

Universitat de Lleida

## Language transfer in second language acquisition. Some effects of L1 instruction (Romanian) on L2/L3 learning (Catalan/Spanish)

Simona Popa

<http://hdl.handle.net/10803/380548>

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**Doctoral Dissertation**

**Language transfer in second language acquisition.  
Some effects of L1 instruction (Romanian) on  
L2/L3 learning (Catalan/Spanish)**

**SIMONA POPA**

**Supervisor: Dr. Àngel Huguet-Canalís**

Doctoral program: Educació, Societat i Qualitat de Vida

Lleida, 2016



## Acknowledgements

First of all, the present study would not have been possible without the FI-DGR scholarship (Reference number 2013 FI\_B 00347) granted by AGAUR (Agència de Gestió d'Ajuts Universitaris i de Recerca), which enabled me to fully dedicate the last three years (2013-2016) to this research. For it, I am profoundly thankful.

I also wish to express my appreciation to the Department of Education, and especially to all the students, teachers, and administrative personnel involved in this investigation.

My utmost gratitude goes to my supervisor, prof. Dr. Àngel Huguet-Canalís, for his mentorship and trust, as well as his encouragement and patience with all the processes I underwent along these three years.

I am also grateful to the members of the research group 'Plurilingualism and education' (Ceci, Clara, Judit, and Jose Luis), with whom I had the pleasure to work during the last three years. I appreciate their support, encouragement, and help in times of need.

I am also deeply thankful to prof. Dr. Théophile Munyangeyo, for granting me the opportunity to be part of his academic family at Leeds Beckett University, and also for the highly cherished support offered during my stay there, both professional and personal.

I would like to extend my thanks to my colleagues and friends, Adelina, Carmen, and Mireia. Special thanks for your presence and support, so diverse, ranging from the reading of different versions of the manuscript or valuable statistical, technical, and formatting counselling, to kind words, warm tea, and homemade food, among many others.

Likewise, I wish to thank my family for their support and much appreciated constant presence. To my brother, Marius, for always believing in me and for constantly encouraging me to pursue goals that I wouldn't even dare to dream of.

My special gratitude goes to my chosen family, my friends. Especially to Sandra, for being such a loving friend and a model of strength and perseverance, and to Vicky, for simply being the most wonderful best friend one can only hope for and I was fortunate enough to find.

Also, I would like to thank two very special women, Elena and Mandita, for making me part of their families and for being there for me through it all, as friends, mothers, confidants.

## **Abbreviations used throughout the work**

BICS	basic interpersonal communicative skills
CA	contrastive analysis
CAH	contrastive analysis hypothesis
CALP	cognitive/academic language proficiency
CLI	cross-linguistic influence
CSE	Compulsory Secondary Education
CUP	common underlying proficiency
DO	direct object
ESL	English as a Second Language
EA	error analysis
FL	foreign language
FLA	first language attrition
IL	interlanguage
IO	indirect object
L1	first language
L2	second language
L3	third language
LAD	language acquisition device
LT	language transfer
MT	mother tongue
NL	native language
NNS	non-native speaker
NS	native speaker
SLA	second language acquisition
SLL	second language learning
TL	target language

UG universal grammar

## **Abbreviations and conventions used for interlinear morpheme-by-morpheme glosses**

### **Standard abbreviations used for glossing the examples**

1	first person
2	second person
3	third person
AMB	ambiguous
ART	article
CL	clitic
COND	The Present Conditional
DEF	definite
DET	determiner
F	feminine
FUT	The Simple Future
IMP	The Imperative
IND	indefinite
INF	infinitive
IPF	The Imperfect
ISU	The Imperfect Subjunctive
M	masculine
N	neuter
PAR	participle
PCO	The Conditional Perfect
PFU	The Future Perfect
PL	plural
PLS	The Past Perfect (Pluperfect) Subjunctive

PLU	The Past Perfect (Pluperfect)
PREP	preposition
PRF	The Present Perfect
PRON	pronoun
PRS	The Simple Present
PST	The Preterite (The Simple Past)
PSU	The Present Perfect Subjunctive
SG	singular
SUB	The Present Simple Subjunctive

### **Symbols used for glossing the examples**

- separates morphs and the corresponding glosses (used in morph-by-morph segmentation)
- . separate multiple glosses of a single morph or word form (used when morph-by-morph segmentation is not necessary)
- . when a single object-language element is rendered by several metalanguage elements (words or abbreviations), these are separated by periods
- ≡ equivalent; marks syncretism (3SG≡3PL indicates that the 3<sup>rd</sup> person singular is syncretic with the 3<sup>rd</sup> person plural)
- ∅ null argument; zero inflectional ending; element omitted

### **Symbols used in the examples**

- x [\*] unattested or ungrammatical example
- 0x element omitted

## **Abstract**

In migration contexts, the diversity of languages in contact triggers the processes of second language (L2) acquisition and language transfer; as well as drawing attention to the importance of mother tongue (L1) maintenance.

The present study examines the processes of L2 acquisition (Catalan and Spanish), L1 (Romanian) maintenance, and L1 transfer, in the case of 130 immigrant Romanian students, as well as the effect of attendance at L1 classes and length of residence on the three languages analysed. Accordingly, three parallel language competence tests were applied in seven public schools of Compulsory Secondary Education in Catalonia. Generally, the results indicate that the language transfer from the L1 to the L2s occurs and a longer length of residence facilitates the learning of Catalan and Spanish, but, at the same time, hinders the level of competence in L1. Also, attendance at Romanian classes seems to influence the maintenance of the mother tongue and the acquisition of the second languages.

## **Resum**

En contextos de migració, la diversitat de llengües en contacte esdevé processos d'adquisició de segones llengües (L2) i de transferència lingüística; a més de revifar el debat sobre la importància del manteniment de la llengua materna (L1).

En el següent treball s'exploren els processos d'adquisició de l'L2 (català i castellà), del manteniment de l'L1 (romanès) i de la transferència lingüística de l'L1, de 130 estudiants immigrants d'origen romanès; així com l'efecte d'assistir a classes d'L1 i el temps d'estada, en les tres llengües estudiades. Per a aquest propòsit, s'han aplicat tres proves paral·leles de competència lingüística en set instituts d'Educació Secundària Obligatoria de Catalunya. A nivell general, els resultats indiquen que la transferència lingüística de l'L1 a les L2s sorgeix i que un major temps d'estada afavoreix l'aprenentatge del català i del castellà però, al mateix temps, va en detriment del nivell del coneixement adquirit en la seva L1. Així mateix, l'assistència a classes de romanès sembla influir en el manteniment de la seva llengua materna i en l'aprenentatge de segones llengües.

## **Resumen**

En contextos de migración, la diversidad de lenguas en contacto desencadena procesos de adquisición de segundas lenguas (L2) y de transferencia lingüística; además de reavivar el debate sobre la importancia del mantenimiento de la lengua materna (L1).

En el siguiente trabajo se exploran los procesos de adquisición de L2 (catalán y castellano), del mantenimiento de la L1 (rumano) y de la transferencia lingüística de la L1, de 130 estudiantes inmigrantes de origen rumano, así como el efecto de asistir a clases de L1 y el tiempo de estancia, en las tres lenguas estudiadas. Para ello, se han aplicado tres pruebas paralelas de competencia lingüística en siete institutos de Educación Secundaria Obligatoria de Cataluña. A nivel general, los resultados indican que se da la influencia de la L1 en las L2 y que un mayor tiempo de estancia favorece el aprendizaje del catalán y del castellano, pero, a su vez, va en detrimento del nivel de conocimiento adquirido en su L1. Asimismo, la asistencia a clases de rumano parece influir en el mantenimiento de su lengua materna y en el aprendizaje de segundas lenguas.

## **Rezumat**

În contexte de migrație, diversitatea limbilor în contact declanșează procesele de achiziționare de limbă a doua (L2) și de transfer lingvistic; în plus, se readuce în atenție importanța menținerii limbii materne (L1).

Prin acest studiu se analizează procesele de achiziționare de L2 (catalană și spaniolă), de menținere a L1 (română) și de transfer lingvistic din L1, în cazul a 130 de studenți imigranți români, precum și efectul participării la ore de L1 și timpului de ședere asupra celor trei limbi studiate. Cu acest scop, trei teste paralele de competențe lingvistice au fost aplicate în șapte licee din Catalonia. În general, rezultatele indică că transferul lingvistic din L1 în cele două L2 are loc și că un timp de ședere mai lung favorizează învățarea catalanei și spaniolei, dar, în același timp, vine în detrimentul nivelului de cunoștințe în L1. De asemenea, participarea la ore de română pare să influențeze menținerea limbii materne și achiziționarea limbilor L2.

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# INTRODUCTION

The present study was conducted in Spain, a country with a significant tradition in welcoming immigrant groups of various backgrounds in its society and schools. This circumstance, although present all over Spain, acquires a special relevance in the case of Catalonia, where the educational system is organised under the parameters of bilingual education.

Accordingly, in a context of immigration, such as the one in question, the foreign population arrives with its own cultural and linguistic background and thus the process of second language acquisition is triggered. Consequently, the concept of transfer among languages also emerges from this diversity of languages in contact.

In the same vein, the relationship between the mother tongue (L1) and the second languages (L2s) has been the object of numerous studies in the field of second language acquisition research. Much of the discussion has focused on the transfer phenomena that are generally defined as “the incorporation of features of the L1 into the knowledge system of the L2 which the learner is trying to build” (Ellis, 1994: 28).

Subsequently, the nature of our context leads us to examine the importance and influence of the L1 in the process of second language acquisition, since the importance of L1 as a source of errors was widely examined in various linguistic contexts (Chondrogianni, 2008; Madrid, 1999; Navarro & Nicoladis, 2005; Ortega, 2008; Phillips, 2007) and also confirmed by the results of researches conducted in the Catalan context (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia, 2007; Gràcia, Crous, & Garganta, 2008; Gràcia & Serrat, 2003).

On the other hand, one of the most salient linguistic characteristics of immigrant populations across the world is that in language contact situations, first language skills will be affected. Empirical research on individual L1 loss in an L2 environment has started only recently. Accordingly, given the fact that we examine the L1 of students in an immigrant context, we were confronted with the hypothesis of a possible L1 loss that occurs in L2 or migrant environments (de Bot & Hulsen, 2002). This rests on the assumption that a certain degree of language attrition can generally be found among migrant populations (Schmid & Dusseldorp, 2010). In order to overcome the possible L1

loss, classes of mother tongue were provided to immigrant students in Spain, and so encouraging them to maintain the contact with their linguistic and cultural background.

Furthermore, the method commonly used to measure the aforementioned processes and also adopted in the present study is error analysis.

Specifically, Corder (1975) viewed error analysis as having implications for both theory and pedagogy. The investigation of learner errors can serve two pedagogic purposes: diagnostic (to pinpoint a problem in learner production) and prognostic (to guide pedagogic decision-making about how to solve a specific problem once identified).

Following the same author, we consider error as a systematic and consistent deviance from the norms of the second language, revealing a gap in underlying knowledge or L2 competence. Also, errors are usually analysed following the three steps described by Ellis (1999): sampling of learner production data, identification of errors, and description and classification of errors.

Further, regarding the participants in the study, the focus is on Romanian immigrant students, as the data provided by the Spanish National Institute of Statistics reveals that the Romanian group is one of the most represented immigrant groups in the Catalan bilingual educational system. Consequently, since the academic year 2007-2008, Romanian students were granted the possibility to attend classes of Romanian language, culture, and civilization. Specifically, according to the information available, during the academic year 2011-2012, 207 Romanian students of Catalonia studied their mother tongue as an extracurricular activity (MAE, 2015).

In this regard, the present study comes as an answer to the necessities and the research lack in our field, as it deals with the process of second language acquisition and language transfer in the case of the Romanian immigrant students of two L2s simultaneously, Catalan and Spanish, both oral and written language.

Additionally, it provides new information that has not been previously studied, as it analyses the evolution of the L1 (Romanian) of the participants. Specifically, we tried to find within-group characteristics that might influence language maintenance and loss in such a setting. The focus was on two factors: attendance at classes of mother tongue and length of residence in the host country.

The study of the mother tongue is particularly relevant when we consider the impact of L1 in the acquisition of second languages (Jarvis & Pavlenko, 2008) and Cummins'

Linguistic Interdependence Hypothesis (1979, 1981), which purports the notion that, if some conditions are favourable, abilities acquired in a certain language (L<sub>x</sub>) can be transferred to another language (L<sub>y</sub>).

There are numerous studies examining and confirming the importance of Cummins' (1981) Linguistic Interdependence theory (Huguet, 2008, 2014; Lasagabaster, 2001; Vila, 2006) with elements located at a deeper level of linguistic competence. However, the novelty of the present study resides in the fact that it examines the aforementioned theory when analysing surface elements, as it is the case of the error analysis we conducted on morphosyntactic aspects.

Specifically, additional analyses were conducted regarding the effect of attendance at Romanian classes on the total scores at language competence tests and on the proportions of errors in the three languages: the mother tongue and the official languages of Catalonia. Also, the evolution of the proportion of errors was examined according to length of residence.

The importance of the variable length of residence in the process of second language acquisition has been acknowledged in the Catalan context through various studies assessing the language competence of both native and immigrant students from various L1 backgrounds (Chireac, 2010; Huguet, 2014; Huguet, Navarro, & Janés, 2007; Maruny & Molina, 2000; among others). There is a consensus among studies that students with a length of residence longer than 6 years obtain higher averages than their peers with shorter lengths of residence, thus the process of acquisition of the official languages of the host society (Spanish and Catalan) occurs (Huguet et al., 2011, 2012, 2013; Navarro & Huguet, 2010).

Likewise, we also provided an in-depth descriptive analysis of the incorrect use and its possible cause in the L1 for the two official languages: Catalan and Spanish, in both language productions studied: oral and written.

In order to carry out the aforementioned analyses, three parallel tests of language competences of Catalan, Spanish, and Romanian were applied in seven public schools of Compulsory Secondary Education in Catalonia. Likewise, our sample comprises 130 Romanian students, 42 who attend Romanian classes and 88 who do not attend those classes.

Lastly, the present study is structured in two parts. The first one tackles the theoretical framework of the research and presents the educational system and the migration situation at international, Spanish, and Catalan level, with special emphasis on the influence of migration on education and the relationship between the two. Similarly, the following sections expose the theoretical basis of mother tongue maintenance and loss and the process of second language acquisition, with special attention drawn on the language transfer phenomenon and error analysis as a method to assess the above-mentioned.

The second part presents the objectives and hypotheses of the research and details the methodology employed to collect the data necessary for the study. Following, the results are presented both quantitatively and an in-depth analysis of the most recurrent incorrect use, with an examination of evidence of mother tongue influence. In the same vein, the statistical analyses were conducted for both language competence and proportions of errors, investigating also the effect of the variables attendance at Romanian classes and length of residence.

# 1 MIGRATION AND EDUCATION

Given the now widely-recognised connection between migration and language, the present chapter examines the aforementioned interaction and consequently, how migratory movements influence language-related programs and policies.

Specifically, we examine the evolution of migration and multilingualism at three levels: worldwide (comprising both international and European), in Spain, and in Catalonia.

## 1.1 INTERNATIONAL MIGRATION AND MULTILINGUAL EDUCATION

Taking into account the importance and extended works dedicated to both migration and multicultural education, we will focus on their main implications.

Firstly, we will resume ourselves to a brief presentation of what the concepts of migration and migrant entail.

### 1.1.1 Migration

To begin with, we present the definition of an international migrant as stipulated by the United Nations (1998: 17): “any person who changes his or her country of usual residence”. The aforementioned definition is a rather broad one, that comprises several categories of migrants: foreigners admitted for education or training, foreigners admitted for employment, migrants for family reunification, migrants having the right to free establishment or movement, migrants for settlement, that have been granted the permission to stay for an unlimited period without being limited by the exercise of an economic activity (employment-based, family-based, ancestry-based, entrepreneurs and investors, foreign retirees), foreigners admitted for humanitarian reasons (refugees, asylum-seekers, foreigners granted temporary protected status, other), foreigners whose status is regularized (United Nations, 1998).

Furthermore, Newman and Matzke (1984) state that the majority of definitions in the field are centred on the idea that migration implies a change of residence, which can be permanent or semi-permanent. In this sense, Bhugra (2004) defines migration as a process that leads to social change, and through which one or more individuals relocate from a

certain geographical region to another area within the borders of the same country or in a different country, for a long period of time or permanently, and for various reasons.

In their Glossary of Migration, Perruchoud and Redpath-Cross (2011: 62-63) present a more thorough and somehow updated view on migration as:

*the movement of a person or a group of persons, either across an international border, or within a State. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification.*

As follows, today's migration is marked by considerable differences at economical, developmental, cultural, and demographic level between sending and receiving countries. In other words, sending countries are the ones less developed, generally characterized by scarce capital and investments, thus with a limited demand of labour, while receiving countries are those developed and more intensive in capital. Czaika and de Haas (2013) highlight that most of the current migratory flows tend to converge toward a relatively low number of destination countries.

Additionally, contemporary international migration faces a contradiction between the ongoing demand for immigrant labour and the perception of immigrants as an unwanted problem, amplified by the high rates of autochthonous unemployment (Massey et al., 1998). Even more, in certain contexts, the immigrant was considered as somebody incomplete (Pallaud, 1992), thus it is necessary to provide him/her with multiple and various resources for his/her private, social, and working life. In other words, the newcomer can be perceived as somebody socially disadvantaged, who ignores the history and circumstances surrounding him/her (Miquel López, 1995). In this sense, Huysmans (2000: 758) states that migration is perceived as a threat:

*migration is identified as being one of the main factors weakening national tradition and societal homogeneity. It is reified as an internal and external danger for the survival of the national community or western civilization. This discourse excludes migrants from the normal fabric of society, not just as aliens, but as aliens who are dangerous to the reproduction of the social fabric.*

That notwithstanding, the impending decline in the number of natives in most European societies means that migration is likely to be a significant part of Europe's demographic

future. European citizens do not like that prospect, and already anti-emigrant attitudes are hardening in many European countries (Boeri & Brücker, 2005).

#### ***1.1.1.1 Migration at international level***

Globally, there were 232 million international migrants in 2013. Of these, nearly 59% lived in the developed regions, while the developing regions hosted 41% of the world's total. Of the 136 million international migrants living in the North in 2013, 82 million, or 60%, originated from a developing country, while 54 million, or 40%, were born in the North. Further, 82 million or 86% of the 96 million international migrants residing in the developing world in 2013 originated from the South, while 14 million or 14% were born in the North.

Worldwide, international migrants accounted for a relatively small share of the total population, comprising about 3.2% of the world population in 2013, compared to 2.9 per cent in 1990. In the North, international migrants constituted 10.8% of the total population in 2013 compared to 1.6% in developing regions. Between the period 1990 and 2013, international migrants as a share of total population grew in the North, but remained unchanged in the South (United Nations, 2013).

Likewise, the global distribution of international migrants is not even. Analysing the trends for international migration in the first decade of the 21<sup>st</sup> century, Li (2008) concluded that North America, Europe, and Oceania (mainly Australia and New Zealand) registered net migration gains, while for Asia, Africa, and Latin America the numbers show net migration loss. At country level, the number of international migrants between 2000 and 2010 has increased in 165 countries and regions, while decreasing in 65 others (United Nations, 2013). Accordingly, roughly 60% of the 232 million international migrants had relocated to developed countries. Europe is home to 31% of the international migrant population, while North America hosts 22% of the total number of international migrants.

In 2013, the United Nations report shows that over 51% of all international migrants in the world were living in ten countries. The largest number of international migrants resided in the United States of America: 46 million in 2013, equal to nearly 20% of the world's total. The Russian Federation hosted the second largest number of migrants

worldwide (11 million), followed by Germany (10 million), Saudi Arabia (9 million), the United Arab Emirates and the United Kingdom (8 million each), France and Canada (7 million each), and Australia and Spain (6 million each) (United Nations, 2013).

Between 1990 and 2013, the number of international migrants worldwide rose by over 77 million or by 50%. Much of this growth occurred between 2000 and 2010. During this period, some 4.6 million migrants were added annually, compared to an average of 2 million per annum during the period 1990-2000 and 3.6 million per annum during the period 2010-2013. The developed regions gained 53 million or 69% of the 77 million international migrants added worldwide between 1990 and 2013, whereas the developing regions added 24 million or 31%. Likewise, the size of the international migrant stock grew in nearly three quarters of all countries or areas. The United States of America gained the largest number of international migrants between 1990 and 2013: nearly 23 million, equal to 1 million additional migrants per annum. The United Arab Emirates recorded the second largest gain during this period (7 million), followed by Spain (6 million). Yet all ten countries with the largest gains in their migrant stock between 1990 and 2013 witnessed a deceleration in their annual growth rate between 2010 and 2013 compared to the period 2000 to 2010 (United Nations, 2013).

#### ***1.1.1.2 Migration in the European Union***

Further, when analysing the migratory phenomenon in our continent, it can be seen that Europe added the second largest number of international migrants between 1990 and 2013 (23 million or 1 million per year). Of the 23 million international migrants gained during this period, 43% were born in Europe, 22% in Asia, 18% in Africa, and 14% in Latin America and the Caribbean. Europe-Europe was the second largest migration corridor during the period 2010- 2013, with an average of 0.6 million international migrants per annum (United Nations, 2013).

During 2012, there were an estimated 1.7 million immigrants to the EU from countries outside the EU. In addition, 1.7 million people previously residing in one of the EU Member States migrated to another Member State. Thus, about 3.4 million people immigrated to one of the EU Member States. Germany reported the largest number of immigrants (592,200) in 2012, followed by the United Kingdom (498,000), Italy (350,800), France (327,400), and Spain (304,100) (Eurostat, 2014).

In the same vein, the EU foreign population (people residing in an EU Member State with citizenship of a non-member country) on 1 January 2013 was 20.4 million, representing 4.1% of the EU-27 population. In addition, there were 13.7 million persons living in an EU Member State on 1 January 2013 with the citizenship of another EU Member State (Eurostat, 2014). On the other hand, there were 33.5 million people born outside of the EU living in an EU Member State on 1 January 2013, while there were 17.3 million persons who had been born in a different EU Member State from their country of residence. Only in Ireland, Hungary, Luxembourg, Slovakia, and Cyprus was the number of persons born in other EU Member States higher than the number born outside of the EU (in other words in non-member countries). People born abroad outnumbered foreign citizens in all of the EU Member States, except Latvia, the Czech Republic, and Luxembourg.

In absolute terms, the largest numbers of non-nationals living in the EU on 1 January 2013 were found in Germany (7.7 million), Spain (5.1 million), the United Kingdom (4.9 million), Italy (4.4 million), and France (4.1 million). Non-nationals in these five EU Member States collectively represented 77 % of the total number of non-nationals living in the EU-27, while the same five Member States had a 63% share of the EU's population. In relative terms, the EU-27 Member State with the highest share of non-nationals was Luxembourg, as they accounted for 44% of the total population. A high proportion of non-nationals (10% or more of the resident population) was also observed in Cyprus, Latvia, Estonia, Ireland, Austria, Belgium, and Spain (Eurostat, 2014).

A further aspect of the scale and significance of immigration in Europe relates to what Europeans understand by the term 'outsiders'. Here there is potential for great muddle since most of the outsiders who make up the migration flows into European countries are themselves European and so, from a pan-European point of view, are not outsiders at all. The Organisation for Economic Co-operation and Development (OECD) calculates that the top ten source countries in 2004 for immigration into the OECD's European member states provided those states with almost a million immigrants— but that over 800,000 of these came from other European countries (OECD, 2006). Romania and Poland were the two top countries of origin, between them accounting for close to four out of every ten immigrants into the rest of Europe. Morocco (with 12% of the total) and the United States (with 5%) were the only two non-European states to feature in the top-ten list. Much of

European migration, therefore, takes the form of a spatial re-shuffling of Europe's existing ethno-national populations rather than a genuine influx from 'outside'.

Over the past two decades, period in which immigration is said to have risen rapidly in Europe<sup>1</sup>, net immigration from outside the continent amounted to the equivalent of 3.7% of its population at the end of the period. This compares to an immigrant inflow into the United States of 8.4% of population over the same period and 13% in Australia (calculations based on UN population database 2006 revision). The UN's medium variant projections up to 2050 envisage a net immigration total for Europe by the end of that period equivalent to 5.5% of population, compared to corresponding figures of 12% for the United States and 16% for Australia. Some regional areas within Europe will undoubtedly have more immigration than others, but again not to an exceptional degree by world standards. In the United Nations projections, only Northern Europe is assumed to experience immigration totals in the 45 years from 2005 to 2050 that, at 8.4% of population, approximate those accumulated over the past 20 years in the United States.

To conclude, as migration flows to developed countries have increased since the mid-1980s, so has the diversity of origins of new migrants. Accordingly, there are now more than 50 million people in Europe living in a country other than the one in which they were born. Language education, and in particular the learning of the language of the host country, has a major role to play in supporting the integration of young and adult migrants into educational systems, the labour market, and society at large. This integration in turn helps create a more socially cohesive Europe. Therefore, among many others, migration has important linguistic consequences, fostering multilingualism, since an increasing number of languages come in contact and traditional monolingual institutions are challenged by the population movements (Extra & Yağmur, 2004).

Consequently, in the following chapter bilingualism and multilingualism will be dealt with in-depth, as one of the most relevant consequences of migration.

### **1.1.2 Bilingualism and multilingualism**

Bilingualism, and more generally multilingualism is a major fact of life in the world today. In this regard, Crystal (1997) estimates that two-thirds of the world's children grow up in a bilingual environment. One must conclude that, far from being exceptional,

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<sup>1</sup> The concept of Europe referred to here is that of the UN and thus excludes Turkey.

as many believed, bilingualism/multilingualism is currently the rule throughout the world and will become increasingly so in the future (Butler & Hakuta, 2006).

Moseley and Asher's (1994) Atlas of the World's Languages indexed 5900 languages, while the UNESCO Atlas of the World's Languages in Danger of Disappearing (Wurm, 2001) estimated between 5000 and 6000 languages.

Nonetheless, the ratio of number of languages to number of states indicates that most states count with more than one language, meaning that communication among the citizens of many of the world's countries clearly requires extensive bilingualism and/or multilingualism:

*bilingualism is present in practically every country of the world [...]. In fact, it is difficult to find a society that is genuinely monolingual. Not only is bilingualism worldwide, it is a phenomenon that has existed since the beginning of language in human history* (Grosjean, 1982: 1).

Moreover, the number of multilingual individuals surpasses the number of monolinguals (Baker, 2006; Tucker, 1998). As it results, monolingualism is rather "the exception, not the rule" (DeKeyser & Larson-Hall, 2005: 223); although for a long time it was considered the norm, especially in Europe, where nation states used to "define themselves not in the least by the one (standard) language which was chosen to be the symbolic expression of their unity" (Auer & Wei, 2007: 1). Hence, being part of a nation meant speaking its language.

Firstly, regarding the number of languages involved in bilingualism and multilingualism, the first one refers to a situation in which two languages are used, whereas the latter refers to three or more languages (Baker, 2011; Kemp, 2009).

Accordingly, the term multilingualism implies 'multiple' languages and it usually refers to two or more languages. The term 'bilingualism' means the capacity to use 'two languages' (Greek prefix 'bi' = two) and is widely spread because many studies have focused on two languages. As a result of this tradition 'bilingualism' is also sometimes used instead of 'multilingualism' to include more languages. Nowadays, there is a strong trend to use multilingualism when two or more languages are involved and sometimes a term like 'bi-/multilingualism' is used (Skutnabb-Kangas & McCarthy, 2008).

Likewise, various authors define bilingualism as the use of two or more languages as a means of communication in the everyday life routines (Grosjean, 1992; Grosjean, 2010; Oksaar, 1983). In this sense, Bloomfield (1956: 56) defines bilingualism as “native-like control of two or more languages”. However, De Angelis (2007: 9) clarifies that

*In reading these definitions- and many more of this kind are available in the literature- we are under the impression that the word bilingual can refer to anything beyond the L1, when in fact the prefix ‘bi’ means ‘two’ hence a bilingual can only be a speaker of two languages and not a speaker of more than two languages by definition...*

Furthermore, the same author explains the risks in using the terms bilingualism and multilingualism as synonyms, since it “generates confusion in the field and one often needs to look for additional information in the text itself in order to be able to identify whether the author is talking about bilinguals or multilinguals” (De Angelis, 2007: 9).

In this sense, despite the lack of empirical evidence to prove it, multilingualism seems to be more intricate than bilingualism, as Cenoz and Genesee (1998: 16) explain:

*Multilingual acquisition and multilingualism [...] implicate all the factors and processes associated with second language acquisition and bilingualism as well as unique and potentially more complex factors and effects associated with the interactions that are possible among the multiple languages being learned and in the processes of learning them.*

As can be seen, the definitions of multilingualism, and also of bilingualism, are many and wide-ranging. They are rooted in diverse theoretical and practical perspectives and emphasise different aspects of using and learning languages (Aronin & Singleton, 2012).

It is to be noted that the majority of definitions constantly refer to the monolingual norm, requiring from the bilingual a level of proficiency in both languages comparable to that of monolingual native speakers of the languages in question. In this regard, De Angelis and Selinker (2001: 45) state that

*A multilingual is neither the sum of L3 or more monolinguals, nor a bilingual with an additional language. Rather, in our view a multilingual is a speaker of 3 or more languages with unique linguistic configuration often depending on his individual history, and, as such, the study of third or additional language*

*acquisition cannot be regarded as an extension of second language acquisition or bilingualism.*

Furthermore, a basic distinction needs to be made between multilingualism and bilingualism as the characteristic of a group, region, or country, and multilingual and bilingual as individual characteristics. At individual level, multilingualism is referred to as *plurilingualism*, as a way to distinguish it from multilingualism at group level (Kemp, 2009). Alternatively, the term used to describe multilingual or bilingual individuals, regardless of the number of languages the individual can use, is *individual bilingualism*. Although there is a clear difference between multilingualism and bilingualism, this is done for the sake of simplicity but also because most individuals don't use more than two languages in their daily interactions. For multilingualism and bilingualism at societal level, the term used is *societal bilingualism* (Baker, 2011; Baker & Prys Jones, 1998; Coulmas, 1998; Edwards, 2013; Grosjean, 2010).

In this regard, Baker (2006: 2) states that “[...] it is valuable to make an initial distinction between bilingualism and multilingualism as an individual characteristic, and bilingualism and multilingualism in a social group, community, region or country”.

To sum up, in Cenoz and Gorter (2011) it is stated that multilingualism can be understood as an individual or a social phenomenon. It can refer to the acquisition, knowledge, or use of several languages by individuals or by language communities in a specific geographical area.

Additionally, multilingualism is not a new phenomenon because there has always been contact between speakers of different languages related to commerce, wars, or immigration (Cenoz & Gorter, 2011), but only in recent times it transpired as a phenomenon whose nature is to be investigated afresh and on its own terms (Aronin & Hufeisen, 2009).

Nonetheless, the treatment of immigrant languages appears to be changing, as the Civil Society Platform to Promote Multilingualism: Policy Recommendations for the Promotion of Multilingualism in the European Union (2011: 6) recognised the importance of the languages of immigrant groups:

*All languages that are in regular use by a community, whether territorial or Diaspora, are important and should be included in language policy; not just the*

*official working languages of the European Union. This includes among others less-widely used languages, languages of immigrant communities, minority languages. This will help guarantee Europe's cultural diversity as well as the basic human rights of all citizen.*

Many incorrect beliefs regarding the negative consequences of bilingualism at individual level were invalidated by numerous studies realised in various contexts. In this sense, Edwards (2003: 28) pointed:

*Older ideas that bilingualism meant a splitting of finite cognitive potential or, worse, a diminution of intellectual capacities, have long since been retired by research, to be replaced by the view that bilingualism does not mean loss; indeed, some have argued that increases in linguistic repertoire correlate with heightened sensitivity, enhanced cultural awareness, perhaps even greater cognitive flexibility and all-round nous.*

Therefore, approaches which foster multilingualism for all learners, not just for migrants, are a key to successful integration in schools. According to the Council of Europe's Language Policy Division (2010), "access to literacy in two languages benefits cognitive development. Thus, the language skills of children and adolescents from migrant backgrounds should be fostered by whatever means available, partly as a matter of human rights and partly in order to increase society's linguistic and cultural capital".

