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THE ACQUISITION OF DEFINITE AND INDEFINITE ARTICLES BY TYPICALLY DEVELOPED CHILDREN AND BY CHILDREN WITH SPECIFIC LANGUAGE IMPAIRMENT

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ABSTRACT

This dissertation provides an empirical study on the acquisition of overt articles by native speakers of English. The study investigates how articles are acquired by typically developed children (TD) and by children with specific language impairment (SLI). The analysis of the data carried out in this dissertation centers on five semantic contexts in which the definite and the indefinite article may appear. The type of data analyzed in the study is spontaneous and it has been extracted from CHILDES. The TD and SLI participants have been matched considering two parameters: their MLU and their age. The study finally points out that in the acquisition of articles, the production of SLI participants is similar to that of their MLU-matched TD peers rather than to that of their AGE-matched TD ones.

KEYWORDS: Acquisition, articles, children with specific language impairment (SLI), English, semantic context, typically developed children (TD).

RESUMEN

Este trabajo aporta datos empíricos sobre la adquisición de los artículos explícitos del inglés por parte de niños nativos. El estudio examina cómo niños que se desarrollan de forma normal y niños con un trastorno específico del lenguaje (TEL) adquieren los artículos. El análisis de los datos realizado se centra en cinco contextos semánticos en los que el artículo definido y el indefinido pueden aparecer. El estudio analiza datos espontáneos extraídos del proyecto CHILDES. En el análisis los participantes se han agrupado teniendo en cuenta dos parámetros: su LME y su edad. Por último, en lo que respecta a la adquisición de los artículos, el estudio apunta a que la producción de los niños con TEL se parece más a la de los niños sin trastornos del lenguaje que tienen la misma LME más que a la de aquellos cuya edad cronológica coincide con la de los niños con TEL.

PALABRAS CLAVE: Adquisición, artículos, niños con trastorno específico del lenguaje (TEL), inglés, contexto semántico, niños sin trastornos asociados al lenguaje.

CONTENTS

FOREWORD: CONTEXTUALIZATION OF THE UNDERGRADUATE DISSERTATION

The present undergraduate dissertation is the last final formal requirement to conclude the degree in English Studies at the University of Valladolid. The topic of this dissertation belongs to contents in the A2 subject "Scientific description of the English Language", as presented in the teaching guide of the academic year 2015-2016. This subject encompasses the following seven courses given in this degree: three on English descriptive grammar, two on phonetics and phonology, one on the origins of the English language and the final one on English/Spanish comparative grammar.

The present dissertation centers on the description and the acquisition of the English grammar. More specifically, it deals with the acquisition of the definite and the indefinite article in English. Therefore, I consider that the present study can provide me with useful information on the acquisition of the English language by English native speakers. Firstly, as a non-native speaker, researching on this particular area will help me in the sense that it will give me more knowledge about the topic in question and, secondly, as a researcher, I will become familiar with the research procedure of analyzing previous works, proposing my own research questions, selecting the data and the participants of the study, extracting the data from CHILDES by using some CLAN programs, and classifying and analyzing the data.

Moreover, this dissertation has given me the opportunity to undertake research on a specific grammar category (i.e. articles). I have selected this grammatical category given that the acquisition of articles is not as simple as it may seem at first sight and given that, as a functional category, it is an essential part of language use. Thanks to this dissertation, I have explored this grammatical category more in depth than in a simple assignment essay. Furthermore, my own interest on research has increased since this dissertation has opened me a new horizon to direct my future professional career.

In this dissertation, I have applied some of the competences acquired in the different courses taken along the four-year degree. More specifically, through the elaboration of the present dissertation I have had to put into practice the following general and specific competences described below. Theses competences are reflected in the official description of the English degree, too.

While working on the English articles, I have carried out a bibliographical search using the resources available in the faculty library, both on-line and off-line, as well as internet

resources as online articles and websites. This has strengthened both general and specific competences like the following:

- Ability to manage technological means and resources.
- Ability to identify, manage and synthesis bibliography.
- Skills on managing information.
- Ability to manage specific technological means and resources related to the main professional possibilities of the degree.
- Capacity to analyze and systematize conceptualization and abstraction.
- Research skills: investigation techniques and documentation.

Even though I have been working under the supervision of my tutor, I have been able to develop my own research work by selecting linguistic data from CHILDES whose analysis I present in this dissertation. This way of working reflects general competences like the next ones:

- Creativity.
- Ability to solve problems.
- Autonomous learning.
- Critic and constructive spirit.

Given that the focus of my work is not only on grammatical description but on how TD and SLI children acquire a grammatical category of the English language, my dissertation also covers specific competences like the ones below:

- Capacity to write and speak in the English language.
- Capacity to understand and produce in the English language texts related to the main professional possibilities of the degree.
- Capacity to relate linguistic knowledge with other areas and disciplines.
- Capacity to understand the English grammar and its description.

1. INTRODUCTION

The acquisition of a language is a task that native speakers as well as non-native speakers have to accomplish. In general terms, a particular language and all its grammatical properties are always acquired through a period of time. This is so for both native and non-native speakers. During this acquisition process, the use of correct structures coincides with that of incorrect or ungrammatical ones. It is the case of the acquisition of overt articles in English. This process involves more than just acquiring the article forms *the* and *a/an*. For example, native children who are acquiring the grammatical properties of their first language also have to acquire the different semantic contexts in which articles may appear. It could be a source of difficulty for speakers and therefore both correct and incorrect uses may emerge.

The present dissertation is based on an empirical study which considers how native typically developed (TD) children and children with specific language impairment (SLI) acquire the articles in English. Moreover, this study investigates the type of article (i.e. definite and the indefinite article) that is most commonly used by each type of participant as well as the grammatical (i.e. overgeneralization cases) and orthographical errors that the acquisition of articles may involve. The principal objective of this study is to consider if the results obtained by the SLI participants are more similar to the results produced by their MLU[1]-matched TD peers or to the ones produced by the AGE-matched TD participants.

This paper is divided into eight main chapters. The introduction is the first one. In the second one, the grammatical category under analysis (i.e. articles) is described considering two semantic contexts for the definite article (i.e. the anaphoric reference and the bridging use of the definite article) and three semantic contexts for the indefinite article (i.e.

[1] The Mean Length of Utterance (MLU), as proposed by Brown (1973), provides a rough estimation of grammatical development. An increase in MLU is a sign of progress in the child's language development. The MLU can be calculated in terms of morphemes (known as the standard MLU) indicating the average number of morphemes per sentence; or in terms of words (MLUw) showing the average length of sentences in terms of words. More information regarding the MLU is provided in subsection 1.3 of chapter 5.

referential specific indefinite, the use of the indefinite article signaling a class membership, and the generic meaning denoted by this type of article). In the third chapter, some previous studies on the acquisition of articles by TD children and by children with SLI will be presented. Then, the main research questions of the study will be explained in chapter four. The fifth chapter of the dissertation deals with the methodology of the empirical study itself. This chapter includes the data selection, the data extraction and the data classification. Moreover, in the sixth and the seventh chapter the results of the study and the conclusions reached after having analyzed the data will be shown. The CD attached to this undergraduate dissertation includes the excel with the database designed to codify and analyze the data involved. To finish off, in the last chapter the bibliography consulted for the creation of this dissertation will be presented.

2. THEORETICAL FRAMEWORK

Determiners are functional words which delimit and specify the noun they go with. They can be classified in different subgroups. In this dissertation, I am going to focus on a subgroup of central determiners denominated articles. Huddleston and Pullum (2002: 368) describe the article as "a subcategory of determiners that denotes the basic expression of definiteness and indefiniteness." There are two types of articles: overt and zero articles. In this dissertation, I will analyze overt articles.

In this chapter 2, firstly I will introduce the concepts of definiteness and specificity as they are the two basic concepts that articulate the use of articles. This will lead us to the third part, where I will explain the two types of overt article forms: the definite article and the indefinite article.

1. Definiteness in English

Chondrogianni and Marinis (2014: 2) defend that definiteness is "a complex semantic notion that encodes the degree to which an entity denoted by a noun phrase (NP) is familiar and identifiable by both the speaker and the hearer".

In order to describe the semantic distinctions between definite and indefinite articles, Chondrogianni and Marinis (2014) use a set of two semantic features with a positive and a negative feature value (i.e. [+/- hearer, +/-speaker]). In this way, they express the presence and the absence of speaker and hearer knowledge.

Thus, following these criteria, two types of NPs can be classified: definite and indefinite. On the one hand, as Chondrogianni and Marinis (2014) explain, definite expressions assume that an entity (i.e. an NP) is familiar to both the hearer and the speaker. Therefore,

definite expressions belong to the common knowledge shared between the speaker and the hearer. Moreover, they can be identified by the feature combination [+speaker, +hearer]. On the other hand, these linguists point out that the entity of indefinite expressions does not belong to the common knowledge of the speaker and the hearer. Thus, indefinite expressions assume the lack of hearer knowledge [- hearer], and may or may not involve speaker knowledge [+/-speaker].

(1) They would like to meet *the Queen of England.* (Abbott, 2006)

On the one hand, example (1) includes an instance of a definite NP (in italics in the example 1). According to Abbot (2006), this NP is known as "definite descriptions" in the philosophical literature. In example (1), *The Queen of England* is a definite expression given that it is part of the common knowledge of both the hearer and the speaker. Therefore, it is identified with the features [+speaker, +hearer].

(2) She told me *a secret* yesterday. (Von Heusinger, 2002)

On the other hand, the NP in italics in example (2) represents the idea of indefinite expression since it does not belong to the common knowledge between the speaker and the hearer. In this case, *a secret* is introduced by the indefinite article *a*, and its referent is known by the speaker but not by the hearer. Example (2) is a representation of indefinite expressions characterized as [+speaker, -hearer].

(3) And I know that he [= the Evil One] can impel his victims to do evil in such a way that the blame falls on *a righteous man*. (Von Heusinger, 2002)

Example (3) is an illustration of indefinite expressions of the type [-speaker, -hearer]. In this case, the indefinite expression *a righteous man* is introduced by the indefinite article *a.* Moreover, the specific referent of *a righteous man* cannot be identified neither by the speaker nor by the hearer. Therefore, it involves no speaker or hearer previous knowledge.

Finally, the combination [-speaker, +hearer] is not adequate since it is not possible that the speaker refers to an entity which is not familiar to him/her and that, at the same time, that entity is known by the hearer.

2. Specificity in English

According to Barrera Rodríguez (2008: 2), specificity refers to "the knowledge held by the speaker." Below, I will explain some examples in order to get a better understanding of this linguistic term.

(4) He will select *the candidate who is most qualified.*

(Barrera Rodríguez, 2008)

As example (4) depicts, the NP *the candidate who is most qualified,* is identifiable and that is the reason why the definite article *the* has been used. Nevertheless, the referent is non-specific since nobody knows who the best candidate is going to be before carrying out the selection. Putting together definiteness and specificity, example (4) is represented with this semantic feature combination [+definite, –specific].

