple grammatical rules (Krashen, 1981, 1982, 1985, 1994; Reber, 1976;

Robinson, 1996a) (see publication#1 for further discussion). Furthermore, explicit instruction has even been considered to have negative effects if used prematurely (Pienemann, 1987). Consequently, and according to this approach, the impact of the use of a more explicit approach through linguistic forms is very little, or even detrimental, on L2 acquisition. Nonetheless, this radical position represents a minority as a great number of ISLA researchers give instruction enough credit as to consider it a positive and effective factor leading to L2 learning (Loewen & Sato, 2017).

Explicit teaching, and the knowledge derived from it, is apparently effective (even more so than that from implicit instruction), durable, and beneficial, as attested by a number of studies (*e.g.*, de Graaff & Housen, 2009; DeKeyser, 2015; Doughty, 1991; Goo *et al.*, 2015; N. C. Ellis, 1996, 2002a, 2005; Lacabex & Gallardo del Puerto, 2020; Norris & Ortega, 2000; Robinson, 1996a; Russell & Spada, 2006; Spada & Tomita, 2010) –see publication #1, publication #2, and publication #3 for further discussion–. In fact, N. C. Ellis (2005, p. 307) categorically asserts that, given the results derived from different investigations carried out in the previous decades, "language acquisition can be speeded up by explicit instruction".

Additionally, form-focused explicit instruction is especially relevant in contexts with limited input to the target L2 in which participants may not notice or even be exposed to certain relevant linguistic properties frequently enough. A conscious and deliberate diversion of learners' attention to specific linguistic features –the Noticing Hypothesis[2]– would be required along with the facilitation of the linguistic knowledge –*i.e.*,

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[2] The Noticing Hypothesis (Schmidt, 1990, 1994, 2001, 2010) initially stated that whatever is not noticed cannot be learnt. That is, if conscious attention is not directed to certain properties that are not salient for the learner, they will not be noticed by the learner and, therefore, not learnt or incorporated as implicit knowledge for an eventual natural use. This initial categorical assertion of "no learning without noticing" was refined later by Schmidt himself to a more open hypothesis by which "more noticing leads to more learning" (1994, p. 18). Either way, a conscious process directed to the acquisition of certain properties of input would be required on the part of the learner.

grammatical rules– for learners to be able to tackle language consciously, and, ideally, in a more effective way (DeKeyser, 1995).

More recently, form-focused and meaning-focused forms of instruction are considered as two distinct types and independent instruction approaches (Loewen, 2015), with the former concentrating mainly on communication situations, and the latter focusing on linguistic structures to varying degrees. And just as implicit methods alone result insufficient, a reduced and overly simplified approach comprising just explicit teaching may also be limited and insufficient to reach the L2 knowledge needed to gradually approach the expected communicative competence or the ideal native-like performance (DeKeyser, 2009; N. C. Ellis, 1994; Hulstijn, 2007; Sánchez, 2004). In this spirit, R. Ellis (1992, p. 659) acknowledges that the "best results" of formal instruction – *i.e.*, explicit instruction– are attained when "combined with opportunities to experience the structures in communication". In other words, either meaning-focused or form-focused types of instruction by themselves are not sufficient and yield better results when combined.

Thus, if focus on form is implemented as a way of bringing attention to certain linguistic forms in meaning-focused communicative learning situations –a combination of explicit and implicit types of instruction–, effective language learning is more likely to take place. Where to find the balance in the classroom between the use of implicit and explicit types of instruction is the present focus of attention of ISLA research (Loewen & Sato, 2017).

Together with instruction, another main ISLA-related factor which is relevant for our study is the concept of input. As Gass (1997, p. 1) puts it, "the concept of input is perhaps the single most important concept of second language acquisition (SLA). It is

trivial to point out that no individual can learn a second language (L2) without input of some sort".

Input, or exposure, is the specific language that learners are exposed to. It is one of the main data sources on which the learners of a language rely to build their linguistic competence (VanPatten & Benati, 2010) –see publication#2 and publication#3 for further discussion–. In the SLA context, comprehensible input, as in Krashen's Input Hypothesis (1977, 1981, 1982, 1985), would be necessary for acquisition to take place. On the contrary, non-comprehensible input would consequently hinder the L2 acquisition process.

If the focus is placed on the context where input is received by learners, two types of context-related input can be found: institutional and natural. The former is the one found in formal L2 teaching contexts, such as classrooms, and it is highly systematized and teacher-controlled (Lightbown & Spada, 2001). Furthermore, institutional input is more related to conscious learning processes on the part of learners. The latter, natural input, is more related to other contexts not belonging to the formal learning of a language (*i.e.*, out-of-the-classroom situations), where learning can happen but in a more unconscious way, therefore, more naturally. In this dissertation, special emphasis will be put on the institutional type of input, given its clear bond with controlled learning situations in which instruction can occur.

Both institutional and natural types of input have been said to be conditioned by the quality (in terms of, for example, richness and complexity) and the quantity (length of exposure) of the input received by learners. These factors have been widely studied since they are considered to be highly influential in L2 learning situations (*e.g.*, Döpke, 1992; Gass, 1996; Kharkhurin, 2008; Norris & Ortega, 2000; Spada & Tomita, 2012; Unsworth, 2016).

The focus will be put here on the quantity of input, or length of exposure, which is the amount of input that learners of an L2 receive, and which may be measured in terms of the total number of hours of exposure to the L2 that the learner receives in the institutional setting (*e.g.*, García Mayo, 2003; Muñoz, 2011; Shojamanesh *et al.*, 2018; publication#1; publication#2; publication#3). In this way, length of exposure can be defined as the amount of L2 input that learners receive in their own country where the L2 is not part of the linguistic repertoire in social interactions[3].

Several studies, some dating back over 40 years, point to a direct correlation between amount of exposure and attainment so that the higher the amount of exposure to the L2, the better the attainment of the L2 (see references below). In fact, the amount of exposure in an instructed setting has been argued to be one of the most important predictors of L2 success (*e.g.*, Genesee, 1988) or to have a significant relevance (*e.g.*, Gathercole, 2002a, 2002b, 2002c; Muñoz, 2006). Moreover, and in Muñoz's (2011) words, the amount of length of exposure received in a learning scenario "may never cease to be determinant" (p. 118).

Nevertheless, claims like 'the more, the better', that is, the advantage of those learners who receive more exposure to the language over those who receive less, has not always been found (see below). This is especially so in cases in which other issues are also considered. For instance, Muñoz *et al.* (2018) point to the fact that length of exposure is not as important as other factors, such as cognate linguistic distance of the languages in contact and out-of-school exposure; see also publication#2 for further discussion of Mujcinovic's (2020) study.

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[3] In immigration contexts, length of residence rather than length of exposure is often referred to when attempting to calculate the amount of input. However, a difference does exist between length of exposure and length of residence. The latter has been claimed to be influential just in an initial period (Long, 2007; Muñoz, 2008, 2010) and its effects to decline due to age (Higby & Obler, 2016).

Similarly, and closely related to the concepts of length of exposure and quantity of input, the role of age has been widely investigated from different perspectives (*e.g.*, Birdsong, 2006, 2014; DeKeyser, 2000, 2012; Dekeyser & Larson-Hall, 2005; Muñoz, 2006, 2008, 2011, 2015).

Related to age of onset, an early start of the learning process is likely to offer more time to be devoted to the learning of the L2 –more length of exposure–. However, and despite common generalizations, the possible existing advantage of younger learners over older ones attested in naturalistic contexts has not been found in L2 instructional contexts between early starters –young children– and late starters –adolescents or adults– (Muñoz, 2006, 2008, 2011, 2015).

As for this study's participants, all of them are young children whose age of onset is the same, and who have received the same amount of input and have been tested in different moments throughout their L2 learning process –different lengths of exposure–. In this respect, the relevant variable in the present investigation it is not age per se but rather the time at which the children were tested.

The previous account of the main ISLA-properties allows us to expose the three issues that constitute the backbone of the present investigation: CLI, explicit instruction and length of exposure, and how these are combined in the L2 learning process of L2 English children. The interaction of these issues leads to the following research scenarios explored in the three publications.

In the case of young children who are in their early learning stages, as is the case of our participants, there is a heavy reliance on the L1 (Krashen, 1981). Additionally, instructional contexts like the one at stake have been said to be generally characterized by limited input (Muñoz, 2008), and consequently, CLI with a negative effect may be expected to occur due to the lack of sufficient input (Ringbom, 1990). This creates the

perfect arena to test the validity of an assertion such as 'the more exposure, the less negative transfer'. That is, the more exposure to the L2, the less CLI with negative effects is expected and the more native-like the learners' language production would be (*e.g.*, Blom & Baayen, 2012; Gathercole, 2016; Llinàs-Grau & Bel, 2019; Montrul & Ionin, 2012; Ringbom, 2016; Unsworth, 2016).

In the same vein, explicit instruction on one of the target structures that differs cross-linguistically between the two languages of the learners (*i.e.*, NNs) would help us characterize instruction along the L2 acquisition process. This type of instruction, which can be considered as a more focalized instance of input, has been said to help in the prevention of negative transfer (Odlin, 1989). Thus, it could be possible to assess whether the negative effects of the existing CLI between the participants' L1 and the L2 can be reduced. This NN explicit instruction program has been implemented for half of the participants in the study which allows a comparison between two participant instructions groups (*i.e.*, instruction versus non-instruction).

In parallel, the possible CLI positive effects in this language-in-contact situation have also been tested. A similar structure, ANs, which is argued to be parallel to NNs given their common underlying scheme of modifier+head (see section below), has also been included in the study. As argued in publication#1 and publication#2, not only the learning of the participants' NNs has been tested for possible benefits from the explicit NN instruction implemented, but also the learning of their ANs given the existing cross-linguistic similarity and cross-structure similarity.

Furthermore, the participants have been tested longitudinally in three different moments in time (see publication#1 for year 1, publication#2 for both year 2 and year 3, and publication#3 for year 3). In this manner, the possible effects of length of exposure, as measured in terms of the total number of hours of exposure to the L2 in the institutional

setting, have been analyzed, compared, and put in relation to the other factors involved across the different testing times.

In conclusion, the aim of this dissertation is to analyze whether length of exposure in terms of amount of input and the use of manipulated input in the form of explicit instruction can both mitigate the negative CLI effects and foster the positive ones. In order to address these issues, the present investigation targets two specific types of nominal constructions whose word order properties constitute a potential locus for CLI: noun modification by means of an adjective or by means of another noun. These structures and the different word order properties they exhibit in English (the L2 of the participants in this study and the target language) and in Spanish (the L1 of the participants) are discussed in the next section.

2.2 Word order in nominal structures: the case of adjective-noun strings and noun-noun compounds

This investigation is concerned with word order within the DP domain and, in particular, with the following two structures: DPs that involve the modification of the head noun (N) by an adjective (A), the so-called ANs, as in (3); and DPs that involve the modification of a head N by another N, the so-called NNs, as in (4).

(3) a. brown **dog** $\quad$ $A_{modifier} + N_{\textbf{head}}$

b. ***perro*** *marrón* $\quad$ $N_{\textbf{head}} + A_{modifier}$

(4) a. bat**man** $\quad$ $N_{modifier} + N_{\textbf{head}}$

b. ***hombre*** *murciélago* $\quad$ $N_{\textbf{head}} + N_{modifier}$

The language under investigation is English as an L2. However, and given that Spanish is the participants' L1, a comparative approach on how the target structures work in the two languages is called for. Before proceeding with an account of the main

properties of these two structures separately, as well as of the cross-linguistic comparison, the motivation as to why these two structures have been selected and considered together is presented. The reason is two-fold: Firstly, because of the cross-linguistic similarities and differences that appear in terms of word order and productivity when comparing English and Spanish; and secondly, because of the parallelism that both structures exhibit in terms of word order when looking into each of the two languages under consideration.

On the one hand, a word order parallelism between ANs and NNs in English and in Spanish appears, as in (3) and (4). In English, the head element always appears after the modifier element, both in ANs (3a) and in NNs (4a); conversely, in Spanish the head N always precedes the modifier A, in the case of ANs (3b), or the modifier N, in the case of NNs (4b). That is, both ANs and NNs exhibit the same order in each of the two languages under consideration (*e.g.*, Baker, 1998; Nicoladis, 1999; Sadock, 1998; Selkirk, 1982).

However, while ANs and NNs present a parallelism in terms of word order in Spanish and in English respectively, when each structure is compared in the two languages under consideration, a word order difference arises: in Spanish the head element always appears in the first place, while in English it is the modifying element the one appearing first. That is, each language exhibits a different directionality: while English is a right-headed language, Spanish is a left-headed one.

On the other hand, while ANs are available both in Spanish (the participants' L1) and in English (the participants' L2) and they are very productive, NNs are productive only in English (see the supplementary material of publication#1 for further examples of more productive Spanish equivalents of English NNs).

These cross-linguistic differences (*i.e.*, directionality and productivity) may present a challenge for L1 Spanish speakers learning English in an L2 setting. Nonetheless, as Müller (1998) attested, absolute ordering rules, such as the one under discussion, should

not be of difficulty for L1 bilingual children to assimilate as has been proven with other constructions. If this were also the case for L2 learners, and as Nicoladis (2002b) suggests, children may use similar structures as a model to acquire others. In this particular case, children may use the word ordering rule for ANs, which they are already familiar with, to learn the word order of NNs. If this is the case, learning English AN order could pave the way to learning English NN word order.

Focusing on word order, the difficulty of this rule in terms of teachability remains to be considered. When it comes to the different rules that learners have to acquire, two types of grammatical rules are normally identified: those considered simple or easy, and those that are complex or difficult (*e.g.*, Green & Hetch, 1992; Krashen & Terrel, 1983; Robinson, 1996a). However, in SLA there is no straight forward agreement to define the complexity of grammatical rules which is something that has been much debated in field (Hulstijn, 1995; Robinson, 1996a, 1996b).