Multilingual acquisition and multilingualism are complex phenomena. They implicate all the factors and processes associated with second language acquisition and bilingualism as well as unique and potentially more complex factors and effects associated with the interactions that are possible among the multiple languages being learned and in the processes of learning them. Like bilingual acquisition and bilingualism, multilingual acquisition and multilingualism are complex because they can occur simultaneously or successively, formally (through instruction) or naturally (outside school), and in childhood, adolescence, or adulthood (Cenoz & Genesee, 1998).

Likewise, multilingual individuals may use a number of languages on account of many different social, cultural, and economic reasons. They may live in a multilingual community, or overlapping bilingual communities, or be in contact with several monolingual communities (Aronin & Hufeisen, 2009). Also, as previously stated, their proficiency in each of their languages is likely to differ, and may fluctuate over time

(Herdina & Jessner, 2002). Their languages may have different roles and functions, they may use them separately or code switch, and they are still described as multilingual whether they know three or seven languages (Aronin & Hufeisen, 2009).

Further, we will see how the aforementioned concepts are applied in education.

### ***1.1.2.1 Bilingual and multilingual education***

Multilingual education not only implies the teaching of two or more languages, but also that education aims at multilingualism and multiliteracy as an outcome. In fact, multilinguals seldom have balanced proficiency in the different languages because language acquisition and language use are dynamic processes and they depend on many factors.

Similarly, Siguán and Mackey (1986: 62) define bilingual education as “an education system where two languages are used as medium of instruction, of which usually, although not always, one is the first language of the students”.

A more detailed description is offered by García (2011: 5) who understands by bilingual education:

*any instance in which children's and teachers' communicative practices in school normally include the use of multiple multilingual practices that maximize learning efficacy and communication; and that, in so doing, foster and develop tolerance towards linguistic differences, as well as appreciation of languages and bilingual proficiency.*

Summarizing, for an education program to qualify as bilingual it has to use the two languages as a medium of instruction (García, 2011; Huguet & Madariaga, 2005).

Before moving forward in the discussion, a distinction must be made between additive and subtractive bilingualism. Lambert (1974) differentiates between the two types and states that additive bilingualism refers to contexts where the individuals incorporate a new language to their linguistic repertoire, but the status of their own is not expected to be affected by that process. On the other hand, subtractive bilingualism describes situations in which the acquisition of a second language is accompanied by pressure to demote the first language and generally occurs in ethnolinguistic groups of low prestige in which the acquisition of the second language comes with the transmission of superior values

towards that language and culture. Under these circumstances, the acquisition of the second language occurs in the disadvantage of the mother tongue, as the latter one gets replaced by the one of the higher prestige. This is often the case of migrants, who feel pressured to use the majority language and feel embarrassed when using their first language. At psychological level, this can lead to marginalization and loss of cultural and ethnic identity (Baker, 2006).

Additionally, Cenoz and Gorter (2011) exemplify that a case of additive multilingualism can be immersion aimed at speakers of the majority language in different parts of the world. In these programmes, a second language such as French for English L1 speakers in Canada, Catalan for Spanish L1 speakers in Catalonia or Welsh for English L1 speakers in Wales is used as a language of instruction at no cost for the first language. Subtractive multilingualism is often associated with situations of immigration. A typical example would be that of Spanish speakers in the USA when they receive education only through the medium of English without having the opportunity to develop their home language.

Furthermore, the traditional, widely accepted view of multilingual education is that it involves the use of two or more languages in instruction (García, 2011). Similarly, Cummins (2008) defines bilingual education as “the use of two (or more) languages of instruction at some point in the student’s school career”. In line with this view, Genesee (2004: 548) describes multilingual education as being “education that aims to promote bilingual (or multilingual) competence by using both (or all) languages as media of instruction for significant portions of the academic curriculum”.

As we could previously observe, for various reasons, some authors prefer to use the term ‘bilingual education’ to encompass also ‘multilingual education’ (Baker, 2006; García, 2011). However, the inclusion under the term ‘bilingual education’ of all programs that use more than one language is more problematic than it first appears.

Regarding this difference, Cenoz (2009: 32) considers multilingual education as “teaching more than two languages provided that schools aim at multilingualism and multiliteracy”. Although this definition is based on teaching languages as school subjects and not as languages of instruction, the author continues by explaining that in most contexts, some if not all of these languages will be used in teaching – with the exception of those situations in which the exposure to some of those languages outside the classroom is deemed to be sufficient to attain proficiency, and thus they are included only

as school subjects. So, although at curriculum level all the languages have to be taught, not all of them need to be used as languages of instruction.

On the other hand, 'bilingual education' is an ambiguous, generic term. It is attributed to many different schools that teach bilingually, or merely teach bilingual students. The phrase 'bilingual education' is used to cover schools where children move quickly from minority language dominance to majority language dominance as well as for schools that help children become bilingual and biliterate (Baker, 2007).

To reduce ambiguity, 'bilingual education' is ideally reserved for those schools and classrooms that teach some part of or all subject content through two languages. This is termed a 'strong' version of bilingual education (Baker, 2006). In contrast, there are 'weak' forms that allow children to use their home language for a short, temporary, transitional period. The language of instruction quickly moves from a minority language to being in the majority language only. There is also the case of an absence of any bilingual instruction, yet because there are bilingual children present, the word 'bilingual education' is wrongly applied. In other words, bilingual education is an umbrella term that includes not only 'weak' or 'strong' forms but also trilingual or multilingual education, where three or more languages are used in the school (e.g., in the European Schools Movement, or Luxembourgish /German/French education in Luxembourg, or Hebrew /English/French in Canada) (Baker & Prys Jones, 1998).

Likewise, bilingual children are typically expected to show the same levels and types of success as their peers in monolingual (mainstream) schools, but in addition, to achieve bilingualism and biliteracy at no cost to general academic achievement.

To continue, we will present in more detail the main bilingual and multilingual educational programs developed throughout time.

### ***1.1.2.2 Bilingual/ Multilingual education programs***

As it can be noted, not all programs designed for bilingual children represent bilingual education programs.

Skutnabb-Kangas (1995) proposes four categories of educational programs designed for bilingual children: segregation, submersion, maintenance, and immersion.

The specialised literature presents a number of approaches to categorizing multilingual education. An example is Fishman's (1976) typology which describes: the transitional or compensatory models, the maintenance models, and the enrichment models. Following, the objectives of the aforementioned models are briefly presented.

**The transitional or compensatory models** address language minority children, who have to be transitioned to the majority language as soon as possible. The programs comprised in these models generally start teaching in the L1 and gradually introduce the L2 with the aim to shift the child from the home, minority language to the dominant, majority language, until the latter replaces the L1 and mainstream education can be followed. Consequently, monolingualism is promoted. At social level, the transitional models aim toward social and cultural incorporation and assimilation (Baker, 2006; Hornberger, 1991). Transitional programs are frequently implemented in the United States.

**Maintenance or heritage language models** are designed to maintain and develop children's minority language alongside the majority language, fostering bilingualism. Among the main goals are to strengthen the child's sense of cultural identity and affirm the right of an ethnic minority group in a nation (Hornberger, 1991). Both minority and majority languages are used in the classroom, although the time allocated to each varies among programs. Maintenance programs were implemented in Wales, Sweden, Scotland, and Spain.

**Enrichment models** target the whole society, language majority and language minority speakers alike, pursuing that all students become competent in the languages of the territory (Huguet & Madariaga, 2005). Enrichment models of bilingual education encompass (a) immersion programs, directed to language majority speakers; (b) two-way or dual language bilingual education programs, which are designed for balanced numbers of language majority and language minority speakers, and (c) bilingual education in majority languages.

In recent times, the most frequent grounds for the development of bilingual models is immigration. Immigration leads to language communities of varying sizes within the territory of a majority language. Bilingual education models have been established mostly in the service of larger immigrant communities (Gogolin, 2011).

In the same vein, Baker (2006) describes ten varieties of programs for bilingual children in function of the type of children, the language of the classroom, the societal and educational objectives, and the aims in language outcome. The author further constructs three categories: ‘monolingual’, ‘weak’, and ‘strong’ forms of education for bilinguals. In the case of monolingual programs bilingual pupils are present but bilingualism and biliteracy is rarely the outcome, as these programs generally lead to monolingualism for language minority children. See Baker (2006) for a detailed presentation of the main bilingual education programs, classified according to the typology: strong forms, weak forms, and monolingual forms, and taking into consideration characteristics as type of children, language of the classroom, and outcome language. Also, see Ianos (2014) for a contrastive presentation of the different classifications of bilingual education programs.

Following, we will briefly describe each of the aforementioned categories according to the typology developed by Baker (2006).

### **Monolingual programs**

#### *Mainstreaming/ Submersion (structured immersion)*

Submersion education describes education for language minority children who are placed in mainstream education.

Submersion contains the idea of a language minority student thrown into the deep end and expected to learn to swim as quickly as possible without the help of floats or special swimming lessons. The language minority student will be taught all day in the majority language, typically alongside fluent speakers of the majority language.

Structured immersion programs are for minority language speakers conducted in the majority language. The first language is not developed but is replaced by the majority language. Different from submersion, the structured immersion teacher will use a simplified form of the majority language, and may initially accept contributions from children in their home language.

The basic aim of such mainstreaming is assimilation of minority language speakers, particularly where there has been immigration.

*Mainstreaming/ Submersion with withdrawal classes*

Mainstream education may occur with or without the addition of withdrawal classes or pull-out classes designed to teach the majority language. In this sense, language minority children in mainstream schools may be withdrawn for compensatory lessons in the majority language.

*Segregationist*

Segregationist education occurs where minority language speakers are denied access to those programs or schools attended by majority language speakers. Such separation can be through law or practice.

Monolingual education through the medium of the minority language can be for apartheid (educating a colonial people only in their native language). Segregationist education forces a monolingual language policy on the relatively powerless.

**Weak forms of bilingual education**

The basic aim of 'weak' forms of bilingual education is assimilation of language minorities rather than maintenance of their home languages and cultural pluralism.

When the child's home language is disallowed in the curriculum, there is an increased possibility of a child's self-esteem, self-confidence, and self-concept suffering. The symbolism is that previous learning, early literacy skills, coming from a different culture and diverse life experiences are not valued by the school or its teachers. The child, its parents and extended family, community, and religion may each be seen as rejected through the home language being denied. The educational environment becomes subtractive, even stressful and there are high chances of underachievement, even failure (Tse, 2001).

*Transitional*

The aim is assimilationist and entails increasing the use of the majority language in the classroom, while proportionately decreasing the use of the home language in the classroom. It differs from submersion education in that language minority students are temporarily allowed to use their home language. Such students are taught briefly through their home language until they are thought to be proficient enough in the majority language to cope in mainstream education.

Transitional bilingual education (TBE) can be split into two major types: **early exit** and **late exit**. Early-exit TBE refers to two years maximum help using the mother tongue. Late-exit TBE allows around 40% of classroom teaching in the mother tongue until the 6<sup>th</sup> grade.

Gogolin (2011: 234) explains that this type of programs “all the teaching takes place in the first language of the children in the beginning”. Also, the second (or majority) language is gradually introduced, at first as a subject only of language, then after some time also in other content areas. The aim of such models is to support the acquisition of the second (majority) language and to prepare their transition to monolingual mainstream class.

#### *Mainstream with foreign language teaching*

In the US, Australia, Canada, and parts of Europe, most language majority school-children receive their education through their home language. For example, children whose parents are English speaking monolinguals attend school where English is the sole teaching medium (often with some second (foreign) language teaching). In Canada, this would be called a core program. In Wales and elsewhere, it is sometimes called a ‘drip-feed’ language program. The term ‘drip-feed’ highlights the kind of language element in mainstream schooling. Drip-feeding Arabic, French, German, Mandarin, Japanese, or Spanish makes the language a subject in the curriculum similar to science and mathematics.

Mainstream education rarely produces functionally bilingual children (Baker, 2006).

#### *Separatist*

A narrower view of language minority education would be to choose to foster monolingualism in the minority language. The aims are minority language monolingualism and monoculturalism in a context where such choice is self-determined. This type of education may be organized by the language community for its own survival and self-protection.

#### **Strong forms of bilingual education**

For all strong forms of bilingual education the aim is bilingualism and biliteracy.

*Immersion*

The term ‘immersion education’ came to prominence in Canada during the 1960s to describe innovative programs in which the French language was used as a medium of instruction for elementary school students whose home language was English. However, as Johnson and Swain (1997) point out, there is nothing new in the phenomenon of ‘immersing’ students in a second language (L2) instructional environment. In fact, throughout the history of formal education the use of an L2 as a medium of instruction has been the rule rather than the exception.

Immersion education is typically designed for language majority children and the language of the classroom is bilingual with initial emphasis on L2. According to the age at which a child commences the experience, the types of immersion bilingual education in Canadian programs are: **early immersion** (kindergarten or infant age), **delayed or middle immersion** (at nine to ten years old), or **late immersion** (at secondary level). Furthermore, as regards to the amount of time spent in immersion, a distinction is made between **total immersion** (starts with 100% per week immersion in the second language, after two or three years reducing to 80% per week for the next three or four years, French per week), and **partial immersion** (close to 50% immersion in the second language throughout infant and junior schooling).

Given the relevance of the distinction between immersion and submersion programs, Table 1 presents the main characteristics and differences between the two types of programs.

**Table 1. Main differences between submersion and immersion programs (Arnau, 1992)**

<b>Submersion programs</b>	<b>Immersion programs</b>
- L1/minority language not valued, possibly stigmatized; the teaching method does not take into account the students' mother tongues	- L1/minority language fully valued
- Proficiency and literacy development in the majority language	- Proficiency and literacy development in own and target language
- Compulsory	- Optional
- Low motivation	- High motivation
- Presence in the same classroom of speakers and non-speakers of the instruction language	- The students are non-speakers of the instruction language
- Monolingual teachers who do not know the L1 of the students	- Fully trained, bilingual teachers
- L2 input not adapted	- L2 input adapted
- Students' errors in L2 are seen as learning deficiencies	- Students' errors in L2 are seen as part of the normal learning process
- Students' L1 is considered inappropriate	- Students' L1 is considered appropriate
- Students are not allowed to speak their mother tongue in school	- Students speak their mother tongue in school
- No teaching of L1	- Teaching in and of L1
- No L1 development	- Long-term L1 development
- Ethnolinguistic diversity not acknowledged, possibly stigmatized	- Ethnolinguistic diversity celebrated, at least between own and majority language group
- Own ethnicity not affirmed	- Own ethnicity affirmed
- Low ethnic identification	- High ethnic identification
- Negative self-concept	- Positive self-concept
- Low ethnic tolerance	- High ethnic tolerance
- Decreased academic performance	- Increased academic performance

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*Maintenance/heritage language*

The most common type of child represents the language minority and the language of the classroom is bilingual with emphasis on L1. That is, language minority children use their native, ethnic, home, or heritage language in the school as a medium of instruction and the goal is full bilingualism. Examples include education through, or more often partly through, the medium of Navajo and Spanish in the US, Catalan in Spain, Ukrainian in Canada, Gaelic in Scotland, Finnish in Sweden, and Welsh in Wales.

In so-called language maintenance programmes, the aim can be to produce fluent and balanced bilingualism – or even more than that, to provide the entire curriculum in both languages. This kind of model has been established in particular for autochthonous minorities in areas with quite stable bilingual speech communities, but some attempts have also been made with respect to immigrant minority communities. Literacy in these models can be taught in parallel or consecutively. It is normally the case that the teachers involved are themselves bilingual in the languages concerned.

*Two way/dual language bilingual education*

In this case the common type of child is mixed language minority and majority; it occurs when an approximately equal number of language minority and language majority students are in the same classroom. Consequently, the languages of the classroom are minority and majority, and are preferably present in a balanced amount. If one language becomes dominant (due to the much larger numbers of one language group), the aim of bilingualism and biliteracy may be at risk. An imbalance in the two languages among students may result in one language being used to the exclusion of the other; segregation rather than integration may occur. In the creation of a dual language school or classroom, careful student selection decisions have to be made to ensure a language balance. In practice – at least in the European versions of such models – this is hardly achieved. Two reasons can be responsible for this: first, these models are often situated in multilingual areas, with the result that students may be bilingual, but represent other home languages than the partner language which is taught in the bilingual model. And second, the prestige of the languages involved in the model plays a role. Schools offering models with less prestigious languages face the possibility that monolingual parents will refuse to choose them for their children (Gogolin, 2011).

*Mainstream bilingual*

It is usually implemented in multilingual societies or when the goal is to introduce an international language. In this way, students learn the regional majority language and a second international language, as in the case of Brunei, Nigeria, or Luxembourg (Baker, 2006; García, 1998).

To conclude, there are many potential societal, ethnic group, and community benefit of ‘strong’ forms of bilingual education such as: continuity of heritage, language maintenance and revitalization, cultural transmission and vitality, empowered and informed citizenship, raising school and national achievement levels, social and economic inclusion, socialization, social relationships and networking, ethnic identity, and ethnic group self-determination and distinctiveness (Baker, 2006).

Further, we will provide an in-depth analysis of the migratory and educational situation of the country where the present empirical study was conducted, Spain.

## **1.2 MIGRATION AND MULTILINGUAL EDUCATION IN SPAIN**

It is highly relevant to examine the relation between migration and education in this context, given that since the 1990s, Spain has become a host country for immigrants, and Spanish schools have received an increasing number of pupils of diverse foreign origin. The presence and increase in the number of these new pupils has created new issues in the educational debate and has contributed to the implementation of distinct measures by schools in order to facilitate their integration into the school system. Consequently, we aim to tackle these aspects throughout this section.

Immigration to Spain has increased significantly in recent decades. According to the Municipal Rolls, in 1995 Spain had only 500,000 foreigners residing within its territory, amounting to 2% of the total population. In comparison, at the beginning of 2007, there were more than 4.48 million foreigners in Spain, representing 9.9% of the total population. Immigration policy over the past ten years has consisted of successive attempts by the Spanish government, trying to regulate migratory flows in response to the needs of the national labour market, leading to the establishment of immigrant worker quotas.

As previously mentioned, attempts have been made to manage immigration, but legislative instability, insecurity, and misinformation regarding applicable rules, along with contradictory immigration policies, have led to the presence of an estimated number of more than one million irregular immigrants in Spain. Furthermore, the poor integration of the immigrant population has led to friction between the host society and the new entrants.

Spanish legislation distinguishes between two situations: foreigners in a situation of stay or residence. Stay is defined as presence on Spanish territory for a period of time up to 90 days, except in the case of students, who can stay for a period equal to that of the courses in which they are enrolled. On the other hand, residents are foreigners who live in Spain with a valid residence authorization. They can be in a situation of temporary or permanent residence. The legislation also contemplates three specific situations: the special regime for students, the residence of stateless persons, undocumented people and refugees, as well as the residence of minors. Accordingly, one can state that the two principal legal

situations in which third-country nationals may find themselves in Spain are visitors or residents.

### **1.2.1 Current migratory situation in Spain**

Immigration became part of the Spanish government's agenda in 1985, but it was not until the mid-1990s that it became a matter of vital importance to political elites and in the eyes of the public. The sharp increase in the number of foreign residents in the last years, the recent polemical debate surrounding the reform of the immigration law, the establishment of a political immigration framework known as the Plan Greco, and the shortcomings of the 2002 labour quota program have made immigration one of the most contested issues in the media, and the second most important national issue for Spaniards after terrorism (Ortega Pérez, 2003).

Spain's development into a country of immigration was part of a larger regional phenomenon. In the late 1980s, in the midst of economic crisis and the accompanying high unemployment, Mediterranean countries of Europe such as Spain, Portugal, and Italy became receiving countries. The number of foreign residents in Spain increased significantly in the last quarter century. From 1975 to 1985, the increase was a moderate average of 2.2% annually. From 1985 to 1991 (which included the enactment of the 'Ley de Extranjería', the national immigration law, and the first extraordinary regularization process) the foreign population rose an average of 7% annually. As of 1992, this figure had climbed to 10% annually. From 1992 to 2000, the numbers of people from developing countries increased 214% annually, much higher than the 60% increase in the number of foreigners from industrialized nations (Ortega Pérez, 2003).

Even in the mid-1990s, half of all resident foreigners were European. Of this percentage, the largest groups were from EU member countries: the United Kingdom (23%), Germany (17%), and Portugal (12%), whereas immigrants from Eastern Europe accounted for only 4%. Africans accounted for 19%, most than three fourths of them Moroccans. The latter group has seen the largest and most sustained increase over the last 25 years, to the point of becoming the most numerous foreign nationality in Spain at this time.

People from the Americas also saw their numbers grow at a constant pace, as they came to account for about 21% of all foreigners. Traditional groups such as Argentines, Venezuelans, and Chileans decreased as a relative share of the Latin American

population, while others such as Peruvians, Dominicans, and Cubans saw their numbers grow more quickly. In absolute terms, there were few people from North America (United States, Canada, and Mexico) or Oceania. The relative share of the population of Asian origin diminished.

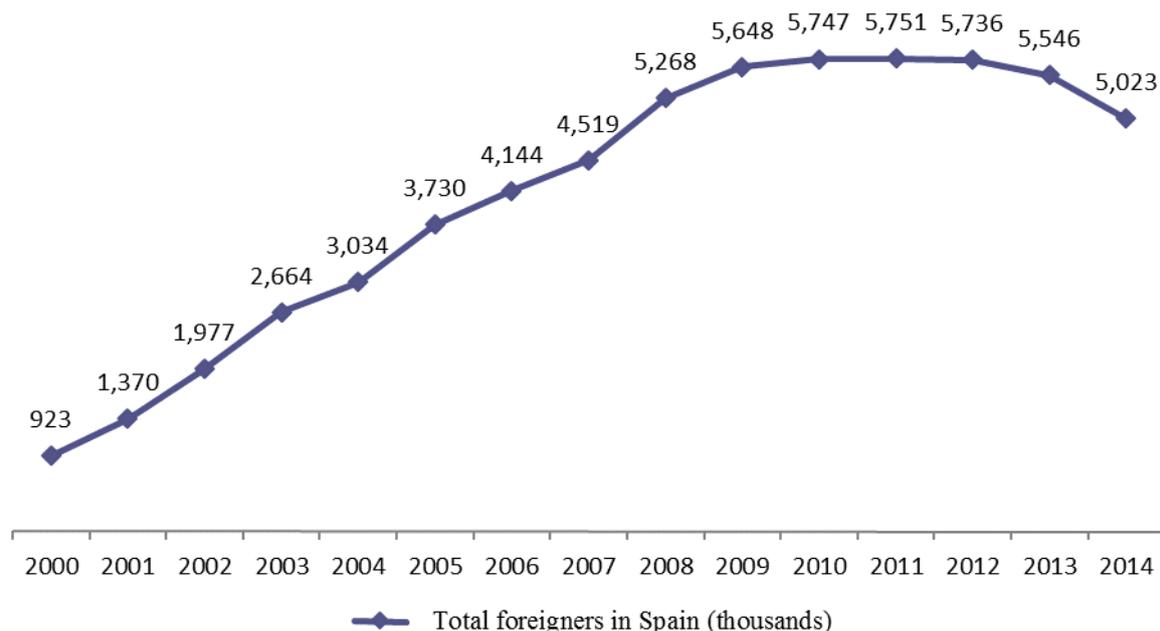
More recently, the proportion of Europeans among all foreign residents declined to 40.4% in 2000, and the African proportion increased to 29%. The difference between the number of Europeans and Africans, the two largest foreign communities, has diminished not because fewer Europeans have arrived, but because the African population has increased much more rapidly. The number of European immigrants increased 105,735 from 1995 to 2000, surpassing even the population increase by 91,033 for Latin Americans. At the same time, there was an increase of 165,660 in the number of Africans. People from the Americas accounted for 22% of the total, Asians 8%, and persons from Oceania an almost invisible 0.1%. The remainder of those counted was stateless people.

In 2001, resident foreigners in Spain accounted for 2.5% of the total population, and saw one of the largest annual increases in their numbers (23.81 percent) in recent years (Figure 1). The biggest communities of resident foreigners were Moroccans (234,937), Ecuadorians (84,699), British (80,183), Germans (62,506), Colombians (48,710), French (44,798), and Portuguese (42,634). These figures reflect the increasing size of the traditional Moroccan community, as well as the trend of increased immigration from Latin America. The fact that neither of the top two nationalities was an EU country, as had been the case just five years ago, brings Spain more in line with the tradition of immigration from third countries, a tradition also visible in other European Union countries (Ortega Pérez, 2003). As the same year's data show, the countries of origin of resident foreigners have shifted significantly in a short time. Moroccans and Ecuadorans have become the two largest nationalities, even as immigration from other EU countries continues to account for a large share of the total.

As previously seen, at an international level, Spain is among the top ten immigrant receiving countries. The intensity of the process becomes even more evident when analysing the figures published by the statistical office of the European Union (Eurostat, 2014). According to these data, in 2010, there were 6.4 million foreign-born residents in Spain, corresponding to 14.0% of the total population. Of these, 4.1 million (8.9%) were born outside the EU and 2.3 million (5.1%) were born in another EU Member State. According to data made available on 1 January 2013, Spain was hosting the second

highest rate of foreign citizens living in a European country in 2013 (5.1 million), second only to Germany (7.7 million persons). This sets Spain apart from other countries with a much longer tradition in the reception of immigrants, as for instance the United Kingdom (4.9 million), Italy (4.4 million), or France (4.1 million) (Eurostat, 2014). Likewise, regarding the origin of the immigrants, those from the European Union make up a growing proportion of immigrants in Spain. The main countries of origin are Romania, the United Kingdom, Germany, Italy, and Bulgaria.

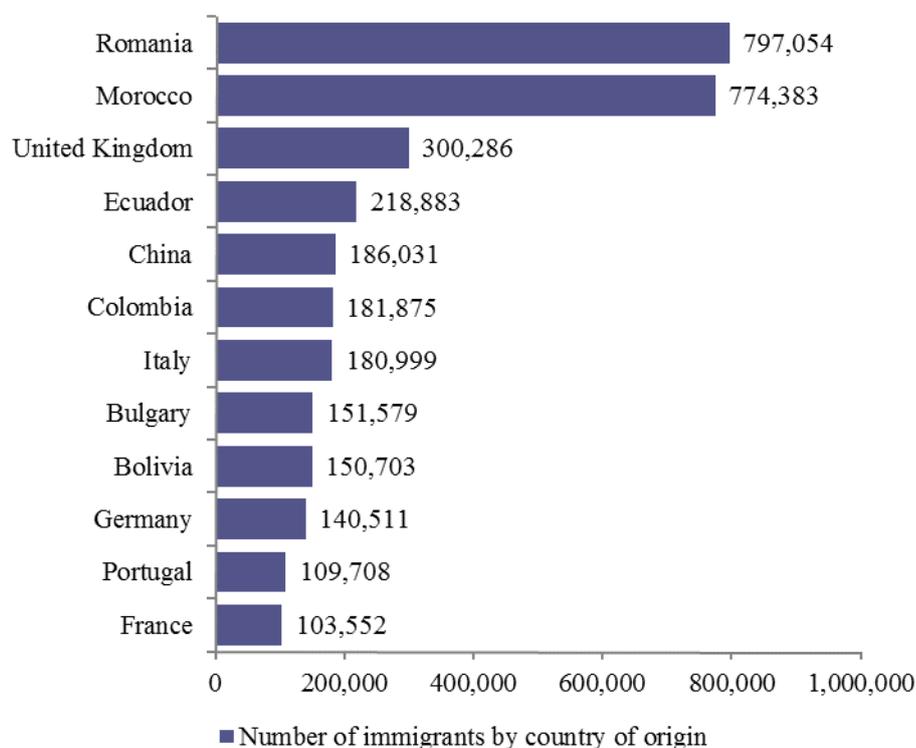
Figure 1 presents the evolution of foreign born population in Spain for the period 2000-2014. As previously mentioned, the time span 2000-2008 is marked by an acute increase in immigrants. On the other hand, the last four years for which data is available, 2011-2014, were marked by a slight decrease in the immigration movement.



**Figure 1. Evolution of the immigrant population in Spain for the period 2000-2014 (INE, 2015a)**

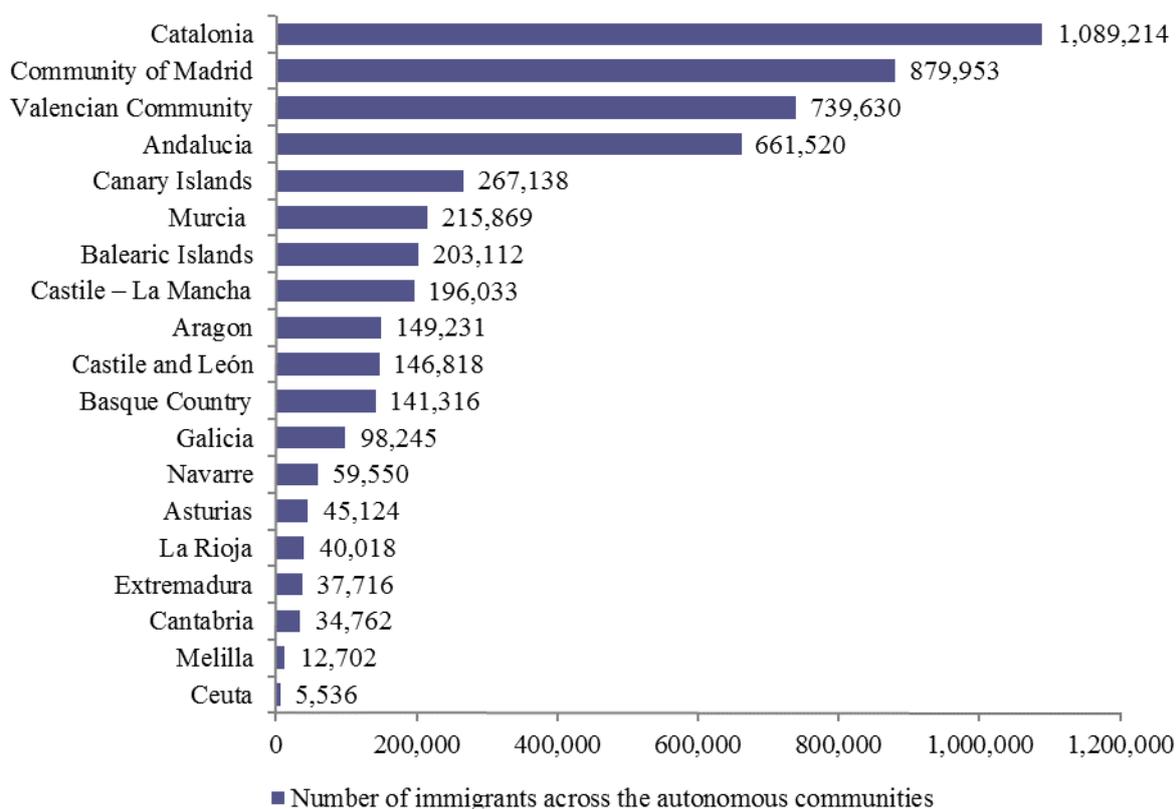
Consequently, on 1 January 2014 there were 46,771,341 registered persons in Spain, of which 41,747,854 Spanish citizens and 5,023,487 foreigners corresponding to 10.74% of the total population (INE, 2015b). Regarding the foreign population gender wise, men accounted for 51.16% of the foreign population, being slightly more numerous than the women who represented 48.84% (INE, 2015b).

Among the foreign population, 2,056,903 persons came from a European Union member state. The most numerous groups were from Romania, Morocco, UK, Ecuador, and China (INE, 2015c). Figure 2 presents the main sending countries, from where more than 100,000 persons immigrated to Spain.



**Figure 2. Immigrant population in Spain by country of origin on 1 January 2014 (INE, 2015c)**

Nonetheless, the immigrant population is not distributed uniformly across the state (Figure 3), differences appearing among autonomous communities. In absolute numbers, with more than one million foreigners, Catalonia (1,089,214) counts with the highest numbers of foreigners and it is closely followed by the Community of Madrid (879,953). Likewise, Valencia (739,630) and Andalusia (661,520) also host large numbers of foreigners.