(5) We will select *the candidate that is from Kenya.*

(Barrera Rodríguez, 2008)

In example (5), the NP *the candidate that is from Kenya* is identifiable by the speaker and the hearer. Besides, the referent of the NP is alluding to a person who is not hypothetic but real. Therefore, this example can be represented as being [+definite, +specific].

At the same time, indefinite NPs can have two interpretations. In order to explain both interpretations, I will use the same sentence presented in example (6). The first

interpretation corresponds to the [-definite, –specific] semantic features, while the second one can be represented by the semantic features [-definite, +specific].

(6) He wants to get married with *a girl from Cuba*.

(Barrera Rodríguez, 2008)

In (6), a first possible interpretation is the following: the NP *a girl from Cuba* is not familiar to both the speaker and the hearer, and thus the indefinite article has been used. Moreover, the referent is unidentifiable and hypothetic since every Cuban girl can be the selected one. Therefore, the corresponding semantic features of this sentence are [-definite,–specific].

The second possible interpretation associated with indefinite NPs can be depicted by the use of the [-definite, +specific] semantic features. Now, the NP *a girl from Cuba* is an indefinite expression since it involves that the entity does not belong to the common knowledge between the speaker and the hearer; maybe the girl is only known by the speaker and not by the hearer. Following this interpretation, the girl is specific since the speaker knows her, and, for instance, he can express that she is very smart.

3. The overt article forms

In this section, I will explain the different types of article forms that can be used in English and how variants can appear in some cases depending upon the sort of noun they go with. These articles are summarized in table 1.

Table 1. Article forms

	COMMON COUNTABLE		**COMMON UNCOUNTABLE**		**PROPER**	
	[-DEF]	[+DEF]	[-DEF]	[+DEF]	[-DEF]	[+DEF]
SINGULAR	**a** frog **/ an** elephant	**the** frog**/ the** elephant	**Ø** wine	**the** wine	-	**Ø** George
PLURAL	**Ø** frogs**/ Ø** elephants	**the** frogs**/ the** elephants	-	-	-	-

As it can be seen in table 1, three distinct forms appear: *the, a (n) and* zero (Ø). I will present here some initial examples and, in the next subsections, a more detailed approach concerning the grammatical properties of overt articles will be provided as they are the focus of the present study.

The most common and basic overt determiners are the definite article *the* and the indefinite article *a /an.* Both articles take a different spoken (and written) form when the following word stars with a vowel.

(7) a. /Ə/ *a* frog b. /Ən/ *an* elephant

(8) a. /ð Ə/ *the* frog b. / ð ɪ/ *the* elephant

In example (7a), the written form *a* is used before a noun which is pronounced with an initial /f/, while *an* is found before nouns with an initial silent /h/, like in example (7b). In the case of the definite article, no spelling change is produced, as shown in (8a) and (8b), but a change in the phonological articulation is produced instead.

3.1 The definite article *the*

The definite article *the* is the basic indicator of definiteness and specific reference. As it is illustrated in (9), it is compatible with all types of common nouns: countable singular (*pencil* in 9a), countable plural (*pencils* in 9b) and uncountable (*water* in 9c).

(9a)	Bring me *the pencil*.	Definite article + singular count noun
(9b)	Bring me *the pencils*.	Definite article + plural count noun
(9c)	Bring me *the water*.	Definite article + uncountable noun

According to Biber et al. (1999: 263), "the definite article specifies that the referent of the NP is assumed to be familiar and identifiable both by the speaker and by the addressee." Therefore, the knowledge shared by the speaker and the hearer is associated with the linguistic context, either the preceding or the following linguistic context or even the situational context. This leads us to the explanation of the three main semantic contexts in which the definite articles may appear in English: the anaphoric reference, the cataphoric reference and finally the situational reference.

Firstly, the anaphoric reference occurs when there is a link between the preceding context and the current utterance, as illustrated in example (10).

(10) I saw *a frog* on the grass. *The frog* was green and tiny.

In this example, the entity *frog* is initially only identified by the speaker and that is the reason why it is introduced with the indefinite article *a* in the first sentence in (10). Once the entity is introduced, succeeding allusions to the item *frog* involve the use of the definite article *the,* given that the entity now is known by both the speaker and the hearer, as in the second sentence in (10). As Chondrogianni and Marinis (2014) state, the hearer is able to understand what the speaker wants to transmit in the second sentence since the speaker is

alluding to the previous linguistic context in which the indefinite article has been used. This argumentation explains the anaphoric use of the definite article and, as I have considered, it is based on the previous use of the indefinite article in order to introduce a new entity. Consequently, the entity is known by both the speaker and the hearer.

Secondly, definite articles are also used to make reference to something depicted in the following context. This type of correlation is called cataphoric reference, as exemplified in (11).

(11) *The car* which John bought was very expensive.

In example (11), the entity *the car* is introduced by the definite article *the* since *car* refers to something that will be explained afterwards in the sentence. In this case, *the car* is alluding to John's car, as presented in the wh- relative clause *which John bought*.

Thirdly, according to Biber et al. (1999: 264), the last use of the definite article "reflects the shared situational context of the speaker and the hearer." It is called situational reference. It usually occurs in oral conversation due to the fact that conversation takes places in a situation shared by the speaker and the hearer, as shown in (12).

(12) I think she is waiting for us in *the park*.

When the speaker and hearer's perception of the situation is not the same, they are not referring to the same entity. This situation of disagreement normally is caused by problems of interpretation. The following example in (13) shows a situation in which the hearer is not able to understand what the speaker is referring to.

(13) A: Could you get me from *the shelf* the black felt pen?

B: Which shelf?

A: The big one with all the "unclear" on top. (Biber et al., 1999)

In (13) the speaker makes use of the definite article *the* since he /she thinks that the hearer perfectly knows which shelf he /she is referring to. In other words, the speaker believes that the hearer is able to identify the shelf. However, as the conversation continues, the speaker realizes that the hearer cannot identify such shelf so that the hearer asks the speaker which shelf he/she is referring to.

Together with these three uses of the definite article, Chondrogianni and Marinis (2014) add one more. They argue that the definite article can also have an associative use called bridging use. As these authors state, in this type of reference, the entity is introduced by means of the definite article, without being previously introduced into the discourse. Nevertheless, the entity is easily understood by the both speaker and hearer, as illustrated in (14).

(14) Jane wanted to open *a jar*. She removed *the lid* and scooped out some ham.

(Chondrogianni and Marinis, 2014)

In example (14), the definite NP *the lid* does not need to be introduced by the indefinite article since, in this case, everybody knows that *jars* have *lids* since there is a relation between both entities in the sense that *the jar* is an object and *the lip* is a part of that object. Therefore, the speaker uses a definite article since the entity *the lid* has a bridged reference that is *a jar,* in the previous sentence. Since the hearer is able to identify the entailment between both entities, he/she knows the entity the speaker is referring to.

At this point, Biber et al. (1999) specify that the bridging use of the definite article also appears in fiction. In this context, the definite article presents people, things and events in a very familiar way to the reader, despite the fact that these entities had not been previously introduced in the context. In this way, the audience can imagine the fictional world described by the author.

> (15) "Their apprehensions arise from several changes they dread in the celestial bodies: for instance, that *the earth*, by the continual approaches of *the sun* towards it, must, in course of time, be absorbed, or swallowed up; that the face of *the sun*,[…]"
>
> (Swift, 1995.Gulliver's Travels into several remote Nations of the world)

Example (15) shows the belief of some inhabitants in an imaginary island depicted in Gulliver's Travels. The author makes use of the definite article *the* to introduce new objects such as *the sun* and *the earth* that are part of all readers' previous knowledge.

Finally, as I have previously pointed out, the definite article can express a generic reference. In this regard, there are two ways to indicate generic reference. The first consists of the use of the definite article followed by a singular count noun, as exemplified in (21).

(16) *The student* must pay attention. Definite article + singular count noun

In example (16), the definite article *the* goes before the singular count noun *student*. In this case, reference is not made to a specific student but rather to the whole category of students.

The second method to express generic reference is based on the use of the definite article followed by a plural nationality noun or adjective.

(17)	*The Russians* lost the war.	Definite article + plural nationality noun
(18)	*The oppressed* had no voice.	Definite article + adjective

In example (17), the definite article *the* is followed by a plural nationality noun, *Russians*. Whereas in example (18), *the* precedes an adjective, *oppressed.* To sum up, although both examples illustrate different grammatical constructions, both denote the same generic meaning, in the sense that the speaker is not referring to an individual person but to the whole class or group.

3.2 The indefinite article *a (an)*

In general terms, the indefinite article is used when the NP is not familiar to the speaker and to the hearer. As stated in section 2 of this chapter, it is important to take into account the difference between specificity and referentiality.

Chondrogianni and Marinis (2014: 3) explain that the term specificity refers to "the identifiability of the entity denoted by the noun", while referentiality deals with "the degree to which the indefinite NP signals a particular member of a class or a generic reference."

(19) She bought *a dog* three months ago.

In example (19), the use of the indefinite article *a* implies that the entity *a dog* is only identifiable by the speaker as he/she has a particular dog in mind or, on the contrary, *a dog* has been selected as an example or a member of the dog class.

Therefore, the indefinite article can appear in three semantic contexts, according to Biber et al. (1999) and Chondrogianni and Marinis (2014).

In the first place, when the indefinite article precedes a singular count noun, it is limiting the entity denoted by the following noun to a single member of a class. This first use of the indefinite article is commonly applied in order to introduce a new entity in the discourse given that the speaker assumes that the hearer does not know about the particular entity he/she is talking about. This use is known as referential specific indefinite, and it is illustrated by *a very productive article* in (20).

(20) I read *a very productive article* in the New York Times.

The second use of the indefinite article implies a non-referential reading. It occurs when the NP is preceded by an indefinite article and it does not denote a specific member within a class, as I have reflected in (20), but rather signals a class membership itself, as in (21).

(21) She felt terribly, she needed *a friend*. (Biber et al., 1999)

In example (21), the entity denoted by the indefinite NP *a friend* is not known to either the speaker or the hearer. In this way, the indefinite receives a "*de dicto* reading" as argued by Fillmore (1967: 5) since it refers to an unspecified friend that belongs to the whole class of *friends* rather than to a specific friend. Thus, the indefinite article denotes a whole class membership, and not a specific member of that class.

Finally, the indefinite article can also denote a generic meaning. In this context, the indefinite NP can appear as the complement of a predicate such as *have* or *be*, as in (22).