For instance, Bialystok (1979, p. 90, as cited in Green & Hecht, 1992, p. 179) points out that "the rules which refer to specific lexical items are easier than the rules which are more abstract". Krashen and Terrell (1983) differentiate between simple and difficult rules in terms of the required movements of the elements concerned, or in terms of whether other linguistic domains are involved. Thus, simple rules are those not requiring complicated movements or changes or with only simple morphological operations such as the addition of a morpheme; difficult rules, on the contrary, require either several operations and movements or involve other linguistic domains, such as semantics.

Green and Hecht (1992) characterize easy rules as those involving categories that are clearly recognized, those that can be applied mechanically, and those not dependent on large contexts. Following these three criteria, the authors consider examples of easy to learn rules those involving simple word order as well as morphological dichotomies.

Conversely, hard rules either include the aspectual dimension of verbs that involves semantics or incorporate certain aspects that are difficult to be described in simple terms or that cannot be practiced in simple immediate contexts. The use of the perfect tense or continuous forms would be instances of hard rules.

R. Ellis (2002) presents and exemplifies six of several criteria that can be taken into account to determine the difficulty of grammatical features to be acquired as explicit knowledge: formal complexity (whether the structure includes a single element or many elements), functional complexity (if the meanings conveyed are transparent or not), reliability (if the rule presents exceptions or not), scope (broad or narrow coverage of the rule), metalanguage (the degree of metalanguage required for the rule), and L1/L2 contrast (the extent to which the rule differs between the two languages).

Thus, if the above-mentioned criteria were applied to the word order difference under discussion in this investigation (*i.e.*, ANs and NNs in English and Spanish), it could be concluded that this word order difference is a simple grammatical rule. This is so because specific lexical items (Ns and As) are involved, as per Bialystok (1979). The first of Green and Hetch's (1992) criteria classifies as easy rules those involving simple word order issues. Following R. Ellis's (2002) criteria, the rule could be characterized as simple given that there are not many elements involved (only two in each case, either an N and an A or two Ns); that the meaning/function of each element is transparent (one being the head and the other the modifier in every case); that the rule is very reliable since there are very little exceptions (see the 2.2.1 and 2.2.2 below); that no metalanguage was required in the explicit instruction that has been implemented (see "the 1-2 rule" in supplementary material of publication#1); and, lastly, that the L1/L2 contrast is clear and straightforward for the two structures (with one order for the two structures in each language and exactly the opposite order in the other language).

Furthermore, this basic simple word order rule is an appropriate rule to be used in a study like this one, given the child population tested, and given the type of manipulation with the explicit instruction that has been carried out (see section 4.2). As a matter of fact, it is not one but two simple grammatical rules, one per structure: ANs and NNs.

The two target structures, ANs and NNs, are compared and discussed below in the two languages at stake, English and Spanish.

2.2.1 Adjective-noun strings (ANs)

In the subsequent paragraphs, a formal approach to ANs in both English (the language under investigation and the participants' L2) and Spanish (the L1 of the participants) is offered. The information presented in this section draws on the formal description of ANs that appears in publication#1 (section 1.1) and in publication#2 (section 1).

The main issue under the spotlight is the order between the N head and the A modifier in the DP, which is discussed below. Some remarks on the productivity of these structures will be addressed in the final paragraphs.

The position of the adjective in DPs, *i.e.,* attributive adjectives, presents important differences in the two languages. The main cross-linguistic difference is word order in the sense that English adjectives are typically premodifiers, as illustrated in (3a) above and (5) below, while in Spanish they are typically postmodifiers, as in (3b) above and (11) below. There is, however, some degree of flexibility since, in the two languages, the opposite order can also be found. In English, for instance, adjectives tend to occur prenominally, even when modified by adverbs, as in (5), but instances of postmodifying adjectives can also be found, as in (6) to (10) (Swan, 1998):

(5) a very big elephant

(6) heir apparent / queen regent

(7) his palace grand

(8) send all the tickets available
     tickets that are available

(9) let's go somewhere quiet

(10) the members present / the present members
      those who are members now / those who were at a meeting

Instances of postmodifying adjectives in English can be found in fixed phrases and expressions (6), in poetic uses (7), in the case of adjectives normally ending in *-able/-ible* used in a similar way to relative clauses (8), for adjectives accompanying words like *something, everything, anything, nothing, somebody, anywhere* (9), or adjectives having a different meaning depending on the position they occupy (10).

In the case of Spanish, while postmodifying adjectives are more typically found (11), premodifying adjectives are also possible, as in (12).

(11) *la pared blanca* [N+A]
     the white wall

(12) *la blanca nieve* [A+N]
     the white snow

In the Spanish DP, adjectives can occur prenominally and postnominally, being the latter the canonical or unmarked position (Real Academia Española y Asociación de Academias de la Lengua Española, 2009). However, when available, the two different positions imply changes in meaning or different nuances (Demonte 1999a, 1999b, 2008). Take, for instance, the adjective *blanca* ('white' in feminine), as in examples (11) and (12). In these cases, a prenominal adjective (also referred to as non-restrictive) is descriptive of the reality suggested by the noun, as in (12), whereas a postnominal adjective (*i.e.*, restrictive) specifies the reference of the noun, as in (11) (Alarcos, 1999).

González (2020) states in this respect that "[a] <u>nonrestrictive</u> adjective expresses <u>totality</u>; a restrictive one expresses partitivity" (p. 2).

The somehow exceptional and marginal uses in (6-10) for English and the less common ones in (12) for Spanish do not overrule the fact that the dominant word order in each language is A-N for English and N-A for Spanish.

From a theoretical point of view, the formal explanations that syntactically account for the different word orders of ANs in Romance and Germanic languages have been thoroughly discussed in the last decades (see publication#1 and publication #2).

Cinque (2010) and Kayne (1994), within the Universal Base approach, propose that there is a common underlying source for languages with prenominal adjectives and for those with postnominal adjectives. In sum, in their syntactic derivation, attributive adjectives have a predicative source in the form of a reduced relative clause. Adjectives undergo a series of movements (three in the case of Romance languages, and one in Germanic, according to Kayne (1994)) to eventually land in their final pre- or postnominal position depending on the language. However, besides the predicative source in reduced relative clauses, adjectives can also enter the derivation of DPs, depending on their interpretation, as phrasal specifiers of an extended projection of N according to Cinque (2010). Both Cinque's (2010) and Kayne's (1994) proposals are further reviewed and discussed in publication#1 (see section 1.1).

As for the productivity of these structures, a cross-linguistic comparison between English and Spanish reveals no substantial differences: ANs are productive structures not only in English, but also in Spanish. As a matter of fact, instances of noun modification that include adjectives appear very early in the monolingual production of L1 English children (at the ages of 1;8-2;6[4]) (*e.g.*, Clark, 1981; Clark *et al*., 1985; Montrul, 2004;

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[4] Age is expressed as it is normally done in acquisition studies: the first number represents years and the second months. They are separated by a semicolon.

Nicoladis 2002a, 2006b; Snyder, 2001). In addition, ANs are very common in the spontaneous speech of L1 speakers (Nicoladis & Rhemtulla, 2012). In the case of Spanish, and as it is the case for most languages, the noun is the first lexical category produced by children during the one-word stage in their L1 acquisition process (Montrul, 2004), and during the following phase, the two-word stage, adjectives are produced at around the age of 2;2.

Though we agree with Lightbown and Spada (2006) in that "[a] second language learner is different from a very young child acquiring a first language" (p. 29), observing how young children acquire English as an L1 can be enlightening for the analysis of the L2 learning process. Furthermore, in an L2 learning school context, the first words young learners are exposed to are those related to essential communicative functions in the language that is being learnt in order for them to be able to establish the basic dynamics of communication in the L2 classroom: words from the phatic communicative function such as greetings, interjections or fixed expressions. Together with these, and for young learners to try to relate, name, and refer to the realities around them with their initially scarce and limited abilities, they are exposed to lexical words such as nouns, which are basic vocabulary units. Then, when the learning scope of the learners is widened, another lexical category –the adjective– is normally introduced. By making use of adjectives, contrast relationships with other realities of the same kind can be established and more information can be provided for those other words already learnt or in the process of being learnt, that is, nouns.

As a result, it is common to find that ANs are typically addressed in the classroom by means of instruction. In this sense, L2 textbooks normally include a number of activities that deal with this structure, especially in the initial learning stages. The

examples included in figure 1 are taken from the textbooks used by young learners in school contexts like the one of the participants of the present investigation.
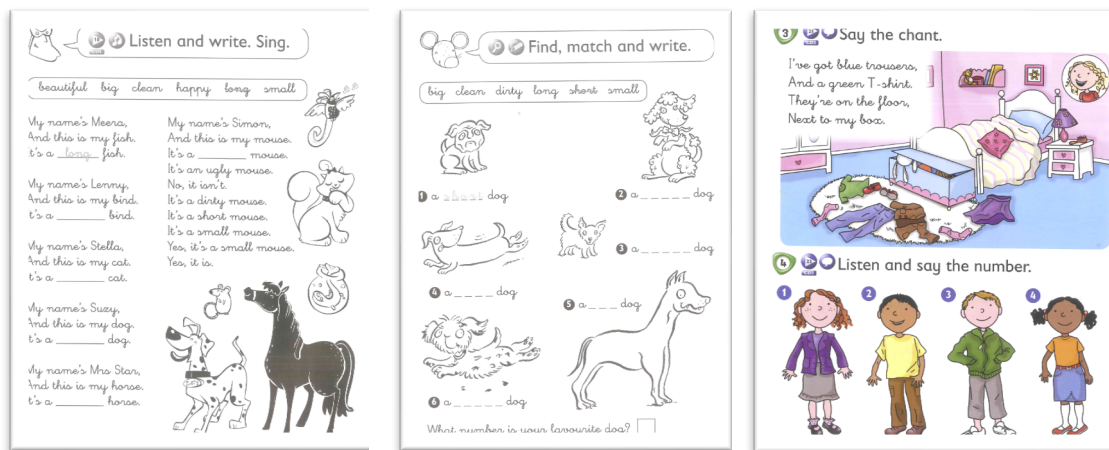
Figure 1. Instances of exercises on ANs in textbooks (Tomlinson & Nixon, 2014)

In all the examples included in figure 1, ANs are targeted in different ways. In the first picture, there is a listening exercise that consists of filling in the blank spaces with the missing adjectives premodifying the respective nouns that they refer to. The second picture is a spelling exercise in which the missing word is the premodifying adjective of a set of nouns. In the last picture, there are two exercises for which the active pieces of vocabulary that are revised include articles of clothing, *i.e.*, nouns, premodified by color adjectives.

In the particular case of the L2 English context under analysis in the present dissertation, table 3 of publication#1 shows an approximation of the written exposure to English ANs. As indicated in this publication, data correspond to the L2 exposure of every single instance of written ANs in all the textbooks in English used by the participants in the five grades that are covered in our longitudinal study. This amounts to a total of 6,189 ANs.

In conclusion, from an English-Spanish cross-linguistic perspective, ANs present no problems in terms of productivity. However, in terms of word order, and even if both languages have the two possibilities for the positioning of the adjective in a DP, each language favors one of these orders –in English the prenominal position and in Spanish the postnominal one–. The possible CLI effects regarding this word order difference is what has been put to the test and analyzed in this dissertation by focusing on children's L2 English performance.

2.2.2 Noun-noun compounds (NNs)

This section offers information on NNs related to the formal accounts presented in publication#1 (section 1.1), in publication#2 (section 1), and in publication#3 (section 2.1).

The concept of compounding will be presented first, followed by a discussion of the two main cross-linguistic differences between English and Spanish NNs: word order and productivity. NNs will be compared in the two languages to account for the most relevant differences.

Despite the difficulty in providing a "satisfactory definition" (Scalise & Vogel, 2010, p. 5), a compound could be described as a new single lexical unit resulting from the combination of two words, which can belong to the same grammatical category or to different ones as in (13-15). The two elements of the compound function as a single element morphologically, semantically, and syntactically. The combination of two nouns results in an NN compound (13).

(13) police dog [N+N]

(14) daydream [N+V]

(15) greenhouse [A+N]

In terms of the notion of headness, compounds are classified in endocentric and exocentric compounds.

Endocentric compounds are those which include a head element, as in (16). In general terms, the head of the compound is the constituent that determines the morphological, semantic, and syntactic properties of the resultant compound word. Morphologically, the compound is a noun since the head *dog* is a noun, which also determines the gender of the resulting compound (masculine in the case of the Spanish equivalent). In addition, it is in the head where the inflectional variation for number may also appear, as in (16b)[5]. In (16a), both constituents are nouns, thus, in order to confirm which is the one transferring the resulting grammatical category of noun to the compound, the semantic dimension is required: the resulting NN is a hyponym of the noun *dog* (a police dog is a type of dog), which is, again, confirmed as the head of the compound. Syntactically, the head element *dog* appears to the right of the compound, which is where the head of compounds always appears in English, whereas *perro* 'dog' appears to the left, the canonical position for the head elements in Spanish compounds.

(16) a. police + **dog**
    police **dog**
    perr-o + *policía*
    [masc. sg. N] [fem. sg. N]
    perro *policía*
        [masc. sg. N]

  b. police + **dogs**
    police **dogs**
    perro-s + *policía(-s)*
    [masc. pl. N]   [fem. (pl.) N]
    perros *policía(-s)*
        [masc. pl. N]

Compounds are considered exocentric, as that in (17), when these three features (*i.e.*, morphological, semantic, and syntactic) fail to be transferred from any of the

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[5] In Spanish, number can also manifest optionally in the non-head element of the compound, but only if it appears in the head, too (Liceras *et al*., 2020; Scalise & Fábregas, 2010).

components to the resulting compound, and when it does not refer to something that cannot be named by either of its constituents (Olsen, 2000). Therefore, exocentric compounds do not have a head.

(17) chiaroschuro
claroscuro

Endocentric NNs are the ones under investigation in the present study given the differentiating position of the head element, which is the main cross-linguistic divergence between English and Spanish NNs: English NNs are left-headed (18), while Spanish NNs are right-headed (19).