**Figure 3. Distribution of the immigrant population across the autonomous communities (INE, 2015b)**

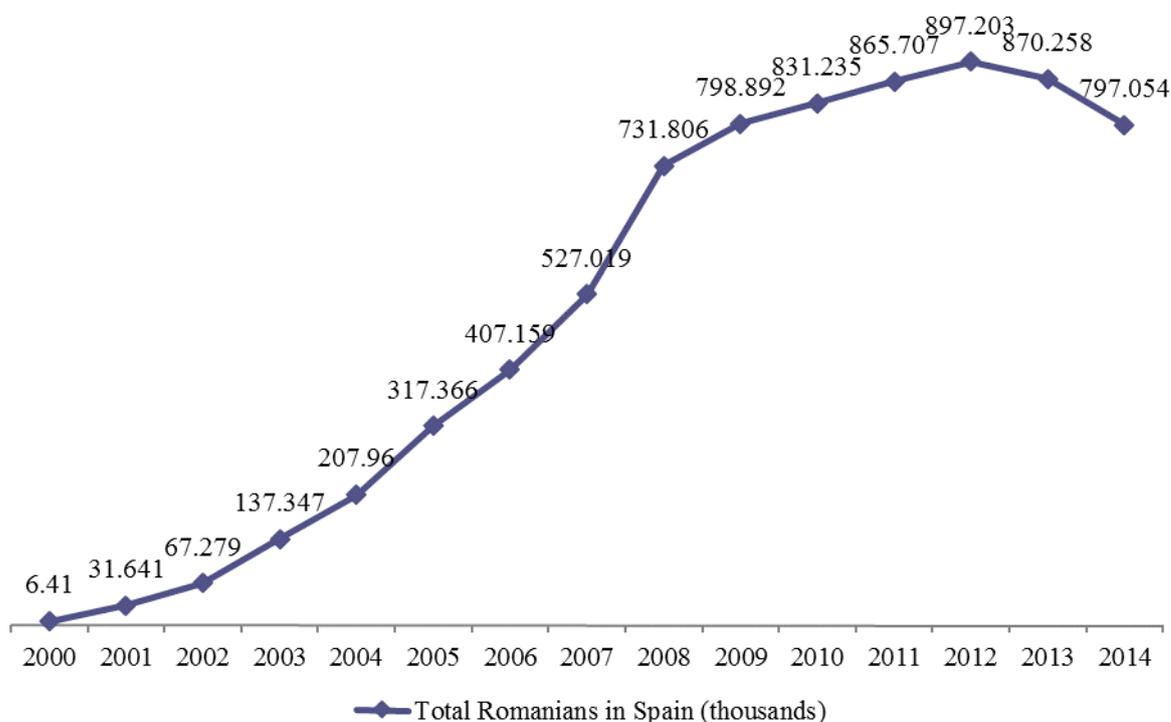
It is important to notice that the data used by the Ministry of Employment and Social Security and the National Institute of Statistics (INE) counts foreigners with a residence permit. Besides them, there are around one million foreign-born persons who obtained Spanish nationality, but should be considered part of the immigrant population.

### ***1.2.1.1 The Romanian immigrant group***

As previously seen, Romanians form the largest group of foreigners in Spain, after surpassing Moroccans in 2007. As of 2014, they made up 15.9% of Spain’s total foreign population of 5,023,487 people (INE, 2015c). Most of the immigration is for economic reasons, as many Romanians from rural and underdeveloped areas are attracted by the higher wages of Spain and the linguistic similarities between Romanian and Spanish.

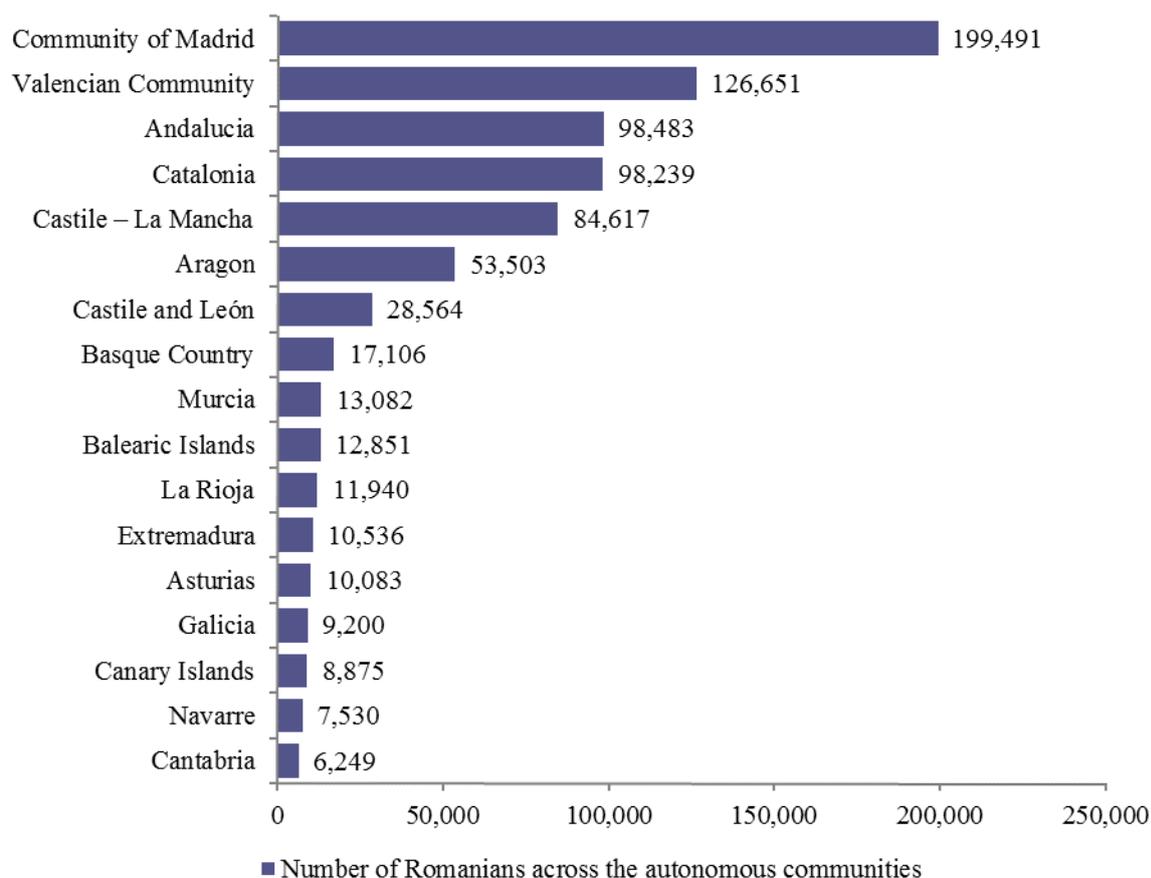
Firstly, Figure 4 presents the evolution of the Romanian population in Spain for the period 2000-2014. As can be noticed, the years 2005-2008 marked a significant increase in immigrants. After reaching the peak with 897,203 persons in the first decade of the 21<sup>st</sup> century, the Romanian population has been steadily decreasing as a result of emigration

from Spain since 2012 due to the economic problems and unemployment in the country, falling to 797,054 people in 2014. Because of this, the diaspora in Italy, which has continued to increase, is now larger than the one in Spain.



**Figure 4. Evolution of the Romanian immigrant population in Spain for the period 2000-2014 (INE, 2015a)**

Nonetheless, the Romanian immigrant population is not distributed uniformly across the state, differences appearing among autonomous communities. The Community of Madrid (199,491) and the Valencian Community (126,651) count with the highest numbers of Romanians, more than 100,000 persons each. Following, Andalusia (98,483) and Catalonia (98,239) also host large numbers of foreigners from this immigrant group.



**Figure 5. Distribution of the Romanian immigrant population across the autonomous communities (INE, 2015a)**

The current migratory situation in Spain has significant consequences on the country's educational system, where immigrant pupils need to be integrated in schools. In this regard, in accordance with the law on the rights and liberties of foreigners in Spain and their social integration, all foreign minors under the age of 18 years have both the right and duty of education under the same conditions as Spanish pupils; a right which includes access to free compulsory education, to the corresponding academic degrees, and to the public system of scholarships and aids (Statutory Law 8/2000).

### **1.2.2 Educational system in Spain**

As a consequence of family regrouping dynamics, and also due to other factors, such as the number of births in the host country or political and military conflicts, among others (Vertovec, 2007), schools have not been left unaffected. For the last decades, as far as pre-university education in Spain is concerned, the number of students of immigrant origin has moved from 137,248 (2000/01 academic year) to 705,575 (2013/14 academic year) (MECD, 2015a). As was the case with general population, these common dynamics

have far-reaching implications for the Catalan educational map, as more than 12% of immigrant students in Spain attend Catalan schools (MECD, 2015b).

In Spain, the 1978 Constitution proclaimed the multilingual nature of the country, in which more than 40% of its citizens live in areas where languages other than Spanish are also present (Siguan, 1992). The introduction to the Constitution expresses the will to protect all Spaniards and Spanish peoples, their cultures, traditions, languages, and institutions. The second article bases the territorial organization of the country on two principles: the nation's unity and the right to autonomy of different nationalities and territories; and the third article, after establishing Spanish as the official language, adds that the other languages of Spain will also be official in the Autonomous Communities where they are spoken, in accordance with their own regional legislations (Lambert, 1974).

Yet in the same way that immigration brings wealth to a country, migrant languages are the very resource we need to sustain linguistic and cultural diversity and to foster intercultural understanding (Hélot, 2012). In this sense, the European Union's aim is 'unity in diversity': diversity of cultures, customs, and beliefs – and of languages. Even more,

*it is this diversity that makes the European Union what it is: not a 'melting pot' in which differences are rendered down, but a common home in which diversity is celebrated, and where our many mother tongues are a source of wealth and a bridge to greater solidarity and mutual understanding (European Commission, 2005: 2).*

Additionally, the Spanish Constitution (1978) acknowledges the country's multilingual and multicultural nature:

*Preliminary Title*

*Section 3*

*(1) Castilian is the official Castilian language of the State. All Spaniards have the duty to know it and the right to use it.*

*(2) The other Castilian languages shall also be official in the respective Self-governing Communities in accordance with their Statutes.*

(3) *The richness of the different linguistic modalities of Spain is a cultural heritage which shall be specially respected and protected.*

Within this constitutional framework, the Statutes of Autonomy passed by the different autonomous governments are the key reference for the development of laws that guarantee an appropriate use of language within the autonomous regions. Thus, minority languages began to recover first through the Statutes of Autonomy of the Basque Country (1979), Catalonia (1979), Valencia (1982), and the Balearic Islands (1982) that granted co-official status alongside Castilian to their regional languages. Vila (2005) states that approx. 42% of the Spanish population lives in territories that, besides Spanish, have another language. Their official status was enforced by the promulgation of ‘Laws of Linguistic Normalization’. Table 2 presents the autonomous communities with another official language, apart from Spanish, the official language of the state, and the date when the language laws ratified the official status of the minority languages. In addition, Aragon and Asturias acknowledge the existence of their own languages, without granting them official status (Huguet & Madariaga, 2005).

**Table 2. Language laws’ date of ratification across the autonomous communities (Huguet & Madariaga, 2005)**

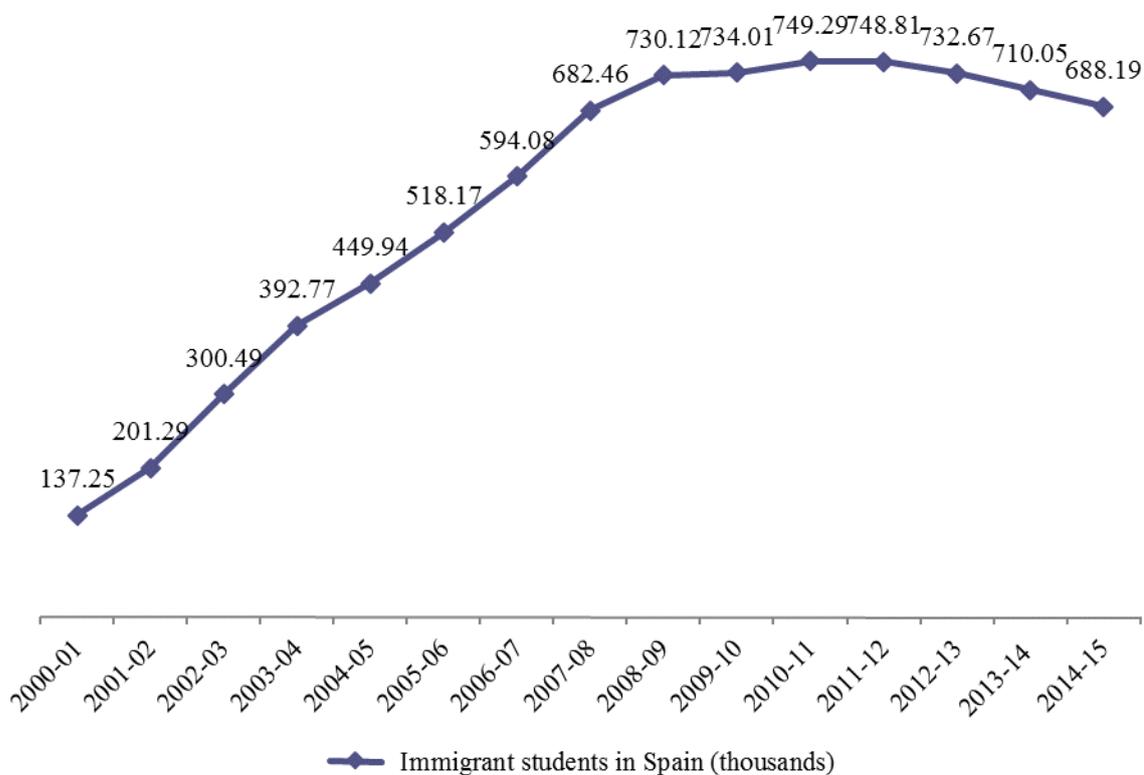
<b>Autonomous Community</b>	<b>Minority language</b>	<b>Date</b>
Basque Country	Euskera	November, 1982
Catalonia	Catalan	April, 1983
Valencia	Valencian	November, 1983
Balearic Islands	Catalan	June, 1986
Community of Navarre	Euskera	December, 1986

Consequently, we will further present the new multicultural and multilingual school reality and the consequent adjustments of the Spanish educational system to it.

### ***1.2.2.1 Immigration and school in Spain***

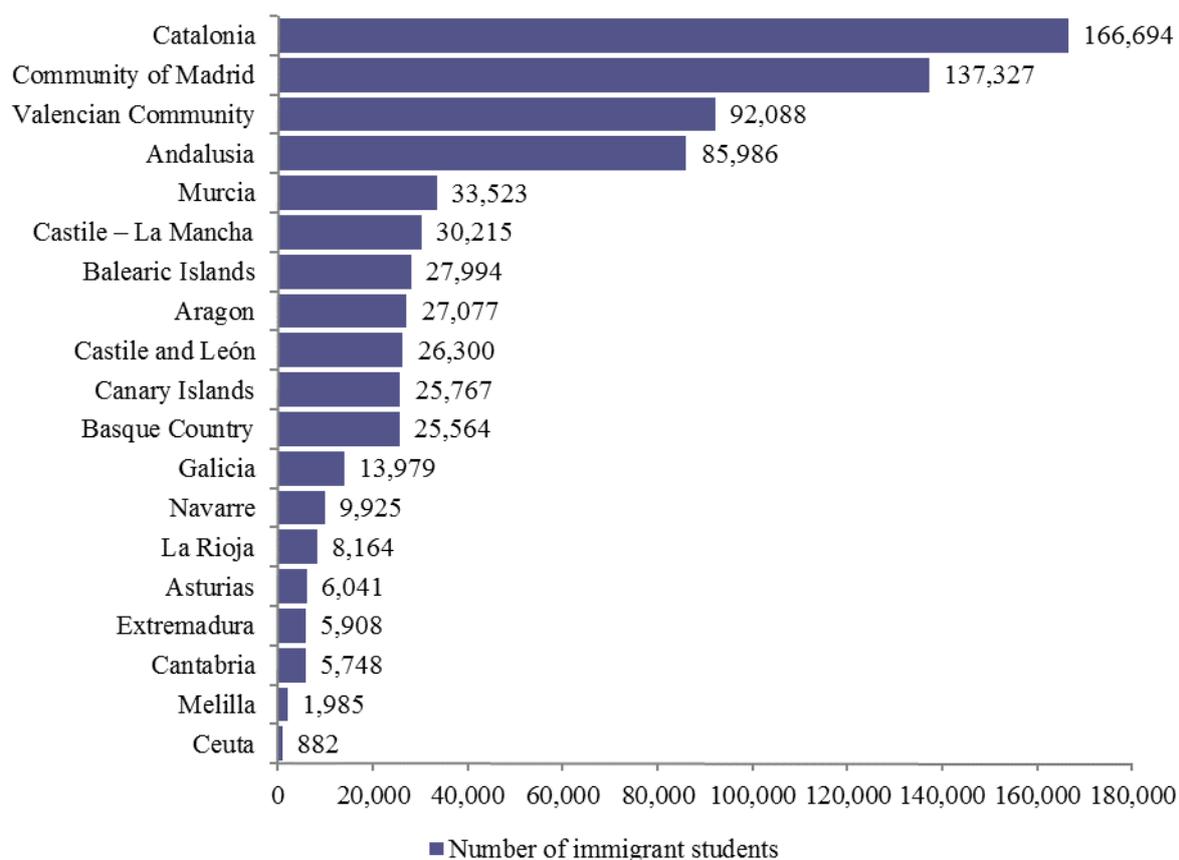
As it occurred in the case of the total values of immigrants at country level for the period 2000-2014, the numbers of immigrant students in Spain’s schools also experienced a period of considerable growth, namely from the academic year 2000/01 to 2010/11, when it reached its highest number, 749,288 students. That notwithstanding, the following

academic years were marked by a slight decrease in the number of immigrant students, as presented in Figure 6.



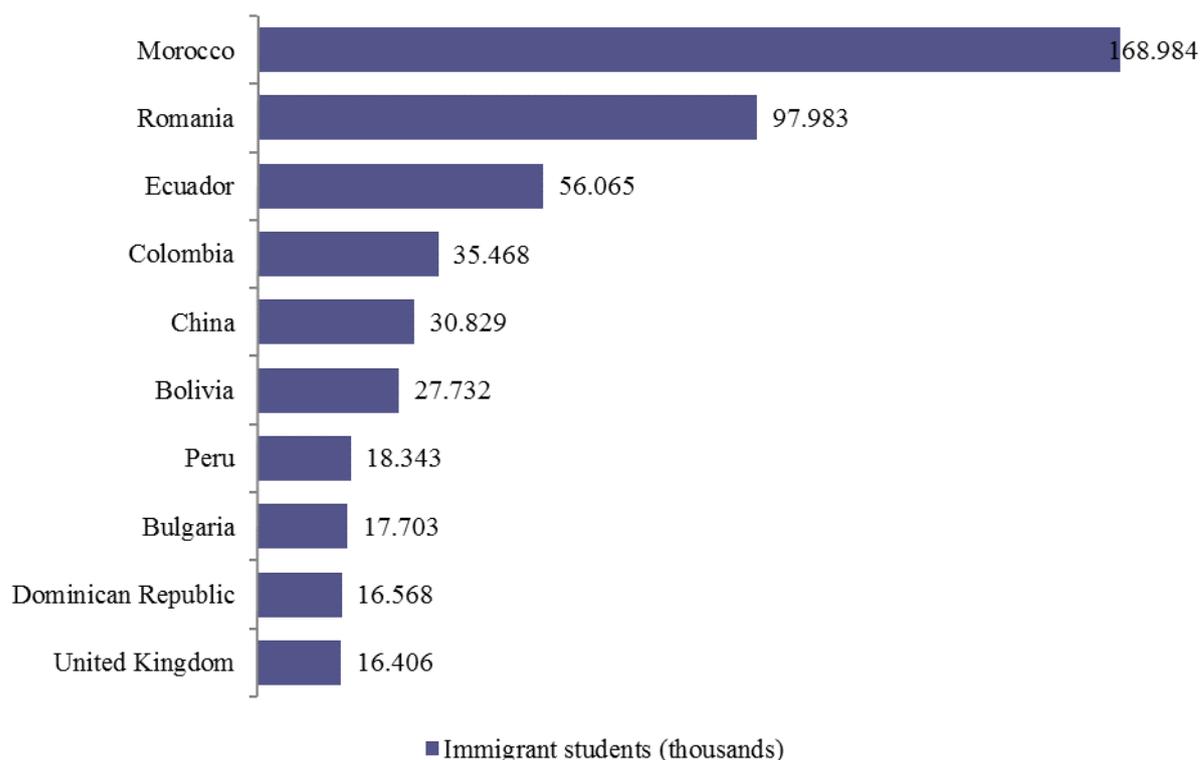
**Figure 6. Evolution of the immigrant student population in Spain (2000-2015). The values for the academic year 2014-2015 are provisional (MECD, 2015a)**

As previously mentioned, there is a considerable number of immigrant children enrolled in the Spanish education institutes at the moment. Nonetheless, there are different percentages of the aforementioned population across the state's autonomous communities. Specifically, Catalonia, Community of Madrid, and Valencian Community count with the largest numbers of immigrant students (see Figure 7). Regarding the percentage of immigrant students from the total student population, the highest percentages were found in La Rioja (14.7%), the Balearic Islands (13.8%), Catalonia (12.7%), and Community of Madrid (11.6%) (MECD, 2015b).



**Figure 7. Distribution of the immigrant students across the autonomous communities (MECD, 2015c)**

As far as the countries of origin are concerned, Moroccan pupils were the most numerous and their number increased significantly during the last years. Students originating from Romania and Ecuador followed the Moroccans during the academic year 2013/14.



**Figure 8. Immigrant student population in Spain by country of origin (MECD, 2015c)**

Furthermore, as a response to the increasing number of pupils from different linguistic backgrounds and with the aim of helping those students preserve their L1, classes of mother tongue were organised for the languages most present in schools.

As a consequence of the fact that the Romanian group is one of the most represented immigrant groups in the Spanish educational system, Romanian students were also granted the possibility to attend classes of Romanian language, culture, and civilization.

#### *1.2.2.1.1 Romanian language, culture, and civilization (LCCR) course*

The project of the course *Romanian language, culture and civilization* (LCCR) began in 2007 with the Government Decision no. 857 of 2007 and the Joint Statement of the Ministry of Education, Research, and Youth of Romania and the Ministry of Education and Science of Spain, signed on July 16, 2007 (MAE, 2015).

The two ministries, both responsible for educational policy, reaffirmed their support for the teaching project Romanian language, culture, and civilization, initiative that aims to maintain contact with the realities of the Romanian school community and the culture in Romania (Ministry of Education, Research and Youth of Romania, 2015). Consequently,

they will not lose their ties with the country of origin despite the fact they are brought up or educated in another country. It is conceived as extracurricular and optional, but could significantly help the children who want to return to Romania, for reintegration reasons and also for the homologation of the studies attended in Spain.

Other objectives of the project as presented by the Department of Education, Youth, and Sports of the Community of Madrid (2015) are:

- To facilitate and promote the knowledge of Romanian language and culture to Romanian students enrolled in Madrid schools of Primary and Secondary education.
- To provide Romanian students with the necessary training that will allow them to preserve their identity and live their culture, also help them to have self-confidence and minimize the negative aspects that might arise from their emigration.
- To promote the students' educational and sociocultural inclusion in the educational system and in the society.

#### *Organization and evolution of the classes*

The course is aimed at all educational levels: primary, secondary, and high school. The curriculum, the textbooks, and other teaching materials are provided by the Institute of Romanian Language in Romania. The course is delivered by Romanian teachers with bachelor's degree in humanities. The Ministry of Education, Research, and Youth of Romania, through the Institute of the Romanian language is responsible for their selection and payment. Likewise, the course is carried on in Spanish schools, which will ensure the correct functioning of the project and will provide the necessary classrooms and infrastructure (MAE, 2015).

Regarding the evolution of the course, it began in the Community of Madrid, Castile - La Mancha, and Catalonia in the academic year 2007-2008. The project comprised 22 teachers and about 1,500 students enrolled in 113 groups for which 972 hours/month were delivered. Surprisingly enough, students of other nationalities also attended the course (Spanish, Ukrainian, Moroccan, etc.), representing approximately 3% of all enrolled students (MAE, 2015).

Furthermore, during the 2011-2012 academic year, the aforementioned course was held in seven autonomous communities of Spain (39 teachers and 4,323 students participated in the project).

The autonomous community with the highest number of students attending Romanian classes during this academic year was Madrid, with 1,325, closely followed by Castile-La Mancha (1,216). In Catalonia, 207 students were enrolled and 3 teachers delivered these classes in 12 different schools from 4 towns (MAE, 2015). Table 3 presents the autonomous communities which offered Romanian classes during the academic year 2011-2012, with the corresponding number of students, schools, and towns involved in the project and teachers required to carry them on.

**Table 3. Autonomous Communities with Romanian classes during the academic year 2011/2012 (MAE, 2015)**

<b>Autonomous Community</b>	<b>No. students</b>	<b>No. teachers</b>	<b>No. schools</b>	<b>No. localities/towns</b>
Community of Madrid	1,325	11	60	18
Andalusia	207	3	12	4
Aragon	506	4	21	2
Catalonia	207	3	12	4
Castile-La Mancha	1,216	11	59	27
La Rioja	315	3	17	7
Valencian Community	547	4	26	9

Unfortunately, data regarding the course for the academic year 2013-2014 is not made available yet.

After presenting the situation at national level, we will further detail the migration and educational state of affairs from the autonomous community where the study was conducted, Catalonia.

## 1.3 MIGRATION AND MULTILINGUAL EDUCATION IN CATALONIA

As seen in the case of Spain, we will firstly discuss the migratory situation in Catalonia, and then present the characteristics of the Catalan educational system; lastly, we will focus on how immigration affects schools and the corresponding educational measures employed.

### 1.3.1 Current migratory situation in Catalonia

As previously seen in Figure 3, in Spain the migratory phenomenon has not affected all territories equally. Catalonia, with 1,089,214 foreigners registered, is the Autonomous Community with the highest number of recently arrived citizens (INE, 2015b).

Furthermore, as presented in Figure 9, the flow of immigrants seemed to stop and even slightly decline from 2010 to 2011, probably as a consequence of the toll that the economic crisis had on Catalonia (INE, 2015a).

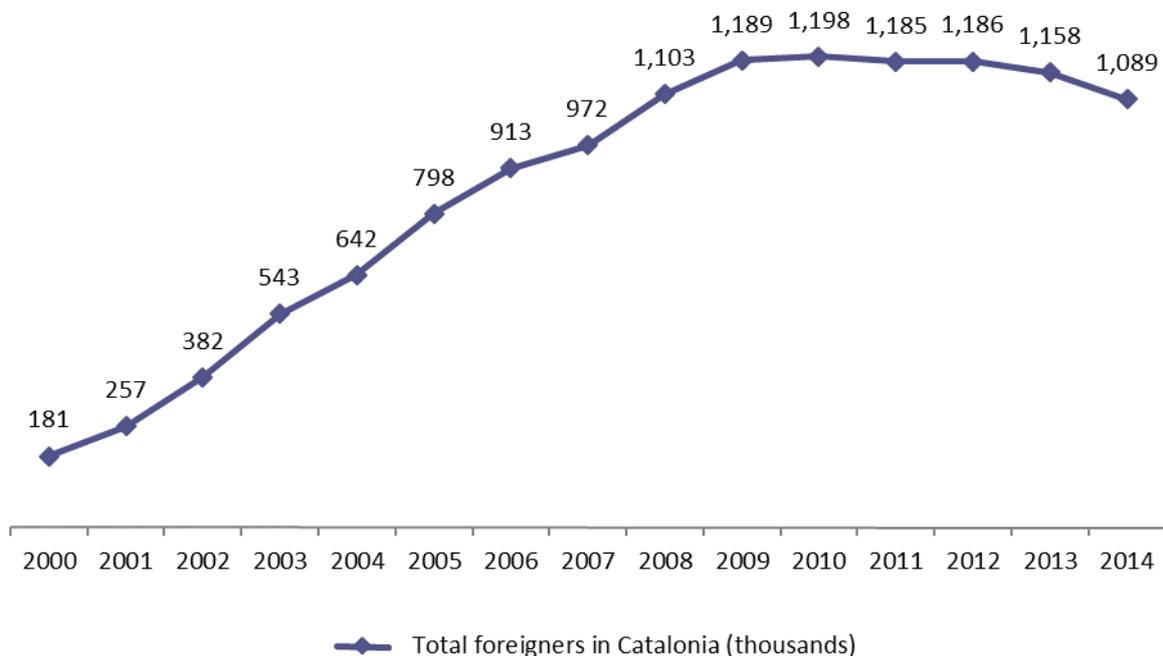
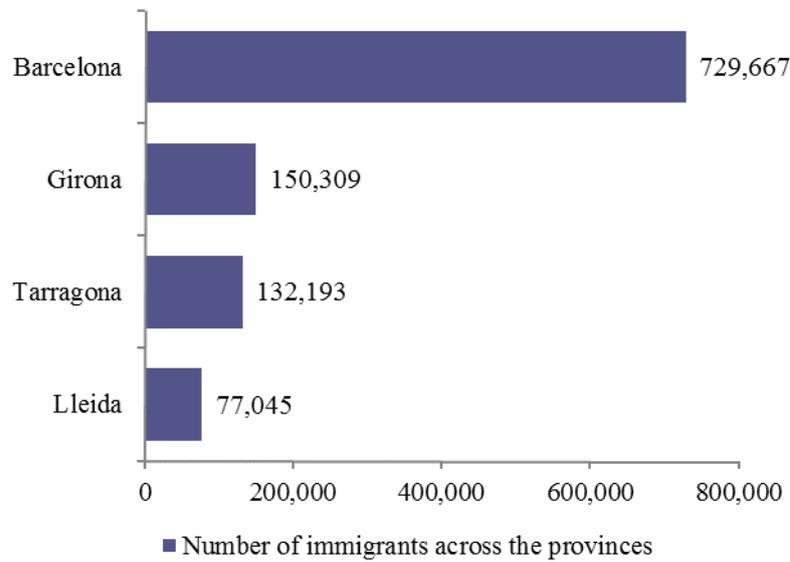


Figure 9. Evolution of the foreign population in Catalonia for the period 2000-2014 (INE, 2015a)

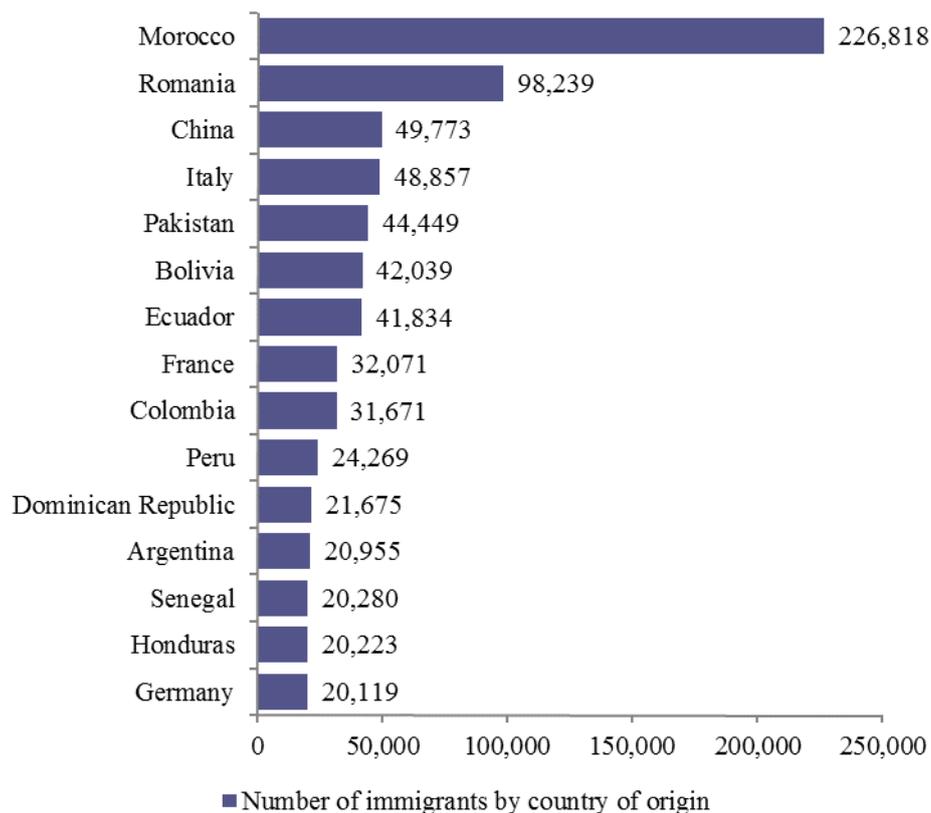
Additionally, from Figure 10 we can observe that the immigrant population is not distributed uniformly across the four provinces of Catalonia. As expected, the province of Barcelona is the one comprising the largest number of immigrants (Idescat, 2015a).