(22) *A doctor* has *a lab coat.* Indefinite article + singular count noun

(Chondrogianni and Marinis, 2014)

In (22), the NP *a doctor* does not denote a particular individual, thus it is non- referential. It corresponds to the generic use of indefinite articles. The entities denoted by the two NPs (*a doctor* and *a lab coat*) are related since it is commonly known that doctors have lab coats. In (22), the indefinite article *a* precedes the singular count nouns *doctor* and *lab coat.*

3. ADQUISITION WORKS

This third chapter of my dissertation is divided into three main sections. The first one deals with the acquisition of articles in typically developed (TD) children. Firstly, I will explain some of the most prominent works regarding the acquisition of the definite article, and subsequently, a general view on how indefinite articles are acquired will be provided. In the second section, I will examine some studies about the same topic but, in this case, the participants are children with specific language impairment (SLI). In the last section, I will offer a review of studies based on the spontaneous data of both TD and SLI children.

1. The acquisition of articles in typically developed children

The following section deals with the acquisition of articles in TD children. It is organized into two main subsections: On the one hand, subsection 1.1 discusses the acquisition of the definite article in TD children, where I will focus on Maratsos' (1976) study and that of Schafer and de Villiers' (2000); on the other hand, section 1.2 presents some of the studies carried out in order to analyze how TD children acquire the indefinite article. Here, I will show the main conclusions of Schafer and de Villiers' (2000) study.

The acquisition of definite and indefinite articles has been widely studied in typically developed English-speaking children. To carry out these studies, Chondrogianni and Marinis (2014) refer to the linguists that have used both naturalistic methods such as Brown (1973) and de Villiers (1973) and experimental methods as Maratsos (1976), Schaeffer and Matthewson (2005), Schafer and de Villiers (2000) and van Hout et al. (2010).

1.1 The acquisition of the definite article

Initial studies examining the acquisition of English articles (e.g. Brown (1973) and de Villiers and de Villiers (1973)) demonstrate that articles are acquired when children are 3 years old. Many linguists have focused on the acquisition of articles in TD children; nevertheless, each linguist has analyzed different semantic properties of the articles.

For instance, some studies focus on the acquisition of the anaphoric and the cataphoric use (as shown in subsection 3.1 of chapter 2) of the definite article, while other linguists establish as their field of research the acquisition of the indefinite article (as displayed in subsection 1.2 of this chapter).

In one of these studies, Maratsos (1976) examines the way 3 to 4 year old English speaking children acquire and produce definite articles. In particular, he focuses on two semantic contexts in which the definite article occurs: the anaphoric context and the bridging context (as presented in subsection 3.1 of chapter 2). In order to carry out his study, he uses an elicitation task which contains short stories without pictures.

He obtains the following results, as Chondrogianni and Marinis (2014) present in their study. In the anaphoric condition, when Maratsos' participants are 3 years old, they correctly produce definite articles at a rate of 55%. When children are 4 years old, they are fluent in this semantic context of the definite article so that they produce definite articles at a rate of 95%. Nevertheless, when Maratsos examines the acquisition of the definite articles in a bridging context, he discovers that, in this semantic context, articles are correctly produced 83% of the time in 3 year old children and 98% of the time in 4 year old children. This means that bridging uses are acquired sooner than anaphoric ones.

This remarkable difference in the acquisition of the anaphoric and the bridging uses of definite articles are later supported in a study carried out by Schafer and de Villiers (2000).

In this regard, Maratsos' study and Schafer and de Villiers' study conclude that children develop the bridging use of the definite article better than the anaphoric one.

Schafer and de Villiers (2000) also examine the errors made by children when they acquire the definite article. They reached the conclusion that most of these errors are omission cases, although they also found some substitutions of the definite and the indefinite article. This substitution is clearer in the anaphoric context than in the bridging one.

As Chondrogianni and Marinis (2014) refer to, the difficulties in the acquisition of the anaphoric use of definite articles have been examined in subsequent works such as Van Hout et al.'s (2010) in which they use short stories with and without pictures in order to examine the acquisition of the anaphoric use of definite articles.

According to Chondrogianni and Marinis (2014), there is a point of disagreement between Maratsos' study and Schafer and de Villiers' study. The former study states that at the age of 4 years old, children have completely mastered the anaphoric use of the definite article, whereas Schafer and de Villiers argue that at the age of 5 years old children have not entirely mastered it.

Schafer and de Villiers (2000) affirm that the reason why TD children have difficulties with the anaphoric use is that children at a young age are not able to understand the different perspectives that a person transmits when he/she talks and, as a result, children are incapable of indicating the [+/- hearer] distinction.

Moreover, they also assert that young children before the age of 5 cannot understand the relation that exists between a formerly mentioned antecedent, which has to be introduced with an indefinite NP, and its following mention, now introduced with a definite NP, as previously dealt with in subsection 3.1 of chapter 2. This connection between the

antecedent and its posterior mention in the discourse can be explained taking into account the cognitive limitations that children have in their early years. As Chondrogianni and Marinis (2014) suggest, these limitations are related to the development of the Theory of Mind (TOM) and to the lack of the [+hearer] feature in children's grammar. Therefore, Schafer and de Villiers' (2000) study how children's early NPs do not exhibit the feature [+ hearer]; instead they incorporate the feature [unique]. Schafer and de Villiers (2000: 611) explain that *the* is "lexically presented as being [unique] and occurs with NPs whose referent can only be identifiable by the child in the context of the utterance." This interpretation explains the reason why the semantic features of definite articles are different depending on whether they have been used by children or, on contrary, by adults. That is, the definite article in young TD children lacks the [+ hearer] semantic feature in these initial stages of the acquisition process.

Other studies have examined how children acquire the bridging use of the definite article. For instance, Avrutin and Coopmans (2000) focus on Dutch and Russian young children. According to Chondrogianni and Marinis (2014), the results of this study show that children are able to use correctly this bridging relationship since it is based on world knowledge.

Up to now, all the previously mentioned studies have examined how the semantic context affects the acquisition of articles. As Chondrogianni and Marinis (2014) explain, the error types (substitutions and omissions) have been scarcely studied, though. Some studies which have examined the errors produced by children when acquiring the articles are Emslie and Stevenson (1981), Hickmann (2003), and Krämer (2003). Particularly, de Cat (2011) concludes that these errors do not point out problems related to the linguistic properties of the articles; instead she demonstrated that children have difficulties in understanding if an antecedent is new or not.

1.2 The acquisition of the indefinite article

Most studies have centered their attention on whether TD English-speaking children misuse definite articles in the context of indefinites. These studies include for instance de Cat (2011), Schaeffer and Matthewson (2005) and van Hout et al. (2010).

As Chondrogianni and Marinis (2014) argue, Van Hout et al. (2010) explain that the substitution of indefinite articles with definite articles in children's production depends on the task carried out in the study. Maratsos (1976: 1) describes these errors based on substitution as being "egocentric" since children are not able to take into account the hearer's perspective when a new referent known by the speaker is introduced.

Nevertheless, sparse studies have been carried out examining whether or not the different semantic contexts of the indefinite article affect children's article production. For instance, de Villiers et al. (2000) and Schafer and de Villiers (2000) analyze the use of indefinite articles in three semantic contexts, which are the referential specific indefinite, the non-referential predicational and the non-referential instrumental.

Schafer and de Villiers (2000) observe that the errors made by their participants are mostly based on omissions and that in the non-referential conditions only a few substitutions are made. They realize that the majority of errors are committed when the indefinite article is used in a referential specific context. Meanwhile, they do not find many errors in the non-referential predicational and instrumental uses of the indefinite article. As a result, Schafer and de Villiers (2000) conclude that children do not have problems with the [+/- hearer] semantic feature given that children do not make many substitutions errors when they use the indefinite article.

2. The acquisition of articles in children with specific language impairment

In this section, I will show some of the studies conducted by linguists on SLI children. Particularly, I will focus on Polite et al.'s (2011) study due to the fact that it examines the production of both definite and indefinite article in SLI children.

Most studies concerned with children with SLI have focused on the study of other grammatical categories such as verbal inflection (e.g. Leonard et al. (2009)), the acquisition of plurals (e.g. Le Normand et al. (1993)) or articles (e.g. Leonard et al. (1997), McGregor and Leonard (1994) or Schaeffer et al. (2003)).

The early studies analyzing the morpho-syntactic properties of English articles in pre-school children with SLI use naturalistic data. Thanks to these initial studies, linguists have determined the differences between TD children and SLI children in the production of articles.

In contrast to the large quantity of studies on the acquisition of definite and indefinite articles in TD English-speaking children (as presented in section 1 of this chapter), there is a scarcity in the number of experimental studies investigating the acquisition of articles in SLI English children.

Two of the most relevant experimental studies examining the acquisition of definite and indefinite articles in English-speaking children with SLI are McGregor and Leonard (1994) and Polite et al. (2011).

Polite et al. (2011) analyze the production of definite and indefinite articles using an experimental task. In their study, they establish a semantic context for each of the articles,

so, to investigate the use of the definite article, they determine the anaphoric context and, for the analysis of the indefinite article, the non-referential instrumental context. According to Chondrogianni and Marinis (2014), these authors discover that children with SLI have notably a worse performance when they use definite articles in the anaphoric context compared to the same use of the article by their MLU-matched TD peers.

Moreover, both SLI children and their MLU-matched TD peers do not vary in the use of the indefinite article in a non-referential context given that all the participants show a good performance in this condition. As Chondrogianni and Marinis (2014) refer, in terms of error patterns, both participants have more errors in substitutions than in omissions. However, if the number of substitutions of both participants is compared, children with SLI produce more substitutions of the definite with the indefinite article. As a consequence, SLI children make more errors than MLU-matched TD children.

Polite et al. (2011) point to a deficiency in the definite article production, whereas the acquisition of the indefinite article by SLI children is not problematic. In order to explain the problems related to the use of the definite article, they follow the ideas stated by Montgomery (1995) claiming that children with SLI have certain limitations in their working memory.

To sum up, as I have shown in this section, Polite et al.'s (2011) study investigates article production in two semantic contexts, the anaphoric context for the definite article, which seems to be tricky for TD children until they are 5 years old, and the non-referential instrumental context for the indefinite article, which seems to be uncomplicated.

3. Studies dealing with TD and SLI children's spontaneous production

In this section, I will briefly introduce some of the most relevant studies concerned with the spontaneous production of articles by TD and SLI children. These studies are very useful for my project, since, as I will present later, the study I have carried out is also based on spontaneous data.

In de Villiers et al.'s (1973) study, speech samples are elicited from 21 children aged between 16-40 months. Their aim is to investigate how fourteen grammatical morphemes are acquired in early child speech. Thus, they examine when each grammatical morpheme is acquired by the child and consequently they establish a rank-ordering. Besides, they provide cross-sectional data on the use of these fourteen morphemes in children speech. For the study, they also register the frequency of use of the grammatical morphemes in their parent's speech. This study takes a point of departure Brown's (1973) study. Some instances of these fourteen morphemes proposed by Brown (1973) are third person singular *-s*, both past regular *–d* and irregular verbal forms, the preposition *in* and the conjunction *or*, or the articles *a* and *the*. This last grammatical morpheme is the one I am interested in the present dissertation and, therefore, in what follows only reference to articles in de Villiers et al.'s (1973) study and Brown's (1973) study will be made.