(18) pirate **boat**   N$_{modifier}$ + **N$_{head}$**

(19) ***barco*** *pirata*   **N$_{head}$** + N$_{modifier}$
[boat pirate]

It is considered canonical that endocentric compounds in Romance languages are mainly left-headed and in Germanic languages right-headed. However, a number of exceptions to the general rule can be attested in each language family (*i.e.*, cases of right-headed compounds in languages whose canonical compounds are left-headed or vice versa). The existence of these exceptions renders the possibility of establishing a universal principle or a binary parameter for compounds difficult (*cf.* Scalise & Fábregas, 2010). For example, in Spanish well established calques of English NNs can be found. This is the case of *ciencia-ficción* 'science-fiction', whose most correct translation should have been *ficción científica*, since it refers to a genre and is not a hyponym of *science*. Conversely, Liceras & Díaz (2001) and Liceras *et al.* (2002) refer to the case of *letter bomb* (*carta bomba* in Spanish), which could be taken as a direct translation from English, and, therefore, an exception in Spanish since the head noun would be to the right. However, for some native Spanish speakers *carta bomba* is a type of letter (*i.e.,* a proper

left-headed Spanish compound), and not a type of bomb (*i.e.,* a right-headed compound as it would be in English).

Exceptions aside, the focus will be put on the considered canonical ordering of the elements within a compound. It has been said that "[o]ne of the most discussed properties of compound heads has been its position inside the word" (Scalise & Fábregas, 2010, p. 115). And when Germanic and Romance languages are compared, a word order dissimilarity arises, an issue that is addressed from a theoretical point of view in the three publications that make up this dissertation.

This word order difference has been captured by Piera's (1995) Word Marker hypothesis. This proposal argues for the existence of a double bracket to the left of words that present a morphological word marker (WM), such as nouns in Spanish, as in (20).

(20) **[[*barc*]WM]**   →   **[[*barc*]*o*]**
     [boat]   [boat]

The double bracket would prevent the placing of another noun to the left. The addition of another noun to the head noun in the derivational process to form NNs would only be possible to the right in Spanish, thus, Spanish NNs always have the head on the left of the word, as in (19). Since English lacks morphological WMs, this double bracket does not exist and, therefore, adjunction to the left is possible and NNs are right headed. Piera's double bracket restriction is fully discussed and exemplified in publication#1 (section 1.1) and publication#3 (section 2.1).

Although not put to the test in this investigation, the Word Maker hypothesis also accounts for the recursive potential of English NNs, as in (21a), in opposition to the only-binary nature of Spanish compounds (21b) (de Bustos Gisbert, 1986; Varela, 1992, 2012).

(21) a. pet police dog

    b. **perro policía mascota*
       [dog police pet]

The second main cross-linguistic difference between English and Spanish NNs is their productivity, that is, how frequent these structures materialize in these languages. In general, NNs do not appear in Romance languages as regularly as they do in Germanic languages (Nicoladis, 1999). Therefore, NNs are highly productive in English, whereas they are not so in Spanish (Val Álvaro, 1999). That is, examples like (17) are not very common, and other more productive options instead of NNs are preferred in Spanish (see examples (1b-5b) in the supplementary material for publication #1).

Snyder's (2001) Compounding Parameter accounts for this difference in productivity, as it is presented and discussed in publication#1 (section 1.1). This parameter establishes two typological groups of languages: On the one hand, English, like most Germanic languages, is a [+compounding] language, since endocentric compounds are formed during the syntactic derivation and are, therefore, highly productive, including the possibility of creating novel compounds; on the other hand, compounds in Romance languages such as Spanish are rather coinages which account for their not being frequent and for their more fixed interpretation and which, therefore, makes Romance languages [-compounding] languages.

In conclusion, when comparing English and Spanish NNs, there are two main differences that may present a challenge for L1 speakers of Spanish learning English as an L2: i) the relative order between the two Ns that make the compound, English NNs being right-headed and Spanish NNs left-headed; and ii) the frequency these structures present in each language, being highly productive in English, while less so in Spanish which favors other structures over NNs. These two issues have been considered in the present study.

CHAPTER 3: EMPIRICAL FRAMEWORK

In language acquisition studies, attention has been paid to how the two structures under analysis in this work –ANs and NNs– are produced or perceived by different groups of speakers (*e.g.*, bilinguals and monolinguals, children and adults, L1 and L2 speakers). To the best of our knowledge, in the vast majority of the cases, only one of the two structures –either ANs or NNs– has been targeted, with very few exceptions (*i.e.*, Nicoladis, 1999; Nicoladis, 2002a).

The three publications included in Chapter 5 provide a review for different AN and NN acquisition studies, both in the case of L1 and L2 speakers. In the review that follows, some of the main findings are pointed out, with acquisition works on ANs presented first, and then those on NNs, followed by an account of the limited investigation in which both structures have been studied and compared in acquisition data.

3.1 The acquisition of ANs

As already discussed, the analysis of AN structures has mainly been focused on how the two elements are ordered; that is, whether the modifying adjective precedes or follows the noun. This gives way to two directionalities (*i.e.,* AN and NA) which are not equally available and used cross-linguistically, and which exhibit different frequencies in the different languages (see section 2.2.1) (*e.g.*, Bernardini, 2003; Rizzi *et al.*, 2013; Scarano, 2000).

When it comes to the acquisition of ANs, the vast majority of studies focus on directionality. In the case of acquisition, the speaker needs to be aware of the distributional properties of the two directionalities for the language they are exposed to. In the case of bilingual acquisition, the two languages of the bilingual may share the same distributional properties or not and this may give way to instances of CLI.

In the case of L1 acquisition, a series of works have analyzed the production of monolingual children in different languages to account for the acquisition of the ordering of adjectives (among others, in English: Brown, 1973; Nicoladis & Rhemtulla, 2012; in German: Mills, 1985; in Italian: Bernardini, 2003; Cardinaletti & Giusti, 2010, Cipriani *et al.*, 1993; in Spanish: Montrul, 2004). What the different studies have found is that, despite a small number of errors in the form of reversals, as in (22), monolingual children acquire this grammatical property from very early stages, around the ages of 1;8-2;6.

(22) *car white

In the case of child 2L1 acquisition, AN reversals have also been found, as in (23-25) (Bernardini, 2003; Granfeldt, 2000a, 2002b; Montrul, 2004; Nicoladis, 2006b; Nicoladis & Gavrila, 2015; Repetto, 2006). However, these have been rather occasional, both in the case of data coming from children´s spontaneous production and from experimental situations.

(23) *grosso cane*   [2L1 Italian-Swedish child]
       big dog   (Bernardini, 2003:70)

(24) *llawn diod*   [2L1 Welsh-English child]
       full drink   (Nicoladis & Gavrila, 2015:910)

(25) *mouse mad   [2L1 English-French/L1 English child]
                                               (Nicoladis, 2006b:21)

Errors in the ordering of the AN elements have been attributed to the overgeneralization of the syntax of one of the two languages of the bilingual (Volterra & Taeschner, 1978), or to the simpler derivation of the prenominal position of adjectives, as per Kayne's (1994) Universal Base approach (Rizzi *et al.*, 2013). Unidirectional CLI in the case of Germanic languages into Romance languages has also been argued to be behind the incorrect position of adjectives (Müller, 1998); that is, from the languages that

present only one possible option for the placement of adjectives (*e.g.*, German or Swedish) to those that present two (*e.g.*, Italian, French or Spanish).

As for 2L1 bilingual adults, in their natural and experimental production of ANs, very few reversals have been attested, as in (27), and those errors have not been attributed to CLI from the other language of the bilingual. The reasons argued for the marginal cases of errors have been explained in terms of either the participants' avoidance of unfamiliar constructions in the case of the natural data, or the infrequent spontaneous use of the experimental structures (Kupisch, 2014).

(27) **piccola figlia*   [2L1 Italian-German adult]
      small girl   (Kupisch, 2014:226)

Regarding L2 acquisition, both sequential bilingual children and adults have been targeted. In both cases, studies have shown that reversals are scarce. The ordering of adjectives within the DP is not a vulnerable domain given that, when errors manifest, they appear in limited cases or tend to disappear rapidly (*e.g.*, Bernardini, 2003 Granfeldt, 2000a, 2000b; Paradis & Crago, 2004; Parodi *et al.*, 2004; Wetter, 1996). The production of AN reversals, both in the case of children and in the case of adults, have been attributed to CLI from the other language (Wetter, 1996), or to the overgeneralization of one of the two possible positions of the adjective (Paradis & Crago, 2004).

In sum, and when it comes to how adjectives are placed in relation to the noun they modify, what research on shows is that, in general, reversals appear in the production of monolinguals and bilinguals, both in L1 and L2 situations, and with adult and child participants. Even if scarce, AN reversals have been attributed to differences across the two languages of the bilingual or to the initial developmental stages in the case of children.

To the best of our knowledge, and with respect to L2 English, no studies have been conducted with participants whose L1 is Spanish with the focus placed on the ordering of the adjective within the DP domain. The present dissertation contributes to fill in this gap by analyzing L1 Spanish child participants learning English as an L2, as well as by combining the analysis of ANs and NNs. In the following section, research carried out for NNs is reviewed.

3.2 The acquisition of NNs

NNs have been the focus of a vast number of empirical studies dealing with a wide variety of topics. Some of these include grammatical analyses targeting issues such as the inflectional properties of the NN constituents (*e.g.*, Kirchner & Nicoladis, 2009; Liceras & Klassen, 2019; Liceras *et al*., 2020; Nicoladis, 1999, 2003b) or word order and gender agreement between the two nouns (*e.g.*, Fernández Fuertes *et al*., 2008). Other studies address lexical and semantic issues such as the family size the nouns belong to (Krott & Nicoladis, 2005), or possible existing relationships between the two elements of the NN (Krott *et al*., 2008, 2010; Nicoladis 2003a). NNs have also been used to prove that comprehension precedes production in the case of monolinguals (*e.g.*, Clark & Barron, 1998), or to study other issues such as the increased creativity of bilingual speakers when compared to monolinguals (*e.g.*, Onysko, 2016).

Different languages have been targeted (*e.g.*, Chinese, English, Finnish, German, Hebrew, Japanese, Māori, Persian, Portuguese, Spanish, and Swedish), in different contexts (natural and institutional), and analyzing participants with different linguistic profiles (monolinguals, L1 and L2 bilinguals, preschool children, older school children, adults, and impaired speakers) (*e.g.*, Berman, 1987; Clark, 1981; Clark & Berman, 1987; Clark *et al*., 1985; Fernández Fuertes *et al*., 2008; Foroodi-Nejad & Paradis, 2009; Gagné,

2001; Kutsuki, 2019; Levy *et al.*, 2006; Liceras & Díaz, 2001; Mäkisalo, 2000; Mäkisalo *et al.*, 1999; Mellenius, 1996; Nicoladis, 2006a; Nicoladis & Yin, 2002).

As in the three publications of Chapter 5, the main findings of NN acquisition studies are revised in what follows and for the two cardinal issues under investigation in this dissertation: productivity and directionality.

In terms of productivity, it has been attested that children acquiring languages in which compounding is highly productive start to make use of compounds from very early ages (1;8) (*e.g.*, Clark, 1981; Clark *et al.*, 1985; Nicoladis, 2006b; Snyder, 2001). Monolingual children even favor the production of the canonical compounding structure over other possibilities, even to refer to novel realities (28) (Nicoladis, 2003a). Additionally, in a case of L1 French-English bilingual production (a language pair with different NN productivity), the natural production in the language that favors compounding (English) has been found to be higher in comparison with the language that does not favor it (French), even when the methodology followed could have biased the participant to producing more NNs in French (Nicoladis, 1999).

(28) a. fish shoes   [N+N]

   b. fish on shoes   [N+PP]

On the other hand, children whose L1 does not have productive compounding, like Spanish, French or Hebrew, do not normally incorporate these structures in their production until later in the developmental process (5;0) (*e.g.*, Berman, 1987; Clark, 1998; Clark & Berman, 1987). Instead, they favor the use of other more productive structures, as in (29) (see supplementary material of publication#1 for further examples and productive options in Spanish).

(29) a. *peral*   [N derivative]
         pear tree

    b. *La Guerra de las Galaxias*[6]   [N+ PP]
        Star Wars

With regards to directionality, the production of both monolingual children, as well as L1 and L2 bilinguals has been investigated.

Monolingual children seem to have a very low error rate when it comes to word order in NNs (*e.g.*, Clark *et al.*, 1985; Nicoladis, 2002b). However, reversals do appear, both in the case of children acquiring a right-headed language such as English, and a left-headed language such as Hebrew (*e.g.*, Berman, 1987; Berman & Clark, 1989; Clark *et al.*, 1985; Mellenius, 1997; Nicoladis, 2002b). Examples of reversals appear in (31) for English and in (32) for Hebrew.

    (31) *door-candy   (Clark *et al.*, 1985:89)

    (32) *ha-letsan balon*   (Berman, 1987:1068)
        the-clown balloon

In bilingual situations, the issue is whether the two languages that are in contact exhibit the same directionality. When the two languages of the bilingual differ in directionality, CLI effects could appear. In the case of simultaneous bilinguals, previous works on English-French child data have shown that children distinguish between the two compounding rules in the two systems (*e.g.*, Nicoladis, 1999, 2002a, 2002b). However, cases of reversals, as in (33), do appear which suggests some sort of CLI that sometimes is reported to be bidirectional, and others from the right-headed language (*i.e.*, English) into the left-headed language (*i.e.*, French). CLI with such an interfering effect has been linked to issues such as the language in which NNs are more frequent as being the source of CLI.

    (33) *brush teeth   (Nicoladis, 1999:253)

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[6] Literally *War of the Galaxies*, which is the adapted and established translation in Spain for the Star Wars term used to refer to the film saga.