**Figure 10. Distribution of the immigrant population across the provinces of Catalonia (Idescat, 2015a)**

Finally, according to the country of origin, the most numerous group is from Morocco, representing 20.83% of the total foreign population in Catalonia. The second largest one is the Romanian group, comprising 9.02% of the autonomous community's foreign population (Idescat, 2015b).

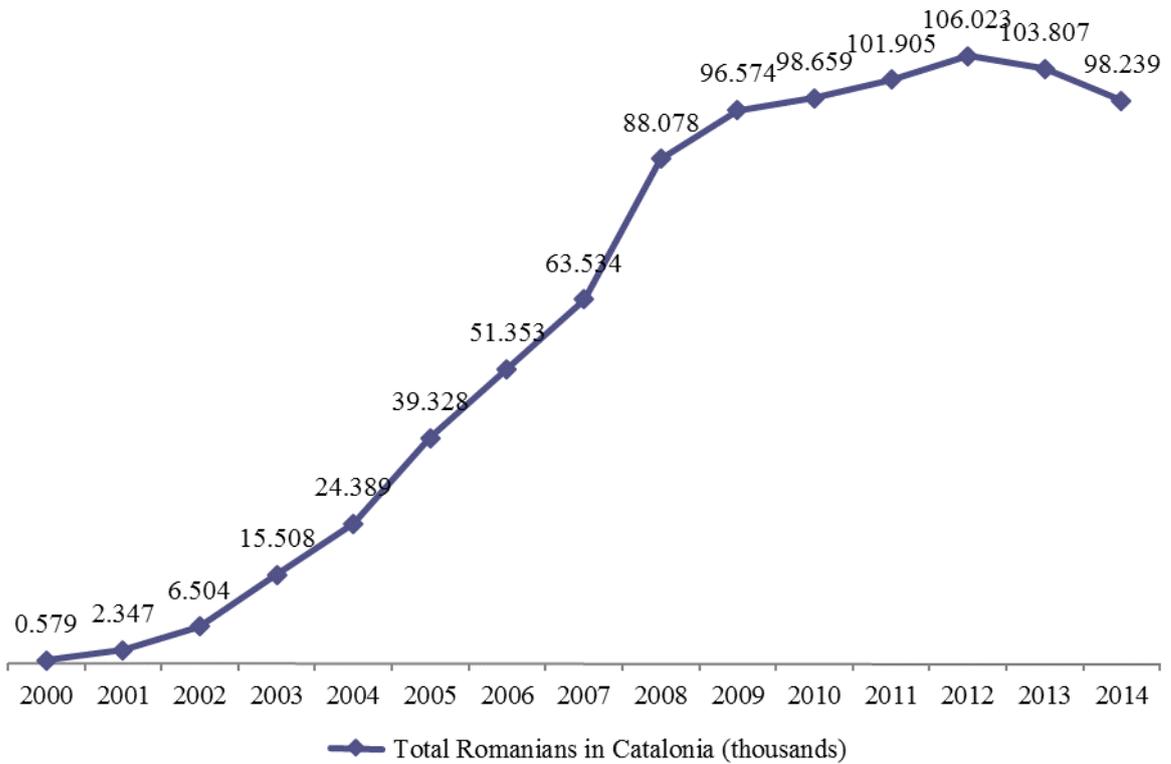
We will further focus on the immigrant group of interest for the present study, the Romanian one, as it represents the second largest one with 98,239 persons, surpassed only by the Moroccan one.



**Figure 11. Immigrant population in Catalonia by country of origin (Idescat, 2015b)**

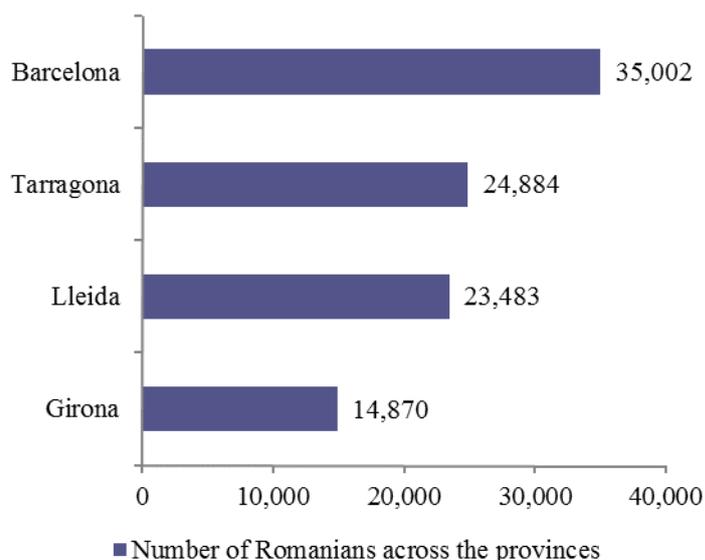
### ***1.3.1.1 The Romanian immigrant group***

Firstly, Figure 12 presents the evolution of the Romanian population in Catalonia for the period 2000-2014. As noticed in the case of the Romanian group in Spain, there were some years of significant increase in immigrants, in this case represented by the period 2002-2008, which culminated in 2012 when the aforementioned group reached its highest number, 106,023 persons. That notwithstanding, the years that followed marked a decrease, due probably to the same economic problems mentioned earlier.



**Figure 12. Evolution of the Romanian immigrant population in Catalonia for the period 2000-2014 (INE, 2015a)**

Secondly, from Figure 13 we can observe that the Romanian immigrant population is not distributed uniformly across the 4 provinces of Catalonia. Once again, the province of Barcelona is the one comprising the largest number of immigrants from this group, followed by Tarragona and Lleida (INE, 2015b).



**Figure 13. Distribution of the Romanian immigrant population across the provinces of Catalonia (INE, 2015b)**

Baring this in mind, we will further discuss the educational system in Catalonia and how it was affected by the migratory movement and the presence of foreign students in the classrooms.

### **1.3.2 Educational system in Catalonia**

Within the Spanish' constitutional frame, the legislation of each different autonomous community is determinant in the process of protecting and promoting local languages. However, not all communities have reached the same level of self-government. Differences, such as the existence or lack of a local language, the social use of the language(s), people's identification with the community, language awareness, attitudes towards the language(s), etc., define a reality that is far from homogeneous. In addition, the political boundaries of some communities do not coincide with linguistic boundaries, a fact which contributes to some contradictions in the language policies of those communities (Siguán, 1992).

With the restoration of democratic rights and institutions, the generalized movement for the recovery of the regional languages of Spain led to the incorporation of the main languages (i.e., Catalan, Galician, and Basque) into their respective educational systems, both as the object of study and language of instruction.

Catalonia is officially recognized as a historical nationality, and has achieved high levels of self-government, contrary to other cases, such as Aragon, with a lower level of

autonomy. This difference, in addition to important sociolinguistic ones, has contributed to the recognition of Catalan as the indigenous language in Catalonia, and to the passing of the 1983 Language Planning Act ('Llei de Normalització Lingüística'), intended as a tool to redress the precarious situation of Catalan after the 40 years of repression and persecution imposed by Franco's dictatorial regime. The above-mentioned Act established the foundations of what is now an international reference point in the field of bilingual education (Laurén, 1994; Vila, 1995).

Catalan and Spanish are the official languages of Catalonia, based on Catalan being Catalonia's own language and Spanish being official throughout the Spanish State. The official status of the two languages was ratified by the Statute of Autonomy of Catalonia approved on December 18<sup>th</sup> 1979, also called the Statute of Sau. Additionally, the Occitan language is official in Vall d'Aran.

The position of Catalan was also strengthened by establishing it to be the language of preferential use in administration, media, and the educational system. Also, the introduction of citizens' duty to know Catalan placed Catalonia's own language on a par with Spanish, mirroring the Spanish Constitution. Thus, the Statute reinforces the measures adopted by previous laws, such as the Catalan Linguistic Policy Act of 1998, and makes one more step towards advancing the process of language recovery and achieving equality between Catalan and Spanish (May, 2012).

The educational system of Catalonia suffered a series of changes imposed by successive laws that lead to the transformation of Catalan from a language taught as a subject to the language of instruction in non-university education.

In 1993, a Catalan immersion model of education was implemented in all preschool and primary education centres, while in secondary education, parents continued to have the possibility to choose the linguistic model.

The immersion program was designed mainly for children from Spanish speaking families in order to help them learn both languages. The program applied was early total immersion. Specifically, it was early because the students are emerged into the second language (Catalan language in this case) from the beginning of school and total because in the first academic years the teaching time in the new language is between 90 and 100 per cent (Serra Bonet, 2005). Immersion education represented more than an opportunity

to learn two languages; it was “part of the project of reinstating Catalonia’s heritage language as a language of normal use in its territory” (Artigal, 1997: 133).

The Catalan Linguistic Policy Act of 1998 consolidated the Catalan Conjoint Model (‘Model de Conjunció en Català’), which stipulated that students will not be divided on first language criteria and that Catalan is the vehicular and teaching language in non-university education. Also, Catalan and Spanish were guaranteed adequate presence in the curriculum in order to achieve competence in both languages at the end of compulsory education. Also, such programs have played a key role in the revitalization of Catalan in the region, and that they have not been detrimental to the levels of competence in Spanish or other basic curricular abilities (Huguet, 2007). Teaching staff was also required to know the two official languages and to be able to use them as medium of instruction (Galindo & Vila, 2009; Generalitat de Catalunya, 2010). This way, the Catalan immersion program was the second largest one, after the Canadian one (Huguet & Madariaga, 2005).

In the course of the last two decades, the desire to see Catalan rise from its prostration has been translated into a vigorous language policy implemented by Catalonia’s autonomous government re-established at the end of the ‘70s after the Franco’s dictatorship.

The Catalan immersion programme was a politically orientated development, considered by the regional government authorities as a mean to both integrate a large non-Catalan-speaking immigrant population into Catalan life and upgrade the status of Catalan in relation to Spanish.

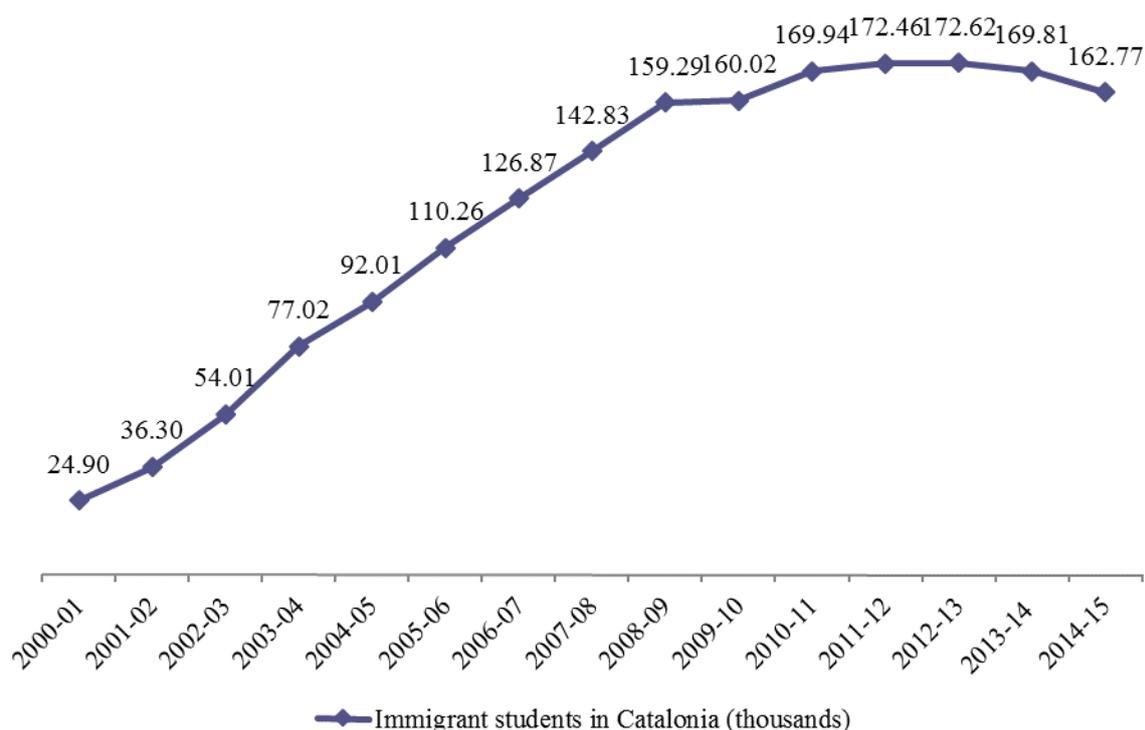
Furthermore, as showed in studies as the ones of Vila (1995) and Arnau (2003), the success of these programs (language maintenance and language immersion) has been widely confirmed by previous studies, and it can be highlighted that there are no differences in Spanish competence level between one and another type of programs, despite the fact that the students with Spanish as mother tongue who are schooled in immersion programs achieve a significantly higher level of Catalan compared to their peers who attend school in their mother tongue. Recent data from the Generalitat de Catalunya (2006) reinforce that the general level of Spanish language of the Catalan students is equivalent to the average at State level, although the final results of the language are inferior to the global ones for Catalan – one of the most relevant tools to interpret these results (Huguet, 2009).

In addition, a complex linguistic scenario has emerged as the result of increasing immigration to Catalonia and other regions of Spain, ensuring that Catalan schools are becoming ever more multilingual (Escobar Urmeneta & Unamuno, 2008). Consequently, the success of the aforementioned programs with native students runs parallel to higher rates of academic failure affecting immigrant students. In fact, international reports (i.e., PISA reports) have shown that in most countries the averages obtained in the different competences evaluated tend to be slightly lower among students of immigrant origin when compared to their native peers.

Following, we will deal more in-depth with the phenomenon of migration in Catalonia and its consequences at educational level.

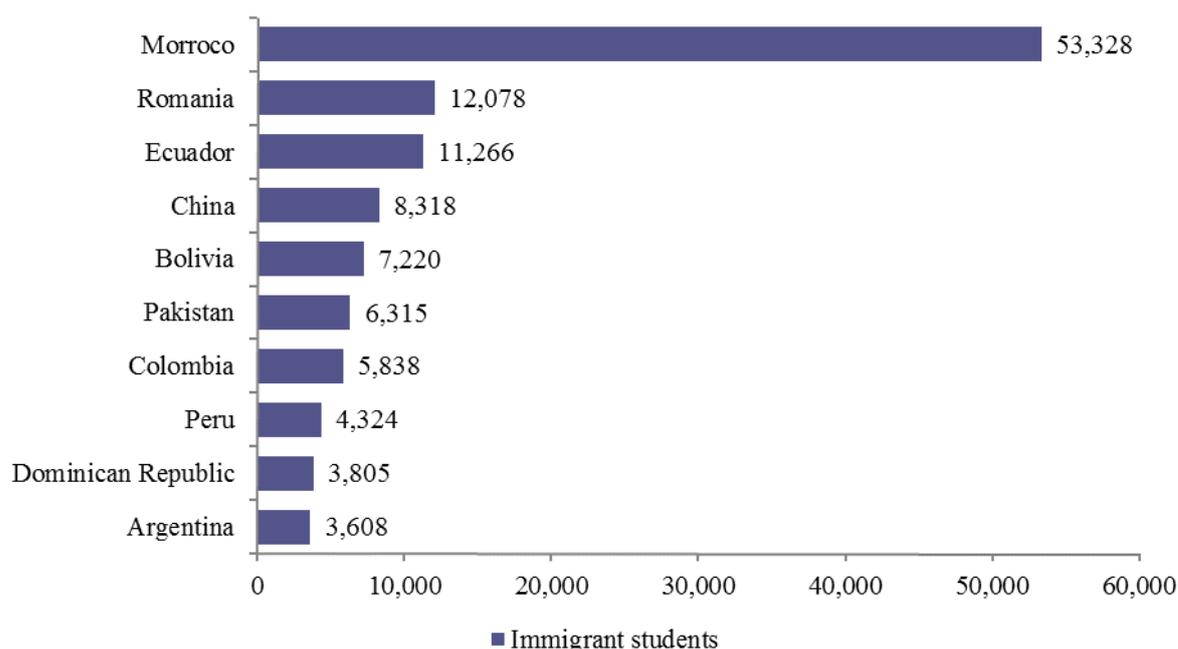
### ***1.3.2.1 Immigration and school in Catalonia***

The numbers of immigrant students in Catalonia also experienced a period of considerable growth, as presented in Figure 14, which reached its peak in 2012, counting for 172,615 students. Furthermore, in the academic year 2013/14, a total number of 166,694 immigrant children were enrolled in the Catalan system of education at non-university level, corresponding to 12.67% of the total student population (MECD, 2015d).



**Figure 14. Evolution of the immigrant student population in Catalonia (2000-2015). The values for the academic year 2014-2015 are provisional (MECD, 2015a)**

The distribution of the immigrant student population in function of their country of origin is diversified. In this regard, Figure 15 shows the absolute numbers of immigrant students in Catalonia for the first 10 countries of origin present in schools. Specifically, the Moroccans comprise the largest group of immigrant students, corresponding to 31.99% of the total population of immigrant students. The second largest group is the Romanian one, which accounts for 7.25% of the aforementioned population. Ecuador, China, and Bolivia are also highly present in the Catalan schools, each one accounting for more than 4% of the total number of immigrant students (MECD, 2015c).



**Figure 15. Immigrant student population in Catalonia by country of origin (MECD, 2015c)**

Furthermore, from Table 4 we can observe that the immigrant student population is not distributed uniformly across the 4 provinces of Catalonia. As was the case with total values of immigrant people across the provinces of Catalonia, Barcelona is the one comprising the largest number of immigrant students, representing 73.38% of the total population of immigrant students (MECD, 2015d).

As a consequence of the linguistically diverse and complex panorama present in Catalan schools, attempts were made to adapt to the new reality, one of the most noteworthy outcomes being the Plan for Language and Social Cohesion discussed in the following section.

**Table 4. Distribution of immigrant students across the provinces of Catalonia for the academic year 2013-2014 (MECD, 2015d)**

Province	Immigrant students	Percentage of the total number of immigrant students (%)
Barcelona	965,615	73.38
Tarragona	144,183	10.96
Girona	130,823	9.94
Lleida	75,300	5.72

*1.3.2.1.1 The Plan for Language and Social Cohesion (LIC Plan)*

One of the interesting aspects of the development of the immersion programmes in Catalonia over the last few years is that they have moved from being considered a local means of promoting the status and use of the Catalan language by the Autonomous Catalan Government, after years of linguistic repression under General Franco (1939-75), to a vehicle to help Spain adjust to the growing demands for multilingualism in international languages in Europe. Simultaneously, the Plan for Language and Social Cohesion - LIC Plan ('Pla per a la Llengua i la Cohesió Social' - Pla LIC) acknowledges the importance of developing the linguistic repertoires of newly arrived immigrants in the country to avoid the social exclusion of the immigrant population, although this is often seen by educational authorities as belonging to the optional after-school activity programmes, rather than forming part of the mainstream school curriculum (de Mejía, 2012).

When attending school in the host society the immigrant students' needs are related to the lack of knowledge regarding the culture, traditions, norms, and customs of the school community and the host society, and also to the acquisition of language competences, especially in the case of those who come from countries which are not Spanish speaking.

The main responsible for the reception and integration of immigrant students are the education centres (Generalitat de Catalunya, 2004). Schools have to develop a Language Project of the Centre ('Projecte Lingüístic de Centre') and a Plan of reception and integration ('Pla d'acollida i d'integració'), which represents the systematic set of actions designed for the incorporation of all students (Generalitat de Catalunya, 2004).

In the context of Catalonia, the LIC Plan was designed by the Department of Education of the Catalan Government and regulated the education practices directed to immigrant students and the training of teaching staff for working in the reception classrooms ('aules d'acollida') (Lizárraga, 2012), with the overall objective "to promote and strengthen the social cohesion, the intercultural education and the Catalan language in a multilingual framework" (Generalitat de Catalunya, 2004: 12).

Accordingly, in order to achieve the objectives and purposes established in the Law of Education regarding the integration of students of immigrant origin, School Reception and Integration Plan and Language Project have been developed. Given the circumstances of a bilingual community, specific objectives of reception classroom deal not only with

the inclusion in the sociological environment in order to ensure the emotional welcome, but also with measures designed to accelerate the learning of the vehicular language of instruction, with the intervention of the Pedagogic Counselling Team.

In this sense, the reception classroom is an open school space that becomes a frame of reference and a work environment “that facilitates immediate and most appropriate care of newcomer students and helps teachers to face the new educational challenges” (Generalitat de Catalunya, 2004: 31).

Regarding the specific aspects that define this classroom, the students are expected not to stay longer than two years in it and it was not developed for students in kindergarten or first cycle of primary education, as the immersion in the classroom at that age does not hinder the rapid adaptation to the new environment and encourages communication and language learning. Also, each student will be assigned an Individual Intensive Plan (‘Pla Individual Intensiu’ - PII); this document collects the student’s desired evolution since joining the school in the reception classroom until their full incorporation into the regular classroom.

Further, the presence of students in the classroom must not exceed half of the weekly teaching hours and gradually decrease. Specifically, students can study in the reception classroom a maximum of 12 hours per week in primary education and 20 hours per week in secondary education. The rest of the hours, newly arrived students participate in regular classes, usually subjects that facilitate the process of socialization (Generalitat de Catalunya, 2004). Furthermore, classes in the reception classroom are carried on in Catalan and the aim is to learn the language of the host society and to acquire the corresponding academic skills.

Reception classrooms have been evaluated since their onset (Vila, Perera, & Serra, 2006) on the one hand, as a tool to accelerate knowledge of the school language and on the other, due to their ability to promote immigrant students’ school adjustment.

In the same vein, the purpose of the reception classes is to hasten the incorporation of students to the academic activities in the regular classroom, but only after they consolidated conversational skills in the school language (as well as basic elements of written language). The regular classroom is the main place where the actual process of

learning takes place and efforts should be focused on dealing with the linguistic diversity of students.

Furthermore, on linguistic matters, the LIC Plan requires that

*by the end of primary education pupils must be able to understand and express simple messages in a given context in one foreign language. By the end of secondary education they must be able to understand and produce oral and written messages in one foreign language...* (LIC Plan, Appendix 2: 28, cited in Escobar Urmeneta & Unamuno 2008: 236-7).

Also, it promotes the development of Catalan “as the mainstay of a multilingual and intercultural education policy in order to achieve greater social cohesion” (LIC Plan: 4, cited in Escobar Urmeneta & Unamuno, 2008: 234).

Likewise, the LIC Plan states that “schools must assume the reception and integration of students of foreign nationality recently enrolled in the educational system as a basic and fundamental task” (Generalitat de Catalunya, 2004: 6), and also that “the reception and integration of new students to Catalonia is the responsibility of, first, the school and all the professionals who work there” (Generalitat de Catalunya, 2004: 17).

In other words, it proposes important changes regarding immigrant students and addresses various aspects: (a) first, the promotion of social and educational inclusion for students, as a strategy to avoid marginalization, ensure equity, and create the necessary conditions for equal opportunities and possibilities in access to quality education; (b) second, the consolidation of Catalan as vehicular language in schools within a bilingual project characterized by both linguistic and cultural diversity.

Finally, the objectives of educational administration in the Catalan community (Departament d’Educació, 2004) culminate with the development of awareness regarding equality in dignity of all persons as a precondition for understanding and respecting cultural differences, promoting the culture of dialogue and the coexistence in an intercultural context.

As previously presented in the sections dealing with migration and schools, currently, one of the groups most present in Catalan classrooms is the Romanian one, fact that has led to the launch, concomitantly with other autonomous communities of Spain (the academic year of 2007-2008) of the educational program aimed at learning the Romanian language, culture, and civilization.

*1.3.2.1.2 Romanian language, culture, and civilization (LCCR) course in Catalonia*

Specifically, the Romanian community represents the second immigrant population in Catalonia and also the second largest group among the immigrant students enrolled in Catalan schools. As a consequence, during the academic year 2007-2008 it was decided to promote extracurricular Romanian language, culture, and civilization classes with native teachers.

In this sense, the Department of Education of the Government of Catalonia established a partnership with the Embassy of Romania in Spain, for the organization and implementation of these classes. The teachers assigned to the program receive an annual training on the Catalan educational system, focusing on the methodology to be used and useful information, as well as educational and management materials (Generalitat de Catalunya, 2008b).

According to the information available, during the academic year 2007-2008, 1,902 students of Catalonia studied their mother tongue as an extracurricular activity. From the total number, 179 were students who studied Romanian. Regarding the area of Catalonia where the students had access to Romanian classes, it is relevant to highlight that only 6 were from the Barcelona area and 173 from Lleida (Generalitat de Catalunya, 2008a).

As for the importance granted to the project in the Catalan context, Ernest Maragall i Mira, ex Minister of Education of the Generalitat of Catalunya, stated that “the point is for these young people enrolled in our schools and obviously undergoing the learning process in Catalan [...] to keep the roots and identities and to make these students feel more at home and know that Catalonia is a land of reception in the broadest sense of the word” (Generalitat de Catalunya, 2008a). He also added that the goal is the children to feel full citizens, but to know there is no reason for them to lose neither their origin, nor their identity (Generalitat de Catalunya, 2008a).

As previously mentioned in the case of Spain, classes of mother tongue were provided to immigrant students in order to maintain the contact with their linguistic and cultural background. In this regard, one of the most salient linguistic characteristics of immigrant populations across the world is that in language contact situations, first language skills will be affected.

Consequently, we will further discuss the process underwent by the mother tongue in a migrant environment.

## **1.4 MAINTENANCE AND LOSS OF THE FIRST LANGUAGE IN MIGRANT CONTEXTS**

Regarding the level of competence in the mother tongue in situations of migration, it is expected for all speakers living in bilingual contexts to experience some degree of deterioration in the L1 (Cherciov, 2011) or what was called loss of the native language (NL) by migrants (de Bot & Hulsen, 2002; De Bot & Weltens, 1985 as cited in van Els, 1986).

Generally speaking, language loss means the loss or deterioration of competence in one's first language or second language (Oxford, 1982).

In the opening of her paper, Montrul (2004: 259) provides a thorough explanation of what the L1 loss concept entails: "L1 loss is a general term that covers attrition, incomplete acquisition, language death, and even language change".

Similarly, L1 loss refers to a more rapid shift from first language prominence to second language prominence and has been defined as a process in which a person's L1 abilities, usually measured expressively, are reduced or diminished (Anderson, 1999). Further, L1 attrition describes patterns of language use in which an individual does not lose his or her ability in the L1, but does not advance in its use, either (Schiff-Myers, 1992). It co-occurs with L1 loss, whereby demonstrated skill in certain aspects of the language is reduced across time (Anderson, 2004).

For the purpose of our study, we will focus on two forms of L1 loss: L1 attrition and incomplete acquisition.

Models of first language attrition are intrinsically related to models of forgetting, of acquiring a second language, and of interlinguistic interference (Cherciov, 2011). The dangerous consequence of ignoring this reality resides in the fact that studies with children were able to show complete L1 loss.

Lambert and Freed (1982) provide the first definition of non-pathological language attrition, referring to the phenomenon as the loss of a language or part of a language, both at an individual level and at a community level.

Therefore, when talking about attrition, we refer to a non-pathological decrease in proficiency in a language that has been acquired at a certain point by an individual (Köpke & Schmid, 2004).

In the same vein, the term first language attrition (FLA) refers to the gradual decline in native language proficiency among migrants. As a speaker uses their L2 frequently and becomes proficient (or even dominant) in it, some aspects of the L1 can deteriorate or become subject to L2 influence.

De Bot and Weltens (1985) (as cited in van Els, 1986) suggest a taxonomy that distinguishes between four types of loss, taking into account which language is affected (L1 or L2) and in which environment the change occurs: loss of an L1 in an L1 environment (e.g., dialect loss), loss of an L1 in an L2 environment (e.g., loss of a native language by migrants), loss of an L2 in an L1 environment (e.g., loss of a foreign language), and loss of an L2 in an L2 environment (e.g., loss of a second language by aging migrants).

Furthermore, Schmid and Köpke (2007) present L1 attrition as a process governed by two factors: the presence and development of the L2 system and diminished exposure to and use of L1. Nevertheless, although a degree of transfer can indeed be encountered in bilingual contexts, in order for L1 attrition to occur there are other necessary conditions, such as emigration, extensive use of L2, extremely reduced use of L1, plus a period of time of decades (Schmid & Köpke, 2007). Moreover, attrition can be seen as the result of both the lack of L1 input as well as the increasing influence of the dominant L2 (Cherciov, 2011).

Further, similar to second language acquisition, first language attrition is mediated by a number of external factors, such as exposure and use (e.g., Hulsen, 2000; Schmid, 2007; Schmid & Dusseldorp, 2010), attitude and motivation (Ben-Rafael & Schmid, 2007; Schmid, 2002), or aptitude (Bylund, 2008). However, some of the most studied variables in L1 attrition are: age, education (Yağmur, 1997), length of residence in the L2 society (Laufer, 2003), language contact and choice, attitudinal factors, language aptitude, and amount of contact with the L1, among others. With respect to contributing factors, it is shown that attitudinal factors may outweigh others such as age, length of residence, L1 choice and use, or language aptitude (Cherciov, 2011).

Regarding the variable age, after analysing a considerable number of studies in the field, Köpke and Schmid (2004) conclude that age proved to be the most important factor when predicting language attrition. That notwithstanding, there is no agreement concerning a specific age limit for the attrition phenomenon. Furthermore, regarding the variable length of residence, the same authors state that its effect can be perceived in the cases where contact with the mother tongue is reduced to nonexistent. In the same line, de Bot, Gommans, and Rossing (1991) point out the linear relation between time and attrition when there is low contact with the L1.

Concerning morphological L1 attrition, the consensus view seems to be that it occurs only later, as language attrition first affects the lexical level (Hutz, 2004). The same author concludes that morphological and syntactic structures therefore appear to be more resistant to the process of language loss, and points to the necessity of longitudinal studies with more participants in order to further disentangle the differences in the process of attrition at lexical and morphological/syntactic levels.

Additionally, Montrul states in her study that “L1 attrition, in my opinion, should only be used to characterize loss of linguistic ability *after* an L1 was acquired completely” (2004: 259, author’s emphasis). In line with the last affirmation of the author, Yağmur (2004) points out in his study, in order for a language to be lost, it should have been previously acquired.

These affirmations bring us to the other form of language loss, incomplete acquisition.

When dealing with incomplete acquisition, we encounter a great help in defining the concept in Montrul’s (2011a: 593) paper: “In its broadest sense, incomplete acquisition is typical of any developing grammar, be it monolingual first language, bilingual first language, or second language acquisition”.

Furthermore, the author recognises the possibility of an incomplete acquisition that can be the product of transfer errors in more stable states of second language acquisition (Montrul, 2011a), and further stipulates inflectional morphology as one of the aspects commonly affected in cases of incomplete acquisition.

Concomitantly, we must highlight the connection between language attrition and L2 transfer, as the first one can be considered to some extent the result of the latter (Cherciov, 2011). In this sense, Sharwood Smith’s (1983) cross-linguistic hypothesis

states that the reorganization of the L1 system under the influence of the L2 is the most likely explanation for the phenomena of loss.

When trying to delimitate the border between L2 influence and L1 attrition, the research currently available comes to no consensus. The problem resides in distinguishing between the normal type of cross-linguistic influence and the process of L1 attrition in the case of members of migrant populations (Schmid, 2011).

In the same vein, the results of the study Cherciov (2011) conducted as part of her doctoral dissertation with Romanian adult speakers in Canada suggest that it is possible for some speakers to retain two languages and achieve considerable proficiency in both the L1 and the L2, this being the case of the bilingual participants who took part in her research. The author (2011: 188) concludes that: “[...] while L1 attrition remains a possible outcome of language contact in a migrant context, the research conducted here establishes that this is not a necessary outcome in the first generation of migrants”. Furthermore, regarding the morphological level, it is stipulated in the above-mentioned paper that the areas affected by reduction were case marking, plural marking, and gender assignment; an explanation for this fact could be the influence of L2. Lastly, the results also indicate a correlation between levels of L1 attrition and negative attitudes towards L1 combined with a younger age at the time of emigration and more education in the L2 country.