In Brown's (1973) study, in the three children studied longitudinally, the acquisition of articles takes place in the 8th rank when contrasting it to the other 13 categories. De Villiers et al. (1973) also claim that articles show gradual growth curves, given that the older the child is, the larger his/ her MLU is, and in this way, the percentage of morphemes correctly produced by the children rises.

Table 2. Acquisition of articles in De Villiers et al.'s (1973) study

NAME	MLU	AGE IN MONTHS	PERCENTAGE OF ARTICLES *A* AND *THE*	PERCENTAGE OF CONTRACTIVE COPULA
Zoe	1.31	16	2.8	3.5
Rachel	2.04	26	30.3	28.2
George	4.23	29.5	98.9	94.9
Michael	4.67	40	100	100

As table 2 shows, the MLU and the percentage of morphemes produced by Michael is higher than those produced by Zoe, since Zoe is 16 months and Michael is older. We can also appreciate from this table that other grammatical morphemes analyzed in De Villiers et al.'s (1973) study also show this gradual curve such as the contractive copula.

Moreover, Brown (1973) contemplates in his study the semantic specific and non-specific feature of definite and indefinite articles. He asserts that, in those contexts in which it is possible to determine which article has to be chosen, children rightly select the correct option. Brown's and de Villiers et al.'s studies also take into account instances in which the article is obligatory in a particular context and it is not used by the participant, and vice versa, when the article should not be used in that context, but it is actually included. This indicates that children at some stages are not able to distinguish between definite and indefinite articles. Another semantic feature which was also taken into consideration in this study is whether the article is followed by a proper or a common noun.

(23) *The Rover*. (de Villiers et al., 1973)

In example (23), Rover is a dog so that children should not call him *The* Rover but Rover by using the zero article.

Another study on the acquisition of articles by children is the one carried out by Schaeffer et al. (2003). They compare the spontaneous language produced by fourteen English

speaking SLI children with data elicited from English speaking TD children with a similar MLU, and also compared with the data elicited from TD children of the same age. The children with SLI were between the ages of 3-4 and they had an MLU range from 2 to 5, while TD children had an average age of 3 years and a mean MLU of 6.3.

Schaeffer et al. (2003) wanted to support the hypothesis that the deficits of SLI children are connected to the grammar of the language. This is the reason why SLI children sometimes have problems with the syntax and the semantics of the language. They also took into consideration the linguistic phenomenon of overgeneralization of *the*, which consists on the use of the definite article in contexts in which adults would use an indefinite article. Maratsos (1974) affirmed that overgeneralization on the other direction, which is using an indefinite instead of a definite article, is not commonly attested.

(24) Sarah: Where's *the black tape*?

Mother: What black tape? (Brown, 1973)

In example (24) the child Sarah uses the definite article *the* in a context in which the indefinite article *a* should have been used since it is the first time that the child introduces the entity *the black tape*. For this reason, her mother does not understand what Sarah is talking about so that Maratsos (1974: 4) proposes that it is an example of "communication breakdown."

Schaeffer et al. (2003) prove that this overgeneralization is a pragmatic phenomenon, based on the idea that the child associates his/her own knowledge to that of the hearer. Therefore, as seen in section 3.1 of chapter 2, the definite article is used when the entity denoted in the NP is familiar to both the speaker and the reader. The problem here is that SLI children overuse the definite article since they use the definite article in contexts in which the entity is only familiar to the speaker and not to the hearer. In example (24), only Sarah, the speaker, knows what she is referring to and not her mother, the hearer. Sarah thinks that, as she knows what she is making reference to, her mother also knows it. In this way, Sarah attributes her own knowledge to her mother's knowledge.

Schaeffer et al. (2003) conclude that children with SLI older than 3 years old do not overgenerate the definite article *the*. Therefore, they correctly produce indefinite articles taking into account the different semantic contexts in which they may appear. Moreover, SLI participants behave similarly to their MLU-matched and AGE-matched participants given that they never overgenerate the definite article *the* in indefinite contexts. They also affirm that TD children younger than 3;0 acquire the overgeneralization *the* at a rate of 16%. Whereas children with SLI older than 3 behave similarly to their TD-matched children older than 3. In this way, 4 year old children with SLI are similar to both MLU and AGE-matched participants.

In a subsequent work, Schaeffer et al. (2014) examine the choice between a definite and an indefinite article in children with High Functioning Autism (HFA) and children with SLI. The study consists on an elicited production task and the participants are 16 Dutch-speaking children with HFA, 16 AGE-matched Dutch-speaking children with SLI, and 16 TD children.

They conclude that the selection of indefinite articles does not imply any error among the three types of participants. Surprisingly, when they examine the selection of the definite article, they realize that HFA participants produce more errors than the TD group and the SLI group. Concretely, 38% (6/16) of the children with HFA versus 13% (2/16) of the children with SLI regularly produce indefinite articles in definite contexts.

In order to find a reason why children with HFA do not produce the same amount of indefinite articles in their speech, researchers such as Horn (1972) come to the conclusion that HFA children do not always take into account the pragmatic meaning that indefinite articles can have. Consequently, pragmatic impairments are more bound to the way children with HFA perceive and use language.

4. OBJECTIVES OF THE STUDY AND RESEARCH QUESTIONS

The principal aim of this study is to find out if there is any difference in the production of definite and indefinite articles in TD children and in SLI children. If these variations based on the acquisition and the use of articles in children exist, a second aim is to seek for a possible reason behind it when choosing the definite or the indefinite article.

In this fourth chapter of the dissertation, I will present the research questions on definite and indefinite articles that have guided the study. This chapter is divided into three sections. In each section, I will present a different question set. In turn, each question set may consist of one or more research questions.

1. Question set 1: General performance

The first question set deals with the general performance of the participants when they make use of articles. In this question set, the next two research questions have been proposed:

1.1 Research question 1: Definite and indefinite articles

It has to do with the predominance or deficiency in the choice of both articles. Is there any preference for using the definite article or the indefinite article?

1.2 Research question 2: Grammatical and orthographical errors

Are there any grammatical errors related to a particular group of participants as in the case of overgeneralizations of *the* (in the line of Maratsos (1974) and Schaeffer et al. (2003))? Are there any orthographical errors related to a particular group of participants?

2. Question set 2: Semantic contexts

The second question set focuses on the different semantic contexts in which both *the* and *a(n)* may appear. In order to state the following research questions, I have taken into consideration the semantic contexts previously presented in sections 3.1 and 3.2 of chapter 2. These semantic contexts will also be associated with the second variable that will be explained in the next chapter (subsection 3.1 of chapter 5).

2.1 Research question 1: Definite article

It deals with the different types of semantic contexts in which the definite article tends to appear in the production of each group of participants. Is there any inclination between the bridging use of the definite article and its anaphoric use like in Maratsos' (1976) study? Is that preference bound to SLI children or to TD children?

2.2 Research question 2: Indefinite article

It centers on the different types of semantic contexts in which the indefinite article may be used. In which semantic context is the indefinite article *a(n)* most commonly used by the participants? Which semantic context is the most predominant one: the referential specific use, the class-membership use or the generic use of the indefinite article? Do SLI and TD children behave in the same way in this respect?

3. Question set 3: MLU and AGE matching

The last question set has to do with the MLU and AGE matching classification of TD and SLI children in the line of what previous works (such as Schaeffer et al. (2003)) have done. In the case of my study, the MLU-matching and AGE-matching groups will be explained in subsections 1.3 and 1.4 of chapter 5. This question set is divided into four main research questions. These research questions are the same as the ones in question sets 1 and 2 previously presented but, in this case, the research field is delimited as follows. Here, I will consider if the results obtained by the SLI participants are more similar to the results produced by their MLU-matched TD participants or to the ones produced by the AGE-matched TD participants.

3.1 Research question 1: Definite and indefinite articles

Are SLI participants more similar to the MLU-matched TD participants or to the AGE-matched TD participants in the general performance on articles?

3.2 Research question 2: Grammatical and orthographical errors

Do the grammatical and the orthographical errors produced by SLI participants resemble the results obtained by the MLU-matched TD participants or those produced by the AGE-matched TD participants?

3.3 Research question 3: Definite article

It deals with the types of semantic contexts in which the definite article tends to appear in the production of each type of participant. In the semantic contexts of the definite articles, are the results produced by SLI participants more like those obtained by the MLU-matched TD participants or those produced by the AGE-matched TD participants?

3.4 Research question 4: Indefinite article

It centers on the different types of semantic contexts in which the indefinite article may be used. In the semantic contexts of the indefinite articles, are the results produced by SLI participants more similar to those obtained by the MLU-matched TD participants or to those produced by the AGE-matched TD participants?

In order to answer all these research questions, a study based on the analysis of spontaneous data obtained from TD and SLI children has been carried out. The whole process of data selection and classification is presented in chapter 5 centered on the research methodology. Finally, in chapter 6, the results will be presented.

5. DATA METHODOLOGHY

In the fifth chapter of this dissertation, I will introduce the whole process carried out to elaborate the empirical study. This chapter is divided into three main sections named data selection (section 1), data extraction (section 2) and data classification (section 3).

In turn, the data selection section is also organized into four different subsections; firstly, I will present the two corpora selected for the analysis the data as well as a brief general description of the participants. Three criteria were used to select the participants of the study: the participants' geographical area (subsection 1.2), the MLU-matching criteria and AGE-matching criteria. Subsection 1.3 deals with the organization of the participants taking into account their MLU while subsection 1.4 explains the classification of the participants considering their age. Given the difficult process of MLU and AGE matching, these last two subsections will also include a detailed account on how this double matching has been done, both in terms of the participants selected (subsections 1.3.1 and 1.4.1) as well as in terms of the files selected for each participant (subsections 1.3.2 and 1.4.2).

In the second section, the procedure followed to extract the data on definite and indefinite articles will be explained. Particularly, I will focus on three CLAN programs: MLU, FREQ and KWAL.

Finally, in the data classification section (section 3), I will clarify the way I have codified the data by establishing a series of variables for the analysis of the articles (see subsection 3.1) and I will also present the cases discarded from the analysis (see subsection 3.2).

1. Data selection

1.1 Corpora

In order to select the data of the study, I have made use of the corpora available through the CHILDES project (MacWhinney, 2000). CHILDES is a compilation of different corpora that contains the video/audio recordings of the spontaneous linguistic production of children and their parents and the data transcription of these oral recordings. Thus, the type of data of the study is spontaneous.

I have selected data from two different corpora to carry out my study. On the one hand, from the English UK- MOR corpora, I have picked the Manchester 1 Corpus. Later on, from that corpus I have chosen five English monolingual TD participants. On the other hand, from the Clinical –MOR /Language disorders corpora, I have chosen the corpus called Conti-Ramsden 3. From there, I have selected three English monolingual SLI children.