When different sources of data have been analyzed and compared with 2L1 child production, differences appear. While almost no word order problems in NNs appear in naturalistic data, in experimental data a higher error rate appears in the ordering of the elements, with reversals in almost half of the total production (Nicoladis, 2002a). This is probably due to the fact that the experimental task was "tapping children's compound abilities in different ways" (645).

In the case of L2 bilinguals, studies conducted with both child and adult data conclude that directionality in the form of reversals is highly frequent (*e.g.*, Altelarrea Llorente, 2013; Fernández Fuertes *et al.*, 2008; Liceras & Díaz, 2001; Liceras *et al.*, 2002; Slabakova, 2002; Trías & Villanueva, 2011, 2013). In this case, the interfering effect of CLI has a specific directionality in that influence goes from the L1 into the L2. That is, when the L1 is a left-headed language, such as Spanish, participants produce ungrammatical left-headed compounds in English and vice versa. This has been attributed to the reduced amount of L2 input participants receive, and it has been linked to the initial stages of the L2 acquisition process, too.

As far as we know, the L2 English knowledge that L1 Spanish children have of NNs has only been considered in one study in which only production data are analyzed (*i.e.*, Fernández Fuertes *et al.*, 2008). Thus, the present investigation contributes to the characterization of NN knowledge that L2 children have. This is achieved by analyzing and comparing data elicited via different methodologies and by analyzing and comparing data from four groups of L1 Spanish–L2 English children that differ in terms of length of exposure and instruction conditions.

3.3 The acquisition of ANs and NNs

As mentioned above, acquisition studies involving both ANs and NNs are scarce. To the best of our knowledge, only two studies exist, the two dealing with L1 bilingual acquisition: Nicoladis (1999) and Nicoladis (2002a). In the case of the former, code-switch production is considered, and, given that the analyses include the combination of both monolingual and bilingual structures, issues different from the ones in this dissertation are at stake. Therefore, Nicoladis (2002a) is, in fact, the only study that addresses the directionality of the two structures under consideration here. In particular Nicoladis (2002a) deals with the spontaneous and experimental production of English and French bilinguals in Canada.

When both ANs and NNs have been analyzed and compared in 2L1 child production, this has been done so to account for the possible reasons behind the acquisition of the common word order of the two structures. In that comparison, the placing of the elements in ANs has always been found to be more accurate, almost error-free, than that of in NNs. As to the reasons why word order errors are produced, Nicoladis (2002a) finds that neither reliance on the similar structure, nor reliance on meaning seem to be behind the different reversal rates children have when it comes to the ANs and NNs they produce.

Inasmuch as studies on the acquisition of the two structures combined (*i.e.*, ANs and NNs) are scarce, this dissertation, thus, clearly contributes to fill this void.

CHAPTER 4: METHODOLOGY

In this chapter, the methodology followed in this work is presented. This investigation is a large-scale work that includes noun modification data collected during three consecutive years, via three different experimental tasks and from four child participant groups. The three publications included in this dissertation focus on different stages along the longitudinal investigation and on the analysis of different data sets extracted from the three experimental tasks.

Therefore, the participants, a description of the intervention program, the tasks, and the research questions and hypotheses that have guided this investigation will be summarized in the subsequent sections and cross-referenced with the three publications, where they appear developed in full. Given its importance for the present study, a section is devoted to the specific pedagogical intervention program implemented with half of the participants (*i.e.,* the so-called instruction group).

4.1 Participants

Thorough information regarding the participants of this study appears in each of the publications: in section 3.2.1 of publication#1, in section 3.1 of publication#2 and in section 3.1 of publication#3.

All the participants from the experimental groups are L1 Spanish speakers that, at the time of testing, were enrolled as Primary Education students. In the particular context of Spain, English has been taught as a foreign language subject in schools, traditionally with a limited exposure to the language. However, in the last twenty-five years, Content and Language Integrated Learning (CLIL) programs have been promoted and prioritized as an educative trend for the teaching of foreign languages in Europe, with the consequent increase of exposure to the language being learnt (European Commission, Directorate-

General for Education, Youth, Sport and Culture, 2006). In Spain the teaching approach has also moved to the CLIL methodology, which has taken over in the last fifteen years in this precise context and is currently being implemented in many Spanish schools (Muñoz, 2015).

Although the present work is a three-year longitudinal study, the time span for the participants covers five academic years of the total six of the Primary Education stage in Spain: from the first grade of the youngest participants in year 1 of testing (age=6-7 years old), to the oldest participants, who were fifth graders in year 3 (age=10-11 years old). Regarding total L2 exposure, first graders have received approximately 227.5 hours of English input, and fifth graders about 1,137.5 hours by the end of their respective academic years in the given context, as shown in table 2[7].

Table 2. L2 input in the school context

Levels (age span)	L2 input in hours
1st graders (6-7 years)	227.5
2nd graders (7-8 years)	455
3rd graders (8-9 years)	682.5
4th graders (9-10 years)	910
5th graders (10-11 years)	1,137.5

The participants' taxonomy is presented in table 3. Participants are classified into two main groups: the instruction groups and the non-instruction groups (NN instructed and non-NN instructed, as referred to in publication#2). This classification was established according to the specific instruction program (see 4.2 below) that was implemented just for those participants in the instruction groups. Thus, participants who did not receive that specific instruction are those included in the non-instruction groups.

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[7] See the three publications for a detailed account of the total amount of L2 exposure. Note that the figures for the amount of L2 exposure in table 2 of publication#1, table 1 of publication#2, and table 1 of publication#3 account for the approximate L2 exposure hours at the time of testing.

Table 3. Participant groups: longitudinal study and data distribution across publications

Participant groups		Year 1	Year 2	Year 3
non-instruction	younger	1st graders	2nd graders	3rd graders
	older	3rd graders	4th graders	5th graders
instruction	younger	1st graders	2nd graders	3rd graders
	older	3rd graders	4th graders	5th graders
number of participants (instruction / non-instruction)		96 (48/48)	95 (47/48)	95 (47/48)
data distribution		publication#1	publication#2	publication#2 publication#3

In each of these groups two age subgroups appear: younger and older. Younger participants were first graders, while older participants were third graders in year 1 of testing (as referred to in publication#1). Consequently, in the last year of data collection –year 3–, younger participants were third graders whereas older participants were fifth graders. Further information on the participants, such as the homogeneity of the different groups in terms of proficiency, is discussed in the three publications (section 3.2.1 of publication#1, section 3.1 of publication#2, and section 3.1 of publication#3).

The same participants were tested along the three years. However, out of the 96 participants of year 1, 95 were kept in years 2 and 3 for the written tasks, and 84 in the case of year 3 for the oral task.

The longitudinal nature of the study is depicted in table 4 showing the two main variables in the four participant groups: length of exposure in the three years of testing and the specific NN instruction by means of the pedagogical explicit intervention (see 4.2 below). A reduced version of this table, showing years 2 and 3, appears as table 2 in publication#2.

Table 4. Longitudinal study: length of exposure and NN instruction

	Year 1 of testing	Year 2 of testing	Year 3 of testing
non-instruction younger	■ ○	■ ■ ○	■ ■ ■ ○
non-instruction older	■ ■ ■ ○	■ ■ ■ ■ ○	■ ■ ■ ■ ■ ○
instruction younger	■ ●	■ ■ ● ●	■ ■ ■ ● ● ●
instruction older	■ ■ ■ ●	■ ■ ■ ■ ● ●	■ ■ ■ ■ ■ ● ● ●

Length of exposure   ■ each square represents a year of exposure to L2 English in school context
   ■ marks the year they were tested

NN instruction   ● each circle represents a year
   ● marks the year they were tested
   ○ marks the absence of NN instruction

As in table 4, length of exposure is marked using squares (*i.e.*, ■). The amount of exposure increases from year 1 to year 3 and equally so for the younger groups and for the older groups (regardless of instruction). The participation in the instruction program appears in circles (*i.e.*, ●). As for exposure, the amount of instruction expands correspondingly in each of the years for both participants' age groups. This is so only in the case of the instruction groups, thus the symbol ○ for the non-instruction groups.

4.2 The pedagogical explicit intervention program

The division of all the participants into the two main groups –non-instruction and instruction– derives from the specific pedagogical intervention that was implemented for approximately half of the participants (see table 3 above).

As it has already been mentioned in previous chapters, this investigation deals with two structures (ANs and NNs) that are addressed differently in the school context of our participants: While students receive implicit instruction for both ANs and NNs in terms of exposure and comprehensible input (publication#1 and publication#2), only ANs are

subject to explicit instruction in the precise context of this study, as they are typically included in the teaching practices and classroom materials.

In order to test the effectiveness of explicit instruction in the case of NNs, approximately half of the participants included in our study underwent a specific pedagogical program in which these structures were targeted. This program was implemented during the three years that cover this investigation. Table 5 summarizes the type of instruction per structure that each participant group received.

Table 5. Types of instruction per structure for participants

Participant groups		Explicit instruction		Implicit instruction	
		NNs	ANs	NNs	ANs
non-instruction	younger	✘	✓	✓	✓
	older	✘	✓	✓	✓
instruction	younger	✓	✓	✓	✓
	older	✓	✓	✓	✓

Only the two age groups in the instruction set received explicit instruction on NNs by means of the different activities that comprise this program.

The main characteristics of the instruction program implemented for both the younger and older participants in the instruction group are discussed in the three publications (in the supplementary material of publication#1, in section 3.2 of publication#2, and in section 3.1 of publication#3). Additionally, publication#1 and publication#2 provide more details regarding the two initial activities of a total of six that make up this specific intervention program. All these activities were designed to explicitly deal with the two main cross-linguistic differences of NNs –word order and productivity– between the two languages of the participants –Spanish and English–. Certain characteristics of the participants, such as their age and cognitive abilities, were taken into account in the design, planning, sequencing, and implementation of the

intervention along the three years. For instance, since in year 1 the younger participants were 6-7 year-olds, the activities that were implemented with them were the ones that mainly relied on oral skills, which are activities that did not require reading or writing abilities –at this age, children are at the early developmental stages of these skills, even in their L1–. The most demanding activities, including those that required reading and writing comprehension skills, or autonomous and/or individual work at home, were used either in the last year of the intervention, or with older participants. Table 6 presents the designation of the seven different activities (see figure 2 for actual classroom snapshots) that make up this intervention and their distribution along the three years of the study for the two age groups, together with the modality of the activity and the place where they were carried out.

Table 6. Activities for the two age groups in the three years

	Activity	Group	Year	Modality / Place
1	What is an NN?	younger	1	* / #
		older		
2	1-2 importance rule	younger	1-2-3	* / #
		older		
3	Let's invent words	younger	2-3	* / # ▲
		older	2-3	
4	Let's imagine what crazy things would look like	younger	2-3	x / #
		older	2-3	
5	Let's explain what an NN is	younger	2-3	* + / #
		older	2-3	
6-7	Songs activities[8]	younger	2-3	* x / #
		older	2-3	

Modality: * = oral; + = written; x = drawing
Place: # = in the classroom; ▲ = at home

In table 6, the symbol * indicates when the activity was carried out orally, the symbol + when it was in the written form, and x when pictures were used as the means of expression. The symbol # indicates whether the activities were carried out in the classroom, and a triangle if they were also done at home.

Figure 2 below shows actual snapshots of how two of the activities were carried out in the classroom. These appear marked in table 6: *Let's invent words* and *Let's imagine what crazy things would look like*.

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[8] The following two songs taken from *YouTube* were used as the departure point for two activities:
https://www.youtube.com/watch?v=frN3nvhIHUk&t=8s,
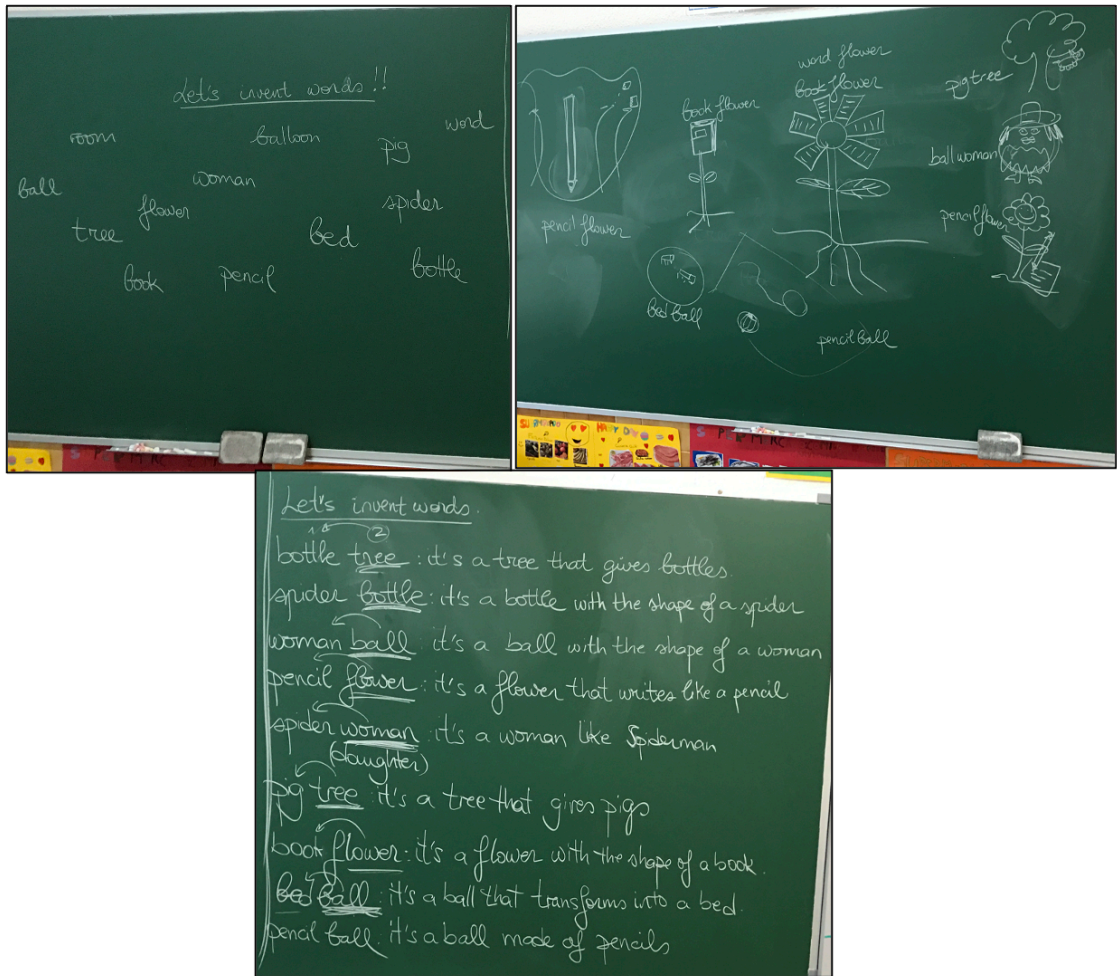https://www.youtube.com/watch?v=ddDN30evKPc

Figure 2. Snapshots of some of the activities of the intervention

As indicated in publication#2, the author of this dissertation was the teacher of all the experimental participants (non-instruction and instruction groups) along the three years of this study, both for the English subject and for all the content subjects taught in English in the CLIL program of the school. The participants in the two instruction groups used the same textbooks, materials, and lesson plans, and they also received the same teaching hours and exposure to the L2 in the classroom. Additionally, the same teaching practices, including every aspect of the specific explicit intervention for the instruction groups under discussion here, were used with all the participants in the most systematic and controlled way possible. All these facts not only ensure a fair and coherent uniformity in terms of duration, intensity, and frequency, but also especially so in terms of both the

explicit and implicit exposure to the two structures considered in this study (see table 3 above).