Although to our knowledge there are no extended studies in the Catalan context dealing with L1 Romanian, in a preliminary study conducted on Romanian immigrant students in Catalonia analysing verb inflection errors in Spanish and Romanian languages, Popa, Chireac, and Huguet (2015) also observed that the errors in the participants’ mother tongue increase with a longer length of residence. The authors draw the attention on the fact that the hypothesis of incomplete acquisition of the mother tongue cannot be discarded either, as from the information available, the participants do not seem to fit the profile of attriters noticed in previous studies in the field (Cherciov, 2011; Köpke & Schmid, 2004; Schmid & Köpke, 2007, among others). Also, the participants’ age at emigration indicates that those with a longer length of residence in the host society did not reach the necessary age to attend school in the country of origin, which is seven years old as stipulated by the Law of National Education, ratified at January 5, 2011. As a consequence, the first generation of immigrants will not complete their L1 acquisition, as they arrived to the host society at an early age (Popa, Chireac, & Huguet, 2015).

To conclude, as Lambert and Freed (1982: 6) pointed out, “we know a fair amount about how people learn languages; we know remarkably little about how language skills, once learned, are forgotten - whatever that means precisely [...]”. Similarly, de Bot (1996) stated that one of the most disconcerting conclusions one arrives at when reviewing reports on L1 attrition is a lack of agreement regarding what aspects of an individual’s grammatical system are most vulnerable to attrition or even whether linguistic competence, once established, can be irretrievably lost.

After reviewing the phenomenon of migration and its consequences at educational level in general and on the mother tongue of the immigrants, we will further examine the theoretical background of the process of second language acquisition, also present whenever we are dealing with migration and thus a context of multiple languages in contact.

## 2 SECOND LANGUAGE ACQUISITION

The aim of this chapter is to provide a succinct overview of the historical evolution in the field of second language acquisition. Additionally, several specific aspects will be dealt with in more depth, as they are directly related and of high significance to the empirical study developed in the second part of the work.

### 2.1 THEORETICAL FRAMEWORK

In the 1970s, Second Language Acquisition (henceforth, SLA) came into its own and was highly influenced by Chomsky's (1965) developing theory of grammatical competence. Chomsky conceived the central task of linguistics to be the resolution of the 'logical problem' of child language acquisition. The conclusion reached by the author was that human beings come equipped with innate mental knowledge of the possible grammatical and phonological resources available to human languages and the ways in which these resources can be configured. His theory of human language was built around his concept of Universal Grammar (UG), the genetic endowment that allows human beings to acquire the grammar of any particular language. In its guise as mental toolbox for first or second language acquisition, it is known as the Language Acquisition Device (LAD). The overall UG theory has led to so-called generative SLA research.

SLA researchers have argued that the formal study of SLA was initiated with Corder's publication on the significance of learners' errors. Corder (1967) has suggested that L2 learners came equipped with something internal, something that guides and constrains their acquisition of the formal properties of a new language. He also made a distinction between input and intake, defining input as the language available from the environment – everything that one hears or reads in the environment, but intake as that language that actually makes its way into the learner's internal system.

The 1980s saw SLA theory develop rapidly, as scholars increasingly recognised that the process could not be just a re-run of first language acquisition, but was governed by a more complex array of factors, both social and psychological. In this sense, Krashen (1981) distinguished unconscious processes of acquisition, such as those governing children's linguistic development, from deliberate acts of learning, which are prominent in adult second language development, especially when the additional language is taught.

Consequently, SLA is the study of the learning process of individuals and groups who aim to acquire a language subsequent to their L1. The mother tongue is usually acquired during early childhood before the age of three, whereas the L2 is often subject to acquisition in later stages of childhood, adolescence, or adulthood, once the L1(s) have been acquired in early childhood (Ortega, 2009). Regarding this matter, Lenneberg (1967) concludes that L2 is more difficult to acquire than L1. This difficulty is based on presupposed differences between L1 and L2 learners such as extent of motivation, inevitability, and completed maturational process (Corder, 1967). Despite these potential differences, which are yet to be proven as fully evident through research, the cognitive processes and the learning strategies of L2 learners can be considered as more or less similar to that of L1 learners given that the L2 learners are motivated and exposed to language input on a regular basis (Corder, 1967).

To understand current contributions of SLA theory to SLA practice, it is perhaps useful to look at the way in which different theories came and went during the last century. Essentially, we can identify three major trends of theory building:

- linguistic approaches, oriented toward language structure and “accuracy” (Contrastive Analysis, Error Analysis, Universal Grammar);
- cognitive approaches, embracing universal and individual elements of the psychology of learning;
- sociocultural approaches, focusing on language use in social contexts.

Furthermore, SLA can be considered as the study of how additional languages are learned (Benati, 2014; Lightbown & Spada, 2006). In a detailed review of how the field is construed in a variety of institutional contexts, Kramsch (2000: 322) concludes that “[SLA] might be called a theory of the practice of [second] language acquisition and use. The theory of [second] language study makes explicit or implicit claims as to how languages can or should be taught in classrooms”.

Likewise, it is a field of enquiry which investigates how learners create a new language system with often a limited exposure to the L2 (Gass & Selinker, 2001). As outlined by VanPatten and Benati (2010: 2),

*Looking at the various definitions of SLA what emerges is a concern about learners and learning. The field of SLA addresses the fundamental questions of how learners come to internalize the linguistic system of another language and*

*how they make use of that linguistic system during comprehension and speech production.*

Additionally, SLA “refers both to the study of individuals and groups who are learning a language subsequent to learning their first one as young children” (Saville-Troike, 2006: 2). Also, the aforementioned acquisition can occur in an informal (e.g., natural context) and/or a formal environment (e.g., classroom).

This approach, from theory to practice and back to theory, is attractive. But it is important to recognise that research in SLA is not always conducted for the purpose of generating implications for the additional language classroom. Indeed, many scholars study SLA for the same purpose that their colleagues study first language acquisition: not to solve the practical problem which confronts the prelinguistic child, but to contribute to our understanding of human language and human development.

As previously pointed out, it is important to emphasize that the study of SLA is separate from the study of language pedagogy, although this does not mean that there are not implications that can be drawn from SLA to the related discipline of language teaching, or that ideas that arise in classrooms cannot be useful in the understanding of SLA. The proof for this is that in the first half of the last century, SLA was not yet established as a separate field of enquiry.

Furthermore, SLA is different from learning a foreign language. SLA of a non-native language occurs in an environment in which the non-native speaker has easy access to speakers of the language being learned. In contrast, foreign language learning refers to the learning of a non-native language in the environment of one’s native language (Gass & Selinker, 2001).

Regarding the morphological acquisition, ever since the morpheme-acquisition studies in the 1970s (Bailey, Madden, & Krashen, 1974), the development of morphology, in particular of inflectional morphology, has been at the centre of second language acquisition research. Indeed, much of the current research on morphology in adult L2 acquisition can be read as a variation on the two central discoveries of these early studies, namely, that the L2 development of morphology is systematic, yet that it differs in developmental sequence and also in outcome from L1 acquisition (Hopp, 2013).

Likewise, the acquisition of tense and aspect has long been a topic of intensive investigation (for overviews, see Bardovi-Harlig, 2000; Slabakova, 2002), given that

temporal expression is fundamental to communication. As a consequence, the acquisition of tense and aspect is a core task for all language learners (Roberts & Liszka, 2013).

SLA research, since its emergence, has been governed by the concept of the native speaker. Manifestations of such dependency are particularly acute in product-oriented approaches to SLA research whose mission is, typically, to examine the quantity and quality of second language (L2) knowledge (Han, 2004). In this sense, Davies (2003: 180) shares his disapproval regarding the native-speaker myth:

*SLA research has always been more interested in the native speaker than in language proficiency. In particular it has compared native-speaker behavior and that of various second language learners, asking the question: What does the second language learner know and to what extent does this differ from what the native speaker knows?*

It is not an uncommon assertion that very few L2 learners appear to be fully successful in the way that native speakers are (Towell & Hawkins, 1994) and the concern of SLA whether or not L2 learners can achieve a linguistic competence indistinguishable from that of a native speaker (Han, 2004).

Regarding the terminology employed, we adopt the wide spread use (Gass & Selinker, 2001; Jarvis & Pavlenko, 2008; VanPatten & Benati, 2010, among others) of the concept of L2 as any language learned after the L1 has been learned, regardless of whether it is the second, third, fourth, or fifth language (Gass & Selinker, 2001).

### ***Theories of second language acquisition and learning***

Over the past three decades, studies in linguistics have focused on SLA investigating how a second language is acquired, describing different stages of development and assessing whether second language acquisition follows a similar route as the first language acquisition. Consequently, a number of theories of second language acquisition were formulated, especially the past few years have seen a renewed interest in general theories of SLA.

Each of the models puts forward an explanation for some aspect of SLA. Also, most of the SLA theories developed during the last decades were developed along the lines of first language acquisition theories. Likewise, it is important to note that language acquisition theories have been influenced especially by linguistic and psychological schools of

thought. Thus they have given relatively changing weights on different factors in approaching the acquisition process as can be seen in the following subsections.

In this part of the study, McLaughlin's (1987) view of language acquisition will be discussed. The author examines five theories: the Monitor Model, the Interlanguage theory, the Linguistic universals, the Acculturation/pidginisation theory, and the cognitive theory.

### *The Monitor Model*

Krashen's (1985) Monitor Model is a collection of hypotheses which together seek to provide a unitary framework for understanding additional language learning. It was developed in the late 1970s as an 'overall' theory of SLA that had important implications for language teaching.

Krashen's theory of SLA is based on five main hypotheses:

- the Acquisition-Learning hypothesis
- the Monitor hypothesis
- the Input hypothesis
- the Affective Filter hypothesis
- the Natural Order hypothesis

The *Acquisition-Learning hypothesis* is the most fundamental of all the hypotheses in Krashen's theory and the most widely known among linguists and language practitioners.

According to the author, there are two independent systems of second language performance: *the acquired system* and *the learned system*. The acquired system or acquisition is the product of a subconscious process, very similar to the one of a child learning his/her L1 or L2 (Gregg, 1984). It requires meaningful interaction in the target language (TL) - natural communication - in which speakers are concentrated not on the form of their utterances, but on the communicative act. On the contrary, language learning refers to the conscious knowledge of a second language, knowing the rules, being aware of them, and being able to talk about them (Gregg, 1984). The learned system or learning is the product of formal instruction. Likewise, it is claimed that learning is less important than acquisition and that these two systems should remain disparate.

The *Monitor hypothesis* explains the relationship between acquisition and learning and defines the influence of one on the other. This hypothesis holds that formal learning has only one function which is as a monitor for the learner's output. Additionally, the monitoring function is the practical result of the learned grammar. Accordingly, the acquisition system is the utterance initiator, while the learning system performs the role of the monitor or the editor (Krashen & Terrell, 1983).

The *Natural Order hypothesis* is based on research findings (Dulay & Burt, 1974a) that suggested that the acquisition of grammatical structures follows a predictable natural order. For a given language, some grammatical structures tend to be acquired earlier than others. This order seemed to be independent of the learners' age, L1 background, conditions of exposure, and although the agreement between individual acquirers was not always 100% in the studies, there were statistically significant similarities that reinforced the existence of a Natural Order of language acquisition. The author however points out that the implication of the natural order hypothesis is not that a language program syllabus should be based on the order found in the studies. In fact, he rejects grammatical sequencing when the goal is language acquisition.

The *Input Hypothesis* represents an attempt to explain how the learner acquires an L2. Krashen's Input hypothesis, central to his theory of SLA, suggests that language instruction just slightly above the student's current level of language proficiency (i.e., comprehensible input) is useful for SLA. Generally, language learners should be given an initial silent period during which they can build up acquired competence in the language before they feel comfortable expressing themselves. So, the Input hypothesis is only concerned with acquisition, not learning. According to this hypothesis, the learner improves and progresses along the natural order when he/she receives L2 input that is one step beyond his/her current stage of linguistic competence.

Finally, the fifth hypothesis, the *Affective Filter Hypothesis*, embodies the view that a number of affective variables play a facilitative, but non-causal, role in second language acquisition. These variables include: motivation, self-confidence, and anxiety. Krashen claims that learners with high motivation, self-confidence, a good self-image, and a low level of anxiety are better equipped for success in SLA. Affective factors as low motivation, low self-esteem, and debilitating anxiety can combine to raise the affective filter and form a mental block that can prevent "input from reaching the language acquisition device" (Krashen, 1985: 100). On the other hand, positive affect is necessary,

but not sufficient on its own, for acquisition to take place. In other words, a high affective filter inhibits acquisition, whereas a low affective filter promotes it. This filter is present in adults but not in children (Larsen-Freeman & Long, 1991).

### *Interlanguage theory*

The term interlanguage was first used by Selinker (1972) to describe the linguistic stage L2 learners go through during the process of mastering the target language. Since then, it has become a major strand of second language acquisition research and theory.

According to the author, interlanguage is a temporary grammar which is systematic and composed of rules. These rules are the product of five main cognitive processes:

1. Overgeneralisation. Some of the rules of the interlanguage system may be the result of the overgeneralisation of specific rules and features of the target language.
2. Transfer of Training. Some of the components of the interlanguage system may result from transfer of specific elements via which the learner is taught the L2.
3. Strategies of Second Language Learning. Some of the rules in the learner's interlanguage may result from the application of language learning strategies "as a tendency on the part of the learners to reduce the TL to a simpler system" (Selinker, 1972: 219).
4. Strategies of Second Language Communication. Interlanguage system rules may also be the result of strategies employed by the learners in their attempt to communicate with native speakers of the target language.
5. Language Transfer. Some of the rules in the interlanguage system may be the result of transfer from the learner's L1.

The subject of interlanguage will be dealt with in more depth later in this study.

### *Linguistic universals*

Mentalist theories of L2 acquisition emphasize the role of innate knowledge. This takes the form of a language acquisition device which helps the learner to discover the rules of the target language grammar and which contains knowledge of linguistic universals (Ellis, 1994).

Broadly speaking, language universals can be considered generalizations about properties of just a small selection of languages, so-called implicational universals, which represent

an empirical generalization derived from typological work that states that if a language has a particular feature, it necessarily has another feature (Robinson, 2012a).

Consequently, Ellis (1994) distinguishes between two approaches to the study of linguistic universals in SLA. A number of linguists have set about identifying typological universals through the study of a large number of languages drawn from different language families (Croft, 2003; Greenberg, 1966). Other linguists (belonging to the generative school associated with Chomsky) have studied individual languages in great depth in order to identify the principles of grammar which underlie and govern specific rules (i.e., Universal Grammar).

#### *Acculturation/ pidginization theory*

Schumann (1978a) first proposed his pidginization/ acculturation model in the late 1970s. On the basis of naturalistic studies of untutored learners, he noticed that early interlanguages resemble pidgin languages (i.e., simplified trading languages which lack native speakers). Pidginization is characterized by simplifications and reductions (e.g., fixed word order and lack of inflections) occurring in the learner's interlanguage which lead to fossilization when the learner's interlanguage system does not progress in the direction of the target language (McLaughlin, 1987).

From this perspective, SLA is greatly affected by the degree of social and psychological distance between the learner and the target-language culture. Social distance refers to the learner as a member of a social group that is in contact with another social group whose members speak a different language. Psychological distance results from a number of different affective factors that concern the learner as an individual (e.g., language shock, culture shock, culture stress). If the social and/or psychological distance is considerable, then acculturation is impeded and the learner does not progress beyond the early stages of language acquisition. As a result, his/her target language will stay pidginized (for a review see McLaughlin, 1987).

#### *Cognitive theory*

Psychologists and psycholinguists viewed second language learning as the acquisition of a complex cognitive skill. Some of the sub-skills involved in the language learning process are applying grammatical rules, choosing the appropriate vocabulary, following the pragmatic conventions governing the use of a specific language (McLaughlin, 1987).

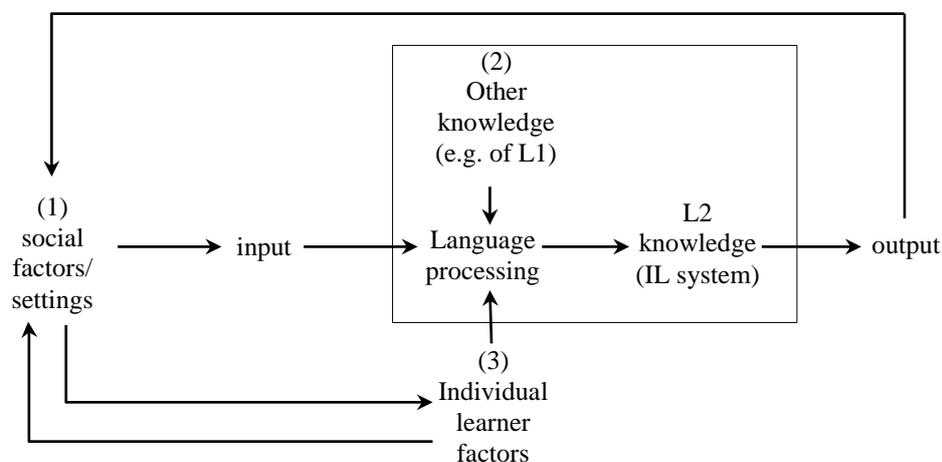
These sub-skills become automatic with practice (Posner & Snyder, 1975). During this process of automatization, the learner organizes and restructures new information that is acquired. Through this process of restructuring the learner links new information to old information and achieves increasing degrees of mastery in the L2.

From the cognitivist's point of view, language acquisition is dependent "in both content and developmental sequencing on prior cognitive abilities" and language is viewed as a function of "more general nonlinguistic abilities" (Berman, 1987: 4).

As previously seen, various attempts have been made in order to convey the processes involved in second language acquisition and learning. Accordingly, from it emerges the necessity of an overview of relevant factors and their interactions to be taken into consideration when interpreting L2 acquisition. However, no sole model can be regarded as conclusive and capable of explaining all the phenomena involved in L2 learning.

Therefore, based on the consensus among different investigators on the main factors that play a significant role in the process of SLA, Ellis (1994) mentions three aspects: the external environment, the 'black box' (i.e., the learner's existing knowledge and the internal mechanisms that guide L2 acquisition), and the individual learner factors (e.g., age, motivation).

As can be noticed in Figure 16, the three factors are interrelated in a number of ways. Social factors (for example, a learner's ethnic background) may influence individual learner factors (for example, a learner's motivation to learn a particular language). Also, the language processing mechanisms account for changes in the learner's L2 knowledge (the interlanguage system).



**Figure 16. A framework for explaining L2 acquisition (Ellis, 1994: 194)**

Furthermore, the same author mentioned that the categorization of explanations in terms of external factors, internal factors, and individual learner differences is justified because it reflects identifiable orientations in SLA research and also because it provides a means of organizing the information provided by research. However, it should be emphasized that there is no single and no simple explanation of L2 acquisition. A complete explanation will need to consider all the three components and how they interact.

Firstly, the impact of social factors/ settings on learning outcomes has been studied in relation to L2 proficiency rather than developmental patterns, as it has been generally assumed that social factors do not directly influence the process of L2 acquisition (Ellis, 1994). Likewise, there has been relatively little research which has investigated the effects of particular social factors on L2 proficiency. These factors affected learners as groups, hence the label 'social'. However, there are several studies related to several sociolinguistic variables: age, sex, social class, and ethnic membership/identity (Gardner, 1985; Giles & Byrne, 1982; Schumann, 1978b).

Furthermore, regarding the learner-internal factors (e.g., language processing mechanisms, previous linguistic knowledge), it must be emphasised that any theory of SLA needs to provide an account of them. Unlike the social factors, these factors are not directly observable. They are covert and can only be inferred by studying learner output and, to some extent, learner's reports of how they learn. Among the most studied aspects in this regard are: language transfer (Corder, 1983; Dulay & Burt, 1974b; Odlin, 1989), linguistic universals, and other cognitive structures and their corresponding developed theories, such as Interlanguage theory (McLaughlin, 1987; Selinker, 1972), the Monitor Theory (Krashen, 1981), the Model of Second Language Learning (Bialystok, 1978), among others.

Lastly, there is a wide variety of individual learner variables which researchers have identified as influencing learning outcomes (Ellis, 1994; Skehan, 1991). Accordingly, Ellis (1994) mentions among the most researched individual factors: beliefs (Horwitz, 1987), affective state - one of the most studied is anxiety (Bailey, 1983), age (Cook, 2008; Lenneberg, 1967; Singleton & Ryan, 2004), language aptitude (Carroll, 1990; Ellis, 1994), learning style (Keefe, 1991), attitude and motivation (Crookes & Schmidt, 1989; Gardner, 1985), and personality, within the last one considering the different dimensions of personality: extroversion/introversion, risk-taking, tolerance of ambiguity, empathy, self-esteem, and inhibition.

***Later-developed theories in SLA<sup>2</sup>***

Although the theoretical framework directly related to the present study (Error Analysis, Language Transfer, etc.) receives a thorough overview, we will briefly present the latest theoretical developments in the field of second language acquisition. That notwithstanding, we ought to bear in mind that SLA research has become a rather amorphous field of study with elastic boundaries, which makes the task of surveying the field a difficult one (Ellis, 1994).

One of the most relevant later-developed theories in cognitivist SLA is the Processability Theory (Pienemann, 1998, 2005; Pienemann & Kessler, 2011). It is a theory of L2 grammar acquisition which aims to offer a cross-linguistically applicable and psycholinguistically plausible explanation for the stages and sequences learners go through in productively processing (hence the term ‘processability’ in the name of the theory) different morphosyntactic phenomena. Subordinate clause procedures are the last ones to be implemented. Within this theory, then, variability is explained in terms of the constraints imposed on the learning process by the architecture of the language processor. The task of language acquisition is seen as the acquisition of processing skills. Thus, the fundamental tenet underlying the Processability Theory is that language acquisition is constrained by the architecture of human language processing: at any stage of development, the learner can produce and comprehend only those L2 linguistic forms which the current state of the language processor can manage. In this regards, Bonilla (2014) conducts an investigation aiming to provide empirical data regarding the stages predicted by the Processability Theory in the second language (L2) acquisition of Spanish syntax and morphology.

Further, among the processing approaches to SLA, several models were proposed concerning the role of attention and awareness in adult L2 learning and behavior, the Noticing Hypothesis (Schmidt, 1990, 1993, 1994, 1995, 2001; Schmidt & Frota, 1986) being one of them<sup>3</sup>.

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<sup>2</sup> We aim to present just a limited selection of theories. For a comprehensive overview of the linguistic, psycholinguistic, and cognitive perspectives in SLA, see for instance Mitchell and Myles (2004) or VanPatten and Williams (2007).

<sup>3</sup> This hypothesis is best explained in Schmidt (1995).

This Hypothesis states in general terms that “SLA is largely driven by what learners pay attention to and notice in target language input and what they understand the significance of noticed input to be” (Schmidt, 2001: 3-4). Therefore, attention controls access to awareness and is responsible for noticing. The same author views attention as being isomorphic with awareness and initially rejects the idea of learning without awareness. Furthermore, he proposes that in addition to noticing, there is another, higher level of awareness, referred to as awareness at the level of understanding, which could lead to deeper learning marked by restructuring and system learning.

That notwithstanding, claims were made that it was difficult to distinguish between absence of noticing and inability to remember and report the experience of noticing at a later time (Ortega, 2009). Acknowledging this, Schmidt (2001) concluded that the more L2 learners notice, the more they learn, and that learning without noticing (that is, subliminal learning), even if it exists in other domains of human learning, plays a minimal role in the challenging business of learning a new language.

Schmidt’s approach to SLA has powerfully influenced the field for the last 20 years, providing a solid theoretical framework for cognitivist SLA approaches. Input and interaction (Long, 1996), the closely related focus-on-form movement, and discussions of implicit versus explicit language learning have all been strongly influenced by Schmidt’s theory (Ortega, 2009). Consequently, we will next present the Interaction Hypothesis (Gass, 1997, 2003; Long, 1996; Pica, 1994).<sup>4</sup>

Focused on the the role of input and interaction in the L2 learning process within a cognitive framework, the interaction hypothesis grew out in the early 1980s of work conducted by Long for his dissertation in which college-level English as a Second Language (ESL) learners were paired to interact with English native-speaking pre-service and in-service teachers of ESL, as it was considered that L2 development is facilitated when learners interact with other speakers (Ortega, 2009). Accordingly, Long (1996: 451-452) states that “negotiation work that triggers interactional adjustments by the NS [native speaker] or more competent interlocutor facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways”.

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<sup>4</sup> This hypothesis is best explained in Long (1996).

Additionally, as for theories regarding (mother tongue) transfer, the Markedness Differential Hypothesis and the Full Transfer / Full Access Hypothesis arise.

On the one hand, the Markedness Differential Hypothesis (Eckman, 1977, 1981) was formulated as an attempt to address some of the problems with CAH and makes use of 'markedness' to explain why some L1 forms are transferred while others are not. For SLA, the general implications are that those areas of difficulty that a second language learner will have can be predicted on the basis of a comparison of the native language and the target language. Specifically, the main claim is that those areas that are more marked in the L2 than the L1 will be difficult, whereas the aspects that are less marked in the L2 than in the L1 will present no particular learning challenge. Also, a form that is more marked in the L1 is less likely to be transferred than a form that is less marked.

On the other hand, the status of Universal Grammar in SLA has long been debated. In this sense, the Full Transfer / Full Access Hypothesis (Schwartz, 1993; Schwartz & Sprouse, 1996) posits that the L1 grammar, including L1 parameter settings, constitutes the initial state of L2 acquisition (full transfer), but that L2 learners have full access to UG at all times during the acquisition process (full access), and thus it is possible to reset parameters during the L2 acquisition. In other words, full transfer means that the initial state is made up of the L1 grammar excluding specific lexical items, whereas full access means that UG is fully accessed during L2 development when interlanguage is needed to restructure.

### ***Non-cognitivist approaches to SLA***

Despite the well-known dominant cognitivist orientation in SLA, the field has been transformed by a process since the mid-1990s of profound critique against the cognitive foundations of the discipline and against the neglect of the sociocultural dimensions of learning (Mitchell & Myles, 2004).

Therefore, newer 'alternative' (Atkinson, 2011) approaches arose, which take a more socially-orientated, dynamic, and complex perspective to language development/acquisition, and are situated outside the traditional cognitivist view of SLA, with the dominant linguistic and psycholinguistic theoretical influences, which also dictate the present study.

Even more, under the new social perspectives, the study of additional language learning is not only shaped by the social context in which it happens, it is bound inextricably to such context (Ortega, 2009).

The approaches that emerged in SLA were generally presented as isolated. However, attempts were made (Atkinson, 2011; García Mayo, Gutierrez Mangado, & Martínez Adrián, 2013, among others) to contribute to the understanding of how they function and are related. In the same vein, we will succinctly overview six approaches based on the selection made by Atkinson (2011): the sociocultural approach to SLA, the complexity theory approach, identity perspectives on SLA, language socialization approaches, conversation analysis approach, and the sociocognitive theory approach.<sup>5</sup>

### *The sociocultural approach to SLA*

In the context of L2 learning, already in the 1980s Lantolf began applying Vygotsky's insights to SLA concerns, and he has made the theory and its variations well known to SLA audiences (e.g., Lantolf, 2006; Lantolf & Appel, 1994; Lantolf & Thorne, 2006, 2007). Beginning in the mid-1990s, Swain (2000, 2006) reworked output and interaction into new sociocultural meanings.

The Vygotskian sociocultural theory posits that consciousness has its basis in the human capacity to use symbols as tools. Language is also a process, rather than a product, and it is the most important of all symbolic tools. As all tools, language is used to create thought but it also transforms thought and is the source of learning (Ortega, 2009). Consequently, Vygotskian SLA researchers see the learning of an additional language as a process that involves gradually appropriating the L2 to make it into our own tool for self-regulation and thinking, just as once we learned to do the same with our L1 as children.

In the same vein, sociocultural theory-L2 research sets mediation, either by other or self, as the central interest, and examines if and how learners develop the ability to use the new language to mediate (i.e., regulate or control) their mental and communicative activity. Accordingly, it identifies two types of symbolic mediation: self-regulation, i.e., the ability to plan, monitor, check, and evaluate self-performance, and concept-based regulation,

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<sup>5</sup> For a basic reading on some of the main socially-orientated approaches in SLA, see Atkinson (2002), Block (2007), Kramsch (2002); Larsen-Freeman (2007), Swain and Deters (2007), Zuengler and Miller (2006).

resulting from the appropriation and internalization of cognitive tools needed for mediation in specific ‘subject-domains’.

Summarising, the sociocultural approach to SLA hypothesises that L2 learning is not something that happens to people, but something people make happen through intentional social interaction and co-construction of reflected-upon knowledge.

Lastly, concerning error correction in this approach, it is not conceived as transfer of linguistic information from a tutor to a tutee, as is often conceptualized in the cognitive interactionist approaches, but is defined as “help that is jointly negotiated between experts and novices” (Aljaafreh & Lantolf, 1994: 480).

#### *A conversation-analytic approach to SLA<sup>6</sup>*

In the context of L2 learning, Conversation Analysis began to be applied to L2 data first in Denmark by Firth and Wagner, as they studied oral interactions among non-native speakers who used English as a lingua franca for business-related purposes in Europe. Although dissemination of their empirical work began in the early 1990s, two particular papers (Firth & Wagner, 1997; Wagner, 1996) were the ones that opened up these ideas to the European and North American SLA audiences, together with an early piece by Markee (1994), who had also broached the discussion of Conversation Analysis in North American SLA.

In a nutshell, a main insight of Conversation Analysis is that L2 interactions, just like any human interactions, are orderly accomplishments in doing communication, rather than random or deficit attempts at using the L2. As a consequence, learning emerges in interaction, as social participants go about the daily activities of making sense of each other’s talk both in and beyond classrooms. In other words, this framework characterizes L2 learning as primordially socio-interactional practice and focuses on the detailed analysis of conversation, in institutional and public talk, or in the instructional talk of classroom and tutorials (Ortega, 2009).

Regarding the role of errors in this paradigm, the notion of error becomes obsolete in the Conversation Analysis approach, because nothing can be treated as error a priori; the analysts in this field talk about repairables, but only when the participants display evidence that they orient to something in the talk as a source of trouble for them.

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<sup>6</sup> For an introduction on Conversation Analysis, see Drew (2005), Ten Have (2007), Hutchby and Wooffitt (2008).

Similarly, L2 users are not deficit users, thus the view of ‘doing’ communication as a social accomplishment.

*Language socialization approaches*<sup>7</sup>

It originated in the field of linguistic anthropology during the 1970s and early 1980s when the seminal work of Ochs and Schieffelin (e.g., Ochs & Schieffelin, 1984) led the way into richly contextualized studies of young children and their caregivers, mutually engaged in social routines that helped socialize the new members into the language, culture, and values of their given community.

Simply put, language socialization represents a broad framework for understanding the development of linguistic, cultural, and communicative competence through interaction with others who are more knowledgeable or proficient. Therefore, it examines not only linguistic development in the cognitive view, but also the other forms of knowledge that are learned in and through language (culture, values, practices, identities, ideologies, and stances of that community, etc.)

As for the role of errors and error correction within the language socialization approach, it is believed that corrective feedback unfolds a socializing function. That is, by drawing attention to verbal behaviors deemed to be problematic and responding to them in particular ways, corrective feedback routines constitute a central locus for socializing novices into a linguistic community. In this sense, the study conducted by Friedman (2009) reveals how corrective feedback is socializing children into speaking pure language and into dominant Ukrainian language ideologies that proscribe language mixing as a violation of the natural boundaries between languages, thus preserving a distinct Ukrainian language.

Lastly, the role of power and inequality in socialization is currently a major focus in this area.

*Identity perspectives on SLA*<sup>8</sup>

Interest in this area began to grow when in 1993 Norton Peirce completed her dissertation on the identity struggle of five immigrant women in Canada and later published parts of this study (Norton, 1997, 2000; Norton Peirce, 1995).

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<sup>7</sup> Overview works: Duff (2007) and Garrett and Baquedano-López (2002).

<sup>8</sup> Overview works: Block (2007), Norton (2006), Pavlenko and Blackledge (2004).

Adopting insights from poststructuralism and critical theory, identity theorists view SLA as a contingent process of identity construction. Accordingly, language learning engages the identities of learners, as language itself is considered a complex social practice through which relationships are defined, negotiated, and resisted. Consequently, there is questioning of the view that learners can be defined in binary terms as motivated or unmotivated, introverted or extroverted, inhibited or uninhibited, without considering that such affective factors are frequently socially constructed in relations of power, changing over time and space, possibly coexisting in contradictory ways within a single individual.

Summarising, there are three main aspects of identity: it has a multiple, heterogeneous character, it has implications for power and opportunity in language learning, and it changes over time.