Table 3 and table 4 display some basic features of each selected corpus. Table 3 refers to the corpus of TD participants, while table 4 to the one of the SLI participants.

Table 3. Main properties of the MANCHESTER corpus: TD participants

CHILD NAME	MLU AVERAGE	MLU RANGE	AGE RANGE	GEOGRAPHICAL VARIETY	# OF FILES
Anne	2.115	1.55-2.57	1;10-2;9	6 from Manchester and 6 from Nottingham	68
Aran	2.849	1.31-4.26	1;11-2;10		66
Becky	2.464	1.34-3.40	2;0-2;11		68
Carl	2.803	1.75-3.98	1;8-2;8		65
Domin	2.238	1.32-3.51	1;10-2;10		68
Gail	2.690	1.50-3.68	1;11-2;11		68
Joel	2.391	1.30-3.55	1;11-2;10		68
John	2.424	1.68-3.50	1;11-2;10		64
Liz	2.773	1.39-4.15	1.11-2.10		68
Nic	1.897	1.08-3.06	2; 0-3;0		68
Ruth	1.960	1.25-3.22	1;11-2;11		66
War	3.091	1.70-4.33	1;10-2;9		67

As we can see from table 3, the Manchester 1 corpus contains the spontaneous linguistic production of twelve English monolingual TD children. They are six boys and six girls. Some of them are from Manchester and others are from Nottingham. Moreover, the MLU of the participants ranges from 1.0 to 4.3 and their ages vary from one year and ten months to three years. The number of files of each participant is between 64 and 68.

Table 4. Main properties of the CONTI-RAMSDEN 3 corpus: SLI participants

CHILD NAME	MLU AVERAGE	MLU RANGE	AGE RANGE	GEOGRAPHICAL VARIETY	# OF FILES
Bonnie	3.308	2.4-4.24	4;0-5;0	North West of England	22
Daniel	1.938	1.00-3.25	2;6-3;11		23
Harry	2.814	1.88-3.90	3;5-4;8		29
Nathan	3.060	1.20-4.34	2;11-4;3		33

Table 4 displays some of the main features of the Conti-Ramsden 3 corpus. As we can appreciate, this corpus comprises the spontaneous production of four English-speaking participants with SLI. All of them come from the North West of England. Besides, they are

aged between 2.6 and 5.0 years old and their MLU range is between 1.00 and 4.34. The number of files that each participant has is between 22 and 33.

This study is conducted with two groups of participants. Five TD children aged between 2 and 4 years and three SLI children aged between 2 and 5 years old. All the participants are monolingual speakers of British English. The linguistic profile of the participants is described below and the information is taken from the manual section of the CHILDES project. In particular, for the TD children the manual used is the British English one; and for the SLI children it is the language disorders one.

TD children are all first born, cared by their mothers primarily and most of them belong to middle-class families. They were recorded in their homes during one year.

Children with SLI, in contrast, had no history of hearing problems or autistic tendencies. Moreover, they had a good degree of intelligibility, but poor language capacities and non-verbal abilities within the normal range. These children were attending mainstream nursery schools and were either receiving speech or language therapy or had received it in the previous six months. Data were collected for a period of sixteen months in the children's homes.

The three criteria that were followed in the participant selection procedure are explained in the subsections below.

1.2 Participants: geographical area

Firstly, participants were selected taking into account their geographical area. For this reason, I have adjusted the participants to the same geographical area and variety. In the present study, all the participants belong to the North West of England: some of them are from Nottingham, Manchester or other places in the North West of England.

The second step affects the comparison between TD and SLI children. In this case, I have classified the participants into two well-defined groups: MLU-matched participants and AGE-matched participants. This classification was taken into account when I carried out the study since the main aim of the study is to examine and to contrast if the acquisition of English articles depends on the age or on the MLU of the children when comparing TD and SLI children.

Both matching procedures followed for both TD and SLI children are explained below. Firstly, I will present the MLU-matching (see subsection 1.3), and then, I will continue with the AGE-matching explanation (see subsection 1.4).

1.3 Participants and data: MLU-matching

1.3.1 MLU-matching: participant selection procedure

I have automatically calculated the MLU of each of the participants by using the CLAN program called MLU, since MLU shows the linguistic development of the children.

Firstly, by focusing only on the MLU of the participants and not taking into account their age, I have performed MLU analyses on the files of each child in each corpus.

Once the MLU of each participant in both corpora had been calculated, I matched up the participants in order to create possible combinations and, afterwards, I paired TD participants with SLI participants. Table 5 shows the MLU correspondence between TD and SLI participants taking into account their MLU (not their age).

Table 5. TD and SLI MLU-matching: Participants selection

CHILD NAME	GROUP	MLU AVERAGE	AGE RANGE
Ruth	**TD**	**1.960**	1;11-2;11
Daniel	**SLI**	**1.938**	2;6-3;11
Carl	**TD**	**2.803**	1;8-2;8
Harry	**SLI**	**2.814**	3;5-4;8
War	**TD**	**3.091**	1;10-2;9
Nathan	**SLI**	**3.060**	2;11-4;3

In table 5, the age of the participants is also presented so that we can realize that SLI children have the same MLU than TD children although SLI children are, of course, older. For instance, Ruth, a TD child, has an MLU of 1.96 when she is between 2 and 3 years old, whereas Daniel, an SLI child, reaches the same MLU when he is aged between 2 and a half and 4 years approximately. This reflects that SLI children's language development is slower than that of TD children.

We can also realize that the first two participants (Ruth and Daniel) have an MLU around 1.9, the next two participants (Carl and Harry) present an MLU around 2.9, and lastly, War and Nathan share a similar MLU around 3.

1.3.2 MLU-matching: file selection procedure

Once the participants have been selected, I have calculated the MLU of each child's file in the corpus, and later on, I have matched the results. Table 6 presents the files I have examined in the MLU-matching section of the study.

Table 6. Selected files based on MLU-matching

CHILD NAME	GROUP	MLU AVERAGE	AGE RANGE	FILES SELECTED	MLU OF THE FILE
Ruth	**TD**	**1.960**	1;11-2;11	ruth14b.cha	1.995
Daniel	**SLI**	**1.938**	2;6-3;11	dan13.cha	1.923
Carl	**TD**	**2.803**	1;8-2;8	carl17b.cha	2.973
Harry	**SLI**	**2.814**	3;5-4;8	harry13.cha	2.860
War	**TD**	**3.091**	1;10-2;9	warr23b.cha	3.862
Nathan	**SLI**	**3.060**	2;11-4;3	nathan23.cha	3.814

In table 6, the files examined in the MLU-matching section are shown. The table includes information on the participants such as the child name and the group to which the participant belongs. Moreover, table 6 provides information on the files selected such as the name of the file in the corpus and the MLU of the participant in each file selected for the study. Once again, from this table, we can realize that the first two participants (Ruth and Daniel) have an MLU around 1.9, the next two participants (Carl and Harry) present an MLU around 2.9, and lastly, War and Nathan share a similar MLU around 3.

1.4 Participants and data: AGE-matching

1.4.1 AGE-matching: participant selection procedure

In the case of AGE-matching, I have matched up the participants regarding their age and without considering their MLU. Firstly, I have examined the ages of each participant in each file. This information has been taken from the headers of each of the files.

Secondly, I have established Daniel, an SLI participant, as a prototype and I matched him with two different TD children (Daniel and Becky). The AGE range of each participant is very similar in the sense that they are aged between 2;6 years and 3 years. Table 7 shows the participants analyzed in this section.

Table 7. TD and SLI AGE-matching: Participant's selection

CHILD NAME	GROUP	AGE RANGE	MLU AVERAGE
Becky	**TD**	**2;0-2;11**	2.464
Daniel	**SLI**	**2;6-3;11**	1.938
Nic	**TD**	**2; 0-3; 0**	1.897
Daniel	**SLI**	**2;6-3;11**	1.938

From table 7, we can appreciate that firstly Daniel has been paired off with Becky, a TD child, and then he has been matched up with Nic, another TD child. This table also presents that when Beck is aged between 2 and 3 years old, her MLU is approximately of 2;46. While an SLI child, such as Daniel, when his age corresponds to the same interval of time, his MLU is lower. Once again, the linguistic delay associated with SLI children is suggested.

1.4.2 AGE-matching: file selection procedure

In order to obtain the files to be analyzed in this section, I have taken into consideration the participants' ages. Therefore, I have divided Daniel's files into two sections:

- First section. Files in which Daniel is aged from 2;6 years to 2;11. This section starts with Daniel01 file and it finishes off with Daniel06 file.
- Second section. Files in which Daniel is from 2;11 years to 3 years. In this section, files from Daniel07 file to Daniel09 file are included.

Later on, I have matched up Daniel's files with Becky's and Nic's files:

- First section. Daniel's files are matched up with Becky's files. It includes Becky's files from Becky18a file to Becky31b file.
- Second section. Daniel's files are matched up with Nic's files. It covers files from Nic31a file to Nic34b file.

Given that the analysis of all these files requires many hours of study, I have decided to select some of them. The criterion I have followed for the selection of Daniel's files is based on the number of instances in which the definite article and the indefinite article appears in each file. Thus, files in which no result was found, such as the first four files in Daniel's production, were discarded from the analysis. Once Daniel files were selected, TD files are matched up with Daniel's files regarding their age. Table 8 depicts the participants' files selected in the AGE-matching section.

Table 8. Selected files based on MLU-matching

CHILD NAME	GROUP	AGE RANGE	# OF FILES	FILES SELECTED	AGE IN THE FILES
Becky	**TD**	**2;0-2;11**	**28**	Becky28a and Becky28b	2;9.13
Daniel	**SLI**	**2;6-3;11**	**6**	Dan05 and Dan06	2;9.11 and 2;10.21
Nic	**TD**	**2; 0-3; 0**	**8**	Nic33a and Nic33b	3;0.03
Daniel	**SLI**	**2;6-3;11**	**3**	Dan09	3;0.25

This different matching in terms of MLU and age between TD and SLI children (tables 6 and 8 respectively) will allow a double comparison between TD and SLI children. It will also provide crucial information regarding the grammatical property under consideration, that is, articles.

2. Data extraction on article use

Since definite and indefinite articles are the grammatical categories I am interested in, I have made used of the CLAN programs to select them. They are tools that allow the user to work with spontaneous linguistic data taken from CHILDES (MacWhinney 2000) and to perform automatic analyses.

The principal aim of using this useful tool, CLAN, is to obtain each instance in which each participant uses the definite article or the indefinite article. These instances will be the ones analyzed for the study.

I have carried out three main analyses using CLAN programs: I have used the CLAN program MLU in the process of choosing the participants and the selected files (as stated in subsection 1.3 above). Moreover, I have analyzed the selected files using FREQ to have an idea of the number of instances of *the* or *a/an* that appear in each file. Moreover, in order to get each particular instance in which these articles were used in each file, I have examined the data using the KWAL program. The KWAL program allows the user to search for the specific linguistic context in which each participant produces a definite or an indefinite article.