4.3 Tasks

A multi and bi-modal task approach was used in this study with all participants. Three tasks were designed and implemented to elicit the data: a set of two written, guided, and longitudinal tasks carried out in group to elicit experimental data –an acceptability judgment task (AJT) and a production task (PRT)–, and an individual, oral, less guided task eliciting semi-spontaneous data –the director-matcher task (DMT)–, which was only used in year 3.

As previously indicated, data elicited by means of written tasks are presented in the first two publications –two tasks in publication#1 and one in publication#2–, whereas publication#3 discusses the data that were elicited orally in year 3.

Each task's specificities are outlined hereunder and related with the corresponding publications where they are fully presented.

4.3.1 The written tasks: the acceptability judgment task and the production task

Two untimed written tasks were specifically designed for the longitudinal and experimental data collection: an AJT and a PRT. For a thorough description of these two tasks, used in the three years of the data collection, see publication#1's supplementary material; for the AJT see also section 3.3 of publication#2.

When the two tasks were used for each data collection in the three years, these tasks were administered in the following order: first the AJT and then the PRT. This order was followed in view of the intrinsic complexity of these tasks: written tasks are considered

more cognitively demanding (*e.g.*, Granfeldt, 2008; Kellogg, 1996; Kuiken & Vedder, 2011, Williams, 2012), and in the PRT participants had to actually write phrases while in the AJT participants had to judge items that have already been formed. Therefore, the task that required written production was carried out after the one that required evaluation by means of emoticons.

Following the procedure specified in the literature on monolingual and bilingual acquisition, the tasks were conducted on separate days, with one week's time between one task and the next to avoid priming (*e.g.*, Blom & Unsworth, 2010; de Houwer, 1990; Gass & Mackey, 2015; McDaniel *et al.,* 1996; Rice *et al.*, 1999; Slobin, 1985; Thornton, 1998). Furthermore, the two tasks were implemented in groups as part of the normal activities within the classroom sessions, in a setting of absolute normalcy, and by means of Power Point presentations that included appealing and funny pictures whenever possible (see figure 3). The participants' answers were registered in answer sheets for each of the tasks which were provided during the group sessions.

Figure 3. Participants being tested with the AJT

The two structures under analysis, ANs and NNs, were tested together and in combination in each of the tasks. This has been so since the perception of ANs and NNs as something similar due to their common underlying representation is one of the research questions of our study (see the third research question of publication#1 and the discussion of publication#2).

The very same written tasks, AJT and PRT, with the same tokens and presented in the same order were used in the three years of testing.[9] This was so to keep the testing conditions as homogenous as possible, except for the main variables under scrutiny, along the three years of the longitudinal study. Using the same instrument repeatedly is a common practice in acquisition research as it allows to keep track of the sequence of acquisition by maintaining all else constant (*e.g.*, R. Ellis, 2008; Petrescu & Helms-Park, 2018).

4.3.2 The oral task: the director matcher task

Apart from the two written tasks, an additional one, the DMT, was used in year 3. This task elicited semi-spontaneous oral data, as opposed to the other two which involved written data. A detailed account of this task is presented in publication#3 (section 3.2).

This task was designed and implemented to have an additional and varied data source for the investigation. In addition, different studies have proven that children, as opposed to adults, perform better in oral tasks since no cognitive load is devoted to writing (*e.g.*, Granfeldt, 2008; Kellog, 1996; Kuiken & Vedder, 2011; Williams, 2012). The writing skill is very demanding, especially in young children like the ones in the present study since, at such early ages, they have yet to fully develop their writing skills in their L1, and even more in the particular case of their L2.

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[9] Year 3 of the data collection is an exception since for the written tasks a set of add-on items were used (see publication#3).

Moreover, given the age range of the participants and with a view to keep the communication situation as natural as possible in the oral interaction, this task was designed in the form of a board game (see figure 4).
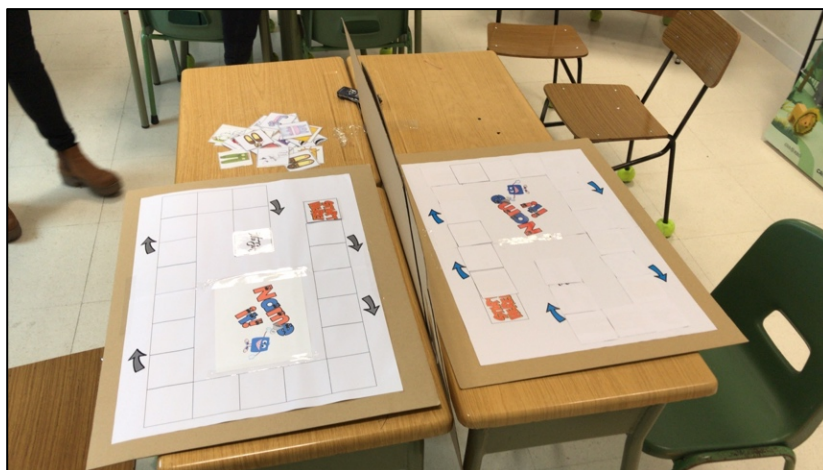

Figure 4. Director's and matcher's boards in the DMT

Gullberg *et al.* (2009) define a director matcher task as "a referential communication task (Yule 1997) in which two participants have to solve a problem together. One of them has the information necessary to solve the task and must convey it so that the other participants can "match" the information and thereby solve the task. Although the task can be designed to encourage speakers to use particular constructions, they are not coerced to use a particular language" (pp. 37-38). The name given to the board game was *Name it*. Participants were urged to name the items in the different cards with as few words as possible and in all cases the expected production included either an AN or an NN.

In spite of the fact that both AN and NN structures were targeted and produced in the DMT, publication#3 only comprises the analysis of the NN structures produced given that those are the structures for which the specific pedagogical intervention program was designed. Furthermore, and as previously mentioned, NNs are not productive in Spanish

and, when used, they present a different directionality. Therefore, and given that these are the two issues under investigation in this study, hence the focus on NNs in publication#3.

4.4 Research questions and hypotheses

The three publications that make up this dissertation aim to address the effectiveness of explicit instruction and of length of exposure. To analyze these two issues each publication focuses on a set of the data that comprises this investigation (see table 1 in Chapter 1 repeated here as table 7).

Table 7. Content of each of the publications

	Publication#1	Publication#2	Publication#3
Structures	ANs & NNs	ANs & NNs	NNs
Tasks	PRT & AJT	AJT	DMT
Years	1	2-3	3

The longitudinal approach of the investigation is not present in publication#1, since only data from year 1 elicited via the two written tasks are analyzed. Therefore, the three research questions (RQ) that are discussed in the first publication revolve around three main issues: the possible existence of CLI in terms of negative transfer from the participants' L1 into the L2 in the form of reversals in the two linguistic structures under analysis (RQ1); whether those negative effects may decrease due to the explicit instruction implemented within the instruction groups (RQ2); and whether ANs will also be more target-like as being indirectly benefited by the NN explicit instruction program due to the common underlying representation between ANs and NNs (RQ3) (see also the discussion of publication#2).

Conversely, in publication#2 the longitudinal character of the study is present since AJT data for both ANs and NNs are discussed in years 2 and 3. One main research

question dealing with the two variables of the study –length of exposure and explicit instruction– is put forward and three hypotheses (H) guide the analysis in this publication: These three Hs aim at discerning whether either length of exposure (H1) or explicit instruction (H2) by themselves contribute to the possible improvement in our participants' L2 English with ANs and NNs; or rather, whether it is not just one but a combination of both length of exposure and instruction (H3) what is actually behind that expected improvement.

In publication#3, and as indicated above, NNs in the DMT are the focus and two specific RQs are formulated dealing with the two main variables: instruction (RQ1) and length of exposure (RQ2).

Each of the three publications by themselves have their respective specific aims. However, the three publications as a whole help complete the bigger picture of the characterization of the L2 English of these L1 Spanish children in the case of ANs and NNs. This characterization is based on how attainment in the L2 is mediated by exposure and instruction.

CHAPTER 5. PUBLICATIONS

This PhD dissertation is structured and organized as a compendium of publications. In this chapter, the three publications that make up this dissertation are presented in full, following the University of Valladolid regulations.

The three manuscripts appear in this section as they were submitted for the final publication to the corresponding editorial boards and not as they appear in the published version. This has been done so following the indications given by the University of Valladolid PhD School to avoid possible copyright conflicts with the publishing editorials.

Format inconsistencies appear both between the three publications that are presented below, and also between this chapter and the other chapters of this dissertation. This is so since for each publication there were different format requirements that were strictly followed to adhere to the different style guidelines and that have been kept here as they were submitted in the last revision of each publication after their final approvals.

A black vertical line appears on a side of all the pages belonging to the three publications so that they are easily identifiable.

Publication#1[10] [11]

Gómez Garzarán, E., & Fernández Fuertes, R. (2020). Is explicit instruction effective? The learning of English noun-noun and adjective-noun structures by L1 Spanish school children. *Culture and Education, 32(2)*, 299–339.

DOI: https://doi.org/10.1080/11356405.2020.1741872

Table 7, repeated below as table 8, highlights what publication#1 includes.

Table 8. Content of each of the publications

	Publication#1	Publication#2	Publication#3
Structures	ANs & NNs	ANs & NNs	NNs
Tasks	PRT & AJT	AJT	DMT
Years	1	2-3	3

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[10] Although in the final published article the sections that appear in the manuscript were not numbered, they have been numbered here to facilitate the reading and cross-references with the rest of the chapters that make up this dissertation.

[11] This publication, once accepted, has been translated into Spanish as per the publications policies of the journal. Since the language of this dissertation is English, the Spanish translation is not included.

Publication#2[12]

Fernández Fuertes, R., Gómez Garzarán, E., Mujcinovic, S., & Mañas Navarrete, I. (2022). When teaching works and time helps: Noun modification in L2 English school children. *Open Linguistics, 8*, 475-495.

DOI: https://doi.org/10.1515/opli-2022-0219

Table 7, repeated below as table 9, highlights what publication#2 includes.

Table 9. Content of each of the publications

	Publication#1	Publication#2	Publication#3
Structures	ANs & NNs	ANs & NNs	NNs
Tasks	PRT & AJT	AJT	DMT
Years	1	2-3	3

Publication#3[13]

Fernández Fuertes, R., Gómez Garzarán, E., & Mañas Navarrete, I. (2020). Noun-noun compounds in a game task: what child data can tell us about teaching practices. In M. Planelles, A. Foucart, & J. M. Liceras (Eds.), *Current perspectives in language teaching and learning in multicultural contexts* (pp. 481–501). Cizur Menor: Thomson Reuters Aranzadi.

DOI: https://doi.org/10.32029/2605-4655.14.01.2020

Table 7, repeated below as table 10, highlights what publication#3 includes.

Table 10. Content of each of the publications

	Publication#1	Publication#2	Publication#3
Structures	ANs & NNs	ANs & NNs	NNs
Tasks	PRT & AJT	AJT	DMT
Years	1	2-3	3

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[13] References and translations into Spanish were required by the journal editorial policy. Since the language of this dissertation is English, these have been eliminated.

CHAPTER 6. CONCLUSIONS AND FURTHER WORK

This PhD dissertation presents a three-year longitudinal study analyzing the effects of two of the main issues discussed within the ISLA framework: type of instruction in the L2 and length of exposure to the L2. Two structures that include noun modification in English –ANs and NNs– have been used in combination in the different experimental tasks to address these two issues. Spanish children learning English as an L2 in a formal school context have been tested following a bimodal and multi-task approach: longitudinal written data have been elicited by means of the AJT and PRT and cross-sectional oral data have been obtained with the DMT, amounting to a total of three tasks.

In this chapter, the main conclusions of this investigation are presented as they appear in the three publications that conform this PhD dissertation. A series of conclusions will be enumerated by summarizing and relating the main findings of the three publications with regards to the variables and issues dealt with in this study. Thus, the following findings have been attested in the formal language learning context, for the L1 Spanish-L2 English child participants under investigation and for the two target structures:

1. Length of exposure to the L2 being learned plays a role in acquisition, given that the results for the two structures under analysis in all the publications point to a better attainment of older participants when compared to younger cohorts, under the same instructional conditions in the written tasks (publication#1 and publication#2). In the same vein, when the same participants are compared in terms of their performance in the AJT along two consecutive years (*i.e.*, year 2 and year 3), results improve, especially for ungrammatical stimuli (H1 in publication#2). As for the oral data, more length of exposure also implies better attainment in NNs when no explicit instruction comes into play (publication#3).