Also, there are two key concepts related to it: *investment*, i.e., what the learner envisions him/herself putting into and gaining from learning/using the L2 in particular situations. Intertwined with their investments are the L2 learners' affective and symbolic affiliations to various *communities of practice*, some of them *real* and some of them *imagined*, i.e., the various conceivable groups and communities the learner envisions him/herself being able to join when they learn a language.

#### *A complexity theory approach to second language development /acquisition*

The Complexity Theory is a newer approach to SLA that is fast growing in popularity (Atkinson, 2011). In a nutshell, this approach emanates from the natural sciences and holds that systematic behaviour in nature is at least sometimes complex, dynamic, and self-organizing. Consequently, it hypothesises that language is a complex adaptive system, which emerges bottom-up from interactions of multiple agents in speech communities (Ellis & Larsen-Freeman, 2009; Larsen-Freeman, 1997).

Additionally, co-adaptation, soft-assembly, and the unknowableness of open complex systems are constructs that move variability to SLA's explanatory center. In the same vein, individual variability and change are considered to be the two central phenomena to be explained in SLA.

Lastly, it is posited that open systems are never fully acquired (Larsen-Freeman, 2010), thus some authors' preference for language development instead of language acquisition.

*A sociocognitive approach to SLA*

The sociocognitive approach to SLA can be considered the newest and least developed alternative to SLA (Atkinson, 2011). In few words, the core claim of sociocognitive approach is that mind, body, and world function integratively in SLA. Therefore, it aims to redirect SLA researchers' imagination to the powerful construct of embodiment and its associated empirical evidence in other fields. Once again, SLA is viewed as an adaptive process, so that what is being adapted to (environment conditions) should also be included in conceptualizing SLA.

Regarding the methodology employed in these new approaches, while the majority of the alternative theories are decidedly qualitative, sociocultural theory and complexity theory appear to allow quantitative (as well as qualitative) methods in order to understand situated data and perhaps even to bring about situated interpretations; all theories invoke the need for longitudinal data.

To conclude this subsection, we ought to highlight that second language acquisition is a complex and multifaceted phenomenon. Ideally, taking into account both traditional linguistic/cognitive-driven approaches and the newer 'alternative' approaches could grant us access to a more thorough and complex understanding of what language acquisition entails.

Further, we will present the emergence and evolution of the Contrastive Analysis Hypothesis, which can be considered one of the pillars in SLA.

### **2.1.1 Contrastive Analysis Hypothesis**

Early studies on L2 acquisition in the 1950s and 1960s were mainly based on the assumptions of the Contrastive Analysis Hypothesis (CAH), according to which difficulties that L2 learners face are related to differences between the L1 and L2. It was assumed that by comparing the linguistic systems of the learner's L1 and L2, researchers and teachers would be able to identify areas of convergence and divergence between the two in order to predict elements of the L2 which would be easier or harder for the learner to learn, and this would ultimately lead to more effective language teaching methodology.

In his classic book *Teaching and Learning English as a Foreign Language*, Fries (1945) viewed language acquisition as a process of habit formation and thus argued that the learner builds up a set of habits for production and comprehension of an L2. The primary mechanisms of language learning were memorization, repetition, and practice of correct responses, which ultimately led to the rise of the Audiolingual Method in language teaching. It was considered that when students became aware of structural differences between languages, the teacher could focus on their errors and help them overcome the difficulties. Consequently, Fries' main concern was to design teaching materials which would allow the L2 learner to develop automatic and unconscious habits for the structural systems of the target language.

Even more, one can say that the Contrastive Analysis (CA) experience began with the following insight. In a much-quoted sentence, Fries (1945: 9) wrote:

*The most efficient materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner.*

In the same vein, Lado pointed out that for effective teaching materials, implied in Fries' statement is "the fundamental assumption" of CA work that "individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of their native language and culture to the foreign language and culture" (Lado, 1957: 2). So, one strong motivation for doing a CA in Applied Linguistics has always been to learn something important about transfer, negative transfer (in this view of things) being traditionally associated with the making of errors (Selinker, 1992).

In this sense, the CA follows certain previously-established steps. First, it is necessary to describe the form of the L2 and of the L1. Second, the comparison areas of interest are selected. These can be phonology, phonetics and morphosyntax, vocabulary, and cultural aspects. Third, the researcher should compare the differences and similarities to enter the last phase: to predict possible errors.

Furthermore, Lado (1957) hypothesised that the learner's errors could be predicted on the basis of comparing his/her L1 to the target language. The idea consists of a confrontation between the mother tongue system and the foreign language.

Likewise, in his view, the structures that are similar in both languages will be easy to learn, but the ones that are different will cause difficulty, because when transferred they

will deviate from the target forms and will have to be reanalysed. In this regard, the concept of linguistic distance emerged, referring to the real distance between two languages and the subjective perception that the speaker holds of the distance between his L1 and the L2. Consequently, one of the predictions was that the errors produced by L2 learners would reflect the structures of their first language as a result of interference from the L1. As Lado (1957: 2) stated:

*[...] individuals tend to transfer the forms and meanings, and the distributions of forms and meanings of their native language and culture to the foreign language and culture, both productively when attempting to speak the language and to act in the culture, and receptively when attempting to grasp and understand the language and the culture as practised by natives.*

As for the importance of language distance, Kleinmann (1977), for example, argued that when certain structures in L1 and L2 differed, this could lead the learner to notice these structures more easily than others. In the same vein, in Koppel and Schler (2003) and Wong and Dras (2009), promising results were obtained when using error types, under an approach based on the contrastive analysis hypothesis. The more dissimilar the two systems are, the more transfer errors could be committed and the more difficult it is to learn English for speakers of such languages. This also means that by analysing the native language it is possible to predict such difficulties in advance.

To a large extent, the major motivation for the emergence of CAH was pedagogical and the aim was to improve language teaching methodology. It was hypothesised that through an intensive contrastive study of the two systems (L1 and L2), the areas of difficulty would be specified and the student's attention could be directed to these areas so that predicted difficulties would be avoided.

In this sense, since the above hypothesis emerged and for almost twenty years, in the classroom the work was carried out according to its basic principles:

- The difficulties that arise in the learning of L2 are due to continuous interference of L1.
- These problems will cause a series of errors that can be predicted by the contrastive analysis of both languages.

- The methods and teaching materials should be based on the contrastive analysis to counter the effect of interference through teaching and learning activities that emphasize these differences.

On the other hand, the fact that similar errors were found in the speech of L2 learners regardless of their L1 background led some researchers to hypothesise that L1 and L2 were similar processes (e.g., Dulay & Burt, 1972, 1974b). For them, such errors were simply developmental errors found both in L1 and L2 acquisition, and hence L2 acquisition is as creative as L1 acquisition.

In this regard, Dulay and Burt (1972) report on the extent of interference errors in L2 acquisition and classify learners' errors into four categories:

- L1 developmental errors: those that are not associated with the learner's L1 but are found in L2 acquisition.
- Ambiguous errors: those that can be viewed as either interference or L1 developmental errors.
- Unique errors: those that reflect neither the L1 nor the L2.
- Interference errors: those that show L1 influence and are not attested in acquisition of the target language.

Regarding the aforementioned error typology, Richards (1971) suggested that the language transfer or interlanguage errors should be distinguished from intralingual and developmental errors caused by the difficulty of language itself and independent of the language background. Thus, transfer errors are potentially powerful in distinguishing between different native languages, but an important step in any research that makes use of them is to carefully identify such errors and not to confuse them with other error types. Similarly, Richards (1974a) and Selinker (1972) cited many examples which were not attributable to the learners' L1, but were mainly developmental. Moreover, some errors never occurred (Dulay & Burt, 1974b), although they were predicted by the CAH. For, some, interference errors varied depending on the learner's age and proficiency (Taylor, 1975). For others, the basic assumption of the CAH, similarities imply ease, and differences imply difficulty, did not seem to receive support.

Under the CAH there were two versions. One of them was called ‘strong version’ (also called ‘a priori’ or ‘predictive version’) and the other ‘weak version’ (also called ‘posterior’ or ‘explicative version’) (Wardhaugh, 1970).

On the one hand, the strong version defended the idea that predictions could be made about learning based on the comparison between the learner’s L1 and L2. Furthermore, from these predictions the errors made by the speakers could be anticipated and educational materials could be designed.

On the other hand, in the case of the weak version the recurring errors of the students were analysed, not predicted, and only after they were compared with the differences between L1 and L2 (Gass & Selinker, 2001). According to Wardhaugh (1970), this hypothesis only requires for the linguist to use the best linguistic knowledge in order to acknowledge the difficulties observed in L2 learning.

Criticism arose that drew attention to the limitations of the CAH when explaining the process of language learning. One important challenge to the CAH deals with the predictive validity of contrastive analyses among languages. When predictions arising from contrastive analyses were empirically tested, it became obvious that CAH predicted some errors, but not all types of errors. In other cases, prediction is used poorly and wrongly (Hyltenstam, 1977).

There was also criticism towards the fact that is systematically considered that the differences between the L1 and L2 always hinder learning and lead to errors. In this sense, two of the studies that most damaged the popularity of the CAH were Dulay and Burt (1972, 1974b) and Dulay, Burt, and Krashen (1982).

The aforementioned studies, conducted with Spanish-speaking learning English in the USA, invalidated the hypothesis by showing that the percentage of errors caused by interference between the L1 and L2 was very low. For instance, in the study of Dulay and Burt (1974b), conducted with 179 children of 5 to 8 years old, most of the errors were not interlingual or transfer (only 4.7%, equivalent of 24 of the total 513 errors), but developmental (87.1%, equivalent of 447 of 513 errors). Therefore, the comparison between the L1 and L2 did not help to predict or explain the process of L2 acquisition (Dulay, Burt, & Krashen, 1982).

In the same line, Dulay and Burt (1973) point out that Lado has made a fundamental error by equating the domain of inquiry for his CAH (in more current terms, a developing IL in

SLA), with the domain of inquiry studied by Haugen and Weinreich (i.e., those individuals who have established competence in two languages from birth or from early childhood). Though the domain of SLA and the domain of bilingualism appear overlapping, they are surely not identical. Importantly, from a research point of view, claims made in one domain cannot automatically be transferred to another (Selinker, 1992).

To sum up this section, the central thesis of Lado (1957) is that errors are the result of interference between the mother tongue and the target language. Although there were also defenders of the contrastive analysis, Dulay and Burt's attack weakened the hypothesis and encouraged other areas of study that could shed new light and facilitate the understanding of the processes of language teaching and learning. As a consequence, the alternative that immediately emerged was the theory of interlanguage (Selinker, 1972), offering a new vision of the role of the mother tongue in foreign language learning. The new theory stipulates that the native language does not mechanically transfer its structures into the new language, but between the two languages an interlanguage is created in the learning process.

Due to the vital significance the concept of interlanguage acquired in the field and its consequent importance for thoroughly understanding the process of second language acquisition, we will further discuss it.

### **2.1.2 The concept of Interlanguage**

The term interlanguage (henceforth, IL), with the meaning from SLA, appears for the first time in print in *General Linguistics* as follows:

*An 'interlanguage' may be linguistically described using as data the observable output resulting from a speaker's attempt to produce a foreign norm, i.e., both his errors and non-errors. It is assumed that such behavior is highly structured (Selinker, 1969 fn 5).*

As can be seen, Selinker coined the term IL, as he realised that many mistakes L2 learners made could not be explained by L1 or L2 structures, and that a learner's L2 knowledge was a dynamic linguistic system which could be studied in its own right (Ellis, 1997). Likewise, the author also stated that the IL must be dealt with as an individual system, "not as an isolated collection of errors" (Selinker, 1969 fn 5).

In this sense, the justification for IL as an independent system had to wait for the European Science Foundation project's discovery that learners of five different L2s with six different L1s all arrived at the same basic grammar, regardless of the L1 and L2 involved (Klein & Perdue, 1997). The same authors provide a fine example of IL as a basic stage of grammar common to adult L2 learners. Regardless of which first and second languages are involved, L2 learners share a simple grammar with three grammatical rules, namely that a sentence may consist of:

- a Noun Phrase followed by a Verb, optionally followed by another Noun Phrase
- a Noun Phrase followed by a copula and another Noun Phrase or an adjective
- a Verb followed by a Noun Phrase

Consequently, the theory of IL shows that the approaches of the CAH were too simple. Rather than discuss the effect of the L1 on the L2, the focus is on the individual linguistic system that the learner is creating and developing, in a personal and autonomous manner. Corder (1967) called 'transitional competence' to this level of language that the student possesses, while Nemser (1971) uses the term 'approximate system', and Selinker employs interlanguage. Regardless of the name, this system has three basic characteristics:

- It is permeable and subjected to continuous evolution.
- It is dynamic, as it frequently changes.
- It is systematic, as it is based on coherent rules that the learner builds.

As a result, researchers began to seriously consider the possibility that an innate UG would constrain L2 acquisition, as it was believed to constrain L1 acquisition. Since then, SLA researchers with training in formal linguistics have also pursued the study of the mental representations of grammar that learners build, with the aim to describe the universal and innate bounds of such knowledge (White, 2003). Consequently, IL as a human language must fit in with UG. The studies by Schmidt (1980) and Ritchie (1978) show that interlanguages reflect principles of surface order and of movement, and hence demonstrate their subjection to UG.

Regarding the etymology of the word, IL is made up of two words, 'inter' and 'language', which means the language that is in between. This implies that the IL system is composed of numerous elements, not the least of which are elements from the L1 and the L2. Even more, according to the IL theory, the abovementioned system is based on the data to

which the L2 learner is exposed and has features from both the mother tongue and the target language (Cohen & Robbins, 1976).

This is the type of language which is produced by the non-native speakers of the language in the process of learning a second, third language, or foreign language. Likewise, Selinker (1972) stresses that a group of speakers may share the same IL and that there would be mutual intelligibility among such speakers of the same IL. Also, the author goes on to state that the set of utterances for most learners of an L2 is not identical to the corresponding set of utterances which would have been produced by a native speaker of a target language.

Once again, the issue arises that L2 learners, however, are at every turn measured against the monolingual native speaker, both overtly as shown by remarks like “relative to native speaker’s linguistic competence, learners’ interlanguage is deficient by definition” (Kasper & Kellerman, 1997: 5), and covertly, through research techniques such as grammaticality judgements that implicitly use the native speaker as an established standard.

It seems relevant to mention at this point that the IL is not a theory that proposes concrete strategies or methods for the learning/teaching of L2; it deals with the description of the mechanisms that act on the process of learning and study the result or output (Martín Martín, 2000).

Furthermore, according to Selinker (1972), the L2 learner’s variety of language is composed of rules that are the product of five basic cognitive processes (see Ellis, 1985 and Valcárcel, Coyle, & Verdu, 1996):

- Overgeneralization of specific rules and features of the L2
- Language transfer: linguistic transfer between the L1 and L2
- Transfer of training: the effect exerted by the L2 instruction
- Strategies of L2 learning: the learning strategies used by the learner
- Strategies of L2 communication: the communication strategies that the L2 learners use in their attempt to communicate

Regarding the role of errors, the same as in the case of the CAH, the IL theory gives them crucial importance. Nevertheless, while with the CAH error was something undesirable because it impeded the formation of habits and thus hindered the learning of L2, with IL

it starts to be considered a useful element, even necessary in SLA, for various reasons (Corder, 1967):

- They provide information regarding the stage of the IL that the student is experiencing.
- They cannot be avoided and constantly occur when the student risks and checks for hypotheses regarding the nature of language he/she is learning.
- They are vital for the understanding in what order the linguistic aspects are produced and learnt.
- They are an indicator of the IL of the speaker, and thus they must be taken into account when analysing the learner's written and oral productions.
- They shed light on the learning and communication strategies used by the speaker in his productions.
- They are a linguistic phenomenon specific of the IL, which implies preserving aspects related to the speaker's IL, regardless of the age or the amount of learning received in L2.
- It is an indicator that illustrates the rules according to which the L2 functions.

*Fossilization as an important factor in Interlanguage*

The term fossilization coined by Selinker (1972) has become widely accepted as a psychologically real phenomenon of considerable theoretical and practical importance and is used to characterize cases of “permanent lack of mastery of a target language (TL) despite continuous exposure to the TL input, adequate motivation to improve, and sufficient opportunity for practice” (Han, 2004: 4).

It is relevant to highlight that fossilisation is considered a feature and central concept of the IL system (Selinker, 1972; Selinker & Lamendella, 1979). Likewise, the former author (Selinker in Richards, 1974b: 36) writes:

*Fossilisable linguistic phenomena are linguistic items, rules and subsystems which speakers of a particular native language (NL) will tend to keep in their interlanguage (IL) relative to a particular target language (TL), no matter what the age of the learner or amount of explanation and instruction he receives in the target language (TL).*

Fossilisation is also described as “near-universal failure to attain full target language competence” (Rutherford, 1989: 442). Shapira (1978) describes fossilisation as ‘non-

learning' while Selinker and Lamendella (1979) see it as 'stabilisation'. The latter authors go on to state that it is a permanent cessation of LI learning before the learner has attained TL norms at all levels of linguistic structure and in all discourse domains in spite of the learner's positive ability, opportunity, and motivation to learn and acculturate into target society.

Furthermore, Lowther (1983) points out that fossilisation as presented in much of the literature, is understood to be the inability of a person to attain native-like ability in the target language. According to Ellis (1985), fossilisation structures can be realised as errors or as correct target language forms.

As can be seen, Selinker (1972) granted great importance to fossilization. Fossilizable linguistic phenomena are those aspects of the L1 which tend to persist in the L2 regardless of the learner's age or the amount of instruction received in the target language. Each fossilized element owes its existence to one of the five previously mentioned processes or to the combined action of several. As a parallel effect to fossilization, a relapse in the IL occurs frequently in the case of individuals who already seemed to have passed a certain stage. Such recidivism has been recorded in learners irrespective of their ages, origins, and linguistic training, or explicit teaching received. It is a unique manifestation of L2 learning, unparalleled in the case of the L1 (Martín Martín, 2000).

That notwithstanding, because of the difficulty in determining when learning has ceased, one frequently refers to stabilization of linguistic forms, rather than fossilization or cessation of learning. In SLA, one often notes that IL plateaus are far from the TL norms (Dominguez, 2007). Furthermore, it appears to be the case that fossilized or stabilized ILs exist, no matter what learners do in terms of further exposure to the TL (Gass & Selinker, 2001).

Krashen (1985) claims that most second language acquirers fossilise and suggests several possible causes of fossilisation. They are: insufficient quality of input, inappropriate quality of input, the affective filter, the output filter, and the acquisition of deviant forms.

Furthermore, language transfer is also considered one of the central processes, which produce fossilised competences and which are central to L2 learning processes. These processes cause fossilisation, and combinations of these processes produce "entirely

fossilised IL (interlanguage) competence” (Selinker, in Richards, 1974: 37). Language transfer therefore causes the fossilisation of IL structures.

To conclude, the concept of IL led primarily to SLA research dealing with the strategies and processes of learning and use. Though interest in the classic idea of transfer has waned, strategies approaches to L2 learning and communication became major industries in the 1980s. Additionally, regarding the importance of IL, it must be highlighted that without the concept of IL, most SLA research would cease to exist; it provides a unique subject matter for the discipline that is not the main focus of other disciplines.

Correspondingly, we will further examine the process of languages transfer, as one of the five basic cognitive processes and thus a fundamental aspect of second language acquisition.

### **2.1.3 Language transfer**

First of all, it must be specified that the present study deals with language transfer as a psycholinguistic phenomenon, that is, focusing on the particular process encountered in the case of the participants of the study.

The complexity of language transfer (LT) or cross-linguistic influence (CLI) partially explains the controversy that has sometimes surrounded the topic (Odlin, 2003) and consequently, its effects have been amply documented in SLA (Cook, 2003). We will begin by presenting how the theory of language transfer or cross-linguistic influence emerged.

Dulay, Burt, and Krashen (1982) suggest that there are two possible ways of describing the term ‘interference’. One is from a psychological perspective, according to which there is influence from old habits when new ones are being learned. The second is from a sociolinguistic perspective, which describes the language interactions that occur when two language communities are in contact. Although for the purpose of our study we are particularly interested in the sociolinguistic view, both perspectives will be briefly presented.

The study of transfer has enjoyed a central role in SLA research (Ortega, 2008) and attracted the interest of researchers over the last five decades (Cuza, 2012). Since the seminal work of Weinreich (1953), scholars in the fields of L2 acquisition (e.g., Gass & Selinker, 1992; Jarvis & Pavlenko, 2008; Liceras, 1989; Montrul & Slabakova, 2003;

Schwartz & Sprouse, 1996) have been interested not only in examining what gets transferred but also in how the process works.

Firstly, during the peak period for CAH, transfer indicated the psychological phenomenon that leads to transfer of structure from the mother tongue to the foreign language, due to the conditioning of previous habits on new habits. However, the decline of the strong form of the CAH emerged in part when second language researchers started looking more closely at the differences between certain contrastive predictions and actual learner difficulties, as the simple comparison of the surface patterns of L1 and L2(s) often proved inadequate to account for the nature and occurrence of learners' errors (Gass & Selinker, 1993).

There are, therefore, several variations in the history of the concept of transfer, ranging from considering it an essential factor in the process of IL construction of the L2 student (Lado, 1957), to the idea that transfer did not have much participation in the development of the IL (Dulay & Burt, 1974b). IL studies showed that not all the errors were the result of linguistic interference, since in order to confidently talk of interference, the form produced in L2 must contain features of the L1 or another L2 previously studied. Additionally, factors such as overcorrection, incomplete application of the rules of the L2, or overgeneralization also accounted for a significant proportion of errors (VanPatten & Benati, 2010).

Andersen's (1983) proposal of 'transfer to somewhere' is one of the studies that tried to explain the conditions under which transfer occurred. According to it, transfer occurs when the element L1 is compatible with the natural principles of acquisition and when the element of L2 leads to L1 generalizations. Kellerman (1995) sees Andersen's proposal as incomplete, since it takes into account only those elements which are similar between L1 and L2. To complete it, he proposes his theory of 'transfer to nowhere', which stated that "there may be transfer that has nothing to do with the similarities with the L2 and where the operation of the L2 is not taken into account, that is, transfer to nowhere" (Kellerman, 1995: 137).

Nevertheless, the most outstanding work of this period is Odlin's (1989) *Language transfer*, due to his extensive review of the state of affairs (Jarvis & Pavlenko, 2008).

In the field of applied linguistics, transfer refers to a strategy of L2 learning in which students use prior L1 linguistic knowledge and apply it to the language they are learning.

This strategy can be an advantage, if the two languages have corresponding aspects, since there is the possibility of a direct transfer of the elements of the L1 to the IL of the student, resulting in what is commonly called positive transfer. However, cases of negative transfer are also given when the patterns of the two languages do not coincide (Arabski, 2006) and the students transferred elements or structures of the L1 which do not correspond to the ones of the L2.

Consequently, it was assumed that the greater the structural difference between languages (L1 and L2), the greater the difficulty in the acquisition process, since the possibility of positive transfer is lower (Fernández González, 1995). That notwithstanding, accumulated empirical evidence led the first generation of SLA researchers to conclude that not only differences, but even more often misleading similarities between the L1 and the L2 are at the root of attested learning difficulties (Ortega, 2009).

However, Vázquez (1991) points out that relating similarity with easiness and difference with difficulty implies adopting a simplistic attitude towards the complex process of learning. It was also proven that “many errors whose origin was sought in the interference were similar to those that children commit in the acquisition of the mother tongue” (Galindo, 2004: 19), which indicated that not all errors were due to the negative transfer of elements and structures of the L1, that is, there are other factors that affect the learning of L2s.

Furthermore, for some time there was a certain rejection of the influence of the L1 on L2 learning altogether. This occurred mainly as a need to move away from behaviourist theories of learning that had been considered interference a key element to explain the IL (Liceras, 1991). However, that view changed and the attention of the researchers focused once more on the role of the L1 in L2 learning. Based on new studies, it was verified that students used their L1 knowledge as well as their previous language knowledge in an attempt to facilitate the L2 learning process (Ringbom, 1987). In the same line, Ellis (2008) states that no learning theory can dismiss the action of transfer from the L1 to the L2. Nevertheless, the author notes that the old behaviourist concept of transfer as negative interference of acquired habits from the L1 on L2 learning has moved to a broader conception of cross-linguistic influence, which includes both negative aspects (interference) as positive ones. Also, it was proved that L2 students resorted not only to the L1, but also to other languages that had been previously studied in an attempt to facilitate the process of language learning (Sharwood Smith & Kellerman, 1986).

Previous research in SLA has long debated whether CLI might be selective (Cuza, 2012). Some early research from the 1980s and 1990s observed that the lexicon and morphology were highly vulnerable to transfer effects, while syntactic domains were less problematic (e.g., Håkansson, 1995; Lambert & Freed, 1982). However, later studies agreed that any feature of the L1 can be transferred to the language to be learnt, and thus the transfer can occur at all the linguistic levels: phonological, lexical, syntactical and semantic (Corder, 1971, 1981; Ellis, 1985; Larsen-Freeman & Long, 1991; Odlin, 1989; Richards, 1974a).

Before going any further, a clarification of the terminology employed is needed.

Researchers interested in contact-induced language change have used several phrases to refer to the phenomenon, such as: ‘interference’ (Weinreich, 1953), ‘code-copying’ (Johanson, 2002), ‘cross-linguistic influence’ (Jarvis, 2002), ‘transfer’ (Heine & Kuteva, 2005), ‘convergence’ (Auer, Hinskens, & Kerswill, 2005), ‘transfer analysis’ (James, 1994), ‘mother tongue influence’ (Corder, 1983), and ‘language mixing’ (Odlin, 2003). We will briefly discuss the terms that received more attention throughout history of studies focused on the matter.

Interference is a term that has often been used since Weinreich (1953), but it carries behaviorist connotations and additionally has the disadvantage of directing one’s attention only to the negative outcomes of transfer. Currently, interference is considered an older term that has been displaced by language transfer and crosslinguistic influence in contemporary SLA discourse (Ortega, 2009).

Other authors such as Gass and Selinker (1983) and Odlin (1989) referred to this phenomenon as language transfer. It seems relevant to notice that although the latter author prefers the term of transfer, the complete title of his well-known and influential work is *Language Transfer: Cross-linguistic influence in Language Learning*.

In this regard, in the mid 1980s Kellerman and Sharwood Smith (1986) proposed the concept crosslinguistic influence, with the aim of including phenomena such as interference, avoidance, borrowing, and transfer, regardless of the direction of influence (L1↔L2). This term has gained general acceptance in the field, even though more recently some scholars have suggested that even this may be an inappropriate term to refer to the phenomenon, given that the influence of one language on another in an individual’s mind may be more an outcome of an integrated multicompetence than of the

existence of two (or more) completely separate language competences in the mind (Cook, 2002).

Jarvis and Pavlenko (2008) use the terms transfer and crosslinguistic influence interchangeably as theory-neutral cover terms to refer to the phenomenon in question, even though they admit that by the 1980s some researchers no longer considered transfer a suitable term because of its association with the behaviorist notion of skills transfer (see Gass & Selinker, 1983; Lado, 1957; Odlin, 1989; Osgood, 1953;). Regarding these same terms Cook (2000) observes that they spuriously suggest some kind of movement.

As can be seen, no single term is entirely satisfactory, and linguists have often noted various problems. In this regard, the suitability of the terms *transfer* and *crosslinguistic influence* can be called into question. Nevertheless, they are the most conventional cover terms employed in contemporary second language research (Jarvis & Pavlenko, 2008; Odlin, 2003). Consequently, language transfer and cross-linguistic influence will be used interchangeably in this study, too.

Furthermore, in the attempt to define transfer, one general agreement is that it is a complex phenomenon with various ramifications (Amaral & Roeper, 2014). That notwithstanding, we consider it appropriate to succinctly present some of the many facets of this concept.

Weinreich (1953: 1) used interference meaning: “those instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language”.

Regarding the role of L1 in the process of transfer, Lado (1957: 2) claimed that

*individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of their native language and culture to the foreign language and culture—both productively when attempting to speak the language and to act in the culture, and receptively when attempting to grasp and understand the language and the culture as practised by natives.*

Likewise, according to Gass (1984) transfer is made of the overlapping of patterns of the mother tongue on those of the language learned. Meanwhile, Schachter (1983) broadened the notion of transfer to include any prior knowledge that L2 learners have, including L2 learners' imperfect knowledge of L2. Transfer refers not only to the negative influences

on L2 learning (interference) but also to the positive influences (facilitation) (Cuza, 2012). Transfer was observed not only from L1 to L2, but also from L2 to L1 (e.g., Verhoeven, 1991, 1994). Correspondingly, learners' L1 and L2 interact with each other. As a result, transfer is no longer considered to be either uni-directional or uni-dimensional, thus some authors prefer to describe such interaction as cross-linguistic influence rather than transfer (e.g., Kellerman & Sharwood-Smith, 1986; Zobl, 1984).

Language transfer is best thought of as an umbrella term for a whole class of behaviours, processes, and constraints, each of which has to do with CLI, i.e., the influence and use of prior linguistic knowledge, usually but not exclusively L1 knowledge (Selinker, 1992). This knowledge or set of rules intersects with input from the TL and with universal properties of various sorts in a selective way, from which results the IL (Selinker, 1992; Vázquez, 1991).

Lastly, Odlin (1989: 27) provides one of the most well-known and widely-accepted definition of language transfer as “the influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired”. Additionally, we consider that the definition of CLI provided by Jarvis and Pavlenko (2008: 1) complements the previously-mentioned one and is also highly consistent with the latest lines of research in the field: “[...] the influence of a person's knowledge of one language on that person's knowledge or use of another language [...]”.

### ***2.1.3.1 Mother tongue influence***

An important issue within research on LT is how L2 learners overcome the effects of L1 influence or what explains the cases in which they do not (Gabriele, 2010). Thus, the influence of learners' L1 is one of the main factors to consider in SLA.

In the beginning of the study of LT, this phenomenon was considered synonym for mother tongue interference.

In the last 50 years, researchers have taken different views of the role of L1 in SLA (Butler & Hakuta, 2006). As could be seen previously, in the 1960s, employing CA, it was believed that L1 had primary influence over L2 acquisition. During the heyday of behaviorism, it was claimed that learners' errors reflected the structure of their L1.

The theory that the L2 learner does not start the learning process from scratches became positively valued. In this sense, a common-used strategy is to resort to the mother tongue (and other previously acquired linguistic knowledge), searching for similarities between their L1, other languages that they know and the language they are currently learning in order to facilitate the L2 learning process (Ringbom & Jarvis, 2009). According to the same authors, SLA research focused more on the differences between languages, than it did on the similarities.

Furthermore, SLA is fundamentally different from L1 acquisition in that L2 learners bring complete knowledge of their L1 grammar to the L2 acquisition task (Montrul, 2010). Indeed, the findings of previous L2 research have clearly shown the effects of L1 transfer (Gass & Selinker, 1992; Odlin, 1989; Schwartz, 1998; Schwartz & Sprouse, 1994, 1996, among many others).

Nevertheless, depending on the language being learned, some L2 constructions are easier while others seem to be more difficult to acquire. This depends partly on the structure of the L1, since it seems that transfer from the L1 can help in L2 acquisition in some cases. An example of an L2 phenomenon that is particularly difficult to learn is grammatical gender (also called noun class), which is a lexical property of nouns (Sabourin, Stowe, & de Haan, 2004). In this regard, knowledge of the L1 can often have a positive impact on the rate of L2 learning (Ortega, 2009). For many years now, Ringbom (1987, 1992, 2007) has been a strong advocate of the idea that relevant knowledge in the L1 can accelerate the rate of L2 learning. Furthermore, the rate advantages afforded by knowledge of the L1 have been documented across diverse areas of L2 learning (Ortega, 2009). A good example is the study by Jarvis (2002), where he investigated the use of the English article system, study conducted in Finland, with Finnish-dominant and Swedish-dominant students learning English at school. He found that L1 influences from Swedish provided the Finland Swedes with an overall advantage in accuracy of use of *the* and zero article over the Finnish-speaking learners, and that the advantage narrowed, but still was noticeable at higher proficiency levels after two, four, and six years of L2 instruction.

In this sense, various studies have shown real effects of the L1, and researchers increasingly realise that good predictions require close study of what learners understand and produce (Odlin, 1989).