3. Data classification

This section is divided into two parts. Firstly, I will present the variables of the study and, subsequently, the discarded cases will be explained.

3.1 Variables of the study

The different article cases obtained from the data selected of the SLI and TD participants have been codified in an excel document attached to this dissertation in an electronic format. This document contains two sheets: one for the MLU-matching analysis and the other one for the AGE-matching analysis.

In each sheet, I have considered the same general properties: CORPUS, CHILD NAME, AGE, FILE, MLU, and INSTANCE. Table 9 shows these general properties used in the database taking as an example an instance produced by Daniel.

Table 9. General properties of the database

CORPUS	CHILD NAME	AGE	FILE	MLU	INSTANCE
Conti-Ram3	Daniel	2;9.11	dan05.cha	1.312	a da [: cat]

This example presented in table 9 is produced by Daniel when he was 2;9 years old. It is extracted from the file dan05.cha of the Conti-Ramsden 3 Corpus.

Moreover, in the excel database, I have also added the three variables of study. The first variable when arranging each article instance is to consider the article type, that is, whether the instance contains a definite article or an indefinite article. Table 10 shows some examples of this first variable.

Table 10. Variable I: Determiner type

CORPUS	CHILD NAME	INSTANCE	DET TYPE
Conti-Ram3	Harry	<**the** castle> .	**The**
Manchester1	Carl	I want to make **a** house there.	**A**
Manchester1	Becky	That's laid **an** egg, isn't it?	**An**

Once the type of determiner is classified, the determiner subtype is analyzed. At this point, depending on the article type, the instance can depict several subtypes. For this classification regarding the subtype, I have taken into account the semantic contexts of each type of article, as presented in subsections 3.1 and 3.2 of chapter 2 of this dissertation. Therefore, for the definite article, I have considered two main subtypes, based on the semantic contexts in which *the* can appear: the anaphoric (ana) and the bridging context (bri).

For the arrangement of the indefinite article subtypes, I based my classification on the three main semantic contexts in which the indefinite article may appear: referential specific indefinite (rsi), class-membership (cm) and generic meaning (gm). These contexts have been previously explained in the subsection 3.2 of chapter 2.

Table 11 shows some examples of this variable considering both definite and indefinite article subtypes.

Table 11. Variable II: Determiner subtype

CORPUS	CHILD NAME	INSTANCE	DET TYPE	DET SUBTYPE
Conti-Ram3	Nathan	The lady's hurting her xxx +/.	The	**Ana**
Manchester1	Becky	<I have> [/] I have those in **the** bath.	The	**Bri**
Manchester1	Ruth	**A** house.	A	**Rsi**
Manchester1	Nic	Nicole have **a** drink.	A	**Cm**
Manchester1	Warr	Not very big **a** minute.	A	**Gm**
Conti-Ram3	Daniel	**An** accide(nt) .	An	**Cm**

The last variable I have explored in the study is adulthood, that is, whether the use of the article was adult-like (A) or non-adult-like (NON-A). In other words, I have considered whether the sentence is a form that an adult would use or not. In this sense, I have only taken into account the different forms and uses of the articles, since it is the grammatical category I am working on. Thus, the rest of grammatical errors such as S-V agreement or plural formation have not been taken into consideration. Example of non-adult forms are, for instance, the use of *the* instead of *a (n)*, the use of *a (n)* instead of *the*, *a* instead of *an* or the double use of determiners. Furthermore, when classifying non-adult-like forms, I have examined if children make orthographical errors when producing articles. Some examples of this last variable are presented in table 12.

Table 12. Variable III: Adulthood

CORPUS	CHILD NAME	INSTANCE	ADULT HOOD	NON-ADULT TYPE
Manchester1	Warr	Not very big **a** minute.	A	
Conti-Ram3	Daniel	Yeah **a** train track.	NON-A	gram error (the)
Conti-Ram3	Harry	This is **a** heye [eye].	NON-A	ortho error(an)
Conti-Ram3	Daniel	No (.) dat [: that] **a dat [: that]** way.	NON-A	gram error (double use of det)

This procedure based on the previously stated variables is the one used to classify all the data of the study.

3.2 Discarded cases

At this point, I will clarify some decisions that were taken when classifying the data of the study that lead to the exclusion of some instances. Firstly, I will deal with cases of imitation, then, I will consider unclear cases and, finally, I will present the way I have classified the repetitions of sentences produced by the participants.

Cases of imitation are not very commonly found in the study. When they occur, the child imitates the previous sentence stated by his or her mother, as example (25) presents.

(25) *MOT: we've got *a robber*.

*CHI: we've got *a robber*. [+ imi] (Daniel, 3; 4.05, dan13.cha)

Example (25) is produced by Daniel, one of the SLI participants. As this example shows the child imitates not only the same noun used previously by his mother, but also the same article. Since cases like that in (25) are not part of the child's spontaneous production, these were discarded from the study.

I have also found some cases in which the child does not use the appropriate article in the sentence, and his/ her mother explicitly corrects the child's utterance by repeating the same sentence with the correct article. In example (26), Daniel's mother corrects him since he is not using the appropriate form of the indefinite article.

(26) *MOT: in that little basket?

*CHI: *a owl.*

*MOT: *an owl.* (Daniel, 3; 4.05, dan13.cha)

In these cases, the first instance produced by the child is classified, but not the second one as it is a repetition of the mother's correction.

Moreover, when classifying the data, I have also encountered cases in which the child uses the article followed by an adjective, such as example (27). In (27a), the indefinite article *a* is followed by a quantifier *bit* and an adjective *bored.* In example (27b), the indefinite article is followed by the adjective *blue*. Therefore, these cases are discarded from the analysis as they do not include an article-noun sequence.

(27) a.*CHI: I'm getting *a bit bored*. (Becky, 2; 9.13, becky28b.cha)

b.*CHI: a blue. (Nic, 3; 0.03, nic33b.cha)

I have also discarded cases in which the child uses an invented word preceded by an article, as in examples (28), in which the child has created the word that follows.

(28) a.*CHI: *a neenaw@c* . (Carl, 2; 2.15, carl17b.cha)

b.*CHI: *tomorning@c.* (Nic, 3; 0.03, nic33a.cha)

In examples (28) the symbol @c attached to the word depicts that the word has been invented by the child. For this reason, these special forms have been discarded from the study.

Cases in which the child uses an article but it is not followed by a noun, or by a clear identifiable noun have also been discarded from the analysis. In example (29), Nathan employs the definite article *the* followed by an unintelligible word marked as *xxx*.

(29) *CHI: mum where is *the xxx* gone? (Nathan, 3; 9.17, nathan23.cha)

Finally, I would like to point out the way I have counted the repetitions when classifying the data in the study. Repetitions in the same utterance are typically counted as one case. However, I have no found any example of this type of repetition in the data.

The other type of repetition I have considered occurs when the repetition takes place in different utterances. In this case, the repetition counts as a different and independent case. An example is provided in (30), in which Carl repeats the same sentences in two correlative utterances. These have been counted as 2 independent instances.

(30) *CHI: I wanna make a house.

*CHI: I wanna make a house. (Carl, 2; 2.15, carl17b.cha)

In the case of instances in the same utterance in which the child uses the articles twice with different nouns, each entity is counted as an independent instance. For instance, in example (31), Daniel makes use of both a definite article and an indefinite one in the same utterance.

(31) a.*CHI*: a trunk & der [: the] train track*. (Daniel, 3; 4.05, dan13.cha)

6. RESULTS OF THE STUDY

In this chapter 6, I will explain the results I have obtained after carrying out the study. In order to provide an answer to each of my research questions presented in chapter 4 of the dissertation, this chapter is divided into three main sections corresponding to each of the question sets previously presented.

Firstly, I will deal with the first set of the research questions, which is related to the general performance of the participants. Subsequently, in the second section of this chapter, I will show the results obtained regarding the semantic contexts of the definite and the indefinite article. Lastly, in the third section, I will compare the results produced by SLI participants and those produced by the MLU-matched TD and AGE-matched TD participants of the study.

1. Question set 1: General performance

1.1 Research question 1: Definite and indefinite articles

In order to answer the first research question (i.e. the predominance or deficiency in the choice of both articles) results have been classified as in table 13.

Table 13. Question set 1: Research question 1. General performance

	DEFINITE ARTICLE	INDEFINITE ARTICLE	TOTAL
TD CHILDREN	111 (44,05%)	141 (55,95%)	252 (100%) (47,54%)
SLI CHILDREN	90 (32,37%)	188 (67,63%)	278 (100%) (52,46%)
TOTAL	201 (37,92%)	329 (62,08%)	**530 (100%)**

This table is an overall approach to the data since I have not taken into account if the instances are correctly produced by the children or whether they belong to the MLU or AGE-matching classification.

Table 13 shows that 530 instances have been analyzed for the study. 37,92% of them correspond to instances in which the definite article has been used, whereas the 62,08% depicts the percentage of cases in which the indefinite article has been used by the participants. In general terms, participants tend to make more use of the indefinite article (62,08%) than of the definite one (37,92%). Thus, in the study, there is predominance on the use of the indefinite article.

Besides, by comparing the use of the articles in both participant groups, I can conclude that in the present study, articles are more frequently produced by SLI children (52,46%) than by TD children (47,54%). By focusing on the production of SLI children, I can state that they use more regularly the indefinite article (67,63%) than the definite one (32,37%). This same pattern is also followed by TD children given that the percentage of cases in which the indefinite article has been used (55,95%) is higher than the percentage of instances in which the TD participants have used the definite one (44,05%) Therefore, both participants share this predominance in the use of the indefinite article. However, the definite article has been more used by TD children (44,05%) than by SLI participants (32,37%), whereas the production of the indefinite articles is more bound to SLI participants (67,63%) than to TD participants (55,95%).

To sum up, the answer to this research question 1 is that, in general terms, participants make more use of the indefinite article. Besides, articles are more in a higher proportion by SLI children than by TD children as the results of the present study show.

1.2 Research question 2: Grammatical and orthographical errors

Secondly, in order to answer the second research question of this first question set concerned with error rates, I have created the following table 14 to analyze the results.

For the creation of this table, I have only considered the non-adult cases of the study, and I have classified them taking into account two basic parameters: the first one is whether they are instances of the definite or the indefinite article. The second parameter is the classification of instances as grammatical or orthographical errors. An instance of a grammatical error is the overgeneralization of *the,* as example (32) presents.

(32) *CHI: making [/] making *the car bridge*. (War, 2; 5.27, warr23b.cha)

In this case the definite article is used by the TD child in a context in which adults would use the indefinite one, since the entity the *car bridge* has not been previously introduced into the discourse.