2. Explicit instruction has also been found to have a positive effect in acquisition, since the instruction groups outperform the non-instruction ones (RQ2 of publication#1, H2 of publication#2, and RQ1 of publication#3). This is so for both structures under analysis, and especially in the case of NNs, this is so even with the younger instruction participants, who performed better than their older non-instruction counterparts (H3 in publication#2). What is more, in the case of the oral data of the DMT, it has been observed that, in the convergence of explicit instruction and length of exposure, the behavior of the older instruction group presents less variability in their results, although the correction rates are similar to their non-instruction age equals. Therefore, instruction seems to outweigh length of exposure in the L2 learning context analyzed for these two structures including noun modification.

3. As far as the two structures under investigation, the improvement in the instruction group's results in NNs and in ANs points to a connection between the two structures (RQ3 of publication#1). The specific explicit NN instruction implemented with half of the participants has been proven to be effective not only for NNs, something that could be expected, but also for ANs. The results of year 1 indicate that both younger and older instruction groups (first and third graders) outperform their non-instruction age equivalents in their NN knowledge; in parallel, their performance with ANs is also bootstrapped by the very same NN instruction. This tendency is kept longitudinally since the same pattern has been found in the two following years (publication#2). This AN benefit due to the specific NN instruction is especially observed in the case of the judgment of ungrammatical items in the AJT (publication#1 and publication#2), as well as in the PRT results (publication#1), which point in the same direction.

4. With respect to the two types of datasets analyzed (*i.e.*, written and oral), which are only comparable in terms of NNs, the cross-sectional oral dataset analyzed

(publication#3) shows, in general, the same tendency as the longitudinal written data (publication#1 and publication#2). Participants' NN knowledge progresses by the effect of length of exposure, in the two age sub-groups considered (*i.e.*, younger and older) in the oral data and also along the different testing years of the written data (*i.e.*, year 1, year 2, and year 3). There is also NN improvement due to the effect of explicit instruction implemented, as can be observed in the comparison of the two instruction groups (*i.e.*, non-instruction and instruction) in both oral and written data. However, the oral data point to a greater relevance of explicit instruction over length of exposure when both variables converge (RQ2 of publication#3), as the comparison between the two age sub-groups in the NN instruction group shows no statistically significant differences. This suggests that, even if the effects of instruction are seen in both the oral data and the written data, they are intensified in the case of oral data. This could be linked to the participants' age, given that written tasks are generally more demanding for children than oral ones (*e.g.*, Granfeldt, 2008; Kellogg, 1996; Kuiken & Vedder, 2011, Williams, 2012).

5. As per the different tasks considered (*i.e.*, PRT, AJT, and DMT), the main findings of each of them are outlined and compared below:

    i) PRT results show a higher, however non-significant, NN production rate in the instruction group when compared to the non-instruction. In terms of producing NNs and also ANs with the correct directionality, participants in the instruction group significantly outperform their non-instruction counterparts. Recall at this point that PRT data is only presented in publication#1, in which year 1 is discussed, and only the older participants were tested via this task in that year.

    ii) AJT results from both publication#1 and publication#2 indicate that in terms of grammaticality, structures with the correct directionality present no difficulty for

these L2 child participants. However, when it comes to ungrammatical stimuli, the results attested point to an improvement of the participants in the judgment these structures along the three years of testing and also to an advantage of the older over the younger participants, when each year is considered independently. This tendency is observed both in ANs and NNs equally, which supports the hypothesis of their being considered as similar structures by the participants and of their having a common underlying representation. In terms of instruction, both age sub-groups within the instruction group behave more native-like than their non-instruction equivalents in year 1, and this difference is kept constant throughout the following two testing times –year 2 and year 3–.

iii) DMT results point to an advantage of the instruction over the non-instruction groups in the production of correctly ordered NNs; such a difference does not appear in terms of the total amount of NNs produced, as in the PRT data above. Therefore, in the cross-sectional data elicited with this task, the explicit instruction implemented is effective for the improvement of the directionality difference in the two languages of the participants. Additionally, since both age sub-groups in the instruction group are found to behave similarly and to outperform their counterparts in the non-instruction group, this is suggestive of the explicit instruction of the pedagogical intervention outweighing length of exposure in importance when it comes to L2 acquisition.

iv) Results across tasks point to the outperformance of the instruction groups over the non-instruction groups in general. In the case of the three tasks, directionality improves due to the effect of instruction and amount of exposure. Out of these two effects, instruction seems to have a more salient role (publication#2 and publication#3). That is, regardless of how the data are elicited from these

children, results are kept constant when it comes to directionality. This contrasts with the results obtained from 2L1 bilingual children whose rates of reversals for NNs differ when comparing experimental and spontaneous data (Nicoladis, 2002a). When it comes to NNs, the production rate is higher in the case of the instruction groups, but the difference does not reach statistical significance, and this is so for both the PRT and the DMT.

This dissertation offers a clear contribution to SLA studies in general and ISLA research in particular in terms of the two variables (*i.e.*, length of exposure and instruction), the two structures (*i.e.*, ANs and NNs), and the multi-task approach followed (*i.e.*, AJT, PRT and DMT). All this constitutes a novelty. Furthermore, this dissertation offers a series of additional contributions. On the one hand, this work contributes to the scarce research that is reported to exist on the effectiveness of grammar instruction in the case of young participants (Gorman & Ellis, 2019; Kasprowicz & Marsden, 2018). On the other, and as indicated in section 3.1, this work helps complete the picture of how ANs are acquired by providing the first instance, to the best of our knowledge, of a study analyzing the L2 English of L1 Spanish children.

In addition, this investigation also contributes to the idea that teaching policies and practices should rely on research (Ferrero, 2020). If, as it has been proven, the implementation of a specific pedagogical program targeting NNs has had positive outcomes, then recommendations could be given to enrich the classroom input in this line.

However, some issues remain to be explored. These include, among others, the following. The conclusions reached present pedagogical implications in terms of how an explicit pedagogical intervention has been found to be effective. It remains to be tested

whether the positive effects attested in the instruction groups are durable, as other investigations have attempted to test (Tode, 2007). The participants belonging to the instruction group could be tested in the future and be compared to others who have not been exposed to the pedagogical program to determine whether the advantages of the instruction participant groups are kept in time. Thus, it could be tested whether the intervention has produced mere and superficial changes in performance or rather affected the underlying knowledge of the new language being learnt (Schwartz, 1993).

On a separate note, only year 1 of PRT data were included in the publications that make up this dissertation. The analysis and discussion of the results of year 2 and year 3 for both structures will unquestionably help to add robustness to the findings presented.

In the same vein, the eight distractor items in the form of adjective-noun combinations of the DMT could also be analyzed so that the oral nature of the data could help complete the picture of the acquisition of ANs by comparing them to the ones from the written tasks.

In line with the above, other experimental tasks could be designed and be implemented. Nicoladis (2006a, p. 108) states that, regarding the comprehension of NNs, "few studies have asked children to distinguish between referents of novel compounds that differed only by the order of the elements (…) researchers should ask children if a compound like 'clown-balloon' means a balloon with clowns on it or a clown holding balloons". Following this line of thought, further data could be elicited by means of a comprehension task where not only the syntactic relation but also the semantic relation between the components of the NN could be explored (*e.g.*, Krott *et al.*, 2008). A translation task could also be used to further delve into the issue of directionality, but also especially so into the issue of NN productivity.

These issues and ideas will be considered in future works.

REFERENCES

Note: This list of references includes the works referred to along the dissertation, excluding the three publications. Each publication has its own references/bibliography section.

Alarcos, E. (1999). *Gramática de la lengua española*. Madrid: Espasa.

Altelarrea Llorente, M. A. (2013). Comparative analysis between English and Spanish native speakers' production and comprehension of N-N compounds. *ES. Revista de Filología Inglesa, 34*, 7-40.

Baker, M. C. (1998). Comments on the paper by Sadock. In S. G., Lapointe, D. K. Brentari & P. M. Farrell (Eds.), *Morphology and its relation to phonology and syntax* (pp. 188-212). Stanford: Center for the Study of Language and Information.

Berman, R. A. (1987) A developmental route: Learning about the form and use of complex nominals in Hebrew. *Linguistics, 25*, 1057-1085.

Berman, R. A., & Clark, E. V. (1989). Learning to use compounds for contrast: Data from Hebrew. *First Language, 9*, 247-270.

Bernardini, P. (2003). Child and adult acquisition of word order in the Italian DP. In N. Müller (Ed.), *(In)vulnerable domains* (pp. 41-84). Amsterdam: John Benjamins.

Bialystok, E (1979). Explicit and implicit judgements of L2 grammaticality. *Language Learning, 29*(1), 81-103.

Birdsong, D. (2006). Age and second language acquisition and processing: A selective overview. *Language Learning, 56*(1), 9-49.

Birdsong, D. (2014). The critical period hypothesis for second language acquisition: Tailoring the coat of many colors. In M. Pawlak & L. Aronin (Eds.), *Essential topics in applied linguistics and multilingualism: Studies in honor of David Singleton* (pp. 43-50). New York: Springer.

Blom, E., & Baayen, H. R. (2012). The impact of verb form, sentence position, home language, and second language proficiency on subject-verb agreement in child second language Dutch. *Applied Psycholinguistics, 34*(4), 777-811.

Blom, E., & Unsworth, S. (2010). *Experimental methods in language acquisition research.* Amsterdam: John Benjamins.

Brown, R. (1973). *A first language: The early stages.* Cambridge: Harvard University Press.

Cardinaletti, A., & Giusti, G. (2010). The acquisition of adjectival ordering in Italian. In M. Anderssen, K. Bentzen & M. Westergaard (Eds.), *Variation in the input. Studies in the acquisition of word order* (pp. 65-93). Dordrecht: Springer.

Cinque, G. (2010). *The syntax of adjectives.* Cambridge: MIT Press.

Cipriani, O., Chilosi, A. M., Bottari, P., & Pfanner, L. (1993). *L'acquisizione della morfosintassi in italiano. Fasi e processi.* Padova: Unipress.

Clark, E. V. (1981). Lexical Innovations: How children learn to create new words. In W. Deutsch (Ed.), *The child's construction of language* (pp. 299-328). New York: Academic Press.

Clark, E. V. (1998). Lexical creativity in French-speaking children. *Cahiers de Psychologie Cognitive, 17*(2), 513-530.

Clark, E. V., & Barron, B. J. S. (1988) A thrower button or a button thrower? Children's judgments of grammatical and ungrammatical compound nouns. *Linguistics, 26*, 3-19.

Clark, E. V., & Berman, R. A. (1987). Types of linguistic knowledge: Interpreting and producing compound nouns. *Journal of Child Language, 14*, 547-567.

Clark, E. V., Gelman, S. A., & Lane, N. M. (1985). Compound nouns and category structure in young children. *Child Development, 56*, 84-94.

de Bustos Gisbert, E. (1986). *La composición nominal en español*. Salamanca: Ediciones de la Universidad de Salamanca.

de Graaff, R., & Housen, A. (2009). Investigating the effects and effectiveness of L2 instruction. In M. H. Long & C. J. Doughty (Eds.), *The handbook of language teaching* (pp. 726-755). Oxford: Blackwell.

de Houwer, A. (1990). *The acquisition of two languages from birth: A case study.* Cambridge: Cambridge University Press.

DeKeyser, R. M. (1995). Learning second language grammar rules: An experiment with a miniature linguistic system. *Studies in Second Language Acquisition*, *17*, 379-410.

DeKeyser, R. M. (2000). The robustness of critical period effects in second language acquisition. *Studies in Second Language Acquisition, 22*(4), 499-533.

DeKeyser, R. M. (2009). Cognitive-psychological processes in second language learning. In M. H. Long & C. Doughty (Eds.), *Handbook of second language teaching* (pp. 119-138). Oxford: Blackwell.

DeKeyser, R. M. (2012). Interactions between individual differences, treatments, and structures in second language acquisition. *Language Learning, 62*(2), 189-200.

DeKeyser, R. M. (2015). Skill Acquisition Theory. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 94-112). London: Routledge.

DeKeyser, R. M., & Larson-Hall, J. (2005). What does the critical period really mean? In J. F. Kroll & A. M. B. de Groot (Eds), *Handbook of bilingualism: Psycholinguistic approaches* (pp. 88-108). Oxford: Oxford University Press.

Demonte, V. (1999a). A minimal account of Spanish adjective position and interpretation. In J. Franco, A. Landa & J. Martín (Eds.), *Grammatical analyses in Basque and Romance linguistics* (pp. 45-75). Amsterdam: John Benjamins.

Demonte, V. (1999b). El adjetivo: Clases y usos. La posición del adjetivo en el sintagma nominal. In I. Bosque & V. Demonte (Eds.), *Gramática descriptiva de la lengua española* (pp. 71-100). Madrid: Espasa.

Demonte, V. (2008). Meaning-form correlations and adjective position in Spanish. In C. Kennedy & L. McNally (Eds.), *The semantics of adjectives and adverbs* (pp. 71-100). Oxford: Oxford University Press.

Döpke, S. (1992). *One parent one language: An interactional approach*. Amsterdam: John Benjamins.

Doughty, C. (1991). Second language instruction does make a difference: Evidence from an empirical study of relativization. *Studies in Second Language Acquisition, 13*, 431-469.

Doughty, C., & Long M. H. (2003). *The handbook of second language acquisition*. Oxford: Blackwell.

Ellis, N. C. (1994). *Implicit and explicit learning of languages*. San Diego: Academic Press.

Ellis, N. C. (1996). Sequencing in SLA. *Studies in Second Language Acquisition, 18*(1), 91-126.