Regarding evidence of L1 effect, it must be pointed out that, while some studies produced evidence of L1 transfer in the construction of L2 grammar (Bennett & Progovac, 1998;

Cook, 1990; Hirakawa, 1990; Lakshmanan & Teranishi, 1994), other studies (or the same study with different learners) produced evidence of little L1 transfer (Cook, 1990; Finer & Broselow, 1986; Thomas, 1993). The reason for the conflicting results may be that not all L2 learners transfer L1 information (Ying, 1999). For example, Cook (1990) produced evidence of LT from Japanese learners, but she did not find much evidence of language transfer from Norwegian learners. Another possible reason for the inconclusive results is that LT occurs mostly with less proficient learners. Likewise, Hirakawa (1990) found evidence of LT with less proficient Japanese learners, but Finer and Broselow (1986) did not find evidence of LT because their subjects were more advanced than Hirakawa's.

In the same vein, studies focusing on competence concluded that students with low competence tended to transfer more elements of their L1 than more advanced students (Celaya, 2007; Celaya & Torras, 2001; Navés, Miralpeix, & Celaya, 2005; Woodall, 2002). However, studies also showed that the influence of the L1 increased throughout the development of the IL, that is, the more competent were the students, more they transferred, especially regarding the number of used borrowings (Sanz, 2000). Likewise, studies indicated that transfer neither increases nor decreases over the development of the IL (Poulisse, 1990), while others claim that this process fluctuates towards a specific direction (Engber, 1995; Jarvis, 1998). Based on these contradictory results, Jarvis (2000) questions whether all these studies are assessing the same phenomenon and claims that specific methodological approaches for the study of lexical transfer need to be established.

Additionally, studies have shown that learners from certain L1 backgrounds have difficulties with using particular target-like forms consistently, even at high levels of L2 proficiency. For example, L1 speakers of Chinese show persistent optionality in their use of L2 English past simple (e.g., Hawkins & Liszka, 2003; Lardiere, 1998a, 1998b, 2000). Such selective differences help to inform debates on whether UG is fully available to older L2 learners (e.g., Lardiere, 2000; Prévost & White, 2000; Schwartz & Sprouse, 1996; Vainikka & Young-Scholten, 1996) or whether it is only partially available (e.g., Hawkins & Chan, 1997; Hawkins et al., 2008; Hawkins & Liszka, 2003; Tsimpli, 2003; Tsimpli & Dimitrakopoulou, 2007).

Accordingly, Ortega (2008) presents a study of the influence that the L1 (Spanish) has on L2 (English) and L3 (Catalan) oral production. Lexical and syntactic transfer were analysed in the production of Catalan and English of two multilingual speakers with

similar knowledge of non-native languages. The results showed that the L1 is the main source of transfer, both in L2 and L3 production, but its influence decreases as proficiency in the target language increases. Language distance also plays an important role in CLI, especially if proficiency in the source language is high and if there has been recent exposure to it. The findings also suggest that while syntactic transfer is exclusively L1-based, lexical transfer can occur from a non-native language. Due to the importance of language distance for the present study, this aspect will be dealt with in more depth further on in this chapter.

Likewise, in the area of verb morphology, the study by Navarro and Nicoladis (2005) investigates to what extent L1 transfer occurs in oral narrations of learners of Spanish with English as L1. The analysis focused on the types of verbs the participants use and the results showed that the students followed the pattern of their L1 in several aspects of verbal usage. Likewise, the study by Phillips (2007) had similar results regarding the use of manner verbs.

For the purpose of the present study it is highly important to emphasize that currently, various studies highlight the importance of L1 as a relevant factor in SLA (Alemán Bañón, Fiorentino, & Gabriele, 2014; Corder, 1983; Cuza et al., 2012; Ellis, 1994; Jarvis & Pavlenko, 2008; Larrañaga et al., 2011; Luk & Shirai, 2009; Montrul, Dias, & Santos, 2010; Rothman, 2011), and its influence, which can occur at all levels: phonological (Leather, 1997; Levis, 1999), semantic (Ringbom, 2001; Whitley, 2004), and morphosyntactic (Gràcia, Crous, & Garganta, 2008; Jarvis & Pavlenko, 2008; Odlin, 2005).

All the above mentioned is highly relevant data in the context where the present study was conducted, Catalonia, even more in the case of Romanian immigrant students, due to the common linguistic elements between Romanian and the two official languages of the region (Spanish and Catalan). In this regard, the literature provides information concerning the influence of Romanian (L1) in the learning of Spanish and/or Catalan (L2s) at morphosyntactic level (Chireac, 2010; Chireac, Serrat, & Huguet, 2011), and specifically in the case of attributive, existential, locative, and possessive constructions (Gràcia, Crous, & Garganta, 2008) and verb morphology (Gràcia, 2007). The latter research presents interesting data about the errors produced by Romanian students in verb inflection matters, as a consequence of using the syntax, tenses, and moods of their L1.

To sum up, research on bilingualism and LT suggests that the L2 can encroach into the structure of the L1 in systematic ways (see contributions in Cook, 2003; Pavlenko & Jarvis, 2002; among others). Also, Ellis (1985: 40) described the importance that L1 has in acquiring a foreign language and mentioned that “the learner’s L1 is an important determinant of SLA. It is not the only determinant, however, and may not be the most important. But it is theoretically unsound to attempt a precise specification of its contribution or even try to compare its contribution with that of other factors”. Accordingly, Slabakova (2002: 186) stated that “much more precise research questions can be formulated if L1 transfer is taken into account and properties that differ in the L1 and the L2 are investigated”.

Given that the effects of the L1 on L2 acquisition in different levels of linguistic analysis (phonology, morphology, syntax, semantics, lexicon) have been extensively documented in the SLA literature over the years (Gass & Selinker, 1992; Jarvis, 1998; Odlin, 1989; White, 1989; Schwartz & Sprouse 1996), we will dedicate the following section to a more in-depth classification of language transfer.

### ***2.1.3.2 Classification of transfer***

Specifically, a detailed classification of language transfer will be presented, taking into account several factors: directionality of transfer, effects of transfer, and levels of the language at which the transfer occurs.

Firstly, according to directionality, it must be emphasized that CLI studies are not limited to the study of the impact of L1 on L2(s), since it seems too simplistic to assume that it is only L1 which influences L2 (Moattarian, 2013). Consequently, a distinction (Jarvis & Pavlenko, 2008) was made among:

- forward transfer (L1→L2): if one language has some kind of effect on another one that was later learnt (e.g., Jarvis, 2000).
- reverse transfer (or bidirectional transfer): if the influence occurs in the opposite direction (for example, L2→L1), (e.g., Andrews, 1999; Cook, 2003; Kecskes & Papp, 2000; Major, 1992; Pavlenko, 2000; Pavlenko & Jarvis, 2002). The reverse transfer or L2 (L3, etc.) influence on L1, is a particularly noteworthy development in this area (Jarvis & Pavlenko, 2008).

- lateral transfer (L2→L3): transfer between two L2s or two L1s, was first documented by Ringbom (1987) (e.g., Cenoz, Hufeisen, & Jessner, 2001).

As can be seen, initially, L1 was considered as a static entity compared to the changing L2. In recent years there has been a growing interest in research that focused on different forms of directionality, as presented in the aforementioned categories. Still, also in short-term studies analysing particular phenomena, the dynamic nature of multilingual systems can complicate the analysis (Gabryś-Barker & Wojtaszek, 2014). In fact, cross-linguistic interaction is dynamic and unpredictable (especially interference, because transfer is more regular, Grosjean, 2012; Herdina & Jessner, 2002) and its source is often difficult to establish. Consequently, cross-linguistic influence is often bidirectional (Herdina & Jessner, 2002; Pavlenko & Jarvis, 2000) or even multidirectional (Wlosowicz, 2012), and some errors are due to ‘doubly supported interference’, e.g., from both L1 and L2 into L3. Also, influences beyond L2 in the contexts of a third, a fourth, or some additional language (e.g., L7) often go by the name of multilingual transfer (Robinson, 2012b).

Secondly, a well-known classification of LT is the one according to the effects it has on the TL:

- positive transfer
- negative transfer

On the one hand, positive transfer is considered to make the process of learning easier and may occur when both the NL and the TL have the same form. This similarity in forms facilitates SLA and contributes to the development of the TL. It represents a learning and communication strategy, through which limitations in the L2 are compensated, when students transfer similar or identical items, previous knowledge that facilitate the acquisition of other new one. Odlin (1989) stated that the effects of positive transfer are only determinable through comparisons of the success of groups with different native languages. Such comparisons often show that cross-linguistic similarities can produce positive transfer in several ways, for example, similarities between L1 and L2 vocabulary can reduce the time needed to develop good reading comprehension.

It must be mentioned however that according to the results of the study by Yip and Tang (1998), positive transfer remains a logical possibility, but there is little empirical evidence to support it, as the mentioned results do not support the hypothesis.

On the other hand, Richards et al. (1996: 205) stated that negative transfer refers to the use of a “native-language pattern or rule which leads to an error or inappropriate form in the target language”. Likewise, Weinreich (1953: 1) considered that negative transfer consists of “instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language”.

Since negative transfer involves divergences from norms in the TL, it is often relatively easy to identify. Although negative transfer tends to be equated with production errors, there are other ways in which an individual’s second language performance may differ from the behaviour of native speaker (Odlin, 1989, 1996). Nevertheless, the result is not always an error, but it can obstruct or delay the development of the TL in a certain stage of the learning process.

To conclude, it can be seen that the negative transference restricts, interferes, or hinders the development of the target language, while the positive transfer has a facilitating role of learning.

A complete review of the literature on the matter is out of the scope of this work. That notwithstanding, we will further present the main conclusions reached by the studies that evaluated the influence from L1 to L2(s) at the main levels of the language (phonological and orthographic, lexical and semantic, syntactic and morphological), with special emphasis on the latter ones, syntactic and morphological transfer, as they represent the main interest of our study.

#### *2.1.3.2.1 Phonological and orthographic transfer*

Phonological transfer is generally used to refer to the ways in which a person’s knowledge of the sound system of one language can affect that person’s perception and production of speech sounds in another language (Jarvis & Pavlenko, 2008). Correspondingly, a cross-linguistic comparison of sounds of two languages should include descriptions of the phonetics as well as the phonology of the NL and TL (cf. Brière, 1968, as cited in Odlin, 1989).

Firstly, there is empirical evidence of the transfer of phonetic and phonological rules (Broselow, 1994, among others). Pronunciation errors (both in the receiving and production processes) can lead to difficulties of decoding the message. L2 learners often categorized sounds according to the phonemic inventory of the L1 or other language they

know well. In this regard, Odlin (1989) stated that there was little doubt that L1 phonetics and phonology were powerful influences on L2 pronunciation. Even more, the importance of transfer is evident in studies of specific pronunciation contrasts and also in research comparing the overall pronunciation accuracy of speakers of different native languages.

While any resemblance between sounds creates the potential for identifications, the judgments of equivalence that learners make are affected by much more than just the acoustic properties of sounds in the native and target languages. The similarity of cognate forms, for example, may induce learners to establish correspondences between sounds that are phonetically very different.

Furthermore, the most obvious effect of phonological transfer at segmental level concerns the difficulty of perceiving the distinction between two sounds in an L2 that are not in phonemic contrast in the L1, as can be seen in the difficulty that Spanish speakers sometimes have in distinguishing between /i/ and /I/ in English words like *sheep* and *ship* (Escudero & Boersma, 2004). On the other hand, the research on transfer at suprasegmental level has documented important CLI effects related to syllable structure, intonation, stress, and rhythm, and has shown that CLI interacts with other important variables, including phonetic environment and universal phonological constraints (Jarvis & Pavlenko, 2008).

On the other hand, although the term generally employed is orthographic transfer, it must be stated that various scholars considered that the concept of writing system transfer would be more appropriate (Jarvis & Pavlenko, 2008) to refer to the phenomenon in question and a distinction between the two is necessary. In this sense, Cook and Bassetti (2005: 29) have pointed out that:

*Because of the distinction between language and writing system, it is not so much aspects of the language itself that may be carried over as the attributes of a particular writing system. It is not Chinese per se that is transferred by Chinese learners to the English writing so much as feature of the Chinese morphemic writing system.*

Regarding the role of L1 in this process, research on orthographic transfer in reading showed that a person's L1 writing system can have an important effect on how that

person processes written words in an L2, especially during the early stages of L2 literacy development (Wade-Woolley, 1999).

#### *2.1.3.2.2 Lexical and semantic transfer*

The simplest and most straight-forward definition of lexical transfer is as the influence of word knowledge in one language on a person's knowledge or use of words in another language (Jarvis & Pavlenko, 2008).

Ringbom (1986) is one of the scholars who most has contributed to the study of lexical transfer and defined it as applying learning hypotheses that consider lexical items as translated equivalents, or that have the same semantic characteristics as the items from the student's L1 or another language he/she knows well. Likewise, according to Kellerman (1995), evidence of the influence of the L1 lexicon has been identified in the IL of L2 learners because they use the lexical transfer as compensation strategy, and partly because the vocabulary is one of the more permeable linguistic aspects.

Furthermore, lexical transfer (or formal lexical transfer) can occur in forms of loan translations, semantic extensions, and cognates, which are often called false friends. Likewise, Odlin (1989) stated that, despite the advantages of a large lexicon common to two languages, there are nevertheless pitfalls in the form of false friends. For example, the forms of French *prévenir* and English *prevent* seem to be as reliable signals of a cognate relation as the forms of *justifier* and *justify*. False friends come in other guises as well. One of the most common problems in SLA is when there is only a partial semantic identity of cognates. Thus, the translation of English *succeed* into Spanish as *suceder* will be acceptable in some contexts but not in others. Lexical transfer can also occur when there is no morphological similarity between words that appear to be semantically equivalent (Ilomaki, 2005).

Other researchers have contributed to a better understanding of lexical transfer. Many empirical studies have shown the importance of L1 in the L2 lexicon (Ard & Homburg, 1983). As previously mentioned, one of the most popular research questions concerns cognates and false cognates. False cognates hinder the learning process and can lead to interference errors. Despite these difficulties, it is obvious the advantage of learning a language that shares a large number of similar words with the TL. In general, lexical similarities promote learning, as revealed in several studies (Ard & Homburg, 1983;

Cenoz, 2001, among others). In this regard, Ard and Homburg (1983) compared the performances of students of English as an L2 speaking two different native languages, Arabic and Spanish. The speakers of the language having more lexical similarities with English (in this case, Spanish) were considerably more successful on vocabulary questions.

In contrast to formal lexical transfer, semantic transfer (also labelled semantic lexical transfer or lexicosemantic transfer) is most evident in the use of an authentic TL word with a meaning that reflects influence from the semantic range of a corresponding word in another language. In this sense, Ringbom (2001) points out an example utterance by a Finnish learner of English, who said ‘He bit himself in the language’ meaning to say ‘He bit himself in the tongue’. This can be explained by the multiple meanings of the Finnish word *kieli*, which is used both for *tongue* and *language*. This phenomenon is known as semantic extension and occurs when semantic properties are extended to the target language word. Additionally, the second situation when semantic transfer occurs is in the use of calques in the TL, which reflect the way a multi-word unit is mapped to meaning in another language. Likewise, the same author found that the source of semantic transfer is not just any previously acquired language, but strongly tends to be the L1. This is presumably because L1 meanings tend to underlie L2 words until the learner has become highly proficient in the L2 (Jarvis & Pavlenko, 2008). However, influence can originate from an L2 in cases where the learner is highly advanced in the L2.

Lastly, studies in the field revealed that formal transfer tends to originate from a source language that the learner perceives as being closely related to the recipient language, whereas semantic transfer tends to come from a language in which the learner is highly proficient (Biskup, 1992; Ringbom, 1987, 2001). In this sense, becoming aware of semantic differences is no easy task given that differences in meaning are far more difficult to recognize than are differences in form.

#### *2.1.3.2.3 Syntactic and morphological transfer*

The notion of syntactic transfer has long been controversial, since syntax, like morphology, has been widely assumed to be immune to CLI effects (see Kellerman, 1995, Odlin, 1989, and Jarvis & Pavlenko, 2008 for in-depth discussions). Despite the

apparent absence of CLI in some studies, recent studies have documented ample instances of syntactic transfer in various types of data. Concretely, considerable evidence has also been found for syntactic transfer for both positive transfer and negative transfer in studies focusing on specific syntactic aspects (word order, pronouns, relative clauses, tenses, negation, etc.) (Odlin, 1989), and it has been found in both reception and production (Jarvis & Pavlenko, 2008).

Furthermore, word order has been one of the most intensively studied syntactic properties in linguistics and SLA research, as there are now numerous studies of learners' word-order patterns. The study of L2 word order has been useful not only for a better understanding of transfer but also for an understanding of discourse, syntactic typology, and other factors affecting SLA.

Regarding the role of the L1, the existing data reveals that the L1 syntax can be transferred to the L2. Various studies have shown that, for example, flexibility in word order is transferable, both in production processes and language comprehension (Odlin, 1989).

As previously mentioned in the case of syntactic transfer, morphological transfer has also been treated with a great deal of scepticism all the way to the present (Jarvis & Pavlenko, 2008). This was due in part to an overly narrow understanding of the ways in which CLI effects can be manifested, and has likewise arisen from a failure to recognize CLI effects obscured through their interaction with other variables, such as simplification and overgeneralization (Jarvis & Odlin, 2000).

Currently, it is generally assumed that certain aspects of a person's L1 transfer to the IL grammar of the learner. However, the questions of which characteristics of the L1 transfer, which transferred properties play a more fundamental role in defining the IL grammar, and what their precise effect is on L2 learning, are far from resolved (Bliss, 2006).

Accordingly, a number of scholars have claimed that the transfer of bound grammatical morphemes is rare or nonexistent (e.g., Whitney, 1881; Krashen, 1978). Nevertheless, Weinreich (1953) found a number of cases where such transfer seems to have occurred. While admitting the scarcity of these cases, the author suggested a formal criterion regarding the use of L1 bound morphemes in another language. Despite the constraints

existing on the transfer of bound morphemes in production, there are probably fewer constraints on transfer in comprehension processes. In other words, the similarity of bound morphemes in two languages may facilitate reading and listening in the same way the similarity of free morphemes does. For example, the similarity of suffixes in English and Spanish, such as *-ous* and *-oso* in *scandalous* and *escandaloso*, is likely to help readers identify words as cognates (Odlin, 1989). Jarvis and Pavlenko (2008) reinforce the idea that, although the transfer of bound morphemes from one language to another is a highly restricted phenomenon, it does occur quite frequently when the source and target languages are lexically and morphologically related.

Additional studies discussed by Odlin (2005) present convincing evidence of morphological transfer in the areas of causation, grammatical gender, and topic. Topic-wise, explorations of morphosyntax have begun to consider CLI in the use of phrasal verbs (Sjöholm, 1995), causative constructions (Helms-Park, 2001), gender assignment (Dewaele & Veronique, 2001), and linguistic framing (Pavlenko, 2003; Pavlenko & Driagina, 2007; Pavlenko & Jarvis, 2002; Slobin, 1996; Vermeulen & Kellerman, 1999).

Other studies that point to the overt transfer of bound inflectional morphemes (both from L1 to L2 and from L2 to L1) are mentioned in Jarvis and Odlin (2000). Together, these studies indicate that the real question is not whether overt morphological transfer does occur, but rather what constrains this type of transfer, and what causes it to occur frequently in some circumstances and rarely or never in others.

Regarding the acquisition of tense and aspect, in a comprehensive synthesis of the existing research on the matter, Bardovi-Harlig (2000: 411) noted that “no significant L1 effect has been identified in the longitudinal studies of the acquisition of temporal expression” and that “comparisons across studies have also revealed little first language influence”. However, she acknowledged that some studies, such as Collins’ (2001) have found some effects of the L1 on the tense and aspectual forms that learners choose in an L2, which made the author to suspect that L1 influence must be found in the details rather than in the larger picture. Indeed, additional information has begun to emerge that demonstrated important effects of learners’ L1s on their use of L2 English tense and aspectual forms. For example, the same Collins (2002) found that L1 French speakers’ acquisition of tense and aspect in L2 English shows important differences from what has been reported for speakers of other L1s in past studies. Concretely, the results of the

aforementioned study showed that transfer can and does occur during acquisition and use of tense and aspect.

Jarvis and Odlin (2000) pointed out that L2 users very frequently do exhibit CLI effects in their language comprehension and production that indicate that they have made interlingual identifications (or crosslinguistic associations) between bound morphemes in one language and corresponding structures in another language. Indeed, the scope of morphological transfer extends far beyond the transfer of overt inflectional morphology. In their study focused on Finnish-speaking and Swedish-speaking learners of English, they noticed that the two groups' spatial reference patterns in English are different from each other but similar to their respective L1 patterns, which "suggests a strong role for semantic transfer in learners' spatial reference and [...] shows that Finns, in particular, are capable of making interlingual identifications between postposed bound morphology in Finnish and preposed free morphology in English" (Jarvis & Odlin, 2000: 550). In addition to morphological transfer involving semantics, the aforementioned authors also found evidence of morphological transfer involving structure. Although their database includes only one instance of overt Finnish morphology being transferred to English, they found multiple instances of prepositional omissions – also referred to as zero prepositions- whose source they attributed to Finnish.

Similar conclusions about the effects of crosslinguistic structural differences have been reached by studies that have examined the acquisition and use of L2 English articles (e.g., Jarvis, 2002; Master, 1997), although these studies do not look specifically at transfer involving bound inflectional morphology. Nevertheless, the studies converge on the finding that a person's L1 grammatical morphology, both bound and free, can have important and multifaceted effects on the way the person uses an L2.

Additionally, in a study investigating L2 ability with grammatical gender, Sabourin and Haverkort (2003) found that even if gender is similar across the L1 and the L2, some constructions may still cause problems for the L2 learner. The authors looked at German learners of Dutch on the acquisition of the Dutch noun phrase (NP). They found that the German participants could attain a native-like level only when the NP was definite. For indefinite NPs the German group did not perform well at all. It was suggested that the German group were able to use surface transfer to acquire the definite NPs, but for the indefinite NPs where the constructions in Dutch and German are less similar, they could not transfer the category gender to help them in the L2 process.

In fact, Franceschina (2001), in an elicitation task, revealed that while English speakers with a high proficiency in Spanish showed persistent problems learning the Spanish gender system, Italian learners (with a gender system very similar to Spanish) did not. She claims that this is because speakers with English L1 have no underlying gender feature in their L1 grammars to map the Spanish gender feature onto. Italian speakers do have such an underlying feature in their L1 grammar.

Similar studies (Ambadiang, Camus Bergareche, & García Parejo, 2008; Díaz & Bekiou, 2006) concur that, regardless of L1, verb inflection is one of the most problematic aspects in the process of SLA. Various researches were conducted in this sense both internationally (Asencion-Delaney & Collentine, 2011; di Franco, 2007; Gutiérrez Quintana, 2005; Kočman, 2011; Leontaridi, Peramos Soler, & Morales Ruiz, 2008; Liskin-Gasparro, 2000; Rakaseder & Schmidhofer, 2014; Salaberry, 1999), and in the Catalan context (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia & Serrat, 2003; Serrat, Gràcia, & Perpiñá, 2007).

In the same vein, in the Catalan context, Gràcia (2007) in her study with Romanian and Chinese speakers emphasizes that L1 influence is stronger in the acquisition of verb inflection than in syntax acquisition. Likewise, the results of the study reveal that regardless of their L1, all the participants presented difficulties related to the verb inflection. That notwithstanding, Romanian speakers make fewer errors of verb inflection than the Chinese ones. Regarding the use of number and person, Romanians make a considerable amount of errors of person forms, substituting personal forms for non-personal ones. Also relevant is the presence of inflection errors of 3<sup>rd</sup> person singular and plural, and 1<sup>st</sup> person singular, which occur in very specific cases, and sometimes related to the functioning of the L1. Lastly, Romanian speakers use erroneously tense, mood, and aspect forms, as a consequence of the use in L1 of tenses and moods. Specifically, they use the Present Tense for other forms, mainly the Imperfect, or the Present Perfect for the Preterite.

Additionally, although most of the literature focuses on forward morphological transfer (from L1 to L2), it has also been documented in the reverse (from L2 to L1) and lateral direction (from L2 to L3) (Pavlenko & Jarvis, 2002; Jarvis & Pavlenko, 2008).

After discussing the evolution of language transfer and the different types of it encountered in SLA, we will further investigate the main factors that affect the abovementioned process.

### ***2.1.3.3 Factors that affect language transfer***

Currently, research in the field focused on the role of conflating variables in the extent of transfer and to what degree the intensity of L1 influence depends on these factors.

Cenoz, Hufeisen, and Jessner (2003) talked about the attention received by the factors connected to CLI, such as language dominance, psychotypology, age, grade, strategic competence, and proficiency in the TL, mainly in the research conducted in multilingual contexts. Moreover, the intensity of the language transfer also depends on the proficiency of the student (Arabski, 2006).

Likewise, Odlin (1989) described seven nonstructural factors that affect transfer (personality, aptitude, proficiency, literacy, age, linguistic awareness, social context), which have been further refined and expanded by Ellis (1994), Jarvis (2000), Odlin and Jarvis (2004), and Pavlenko (2000). Likewise, Jarvis (2000) defends the idea that only by controlling the variables can be discovered when the transfer will occur and under what conditions.

Further, the variables that are of special interest for our study will be present: language distance and length of residence.

#### *Language distance*

Language distance means the extent to which languages differ from each other. Language distance has often been thought to be an important factor in the outcome of foreign language learning (Robinson, 2012b).

In the 1980s, a highly debated topic was that of language distance and its role in triggering instances of transfer from non-native languages (Aronin & Hufeisen, 2009). This possibility was first formulated by Zobl (1982). He proposed that L1-L2 differences account for the pace or rate at which certain morphosyntactic structures will be learned by different L1 groups. All L1 groups will traverse the same series of approximations to the target L2 system, and will be challenged, broadly speaking, by the same aspects of the L2. However, certain L1 groups may stay longer in a given stage, add some extra sub-

stage, or find it more difficult than other L1 groups to learn some aspects of the L2 system in question (see e.g., Odlin 1989; Selinker 1992).

In this sense, research was published with a large number of language combinations that were examined: on Igbo, English, and French (Ahukanna, Lund, & Gentile, 1981), German, French, and Spanish (Möhle, 1989), Finnish, Swedish, and English (Ringbom, 1986, 1987), Portuguese, English, and Arabics (Schmidt & Frota, 1986), English, Spanish, and French (Singleton, 1987), Dutch, English, and German (Voorwinde, 1981). While most of these studies identified language similarity as a triggering factor for LT, they also provided some evidence that transfer could come from languages distant from the TL, even when a language closer to the target was in the speaker's mind (see, for instance, Schmidt & Frota, 1986).

Despite the relative rigidity of the L2 learning route, transfer does occur in so far as the L1 has an impact upon L2 learning, even if it remains true that it is primarily in the sense of speeding up the learning process in the case of closely related languages or similar linguistic structures, rather than changing the route of development itself. That is, L1 transfer cannot radically alter the route of the L2 acquisition but it can impact the rate of learners' progress along their natural developmental paths (Ortega, 2009).

Interestingly, it has been suggested that language distance influences the rate of L2 acquisition rather than the types of transfer; evidence of this can be seen, in the patterns of errors that L2 learners produce (Odlin, 1989). There is evidence from a simulation study using a neural-network model that indicates that language distance affects the rate of learning: the greater the distance between two languages, the longer it takes to learn (Butler & Hakuta, 2006). Likewise, according to Braga (2010), the opportunities to use the aforementioned strategy will be greater the more typologically close the languages in question are.

Also, the main factor is not only the linguistic proximity, but also the speaker's perception of this proximity. In this sense, students try to find similarities between their L1 and the language they are studying (Ringbom & Jarvis, 2009). Consequently, if two languages are perceived as close, transfer (both positive and negative) is more likely to occur. For example, research in Finland, where Finnish and Swedish are both official languages, suggests that L1 Swedish learners of English more readily transfer from their mother tongue, while L1 Finnish learners more readily transfer from Swedish, which they perceive as closer to English (Aronin & Hufeisen, 2009).

Furthermore, Cenoz (2001) also discussed a number of factors that could affect CLI in general and offered empirical evidence that language distance is an important factor in English acquisition by Spanish and Basque bilinguals, as the language that most influenced Catalan production was the language that is typologically closer to it. Some participants were dominant in Basque and others in Spanish. Regarding the language distance, Basque language is related neither to the Spanish, nor to English. According to the results of the study, there was more transfer evidence from Spanish to English than from Basque to English. That was the case for all students regardless of the dominant language.

Lastly, in the Catalan context, the studies of Gràcia (2007) and Chireac (2010) pointed out the importance of language distance, since regardless of the length of residence, Chinese students make more errors than the Romanian ones in the acquisition of the two official languages, Catalan and Spanish.

That notwithstanding, in the same context, Chireac, Serrat, and Huguet (2011) studied the process of acquisition of Catalan and Spanish in the case of Romanian, Ukrainian, and Bulgarian students and the results revealed that immigrant students with a Romance mother tongue (Romanian) do seem to present the same level of language competence as their peers of non-Romance L1s. Accordingly, Huguet et al. (2013) concluded that the linguistic proximity argument does not explain alone, or in all of the cases, the levels of linguistic competence achieved, since the results revealed that Spanish speakers have significantly higher results compared with the Chinese group, but not in comparison to the Arab or Romanian ones, although the latter has as L1 a closer Romance language.

#### *Length of residence*

The length of residence in the host country has proved to be one of the key elements in explaining the language skills developed in the target language by immigrant students (Jarvis & Pavlenko, 2008). In studies dealing with L2 users living in an L2 (or L3, etc.) environment, length of residence is a common index of participants' level of language knowledge (Jarvis & Pavlenko, 2008).

In the same vein, Guion et al. (2000) found that length of residence was a significant predictor of the effects of L1 interference on the English sentence durations of Italian and Korean immigrants to North America: the longer their residence in North America, the shorter and more native-like their English sentence durations were. However, this study

and a later one by Mackay and Flege (2004) found that length of residence was highly confounded with age of arrival and amount of use of the L1 in the L2 environment. These latter factors were also found to be stronger indicators of CLI than length of residence, but this does not mean that the effects of length of residence on CLI are unimportant.

Furthermore, the importance of the variable length of residence in the process of SLA has been acknowledged in the Catalan context through various studies assessing the language competence of both native and immigrant students from various L1 backgrounds (Huguet, Navarro, & Janés, 2007; Huguet, 2014; Chireac, 2010; among others). Additionally, it is important to point out that there is a consensus among studies that students with a length of residence longer than 6 years obtain higher averages than their peers with shorter lengths of stay, thus the process of acquisition of the official languages of the host society (Spanish and Catalan) occurs. However, the results also revealed that the scoring is lower in the case of immigrant students, regardless of their mother tongues, for all of the subtests compared to the levels of scoring of their native peers. In other words, after more than 6 years of stay and schooling in Spain, immigrant students still show difficulties in the school language when compared to the average native student (Huguet et al., 2011, 2012, 2013; Navarro & Huguet, 2010).

One of the pioneering studies in this context is Maruny and Molina's (2000). The research took place in the Catalan region of Baix Empordà (Girona) and analysed, by means of an interview, language learning (Catalan) in a group of students of Moroccan origin. The learners, schooled between 3<sup>rd</sup> year of Primary Education and 4<sup>th</sup> year of Secondary Education, were selected according to length of residence in Catalonia (less than 18 months, 18 to 36 months, and more than 36 months). The results revealed that at least 3 years are necessary to develop sufficient conversational competence in the language of the school; that 5 years are needed to show acceptable reading comprehension level; and that even more time is required for mastering writing and other skills that guarantee academic success.

As a conclusion of the chapter dedicated to language transfer or crosslinguistic influence, a synthesis of the main findings concerning CLI will be presented (conclusions adapted from Odlin (1989) and Jarvis and Pavlenko (2008), where these and others more are dealt with in detail):

*Transfer occurs in all linguistic subsystems.* Despite the scepticism regarding morphological and syntactical transfer, it was proven that bound morphology is also susceptible to transfer.

*Transfer occurs among children as well as among adults.* Research in the field has concluded that, although has been claimed that adults are more susceptible to transfer than children, transfer occurs also in child second language acquisition (Luján, Minaya, & Sankoff, 1984; Hecht & Mulford, 1982).

*Errors are not the only outcome of CLI.* Transfer is not simply interference, which is synonym of negative transfer. There also are positive consequences of transfer (positive transfer), such as when it leads to conventional language use and accelerated language acquisition (e.g., Ard & Homburg, 1983; Ringbom, 1978a).

*Differences between the source and the recipient languages do not necessarily lead to learning difficulties or to CLI.* This theory goes against the strong version of the CAH and states that straight-forward differences often make TL structures easier to acquire.