In the study, this grammatical error is only attested in this instance produced by a TD child. No similar errors produced by SLI children have been recorded. In this way, I can confirm Maratsos' (1974) conclusions, as previously introduced in section 3 of chapter 3. In this way, my results are similar to Maratsos' (1974) in the sense that the linguistic phenomenon of overgeneralization of *the* takes place when articles are acquired by children. In this study, the overgeneralization of *the* has been identified as a type of grammatical error.

However, my study disagrees with Maratsos' study since he affirmed that overgeneralization errors on the other direction, which is using an indefinite instead of a definite article, were not commonly attested. Nevertheless, I have found in my study several instances in which the indefinite articles are used in a context in which the definite article should be used. Therefore, this study shows a clear tendency to the

overgeneralization of *a/an* and not of *the*. This tendency is both attested in TD children, as example (33a) shows, and in SLI children, as in example (33b).

(33) a.*CHI: *a train could.* (War, 2; 5.27, warr23b.cha)

b.*CHI: *a t(r)actor.* (Daniel, 2; 9.11, dan05.cha)

Another example of grammatical error is the double use of determiners in the same utterance, as in example (34).

(34) *CHI: *dat [: that] a jail* (Daniel, 3; 4.05, dan13.cha)

In example (39), the demonstrative determiner *that* and the indefinite article *a* appear together in the same utterance. It is important to point out that this grammatical error has only been attested in the production of Daniel, an SLI participant.

An example of orthographical error is the use of the indefinite article *a* followed by a word whose initial letter is a vowel. The correct orthographical form is *an,* as explained in section 3 of chapter 2. Nonetheless, some of the participants do not make use of the form *an.* The examples in (35) show how this error is attested in both TD and SLI participants.

(35) a.*CHI: I want *a egg.* (Carl, 2; 2.15, carl17b.cha)

b.*CHI: *a owl.* (Daniel, 3;4.05, dan13.cha)

*MOT: *an owl.*

c.*CHI: *a owl* xxx. (Daniel, 3;4.05, dan13.cha)

In examples (35a), (35b) and (35c), the entities *egg* and *owl* start with a vowel so that the indefinite article *an* must be used. In example (35b), we can appreciate how the mother corrects the child's error. This correction is not successful since a few utterances later; the child makes exactly the same mistake, as in (35c).

An unexpected fact is the way in which Harry and Daniel, two of the SLI participants, manage to solve the error. Instead of using the indefinite article *an* before the word which begins which a vowel, they keep on using the indefinite article *a* but they add an extra *h* to the word which starts with a vowel. Personally, I think that this orthographical error is made since SLI children realize that in these constructions, there is something which sounds 'odd' in the construction. However, they are not able to recognize that it is the use for the form *an*, and they confuse it with the /h/ sound. For this reason, they add this extra *h*. Examples in (36) show this surprising construction produced by SLI children.

(36) a.*CHI: *a h*axiden [: accident]. (Daniel, 3; 0.25, dan09.cha)

b.*CHI: no I have *a h*idea [: idea]. (Harry, 3; 10.29, harry13.cha)

c.*CHI: this is *a h*eye [: eye]. (Harry, 3; 10.29, harry13.cha)

In addition, after analyzing the results I have discovered some instances in which the NP which contains the article has been replaced by a pronoun. It shows that children by the time they use the articles, they know the way pronouns work. This idea is presented in the examples in (37).

(37) a.*CHI: he's taking *it the truck*. (Carl, 2; 2.15, carl17b.cha)

b.*CHI: I can't put *it* there *the man.* (Carl, 2; 2.15, carl17b.cha)

In examples (37a) and (37b), the NPs *the truck* and *the man* have been doubled by the corresponding object pronoun *it.*

Table 14. Question set 1: Research question 2. Grammatical and orthographical errors

	DEFINITE ARTICLE		INDEFINITE ARTICLE		TOTAL
	GRAM ERROR	ORTH ERROR	GRAM ERROR	ORTH ERROR	
TD	1 (4,76%)	0	14 (66,67%)	6 (28,57%)	21 (30,4%)
SLI	3 (6,25%)	0	27 (56,25%)	18 (37,5%)	48 (69,6%)
SUB TOTAL	4 (5,8%)	0	41 (59,4%)	24 (34,8%)	**69 (100%)**
TOTAL	4 (5,8%)	(0,75%)	65 (94,2%)	(12,26%)	**530 (100%)**

Table 14 displays the percentage of grammatical and orthographical errors found in the data. In general terms, these errors are more commonly attested when the indefinite article is used (94,2%) than when using the definite article (5,8%). If I compare the percentage of error to the total number of instances recorded in the study, the errors made when using the definite article simply represent 0,75%, whereas those made when using the indefinite article depict 12,26% of the total number of cases analyzed.

Most of the errors have been committed by SLI children (69,6%), whereas the percentage of errors made by TD children is of 30,4%, less than half if compared to that of SLI children. Moreover, the grammatical error is the most common error type when using both articles. In fact, when the participants use the definite article, they do not produce any orthographical error. Finally, all these orthographical errors related to the use of the indefinite article are mainly produced by SLI participants (37,5%) more than by TD participants (28,57%).

2. Question set 2: Semantic contexts

2.1 Research question 1: Definite article

As explained in subsection 3.1 of chapter 2, there are mainly two semantic contexts in which the definite article can be used. The two following examples show the first semantic context in which the definite article may appear which corresponds to the anaphoric use of the definite article.

(38) *CHI: no it's *the new car* (Harry, 3; 10.29, harry13.cha)

Example (38) presents the use of the anaphoric use of the definite article produced by a SLI child. Harry opts for the use of *the* since the entity had been previously introduced in the discourse. Thus, he is making reference to something previously mentioned.

(39) *MOT: it's banged into *the bridge.*

*CHI: no.

*CHI: come in *the bridge.* (War, 2; 5.27, warr23b.cha)

In example (39), the TD child uses the definite article in this semantic context. As we can appreciate in the previous utterance uttered by the mother, the entity *bridge* has been introduced by her mother and then used by the child.

The second semantic context in which the definite article can be used is the bridging one, as presented in subsection 3.1 of chapter 2. The following instances have been extracted from the study.

(40) *CHI: yeah where is *the flusher*? (Harry, 3; 10.29, harry13.cha)

(41) *CHI: Nicole have to get *the box.* (Nic, 3; 0.03, nic33b.cha)

In examples (40) and (41), the entity *the flusher* is introduced by an SLI child and the entry *the box* is introduced by a TD child. The use of the definite article in these instances depicts the notion of bridging reference since both entities have not been previously introduced into the discourse.

Example (42) clearly shows the difference between the anaphoric and the bridging use of the definite article.

(42) *MOT: what do you think I'm doing?

*CHI: making [/] making *the car bridge*.

*CHI: making *the car bridge.*

*MOT: making what?

*CHI: making *the car bridge* (War, 2; 5.27, warr23b.cha)

The first time the entity *the car bridge* is introduced by the child is an example of the bridging use of the definite article. Whereas, the successive allusions made by the child to *the car bridge* are instances of the anaphoric use of the definite article since the entity has just been introduced.

After the classification of the data, the results are summarized in table 15.

Table 15. Question set 2: Research question 1. Semantic contexts of the definite article

	ANAPHORIC	BRIDGING	TOTAL
TD	78 (70,3%) (53,4%)	33 (29,7%) (60%)	111 (100%)
SLI	68 (75,6%) (46,6%)	22 (24,4%) (40%)	90 (100%)
TOTAL	146 (72,6%)	55 (27,4%)	**201 (100%)**

In the present study, there is a clear preference for the anaphoric use of the definite article (72,6%). The definite article is used with a bridging use only in 27,4% of the total cases in which the definite article is used. This tendency is shared by both SLI (75,6% of anaphoric use, in contrast to 24,4% of bridging use) and TD participants (70,3% of anaphoric use, in contrast to 29,7% of bridging use of the definite article). When focusing on the bridging use, I can state that both groups of participants also make use of the bridging use of the definite article but to a lesser extent (27,4%) if we compare it to the anaphoric use of the definite article (72,6%).

Another result I have encountered is that the TD participants of the study are more bound to the bridging use of the definite article (60%) than SLI participants (40%). Whereas the tendency on the anaphoric use of the definite article is associated to a similar extent with SLI (46,6%) and TD participants (53,4%).

2.2 Research question 2: Indefinite article

In order to answer the second research question of the second question set, I have analyzed the data taking into account the three different semantic contexts in which the indefinite article may appear (see subsection 3.2 of chapter 2).

The first semantic context I have analyzed is the referential specific one. Examples (43) show some instances in which this semantic context of the indefinite article is used by some participants of the study.

(43) a.*CHI: *a police [/] police mo(t)orbike.* (Daniel, 3; 4.05, dan13.cha)

b.*MOT: what else have we got?

*CHI: *a monkey.* (Carl, 2; 2.15, carl17b.cha)

In examples (43a) and (43b) above, the indefinite article is used by the participants since they want to introduce a new entity into the discourse. By using the indefinite article, the participants limit the new entities to a single member of a class, like in example (43a), *a police motorbike,* and in example (43b), *a monkey*.

The second semantic context of the indefinite article examined in this dissertation is when it denotes a class- membership. Some examples are presented below.

(44) a.*CHI: Nicole have *a drink.* (Nic, 3; 0.03, nic33a.cha)

b.*CHI: got to have *a mouth* (Harry, 3; 10.29, harry13.cha)

In this semantic context, the participant uses the indefinite article not for denoting a specific member within a class, as shown in the previous examples in (43), but to denote a class membership itself. In examples (44a) and (44b), the indefinite article signals the whole class of *drinks* and *mouths* and not a member of those classes.

Finally, the last semantic context in which the indefinite article may appear is when it denotes a generic meaning.

(45) *CHI: I have this back in *a minute*. (Becky, 2; 9.13, becky28b.cha)

In example (45), the child does not refer to a particular member of a class, or to a whole class, but instead the child is making reference to something general and not specific like *a minute* is.

Table 16. Research question 2. Semantic contexts of the indefinite article

	REFERENTIAL SPECIFIC INDEFINITE	CLASS-MEMBERSHIP	GENERIC MEANING	TOTAL
TD	57 (40,4%) (45,23%)	78 (55,3%) (40%)	6 (4,3%) (75%)	141 (100%)
SLI	69 (36,70%) (54,77%)	117 (62,23%) (60%)	2 (1,07%) (25%)	188 (100%)
TOTAL	126 (38,3%)	195 (59,27%)	8 (2,43%)	**329 (100%)**

After analyzing the semantic contexts of the indefinite article as in table 16, the following results can be pointed out. The most predominant semantic contexts in which the indefinite article appears in this study is when it is used with a class-membership value (59,27%) and the next predominant semantic context is the referential specific one (38,3%). Only 2,43% of the utterances denote a generic meaning. At this point, it is important to highlight the fact that SLI participants make more use of the indefinite article in a referential specific context (54,77%) than the TD participants (45,23%). Moreover, the SLI participants are also the ones who make more use of the indefinite article denoting a class-membership (60%). Nevertheless, the TD participants are the ones more bound to the use of the indefinite article with a generic reference (75%).