Ellis, N. C. (2002a). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition, 24*, 143-188.

Ellis, N. C. (2002b). Reflections on frequency effects in language processing. *Studies in Second Language Acquisition, 24*, 297-339.

Ellis, N. C. (2005). At the interface: Dynamic interactions of explicit and implicit language knowledge. *Studies in Second Language Acquisition, 27*(2), 305-352.

Ellis, R. (1992). *The study of second language acquisition*. Oxford: Oxford University Press.

Ellis, R. (2002). The place of grammar instruction in the second/foreign language curriculum. In E. Hinkel & S. Fotos (Eds.), *New perspectives on grammar teaching in second language classrooms* (pp. 14-34). London: Routledge.

Ellis, R. (2008). Are classroom and naturalistic acquisition the same?: A study of the classroom acquisition of German word order rules. *Studies in Second Language Acquisition, 11*(3), 305-328.

Ellis, R. (2009). Measuring implicit and explicit knowledge of a second language. In R. Ellis, S Loewen, C. Elder, R. Erlam, J. Philp & H. Reinders (Eds.), *Implicit and explicit knowledge in second language learning, testing and teaching* (pp. 31-64). Bristol: Multilingual Matters.

European Commission, Directorate-General for Education, Youth, Sport and Culture (2006). *Content and Language Integrated Learning (CLIL) at school in Europe*. Publications Office of the European Union.

Fernández Fuertes, R., Álvarez de la Fuente, E., Parrado, I., & Muñiz, S. (2008). La bici pirata se convierte en pirate bike o en bike pirate: La composición nominal en datos de adquisición de niños. In L. Pérez, I. Pizarro & E. González-Cascos (Eds.), *Estudios de metodología de la lengua inglesa IV* (pp. 421-438). Valladolid: Centro Buendía, Universidad de Valladolid.

Ferrero, M. (2020). Can research contribute to improve educational practice? *The Spanish Journal of Psychology, 23*, 1-6.

Foroodi-Nejad, F., & Paradis, J. (2009). Crosslinguistic transfer in the acquisition of compound words in Persian-English bilinguals. *Bilingualism: Language and Cognition, 12*(4), 411-427.

Gagné, C. L. (2001). Relation and lexical priming during the interpretation of noun-noun combinations. *Journal of Experimental Psychology: Learning, Memory and Cognition, 27*(1), 236-254.

García Mayo, M. P. (2003). Age, length of exposure and grammaticality judgements in the acquisition of English as a foreign language. In M. P. García Mayo & M. L. García Lecumberri (Eds.), *Age and the acquisition of English as a foreign language* (pp. 94-114). Clevedon: Multilingual Matters.

Gass, S. M. (1996). Second language acquisition and linguistic theory: The role of language transfer. In W. C. Ritchie & T. K. Bhatia (Eds.), *The handbook of second language acquisition* (pp. 317- 345). San Diego: Academic Press.

Gass, S. M. (1997). *Input, interaction, and second language learner*. Mahwah: Lawrence Erlbaum Associates.

Gass, S. M., & Mackey, A. (2015). Input, interaction, and output in second language acquisition. In B. VanPatten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (pp. 180-206). New York: Routledge.

Gathercole, V. C. M. (2002a). Command of the mass/count distinction in bilingual and monolingual children: An English morphosyntactic distinction. In D. K. Oller & R. E. Eilers (Eds.), *Language and literacy in bilingual children* (pp. 175-206). Clevedon: Multilingual Matters.

Gathercole, V. C. M. (2002b). Grammatical gender in bilingual and monolingual children: A Spanish morphosyntactic distinction. In D. K. Oller & R. E Eilers

(Eds.), *Language and literacy in bilingual children* (pp. 207-219). Clevedon: Multilingual Matters.

Gathercole, V. C. M. (2002c). Monolingual and bilingual acquisition: Learning different treatments of that-trace phenomena in English and Spanish. In D. K. Oller & R. E Eilers (Eds.), *Language and literacy in bilingual children* (pp. 220-254). Clevedon: Multilingual Matters.

Gathercole, V. C. M. (2016). Factors moderating proficiency in bilingual speakers. In E. Nicoladis & S. Montanari (Eds.), *Language and the human lifespan series. bilingualism across the lifespan: Factors moderating language proficiency* (pp. 123-140). Washington, D.C.: American Psychological Association.

Genesee, F. (1988). Neuropsychology and second language acquisition. In L. M. Beebe (Ed.), *Issues in second language acquisition: Multiple perspectives* (pp. 88-109). Boston: Heinle & Heinle.

González, L. H. (2020). *Four dichotomies in Spanish: Adjective position, adjectival clauses, ser/estar, and preterite/imperfect*. London: Routledge.

Goo, J., Granena, G., Yucel, Y., & Novella, M. (2015). Implicit and explicit instruction in L2 learning. *Studies in Bilingualism, 48*, 443-482.

Gorman, M., & Ellis, R. (2019). The relative effects of metalinguistic explanation and direct corrective feedback on children's grammatical accuracy in new writing. *Language Teaching for Young Learners 1*, 57-81.

Granfeldt, J. (2000a). *Le développement morphosyntaxique du syntagme nominal chez des enfants et des adultes: approche génerativiste.* Litentiatavhandling*, perles (petites études romanes de Lund extra seriem, commentaires & communications.* Lund, Romanska Institutionen. Doctoral dissertation. Lund: Lund University Press.

Granfeldt, J. (2000b). The acquisition of the determiner phrase in bilingual and second language French. *Bilingualism: Language and Cognition, 3*(3), 263-280.

Granfeldt, J. (2008). Speaking and writing in L2 French: Exploring effects on fluency, complexity and accuracy. In S. van Daele, A. Housen, F. Kuiken, M. Pierrard & I. Vedder (Eds.), *Complexity, accuracy and fluency in second language use, learning and teaching* (pp. 87-98). Wetteren: KVAB Universa Press.

Green, P. S., & Hecht, K. (1992). Implicit and explicit grammar: An empirical study. *Applied Linguistics*, *13*, 160-184.

Gullberg, M., Indefrey, P., & Muysken, P. (2009) Research techniques for the study of codeswitching. In B. E. Bullock & A. J. Toribio (Eds.), *The Cambridge handbook of linguistic code-switching* (pp. 21-39). Cambridge: Cambridge University Press.

Harley, B. (1989). Functional grammar in French immersion: A classroom experiment. *Applied Linguistics, 10*, 331-59.

Higby, E., & Obler, L. K. (2016). Length of residence: Does it make a difference in older bilinguals? *Linguistic Approaches to Bilingualism, 6*(1-2), 43-63.

Housen, A., & Pierrard, M. (Eds.). (2005). *Investigations in instructed second language acquisition.* Berlin: Mouton de Gruyter.

Hulstijn, J. H. (1995). Not all grammar rules are equal: Giving grammar its proper place in foreign language teaching. In R. Schmidt (Ed.), *Attention and awareness in foreign language teaching and learning* (pp. 359-386). Honolulu: Second Language Teaching and Curriculum Center, University of Hawaii at Manoa.

Hulstijn, J. H. (2007). Psycholinguistic perspectives on language and its acquisition. In J. Cummins & C. Davison (Eds.), *The international handbook of English language teaching* (pp. 783-796). Norwell: Springer.

Jarvis, S., & Pavlenko, A. (2007). *Crosslinguistic influence in language and cognition.* New York: Routledge.

Juanggo, W. (2017). The concept of L2 user and the goals of second language learning. *Jurnal Studi Komunikasi Indonesian Journal of Communications Studies, 1*(2).

Kasprowicz, R., & Marsden, E. (2018). Towards ecological validity in research into input-based practice: Form spotting can be as beneficial as form-meaning practice. *Applied Linguistics, 39*, 886-911.

Kayne, R. (1994). *The antisymmetry of syntax.* Cambridge: MIT Press.

Kellogg, R. T. (1996). A model of working memory in writing. In M. C. Levy & S. E. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences and applications* (pp. 57-71). Hillsdale: Laurence Erlbaum Associates.

Kharkhurin, A. V. (2008). The effects of linguistic proficiency, age of second language acquisition, and length of exposure to a new cultural environment on bilinguals' divergent thinking. *Bilingualism: Language and Cognition, 11*(2), 225-243.

Kirchner, R., & Nicoladis, E. (2009). A level playing-field: Perceptibility and inflection in English compounds. *Canadian Journal of Linguistics, 54*(1), 91-116.

Krashen, S. D. (1977). Some issues relating to the Monitor Model. In H. D. Brown, C. Yorio & R. Crymes (Eds.), *On TESOL '77: Teaching and learning English as a second language: Trends in research and practice* (pp. 144-158). Washington, D.C.: TESOL.

Krashen, S. D. (1981). *Second language acquisition and second language learning.* Oxford: Oxford University Press.

Krashen, S. D. (1982). *Principles and practice in second language acquisition.* New York: Pergamon.

Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. New York: Pergamon.

Krashen, S. D. (1994). The input hypothesis and its rivals. In N. Ellis (Ed.), *Implicit and explicit learning of language* (pp. 45-77). London: Academic Press.

Krashen, S. D. (2003). *Explorations in language acquisition and use: The Taipei lectures.* Portsmouth: Heinemann.

Krashen, S. D., & Terrell, T. D. (1983). *The natural approach*. Oxford, UK: Pergamon.

Krott, K., & Nicoladis, E. (2005). Large constituent families help children parse compounds. *Journal of Child Language*, *32*, 139-158.

Krott, K., Gagné, C. L., & Nicoladis, E. (2008). How the parts relate to the whole: Frequency effects on children's interpretations of novel compounds. *Journal of Child Language*, *36*, 85-112.

Krott, K., Gagné, C. L., & Nicoladis, E. (2010). Children's preference for HAS and LOCATED relations: A word learning bias for noun-noun compounds. *Journal of Child Language, 37*, 373-394.

Kuiken, F., & Vedder, I. (2011). Task complexity and linguistic performance in L2 writing and speaking. *Second language task complexity: Researching the Cognition Hypothesis of Language Learning and Performance*, *2*, 91-104.

Kupisch, T. (2014). Adjective placement in simultaneous bilinguals (German-Italian) and the concept of cross-linguistic overcorrection. *Bilingualism: Language and Cognition*, *17*, 222-233.

Kutsuki, A. (2019). The combination of words in compound nouns by Spanish-Japanese bilingual children: Transfers in unambiguous structure. *International Journal of Bilingualism*, *23*(1), 256-274.

Lacabex, E. G., & Gallardo del Puerto, F. (2020). Explicit phonetic instruction vs. implicit attention to native exposure: Phonological awareness of English schwa in CLIL. *International Review of Applied Linguistics in Language Teaching*, *58*(4), 419-442.

Levy, E. S., Goral, M., & Obler, L.K. (2006). Doghouse/Chien-maison/Niche: Approaches to the understanding of compound processing in bilinguals. In G. Libben & G. Jarema (Eds.), *The representation and processing of compound words* (pp. 96-124). Oxford: Oxford University Press.

Liceras, J. M., & Díaz L. (2001). Triggers in L2 acquisition: The case of Spanish NN compounds. *Studia Linguistica, 54*(2), 197-211.

Liceras, J. M., Díaz, L., & Salomaa-Robertson, T. (2002). The compounding parameter and the word-marker hypothesis: Accounting for adult L2 acquisition of Spanish N-N compounds. In J. M. Liceras & A. T. Pérez-Leroux (Eds.), *The acquisition of Spanish morphosyntax: The L1/L2 connection* (pp. 209-237). Dordrecht: Kluwer Academic Publishers.

Liceras, J. M., Klassen, R. (2019). Compounding and derivation: On the 'promiscuity' of derivational affixes. *Linguistic Approaches to Bilingualism, 9*(1), 42-72.

Liceras, J. M., Klassen, R., & Contro Castaldo, I. C. (2020). Compuestos NN y derivación en español y portugués brasileño: En la encrucijada morfología, sintaxis y semántica. *Revista de Filología*, *40*, 124-145.

Lightbown, P. M., & Spada, N. (2001). Factors affecting second language learning. *English Language Teaching in its Social Context*, 28-43.

Lightbown, P. M., & Spada, N. (2006). *How languages are learned*. Oxford: Oxford University Press.

Llinàs-Grau, M., & Bel, A. (2019). On the acceptance of the null that by bilingual Catalan/Spanish L2 learners of English. *Languages*, *4*(2), 30.

Loewen, S. (2015). *Introduction to instructed second language acquisition*. New York: Routledge.

Loewen, S., & Sato, M. (2017). Instructed second language acquisition (ISLA): An overview. In S. Loewen & M. Sato (Eds.), *The Routledge handbook of instructed second language acquisition* (pp. 1-12). New York: Routledge.

Long, M. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413-468). San Diego: Academic Press.

Long, M. H. (2007). *Problems in SLA*. Mahwah: Lawrence Erlbaum.

Lyster, R. (2007). *Learning and teaching languages through content: A counterbalanced approach*. Amsterdam: John Benjamins.

Lyster, R. (2018). *Content-based language teaching*. London: Routledge.

Mäkisalo, J. (2000). *Grammar and experimental evidence in Finnish compounds.* Joensuu: University of Joensuu.

Mäkisalo, J., Niemi, J., & Laine, M. (1999). Finnish compound structure: Experiments with a morphologically impaired patient. *Brain and Language*, *68*, 249-53.

McDaniel, D., McKee, C., & Smith Cairns H. (Eds.). (1996). *Methods for assessing children's syntax*. Cambridge: MIT Press.

Mellenius, I. (1996). Children's comprehension of Swedish nominal compounds. In C. E. Johnson & J. H. V. Gilbert (Eds.), *Children's language, 9* (pp. 167-182). Mahwah: Lawrence Erlbaum.

Mellenius, I. (1997). *The acquisition of nominal compounding in Swedish.* Doctoral dissertation. Lund: Lund University Press.