3. Question set 3: MLU and AGE matching

3.1 Research question 1: Definite and indefinite articles

In order to answer the first research question proposed in this question set 3, I have reflected the results obtained from the study in table 17 where I have considered the overall production of the participants.

Table 17. Question set 3: Research question 1. General performance

	DEFINITE ARTICLE	INDEFINITE ARTICLE	TOTAL
SLI	90 (32,4%)	188 (67,6%)	278 (100%)
MLU-MATCHED TD	76 (43,4%)	99 (56,6%)	175 (100%)
AGE-MATCHED TD	35 (45,5%)	42 (54,5%)	77 (100%)
TOTAL	201	329	**530**

As table 17 shows, TD children have been divided into two groups regarding the MLU and AGE matching criteria previously explained. We can appreciate from this table that the total number of instances analyzed coincides with the same number of results presented in table 13. Given that the research question was to compare whether the general performance of SLI participants is more alike to the MLU-matched TD or to the AGE-matched TD, the table presents the percentage of each type of participant in this regard. In the production of the definite article SLI participants (32,4%) are more alike to the MLU-matched TD participants (43,4%). Whereas in the production of the indefinite article the percentage represented by SLI participants (67,6%) is also more similar to the one depicted by the TD-MLU-matched participants (56,6%). It is important to point out that the percentages obtained from the MLU-matched TD participants and AGE-matched TD participants are very alike since they only differ in one or two points (56,6 % / 54,5%). In conclusion, the answer to this first research question is that even though the percentages obtained from the production of articles by MLU-matched TD participants and AGE-matched TD participants are very similar, SLI participants behave similarly to MLU-matched TD participants on the overall production of articles.

3.2 Research question 2: Grammatical and orthographical errors

The second research question of this third question set was the following one: Do the grammatical and the orthographical errors produced by SLI participants resemble the results obtained by the MLU-matched TD participants or those produced by the AGE-matched TD participants? In order to answer it, results have been classified as in table 18.

Table 18. Question set 3: Research question 2. Grammatical and orthographical errors

	DEFINITE ARTICLE		**INDEFINITE ARTICLE**		**TOTAL**
	GRAM ERROR	**ORTH ERROR**	**GRAM ERROR**	**ORTH ERROR**	
SLI	3 (6,25%)	0	27 (56,25%)	18(37,5%)	48 (100%)
MLU-MATCHED TD	1 (5,3%)	0	12 (63,1%)	6 (31,6%)	19 (100%)
AGE-MATCHED TD	0	0	2 (100%)	0	2 (100%)
TOTAL	4	0	41	24	**69**

In table 18 the results related to the grammatical and orthographical errors are presented. This table differs from table 14 since the present table reflects the MLU and AGE matching division of TD participants. As we can appreciate from this table, the percentage of errors produced by the SLI participants (6,25%-56,25%-37,5%) resembles the percentage of errors produced by the MLU-matched TD participants (5,3%-63,1%-31,6%). Thus, we can conclude that in the production of errors related to the use of articles, SLI participants behave similarly to the MLU-matched TD participants and very differently from AGE-matched TD participants where error rates are non-existent (in the case of orthography) or very low (in the case of grammar).

3.3 Research question 3: Definite article

The third research question of the present set deals with the different types of semantic contexts in which the definite article appears in each participant group. The research question proposed is the following: are the results produced by SLI participants more like those obtained by the MLU-matched TD participants or like those produced by the AGE-matched TD participants? Table 19 has been created in order to provide an answer for this research question.

Table 19. Question set 3: Research question 3. Semantic contexts of the definite article

	ANAPHORIC	BRIDGING	TOTAL
SLI	68 (75,6%)	22 (24,4%)	90(100%)
MLU-MATCHED TD	56 (73,7%)	20 (26,3%)	76 (100%)
AGE-MATCHED TD	22 (62,9%)	13 (37,1%)	35 (100%)
TOTAL	146	55	**201**

This table shows the different proportions in which the definite article is used by the participants regarding the two semantic contexts previously explained. Once again, we can realize that the proportion in which the definite article is used by SLI participants (75,6% anaphoric reference; 24,4% bridging reference) is more similar to that of the MLU-matched TD group (73,7% anaphoric reference; 26,3% bridging reference) than to that of the AGE-matched TD one (62,9% anaphoric reference; 37,1% bridging reference). In this regard, we can point out that the production of AGE-matched TD participants is different from the one of the SLI participants in two respects; firstly, MLU-matched TD participants make more use of the bridging use of the definite article than the SLI participants. Secondly, the AGE-matched TD participants make less use of the anaphoric reference of the definite article than SLI participants. To sum up, the answer of this research question when analyzing the semantic contexts of definite articles is that SLI participants' behavior is similar to the one of the MLU-matched TD participants of the study.

3.4 Research question 4: Indefinite article

The last research question of this question set centers on the different types of semantic contexts in which the indefinite article may be used. The research question that will be answered in this subsection is as follows: are the results produced by SLI participants more similar to those obtained by the MLU-matched TD participants or to those produced by the AGE-matched TD participants? Table 20 has been created in order to respond to this research question.

Table 20. Question set 3: Research question 4. Semantic contexts of the indefinite article

	REFERENTIAL SPECIFIC INDEFINITE (RSI)	**CLASS-MEMBERSHIP (CM)**	**GENERIC MEANING (GM)**	**TOTAL**
SLI	69 (36,70%)	117 (62,23%)	2 (1, 07%)	188 (100%)
MLU-MATCHED TD	36 (36,4 %)	60 (60,6%)	3 (3,0%)	99 (100%)
AGE-MATCHED TD	21 (50%)	18 (42,9%)	3 (7,1%)	42 (100%)
TOTAL	126	195	8	**329**

Table 20 differs from table 16 since the present table shows the MLU and AGE matching classification of participants. We can appreciate from this table that the proportion in which SLI participants (36,70% rsi; 62,23% cm; 1,07% gm) use the different semantic contexts of the indefinite article is once again very similar to the one of the MLU-matched TD participants (36,4% rsi; 60,6% cm; 3% gm) . The percentages on the use of the referential specific indefinite and the use of the indefinite article denoting a class-membership in both types of participants are very similar. The only percentage that differs in a small proportion is when participants use the indefinite article to denote a generic reference. As opposed to this, AGE-matched TD participants make more use of the referential specific indefinite

(50%) than the rest of the participants, as well as of the generic meaning of the indefinite article (7,1%).

We can conclude that the results obtained from the SLI participants resemble those obtained by MLU-matched TD participants in terms of the overall production of articles, grammar and orthographical errors, and in the semantic contexts in which both the definite and the indefinite article appear.

7. CONCLUSIONS

This dissertation has proposed a study on the acquisition of the definite and the indefinite articles in English in the production of TD children and children with SLI. In order to carry out the study, data from TD and SLI English native children have been selected using the corpora available through the CHILDES project. Once these data were extracted, their analysis has noted in the following conclusions reached from the three different question sets presented in chapter 4.

To start with the first research question of the first question set, the study shows predominance in the choice of the indefinite article. That predominance is attested in both TD and SLI participants. However, when focusing on the production of the definite articles, these are more frequent in TD children' production than in that of SLI children.

Moreover, the answer for the second question of this first question set is that grammatical and orthographical errors on articles are mostly found when the indefinite article is used. The largest part of these errors has been committed by SLI participants. Furthermore, the grammatical error (i.e. overgeneralization of *the* and *a(n)* or the double use of determiners in the same utterance) is the one most detected in the study. Orthographical errors are generally committed by both participant groups. At this point, it is important to emphasize one unexpected fact found in two of the SLI participants: the addition of an extra /h/ to some words which start with a vowel (i.e. *a heye* instead of *an eye*). In these constructions, they do not use the correct form of the indefinite article *an*, instead they use *a.* This is not found in the TD children's production.

My second set of research questions deals with the different semantic contexts in which both articles may appear. When considering the semantic context of *the*, there is a clear

tendency in both participant groups to use its anaphoric reference type. On the contrary, the bridging use of the definite article is more favored by the TD participants.

When analyzing the semantic contexts of the indefinite article, the most predominant one is when *a(n)* denotes a class-membership, whereas when it denotes a generic meaning is the least favored. Moreover, the referential specific use of this article is more used by SLI participants than by TD participants. The SLI participants are also the ones who make more use of the class-membership value of this article. Nonetheless, TD participants prefer the use of the generic meaning of *a(n).*

Finally regarding the third research question, I can conclude in general terms that the production of articles by SLI participants is more alike to the one of the MLU-matched TD participants than to the one of the AGE-matched TD ones. The same pattern is followed in the analysis of errors. Lastly, by focusing on the semantic context of both article types, SLI participants also behave similarly to the MLU-matched TD participants. However, it is important to point out that the MLU-matched TD participants prefer the bridging use of *the*, and the referential specific use and the generic use of the indefinite article.

Therefore, when comparing TD and SLI children, studies should match these child groups in terms of MLU to ensure that children are at the same grammatical age.

After having reached the previous conclusions, it is also important to bear in mind that this study has been carried out with a small number of participants. Therefore, future research could investigate this grammatical category (i.e. English definite and indefinite articles) in more speakers, including, for example, other SLI participants with autism or dysphasia. I believe that further research in this respect will provide information regarding to whether this delay in the acquisition of articles is present in all children with SLI or whether this linguistic delay will show depending on the language disorder at stake.

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AFTERWORD: OBJECTIVES REACHED IN THE UNDERGRADUATE DISSERTATION

After carrying out the present study, I believe I have reached two of the most important objectives presented in the official description of the English degree (2009, 13-14) which are the following:

- To provide a complete acquisition process in linguistics, culture and literature of the English language.
- To achieve a solid instrumental competence in English in a general environment but also in a professional one.

Regarding the first objective, this study has given me the opportunity to put into practice several aspects that I have learned in different courses throughout my four-year degree. The courses involved pertain to the linguistic description of the English language and they are the following:

- Grammatical background: English grammar I, II, and III (1st and 2nd year).
- Comparative grammatical background: English/Spanish comparative grammar (3rd year).
- English language: Applied Linguistics III and Information and Communication technologies applied to English studies (4th year).

Regarding the second objective, I have been able to combine these aspects and to relate them to two principal professional fields in our degree: teaching and research. As I have suggested along my dissertation, this study has given me the occasion to get a better and broader picture of the field of study within linguistics. In particular, the analysis of language is not only concerned with TD speakers' production, but also with that of SLI speakers. The study of the different needs of both TD and SLI speakers with respect to language is relevant not only to get a broader picture of children´s production but it can also have consequences for language teaching as it evidences the grammatical areas that are affected and that, therefore, need to be reinforced in the language class. Additionally, given that my study is based on the analysis of empirical data, it is also related to a specific research methodology used in the fields of acquisition and language learning.