Mills, A. E. (1985). The acquisition of German. In D. I. Slobin (Ed.), *The crosslinguistic study of language acquisition* (pp. 141-254). Hillsdale: Lawrence Erlbaum.

Montrul, S. (2004). *The acquisition of Spanish. The morphosyntactic development in monolingual and bilingual L1 acquisition and adult L2 acquisition*. Amsterdam: John Benjamins.

Montrul, S., & Ionin, T. (2012). Dominant language transfer in Spanish heritage speakers and second language learners in the interpretation of definite articles. *The Modern Language Journal*, *96*(1), 70-94.

Mujcinovic, S. (2020). *English subjects in the linguistic production of L1 Spanish, L1 Bosnian and L1 Danish speakers: Typological similarity and transfer*. Doctoral dissertation. University of Valladolid.

Müller, N. (1998). Transfer in bilingual first language acquisition. *Bilingualism: Language and Cognition, 1*(3), 151-171.

Muñoz, C. (2008). Symmetries and asymmetries of age effects in naturalistic and instructed L2 learning. *International review of applied linguistics, 29*(4)*,* 578-596.

Muñoz, C. (2010). On how age affects foreign language learning. *Advances in Research on Language Acquisition and Teaching*, 39-49.

Muñoz, C. (2011). Input and long-term effects of starting age in foreign language learning. *International Review of Applied Linguistics in Language Teaching (IRAL), 49*(2)*,* 113-133.

Muñoz, C. (2015). Time and timing in CLIL: A comparative approach to language gains. In M. J. Garau & J. Salazar Noguera (Eds.), *Content-based language learning in multilingual educational environments* (pp. 87-104). Berlin: Springer.

Muñoz, C. (Ed.). (2006). *Age and the rate of foreign language learning*. Clevedon: Multilingual Matters.

Muñoz, C., Cadierno, T., & Casas, I. (2018). Different starting points for English language learning: A comparative study of Danish and Spanish young learners. *Language Learning*, *68*(4), 1076-1109.

Nicoladis, E. (1999). "Where is my brush-teeth?" Acquisition of compound nouns in a French-English bilingual child. *Bilingualism: Language and Cognition*, *2*(3), 245-256.

Nicoladis, E. (2002a). The cues that children use in acquiring adjectival phrases and compound nouns: Evidence from bilingual children. *Brain and Language*, *81*, 635-648.

Nicoladis, E. (2002b). What's the difference between 'toilet paper' and 'paper toilet'? French-English bilingual children's crosslinguistic transfer in compound nouns. *Journal of Child Language*, *29*, 843-863.

Nicoladis, E. (2003a). What compound nouns mean to preschool children. *Brain and Language*, *84*, 38-49.

Nicoladis, E. (2003b). Compounding is not contingent on level-ordering in acquisition. *Cognitive Development*, *18*, 319-338.

Nicoladis, E. (2006a). Preschool children's acquisition of compounds. In G. Libben & G. Jarema (Eds.), *The representation and processing of compound words* (pp. 96-124). Oxford: Oxford University Press.

Nicoladis, E. (2006b). Cross-linguistic transfer in adjective-noun strings by preschool bilingual children. *Bilingualism: Language and Cognition*, *9*, 15-32.

Nicoladis, E., & Gavrila, A. (2015). Cross-linguistic influence in Welsh-English bilingual children's adjectival constructions. *Journal of Child Language*, *42*(4), 903-916.

Nicoladis, E., & Rhemtulla, M. (2012). Children's acquisition of word order depends on semantic/syntactic role: Evidence from adjective-noun order. *First Language, 32*(4), 479-493.

Nicoladis, E., & Yin, H. (2002). The role of frequency in acquisition of English and Chinese compounds by bilingual children. In B. Beachley, A. Brown & F. Conlin (Eds.), *Proceedings of the 27th annual Boston University Conference on language development* (pp. 441-52). Somerville: Cascadilla Press.

Norris, J., & Ortega, L. (2000). Effectiveness of L2 instruction: A research synthesis and quantitative meta-analysis. *Language Learning*, *50*, 417-528.

Odlin, T. (1989). Language Transfer: Cross-linguistic influence in language learning. Cambridge: Cambridge University Press.

Odlin, T. (2003). Cross-linguistic influence. In C. J. Doughty & M. H. Long (Eds), *The handbook of second language acquisition* (pp. 436-487). Oxford: Blackwell.

Olsen, S. (2000). Composition. In G. Booij, C. Lehmann & J. Mugdan (Eds.), *Morphology. An international handbook on inflection and word formation* (pp. 897-915). Berlin: Mouton de Gruyter.

Onysko, A. (2016). Enhanced creativity in bilinguals? Evidence from meaning interpretations of novel compounds. *International Journal of Bilingualism, 20*(3), 315-334.

Paradis, J., & Crago, M. (2002). Comparing DP in L2 and SLI child French. Paper presented at *IASCL/SRCLD 2002*, 16-21 July, Madison.

Parodi, T., Schwartz, B. D., & Clahsen, H. (2004). On the L2 acquisition of the morphosyntax of German nominals. *Linguistics*, *42*(3), 669-705.

Petrescu, M. C., & Helms-Park, R. (2018). The lexical development of Canadian-born Romanian L1 bilingual kindergarteners. *Languages, 3*(3), 1-29.

Pienemann, M. (1987). Determining the influence of instruction on L2 speech processing. *Australian Review of Applied Linguistics*, *10*, 83-113.

Piera, C. (1995). On compounding in English and Spanish. In H. Campos & P. Kempchinsky (Eds.), *Evolution and revolution in linguistic theory* (pp. 302-315). Washington, D.C.: Georgetown University Press.

Piggott, L., Tribushinina, E., & de Graaff, R. (2020). The icing on the cake? Effects of explicit form-focused instruction after two years of implicit EFL learning. In W. Lowie, M. Michel, M. Keijzer & R. Steinkrauss (Eds.), *Usage-based dynamics in second language development* (pp. 249-270). Bristol: Multilingual Matters.

Real Academia Española y Asociación de Academias de la Lengua Española. (2009). *Nueva gramática de la lengua española, 1*. Madrid: Espasa.

Reber, A. S. (1976). Implicit learning of synthetic languages: The role of instructional set. *Journal of experimental psychology: Human Learning and Memory*, *2*(1), 88-94.

Repetto, V. (2006). *Uno studio sull'acquisizione bilingue. L'aggettivo in tedesco e in italiano.* Master thesis. Università degli studi di Pavia.

Rice, M. L., Wexler, K., & Redmond, S. M. (1999). Grammaticality judgments of an extended optional infinitive grammar: Evidence from English-speaking children with specific language impairment. *Journal of Speech, Language, and Hearing Research*, *42*(4), 943-961.

Ringbom, H. (1990). Effects of transfer in foreign language learning. In H. W. Dechert (Ed.), *Current trends in European second language acquisition* (pp. 205-218). Clevedon: Multilingual Matters.

Ringbom, H. (2007). *Cross-linguistic similarity in foreign language learning*. Clevedon: Multilingual Matters.

Ringbom, H. (2016). Comprehension, learning and production of foreign languages: The role of transfer. In R. Alonso Alonso (Ed.), *Crosslinguistic influence in second language acquisition* (pp. 38-52). Bristol: Multilingual Matters.

Ringbom, H., & Jarvis, S. (2009). The importance of cross-linguistic similarity in foreign language learning. In M. Long & C. Doughty (Eds.), *The handbook of language teaching* (pp. 106-118). Chichester: Wiley-Blackwell.

Rizzi, S., Arnaus Gil, L., Repetto, V., Müller, J., & Müller, N. (2013). Adjective placement in bilingual Romance-Romance and Romance-German children with special reference to Romance (French, Italian and German). *Studia Linguistica*, *67*, 123-147.

Robinson, P. (1996a). Learning simple and complex second language rules under implicit, incidental, rule-search, and instructed conditions. *Studies in Second Language Acquisition*, *18*(1), 27-67.

Robinson, P. (1996b). *Consciousness, rules and instructed second language acquisition.* New York: Peter Lang.

Russell, J., & Spada, N. (2006). The effectiveness of corrective feedback for the acquisition of L2 grammar: A meta-analysis of the research. In J. M. Norris & L. Ortega (Eds.), *Synthesizing research on language learning and teaching* (pp. 133-164). Amsterdam: John Benjamins.

Sadock, J. M. (1998). On the autonomy of compounding morphology. In S. G. Lapointe, D. K. Brentari & P. M. Farrell (Eds.), *Morphology and its relation to phonology and syntax* (pp. 161-187). Stanford: Center for the Study of Language and Information.

Sánchez, A. (2004). *Enseñanza y aprendizaje en la clase de idiomas*. Madrid: SGEL.

Scalise, S., & Fábregas, A. (2010). The head in compounding. In S. Scalise & I. Vogel (Eds.), *Cross-disciplinary issues in compounding* (pp. 109-125). Amsterdam: John Benjamins.

Scalise, S., & Vogel, I. (2010). Why compounding? In S. Scalise & I. Vogel (Eds.), *Cross-disciplinary issues in compounding* (pp. 1-18). Amsterdam: John Benjamins.

Scarano, A. (2000). Aggettivi qualificativi, italiano parlato e articolazione dell'informazione. *Atti del VI convegno SILFI - Tradizione e innovazione - Duisburg 28.06 - 02.07 2000*, Ed. E. Burr. Florence: Cesati.

Schwartz, B. (1993). On explicit and negative data affecting and affecting competence and linguistic behaviour. *Studies in second language acquisition, 15*(2), 147-63.

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, *11*, 129-158.

Schmidt, R. (1994). Deconstructing consciousness in search of useful definitions for applied linguistics. *AILA Review, 11*, 11-26.

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3-32). Cambridge: Cambridge University Press.

Schmidt, R. (2010). Attention, awareness, and individual differences in language learning. In W. Chan, S. Chi, K. Cin, J. Istanto, M. Nagami, J. Sew, T. Suthiwan & I. Walker (Eds.), *Proceedings of CLaSIC* (pp. 721-737). Singapore: National University of Singapore.

Selkirk, E. O. (1982). *The syntax of words*. Cambridge: MIT Press.

Serratrice, L. (2013). Cross-linguistic influence in bilingual development: Determinants and mechanisms. *Linguistic Approaches to Bilingualism, 3*(1), 3-25.

Shojamanesh, V., Kim Hua, T., & Salehuddin, K. (2018). The temporal role in grammatical performance of foreign language learners of English. *The Southeast Asian Journal of English Language Studies, 24*(4), 57-70.

Slabakova, R. (2002). The compounding parameter in second language acquisition. *Studies in Second Language Acquisition, 24*(4), 507-540.

Slobin, D. I. (1985). Crosslinguistic evidence for the language-making capacity. In D. I. Slobin (Ed.), *The crosslinguistic study of language acquisition, 2. Theoretical issues* (pp. 1157-1256). Hillsdale: Lawrence Erlbaum Associates.

Snyder, W. (2001). On the nature of syntactic variation: Evidence from complex predicates and complex word-formation. *Language*, *77*, 324-342.

Spada, N., & Tomita, Y. (2010). Interactions between type of instruction and type of language feature: A meta-analysis. *Language Learning, 60*, 263-308.

Swan, M. (1998). *Practical English usage* (new ed.). Oxford: Oxford University Press.

Thornton, R. (1998). Elicited production. In D. McDaniel, C. McKee & H. S Cairns (Eds.), *Methods for assessing children's syntax* (pp. 77-102). Boston: MIT Press.

Tode, T. (2007). Durability problems with explicit instruction in an EFL context: The learning of the English copula *be* before and after the introduction of the auxiliary *be*. *Language Teaching Research*, *11*(1), 11-30.

Tomlinson, M., & Nixon, C. (2014). *Kid's box 1* (2nd ed.). Cambridge: Cambridge University Press.

Trías, M., & Villanueva, A. M. (2011). La composición nominal en la adquisición del español como segunda lengua. Respuestas a una prueba de evocación. *Entre Lenguas*, *16*, 63-78.

Trías, M., & Villanueva, A. M. (2013). The compounding parameter in the acquisition of Spanish as a foreign language considering the influence of the mother tongue and the learning context. *Colombian Applied Linguistics Journal, 15*(1), 57-75.

Unsworth, S. (2016). Early child L2 acquisition: Age or input effects? Neither, or both? *Journal of Child Language*, *43*(3), 608-634.

Val Álvaro, J. F. (1999). La composición. In I. Bosque & V. Demonte (Eds.), *Gramática descriptiva de la lengua española, 3* (pp. 4757-4842). Chichester: Espasa.

VanPatten, B., & Benati, A. G. (2010). *Key terms in second language acquisition. Key terms series*. London: Continuum International Publishing Group.

Varela, S. (1992). *Fundamentos de morfología*. Madrid: Síntesis.

Varela, S. (2012). Derivation and compounding. In J. I. Hualde, A. Olarrea & E. O'Rourke (Eds.), *The handbook of Hispanic linguistics* (pp. 209-226). Chichester: Wiley-Blackwell.

Volterra, V., & Taeschner, T. (1978). The acquisition and development of language by bilingual children. *Journal of Child Language, 5*, 311-326.

Wetter, M. (1996). *Tra una e due lingue materne: L'acquisizione del tedesco in bambini italofoni, germanofoni e bilingui*. Rome: Bulzoni Editore.

White, L. (1991). Adverb placement in second language acquisition: some effects of positive and negative evidence in the classroom. *Second Language Research*, *7*, 133-161.

Williams, J. (2012). The potential role(s) of writing in second language development. *Journal of Second Language Writing*, *21*(4), 321-331.

LIST OF ABBREVIATIONS

A: adjective

AJT: acceptability judgment task

AN: adjective-noun string

CLI: cross-linguistic influence

CLIL: content and language integrated learning

DMT: director-matcher task

DP: determiner phrase

H: hypothesis

ISLA: instructed second language acquisition

L1:   first language

L2:   second language

N: noun

NN: noun-noun compound

PRT: production task

RQ: research question

WM: word marker