*CLI interacts with other factors that together determine the likelihood of transfer – or the transferability – of a given structure in a given context.* One of these factors is language distance. While similarity between languages can create special problems, such as errors involving false cognates, similarity often confers important advantages and represents a major determinant of the amount of time students will need in order to become highly proficient in a language.

*Language transfer does not occur only from an L1 to an L2, but from other languages known by the learner, too.* In other words, transfer is not simply a falling back on the native tongue, even though for availability reasons, as the L1 is always present, this identification is common.

Furthermore, an important contribution in the field was Odlin's (1989) classification of outcomes of CLI. According to it, positive transfer implies that the learning of one language facilitates or strengthens the learning of another language. On the other hand, negative transfer occurs when the use of an L1 hinders or inhibits the learning of another language, causing production errors in the new language. The latter type of transfer can materialize through different forms, such as underproduction, overproduction, production errors (e.g., substitutions, calques, alterations of structures), and misinterpretation, respectively. Additionally, the author talked about the fact that the distinction between

positive and negative transfer is useful, but the study of these types of transfer tends to focus on specific details and not on cumulative effects of cross-linguistic similarities and differences on the acquisition process. Consequently, one way of assessing such effects is to look at the length of time needed to achieve a high degree of mastery of a language.

In the same vein, from a psycholinguistic perspective the hypothesis of the existence of a general language competence linked to a language or another emerged with Cummins' Interdependence hypothesis. This stated that academic proficiency in L1 and L2 are interdependent, provided a theoretical framework for understanding the mechanism of bilingual proficiency in academic contexts. Consequently, this transferability may be influenced by differences in language structures and orthographic systems (e.g., Verhoeven, 1994; also see Koda, 1994, 1997, for a review of transfer among adult L2 readers).

#### **2.1.4 The Interdependence Hypothesis**

The Interdependence hypothesis proposed by Cummins (1981) suggests that a child's second language competence is partly dependent on the level of competence already achieved in the first language. In other words, "the more developed the first language, the easier it will be to develop the second language. When the first language is at a low stage of evolution, the more difficult the achievement of bilingualism will be" (Baker, 1996: 151).

The Interdependence hypothesis was formally expressed by Cummins (1981: 29) as follows:

*To the extent that instruction in L<sub>x</sub> is effective in promoting proficiency in L<sub>x</sub>, transfer of this proficiency to L<sub>y</sub> will occur provided there is adequate exposure to L<sub>y</sub> (either in school or environment) and adequate motivation to learn L<sub>y</sub>.*

In concrete terms, what this principle means is that in, for example, a Spanish-English bilingual program intended for native speakers of Spanish, English instruction is developing not only reading and writing skills in this language, but also a deeper conceptual and linguistic proficiency that is strongly related to the development of literacy in the majority language (Spanish). In other words, although the surface aspects (e.g., pronunciation, fluency, etc.) of different languages are clearly separate, there is an underlying cognitive/academic proficiency that is common across languages. This

common underlying proficiency, composed of both conceptual and procedural knowledge and skills makes possible the transfer of cognitive/academic or literacy-related proficiency from one language to another.

Everything said so far applies to languages that are either close or distant in typological terms. In the first case, the transfer operates at both linguistic and conceptual levels, while in typologically distant languages transfer takes place affecting mainly cognitive and conceptual elements, as would be the case with English and Japanese (Cummins, 1984) or Spanish and Náhuatl (Francis, 2000). In fact, depending on the sociolinguistic situation, according to Cummins (2005) we are dealing with five different kinds of transfer, which are:

- Transfer of conceptual elements (e.g., understanding the concept of photosynthesis)
- Transfer of metacognitive and metalinguistic strategies (e.g., strategies of visualizing, use of graphic organizers, mnemonic devices, vocabulary acquisition strategies, etc.)
- Transfer of pragmatic aspects of language use (willingness to take risks in communication through L2, ability to use paralinguistic features such as gestures to aid communication, etc.)
- Transfer of specific linguistic elements (knowledge of the meaning of photo in photosynthesis)
- Transfer of phonological awareness—the knowledge that words are composed of distinct sounds (Cummins, 2005)

Accordingly, when learners attend a school where the language of instruction is different from their L1, if provided with enough opportunities to improve their competence in the L2, apart from reaching this goal, they will develop their general competence common to both languages. This will be the case if students are also able to use their L1 in social or familiar settings, as this will generate the environments necessary for the transfer of abilities (developed in L2, and vice versa) to take place. In other words, as far as language command is concerned, learning a language favours the development of other languages if they are fostered in all the contexts where they are present (Gass, 1996; Jarvis & Pavlenko, 2008).

The question sometimes arises as to whether we are talking about transfer or the existence of underlying attributes based on cognitive and personality attributes of the individual. In reality, these dimensions are not separate. The presence of the underlying attribute makes possible the transfer. Attributes develop through experience; in other words, they are learned. Once they exist within the individual's cognitive apparatus or operating system (Baker, 1996), they are potentially available for two-way transfer across languages (from Lx to Ly or from Ly to Lx) if the sociolinguistic and educational context is conducive to, or supports such transfer.

In this vein, a distinction was introduced between 'surface fluency' and 'conceptual-linguistic knowledge' (Skutnabb-Kangas & Toukomaa, 1976) and was later formalized in terms of basic interpersonal communicative skills (BICS), which are acquired at a functional level within about two years after the initial exposure to the second language and cognitive/academic language proficiency (CALP), which requires at least five years (five to seven) in order to reach a native's level in academic aspects of the second language (Cummins, 1981).

Concretely, BICS comprises elements such as pronunciation, vocabulary, and grammar that make communication and comprehension possible with contextual support, and thus it is focused on communicative skill. On the other hand, CALP refers to skills usually developed in schooling and closely linked to cognitive development - cognitive, linguistic, and metalinguistic aspects related to the ability to process information and language out of context, and thus it is related to conceptual skill. Even more, CALP goes beyond each of the languages that the student learns, and once it develops, can be applied to any linguistic context - when it is acquired in L1 it will be easier to transfer from one language to another the necessary skills to face the language out of context.

Therefore, a distinction is made between surface fluency and the more evolved language skills required to benefit from the education process. Therefore, Cummins' iceberg metaphor is used to highlight the distinction between 'visible', quantifiable, formal aspects of language (e.g., pronunciation, basic vocabulary, grammar) and the less visible and less easily measured aspects dealing with semantic and functional meaning.

Among the limitations of the BICS/CALP distinction, Baker (1993: 152) states that

*terms such as BICS and CALP tend to be imprecise, value-laden and become over-compartmentalized, simplified and misused. These hypothetical terms may*

*unwittingly be regarded as real entities. The terms may over-simplify reality. Such terms may be used to label and stereotype students.*

That notwithstanding, the interdependence hypothesis implies that we should actively teach for transfer across languages in bilingual/immersion programs. This also applies to second language programs in general and in teaching the school language(s) to immigrant students. Lambert and Tucker (1972) noted that some students in the French immersion program they evaluated engaged in a form of contrastive linguistics where they compared aspects of French and English despite the fact that in this program (and in virtually all Canadian French immersion programs) the two languages were kept rigidly separate. If students in bilingual/immersion programs spontaneously focus on similarities and differences in their two or three languages, then they are likely to benefit from systematic encouragement by the teacher to focus on language and develop their language awareness.

Additionally, the hypothesis has received considerable empirical and theoretical support (Baker & Hornberger, 2001 or Cummins, 1996, 2000, 2005, 2008). In the Catalan context, numerous studies were carried out that on the one hand, evaluate the first results of the implementation of the bilingual educational programs, and that test the predictive value of the aforementioned hypothesis, on the other hand: Arnau et al. (1994); Bel, Serra, and Vila (1993, 1994); Huguet, Vila, and Llorca (2000); Serra (1997); Serra and Vila (1996); Vila (1995); among others. As regards to the origin, it has been tested both with native (Huguet, Vila, & Llorca, 2000; Vila, 1995) and immigrant students (Huguet, 2008, 2014; Oller, 2008).

If we focus on these two last authors, it is worth commenting on the fact that the first study of Huguet (2008) was carried out in a secondary education school, with 121 participants (93 native and 28 immigrant students, aged 14 to 16), and Romanian, Ukrainian, Bulgarian, Arabic, Spanish, Portuguese, and Wolof as the L1s spoken by the students. After analysing the data obtained from two parallel tests of linguistic competence in Catalan and Spanish, the work focuses on the explicative possibilities of the hypothesis when it comes to pinpointing the mechanisms at work in the acquisition of new languages by immigrant students in multilingual settings. The analysis carried out seems to indicate that interdependence and linguistic transfer processes do take place, with certain linguistic abilities being more likely to be transferred than others. Precisely, those transferred are located at a deeper level of linguistic competence, in contrast to

those found at more superficial levels. Similar results were reached by the same author in a posterior study (Huguet, 2014) on a larger sample of 237 Spanish-speaking participants (123 native and 114 immigrant students), as it was observed that linguistic interdependence and transfer take place in the case of both native and immigrant Spanish-speaking students.

In the same vein, Oller (2008) worked on a sample of 1,141 twelve-year olds in their last year of primary education in different schools (626 native and 515 immigrant students). There were more than 30 L1s in the sample, and all students participated in Spanish and Catalan competence tests. Among others, the following dimensions were considered in the study: L1, length of residence in Catalonia, family educational level and socio-professional status, sociolinguistic context, and rate of immigrant students per classroom. With the analysis of different linguistic skills, and also of the aforementioned variables, the author sought to clarify the establishment of relationships of linguistic interdependence. To that end, it was concluded that there was a direct correlation between knowledge of Catalan and of L1, as the majority of immigrant students had previously developed cognitive-academic abilities in their own languages. They could transfer these abilities to their Catalan competence if given the chance to use their L1s in their immediate social and academic context. Therefore, L1 was considered as an influential factor in the process of acquisition of the vehicular language, as it mediates in the establishment of relationships of interdependence in accordance with the sociolinguistic context and the different abilities involved.

Later analyses of the same data (Oller & Vila, 2011) focused on some linguistic groups of immigrant students in the sample: 221 speakers of Spanish, 44 speakers of Romanian, and 131 speakers of Arabic. Drawing on a revision of previous research on learners of English-L2 in the USA (Genesee et al., 2005, 2006), it was established that Catalan-Spanish (and vice-versa) transfer and relationships of interdependence take place between Latin American students' L1 and L2. The same applies for L2 and L3 in Romanian or Arabic-speaking students in the sample. Nonetheless, such relationships affect more clearly cognitive-academic skills (linked to written language) than conversational abilities (deployed in oral interaction), all of them in turn framed by length of residence, mother tongue, and the corresponding sociolinguistic context. Specifically, Latin American students show a higher rate of transfer in writing and reading skills already developed in Spanish, while the process does not apply so clearly in oral abilities due to the lack of

opportunities to use Catalan outside the school. Conversely, Romanian-speaking students live in contexts where Catalan is more socially present than Spanish, which helps them develop good levels of oral competence in the former language, which also benefits their reading and writing skills. Lastly, Arabic-speaking students obtain the lowest scores in Catalan and Spanish when compared to other groups. This can be attributed to either differences in family educational level or to difficulties to use their L1 in formal-academic contexts, as they had spent most of their schooling in Catalonia, where they arrived by 2000. Romanian students, on the other hand, had arrived in the region later in their lives and had already been schooled in their country. As a summary, the authors (2011: 19) conclude by stating that in Catalonia (where Catalan is the vehicular language and Spanish is taught two hours per week):

*additional knowledge of oral Catalan is needed so that, on one hand, recently arrived students can transfer the abilities they have already developed from their languages to Catalan and Spanish (and vice-versa). On the other hand, this will also help students of foreign origin born in Catalonia progress in those abilities linked to written Catalan and transfer them onto Spanish (or vice-versa).*

To conclude, the interdependence hypothesis is important in order to explain apparently contradictory results, and for the development of bilingual education programs aimed at simultaneous development of both languages. The distinction between additive and subtractive bilingualism acquires more sense when integrated to the aforementioned hypotheses.

After reviewing the historical and theoretical evolution of second language acquisition, as well as the main theories developed, we will further explore one of the main instruments employed to measure this process in general, and language transfer (negative transfer), in particular: error analysis.

## **2.2 METHODS**

Specifically, the present section of the study aims to present a brief historical overview of errors analysis, with special emphasis on the main error classification developed and the importance and relevance of errors at different levels (linguistic, pedagogical, etc.).

### 2.2.1 Error Analysis

Whereas with CAH errors that reflected the structure of the L1 would be produced (Dulay, Burt, & Krashen, 1982), the novelty of Error Analysis (hereinafter, EA) was that the mother tongue was not supposed to enter the picture. That is, in the latter case the claim was made that errors could be fully described in terms of the TL, without the need to refer to the L1 of the learners (James, 1998). Likewise, in contrast to the habit formation theory of CAH, which merely predicts interlingual errors, EA includes the nativist perspective and the existence of IL (Corder, 1981). These errors are at least partly inevitable and therefore necessary for discovery of the correct concept of grammatical rules. Therefore, during the '60s, EA appeared as a consequence of the failure of the contrastive analysis when it comes to deal with all the errors students make, and it has emerged as both theoretical and methodological alternative.

Corder is considered the Father of EA. It was in his article entitled *The significance of Learner Errors* (1967) that EA took a new turn. Errors used to be flaws that needed to be eradicated, but with the new paradigm shift, systematically analysing language learners' errors made it possible to determine areas that need reinforcement in teaching, as the author himself (1967: 125) writes:

*The study of error is part of the investigation of the process of language learning. In this respect it resembles methodologically the study of the acquisition of the mother tongue. It provides us with a picture of the linguistic development of a learner and may give us indications as to the learning process.*

Accordingly, EA is an approach within SLA with an internal focus on the L2 learner's ability to construct a language (Ellis & Barkhuizen, 2005). It consists of a comparison between the errors made in the TL and that TL itself. In this regard, perhaps the most surprising finding in L2 acquisition research concerns the errors L2 learners make. Studies show, for example, that only 5% of the grammatical errors children make and at most 20% of the ones adults make can be traced to crossover from the first language (Dulay, Burt, & Krashen, 1982). In other words, the L1 is one of the many sources of error, as well as the influence of the pedagogical procedures or the learning and communication strategies used by learners.

Before moving forward with the theoretical overview of EA, it is essential to briefly expose the various definitions that the concept received throughout time.

To begin with, Corder (1992 [1967]) considered EA as a shift of paradigm, from seeing errors as proof of the persistence of old habits, to seeing them as signs that the learner is investigating the systems of the new language. As a result, errors went from manifestation of lack and incomplete learning to constitute a valuable source on the acquisition process that is taking place, fact that is widely accepted at present.

In the same vein, Dulay, Burt, and Krashen (1982) define errors as the flawed side of learner speech and writing. They are those parts of conversation or composition that deviate from some selected norm of mature language performance and that are unavoidable, since people cannot learn language without first systematically committing errors.

Likewise, EA can also be defined by reference to the TL, as “a comparison made between the errors a learner makes in producing the target language and the target language from itself” (Gass & Selinker, 2001: 79).

The common ground in all definitions is that errors must be seen as evidence of the progressive acquisition process, the development of the students’ IL. As Fernández (1997) states, errors are valued as proof of the acquisition process the learner undergoes.

As a consequence, EA proposes a rethinking of both learning theory and the treatment of errors. Concretely, studying learners’ errors serves two major purposes: it provides data from which inference about the nature of the language learning process can be made; and also it indicates to teachers and curriculum developers which part of the target language students have most difficulty producing correctly and which error types detract most from a learner’s ability to communicate effectively.

Corder (1981: 112) also held the same view regarding the function of EA and that there are two justifications for studying learners’ errors: its relevance to language teaching and the study of the language acquisition process:

*[...] the pedagogical justification, namely that a good understanding of the nature of error is necessary before a systematic means of eradicating them could be found, and the theoretical justification, which claims that a study of learners’ errors is part of the systematic study of the learners’ language which is itself necessary to an understanding of the process of second language acquisition.*

Since the aforementioned author’s paper on the importance of errors in learning, teaching, and research, EA has been a helpful technique to identify areas where students are having

problems with the objective of strengthening instruction on those areas and/or accommodating teaching methods appropriately.

Accordingly, Dulay, Burt, and Krashen (1982) emphasise the essential role EA has played in providing information regarding the L2 acquisition process that have stimulated major changes in teaching practices. The same authors also add that perhaps “its most controversial contribution has been the discovery that the majority of the grammatical errors second language learners make do not reflect the learner’s mother tongue but are very much like those young children make as they learn a first language” (p. 138).

Despite its recognised importance for the field, EA was not without its detractors. One of the major criticisms regards its total reliance on errors, to the exclusion of other information (Gass, 2013). That is, critics argue, one needs to consider errors as well as non-errors to get the entire picture of a learner’s linguistic behaviour. Also, EA has turned out to be problematic for various reasons.

Firstly, as stated by Dulay, Burt, and Krashen (1982), the major conceptual weaknesses in EA is the lack of sufficient precision and specificity in the definition of error categories. They add as an example that virtually no effort has been made to define error categories precisely and in such manner as to allow replication or comparative studies to be conducted with scientific rigor. The same authors provide as an example, two considerably different definitions for the same concept of ‘intralingual error’:

*Intralingual errors are those which reflect the general characteristics of rule learning, such as faulty overgeneralization, incomplete application of rules, and failure to learn conditions under which rules apply (Richards, 1974a: 174).*

*Intralingual errors occur when L2 does not have a rule which L2 has; the learner applies an L2 rule, producing an error (LoCoco, 1976: 99).*

In the same line, classification of errors depends on error being localisable to the domains of phonology/graphology, morphology, syntax, lexis, discourse, etc. This is by no means always unproblematic, for example when inaccurate pronunciation or orthography produces another word. Some studies ascribe errors to one source when there could have been more than one source and other studies ascribe errors to several sources when there was only one source.

Likewise, counting of errors becomes problematic when multiple errors occur in close proximity or one error occurs within an already erroneous element. Another quantification problem occurs when an error is found over a larger linguistic domain than a word (Schachter & Celce-Murcha, 1977). Quantification is also problematic since some studies count error types (the occurrence of an error is noted once) and some count tokens (every example of the error is counted) (Lennon, 1991). Making comparisons across studies is, therefore, unreliable and comparing error frequencies or generalising the results is not a simple matter (Hobson, 1999). In this regard, Burt and Kiparsky (1974) first drew attention to what they called global errors, which are difficult to localise to a specific item and seem to extend over the whole sentence. Consequently, assigning psycholinguistic causes to error is by its very nature speculative, particularly for global errors. In practice, it is often difficult to decide whether an error is caused by language transfer or not.

According to Hobson (1999), EA has been criticised, both for theoretical and methodological reasons. One issue is that in EA the norm is the target language and any deviation from the target is viewed as an error. However, determining a norm is problematic because it depends on a variety of factors, external such as situation, interlocutor, speech versus writing, and certain internal ones, especially anxiety.

Lastly, there is another more fundamental objection to EA as a tool for describing transitional competence. At best, EA can only provide negative evidence concerning certain aspects of the language that have not been acquired by a learner at a particular time. In this sense, Hammarberg (1974: 185) points to the “insufficiency of error analysis”, which for him lies in its one-sided practice of “analyzing out the errors and neglecting the careful description of the non-errors”. In other words, critics of EA argue that this approach tends to be focusing too much on error frequency, that is, to make record of erroneous constructions only and excluding what L2 learners actually produce correctly. Also, Schachter (1974) discovered what she saw as a fundamental flaw in EA - a failure to recognize that learners have a tendency to avoid TL items they are not sure about, and so not to commit errors which they would be expected to commit.

That notwithstanding, just because this technique was widely used in the 1970s, it does not mean that 21<sup>st</sup> century instructors cannot take advantage of its useful benefits for today's teaching.

In this sense, EA of L2 production data continues to be a source of valuable information<sup>9</sup> (Guijarro-Fuentes & Larrañaga, 2011; Montrul, 2011b).

However, recent years have seen a proliferation of studies exploring SLA from different theoretical positions and using a wider variety of techniques. Specifically, apart from the studies we will present later on that usually analyse the learners' linguistic competences from the perspective correct-incorrect use and are mainly pedagogically orientated, we draw attention on the incorporation of EA within more complex techniques meant to examine learners' language development, such as the grammaticality judgement tests, i.e., when people are offered sample sentences, which are in (dis)agreement with the rules proposed for the underlying competence, and invited to say whether they think they are grammatical or not (Sorace, 1996). Similarly, many of the results about Spanish L2 processing produced so far have been obtained from offline production studies of learner errors (Alarcón, 2011; Montrul, Foote, & Perpiñán, 2008). In this type of study, the type and quantity of systematic errors produced is analysed as evidence of underlying L2 competence and of the cognitive processes responsible for language production.

Summarizing, EA continues to be practised, although with the newer approaches emerged in the field, the role of error analysis was changed, as errors are generally incorporated as part of other more complex techniques of measuring the same phenomenon, language acquisition.

Before moving further into the discussion, it is essential to make a distinction between mistake and error. Both Corder (1967, 1971) and James (1998) reveal a criterion that helps us do so: the self-correctability criterion. A mistake can be self-corrected, but an error cannot. Mistakes can only be corrected by their agent if their deviance is pointed out to him or her. If a simple indication that there is some deviance is a sufficient prompt for self-correction, then we have a first-order mistake. If additional information is needed, in the form of the exact location and some hint as to the nature of the deviance, then we deal with a second-order mistake (James, 1998).

On the other hand, errors are systematic, and thus likely to occur repeatedly and not recognised by the learner. Hence, only the teacher or researcher would locate them, the learner would not (Gass & Selinker, 1994). In other words, errors cannot be self-corrected

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<sup>9</sup> See Gillon Dowens and Carreiras (2013) for a more in-depth presentation of the complex and diverse presence of error study in up-to-date SLA studies focused on Spanish L2 acquisition.

until further relevant input (implicit or explicit) has been provided and converted into intake by the learner. Hence, errors require further relevant learning to take place before they can be self-corrected (James, 1998).

Likewise, Norrish (1983) also made a clear distinction between errors and mistakes. He postulated that errors represent a systematic deviation when a learner has not learnt something and consistently gets it wrong. He added that when a learner of English as a second or foreign language makes an error systematically, it is because he or she has not learnt the correct form. Regarding mistakes, the author stated that when a learner has been taught a certain correct form, and he/she uses one form sometimes and another at other times quite inconsistently, the inconsistent deviation is called a mistake.

To sum up, a mistake is expected to be corrected easily by an L2 learner when pointed out by the language teacher whereas an error, which tends to occur two or more times in an essay is not correctable by an L2 learner even when pointed out by the language teacher (Corder, 1981).

Lastly, we must emphasise that although the terms mistake and error are often used interchangeably, there is a clear difference between the two that must be taken into account when conducting SLA studies. Also, it is in this light that we aimed to focus the present study on students' errors, and not their mistakes.

Following, we will present several studies that were conducted according to the EA approach, further confirming its relevance and importance for the field of SLA. The works chosen are especially relevant as they deal with the EA regarding some of the morphological aspects that were taken into account when conducting the present study, too.

Firstly, there is an abundance of studies conducted on English-speaking learners of Spanish, mainly at university level and based on written language production assessment.

One of the earliest studies is the one conducted by Azevedo (1980). He examined lexicogrammatical errors found in 61 papers written by English-speaking graduate students of Spanish. Some errors found include gender and number agreement in passive constructions, making the indirect object the passive subject, confusing the impersonal and passive *se*, misuse of the reflexive pronoun, the *gustar* structure, confusing the preterite and the imperfect, and gender assignment for words ending in consonant or for

exceptions to the rule (e.g., *el problema*), among others. He found prepositions to be a problematic category. Also, single words that have two equivalents in the L2 were a major source of errors, such as *por/para*. In this sense, the author adds that “when an item in the native tongue has two structural counterparts in the target language, there is fifty per cent probability that the wrong choice will be made” (p. 221). Correspondingly, Dušková (1969) found many errors in a category that does not exist in the first language (L1), e.g., the definite article.

Likewise, Madrid (1999) classified errors made by 30 English-speaking study-abroad students of Spanish. The corpus included a narration of a study previously read and sentence-completion exercises focused on categories known to be difficult for them. The most frequent errors included, in order: confusing *ser/estar*, wrong use of direct and indirect pronouns, wrong use of the subjunctive, omission of the article, and confusing preterite/imperfect. These errors were also present at the beginning of the program, so they persisted despite instruction and interaction with native speakers. He concludes that the reason behind most errors is the interference of the L1.

Secondly, one of the most comprehensive studies on errors on learners of various L1s is Fernández (1997). Her corpus included one composition and seven quizzes about concrete grammatical points from 108 adult learners of Spanish enrolled in courses at three different levels of proficiency. She analysed the data according to different variables (L1, level, across levels, etc.). Among lexical errors (13.2%), she found *ser/estar* as the most common. Among grammatical errors (48.2%), the most frequent errors included verbs (irregular forms, preterite/imperfect, and subject-verb agreement) and prepositions (especially the personal *a*, *por*, and *en*). She found that gender agreement between the noun and the adjective was the most common error, followed by subject-verb agreement. Because of the difference between results from the compositions and results from the quizzes, she concluded that certain ethnic groups are better trained to focus on form when learning an L2, such as German and Japanese students, and do better in quizzes than in compositions.

Similarly, the same author (Fernández, 1995a) previously conducted an analysis on developmental and fossilizable errors of 108 learners of L2 Spanish with four different L1 backgrounds (German, Japanese, Arabic, and French). The results revealed that the most frequent errors related to verb inflection tend to disappear. Likewise, there was confusion in the use of Perfect-Imperfect, which persists in the case of those who do not have this

distinction in their mother tongues, and avoidance of the Past Perfect (Pluperfect), including in the more advanced levels. Concerning the agreement in the subordinate clauses, an increasing tendency was noticed regarding the commission of the indicative for subjective, the infinitive for a personal mood and the present for past tenses. Regarding the prepositions, almost all the errors decrease, but the ones that prevail are: the omission and incorrect use of preposition *a* with DO ('visité mi madre', 'vi a un barco'), the use of *en* instead of *a* with movement verbs ('ir en España') in the case of the French group and the use of the preposition *con* for means of transportation ('ir con coche'), the use of *en* instead of *de* with locative and possessive expressions ('las casas en mi pueblo', 'los españoles en Siglo de Oro'), the use of *en* instead of *por* ('andar en Madrid'). Other errors that seems to prevail is the omission of the clitics, especially with IO, or, by force of hypercorrectness, the overuse of the clitics.

Additionally, Santos Gargallo (1993) examined 55 compositions written by Serbo-Croatian female university students enrolled in the third and fourth courses of Spanish. The most difficult categories included, in order: the definite article, prepositions (wrong choice), past tenses (particularly, preterite, and imperfect), lexicon selection, pronouns, confusing *ser/estar/haber*, and gender and number agreement. Like other researchers before her (Azevedo, 1980; Dušková, 1969; Lado, 1957), she concluded that the definite article is problematic because it does not exist in the L1. In agreement with Azevedo (1980), she found many errors in single words that have two equivalents in the L2. She also noticed avoidance in the use of the subjunctive, which supports findings by Schachter (1974). Regarding gender agreement, she claims that the poor explanation found in pedagogical materials is the reason behind most errors and recommends revising and improving them.

Gutiérrez Quintana (2005) examines to what extent the mother tongue influences the learning process of 44 Italian students of Spanish at an Italian university. The most frequent errors have been identified, described, and classified, to determine which areas present greater difficulties of assimilation, and their evolution at various levels of linguistic competence, has also been analysed. Specifically, the most frequent errors were related to prepositions, followed by those of verb tense use, and use of article and personal pronoun. Also, the main errors that prevail are those related to article addition, use of clitics, reflexive pronoun omission, use of prepositions, among others.

Similarly, Mohd Hayas (2006) investigated the written lexical errors found in compositions written by adult Malaysian students taking an intermediate Spanish course in Malaysia. Like other researchers (Fernández 1997), she found that errors involving grammar were more frequent (56%), with gender assignment at the top of the list.

Furthermore, when examining studies focused on more specific aspects, one of the most exploited is gender agreement. Consequently, Schlig (2003) examined the errors on gender agreement made by 61 English-speaking college students enrolled in a Spanish advanced grammar course and a Spanish advanced conversation and composition course. The corpus included translations, analysis of texts, short compositions, formal essays, and answers to reading comprehension questions. Over 38% of all errors were gender-assignment or gender-agreement errors in article-noun and noun-adjective combinations. Most gender-related errors involved nouns ending in *-e* or consonant. Students in both courses had similar errors, implying that grammar correction makes no difference in a student's grammatical acquisition.

Also, a wide range of studies dealt with verb inflection. For instance, Barnwell (1987) examined the errors found in verbal aspect selection from 85 midterm exams written by university English-speaking students of second-semester Spanish. Results showed that students had more errors in selecting the correct aspect (preterite or imperfect) than in writing the correct inflection. Likewise, Martínez Guillem (2010) classified the written errors in the verbs of 20 Japanese students learning Spanish at the university. Most errors were found in grammar, particularly in subject-verb agreement, the absence of the stem-vowel change, and overgeneralization of rules. The second most frequent error was lexicon selection, particularly in words that have two equivalents in the L2, as most researchers find. He claims that knowing the L1 of the student can be useful for the teacher in order to foresee an error and strengthen that area before the error occurs.

Regarding the acquisition of the article system, it is worth mentioning that similarly to child L1 studies, research on adult L2 acquisition of articles has reported errors of omission and substitution (Zdorenko & Paradis, 2011). Article omissions were reported in learners of English whose L1s did not have articles (Huebner, 1985; Lardiere, 2004; Parrish, 1987; Robertson, 2000; White, 2003), and such learners' difficulties with articles were naturally attributed to the influence of their L1s, which did not have a functional category D. Also, difficulty in choosing appropriate articles was documented in these learners, who produced more errors of substitution than speakers of languages with article

systems similar to English, such as French (Sarko, 2008), Greek (Hawkins et al., 2006), or Spanish (Ionin et al., 2008; Snape, Leung, & Ting, 2006). Omission and substitution errors were documented in learners from no-article L1 backgrounds of all proficiency levels, even in learners who reached the final state of L2 development (Lardiere, 2004; White, 2003).

Specifically, in their study, Zdorenko and Paradis (2011) investigate the acquisition of the article system of English as a phenomenon at the interface between morphosyntax and semantics. Adult L2 acquisition studies have reported that learners of English often have consistent difficulty in the use of articles until very late stages of acquisition. Also, the authors previously investigated L1 influence in the L2 acquisition of articles, which was attested in a longitudinal study of the acquisition of articles by child L2 learners from a variety of L1 backgrounds (Zdorenko & Paradis, 2008). The authors analysed article use in L2 children from four L1 backgrounds: Mandarin/Cantonese Chinese, Hindi/Urdu/Punjabi, Arabic, and Spanish. The findings of the study indicate three tendencies over two years: (1) All children substituted *the* for *a* in indefinite specific contexts (i.e., showed fluctuation) regardless of L1 background; (2) all children were more accurate with use of *the* in definite contexts than with *a* in indefinite contexts, regardless of L1 background; and (3) children with [-article] L1s had more omitted articles as error forms than children with [+article] L1s, but only at the early stages of acquisition. Overall, L1 influence in the children's developmental patterns and rates of article acquisition was limited. Child L2 learners converged on the target system faster than prior reports have indicated for adult L2 learners, even when their L1s lack articles. Thus, it was concluded that fluctuation is a developmental process that overrides transfer in child L2 acquisition of English articles, in contrast to what has been reported for adult L2 learners.

Similarly, Chondrogianni (2008) found evidence for the initial transfer of L1 properties in Turkish learners of Greek in child L2 acquisition of articles. However, Chondrogianni focused on the acquisition of only the definite article in comparison with pronominal clitics. As previously seen, few recent studies have investigated the acquisition of English articles in child L2 learners from different L1 backgrounds (Zdorenko & Paradis, 2008, 2011).

Furthermore, there were also studies focused mainly on prepositions and the difficulties attained to learning them.

Accordingly, Giraldo Silverio (1997) studied the written errors that affected prepositions in adult advanced learners of Spanish of different ages and nationalities. Some of the most frequent errors included missing the ‘personal a’, using a preposition when it was not necessary, confusing *a/en* with movement and non-movement verbs, missing the *a* in the *gustar* structure, confusing *por/para*, and confusing *a/para*.

Jódar (2006) conducted a correct use and errors analysis of the prepositions and prepositional phrase from 67 written compositions of university students of L1 Polish, L2 French, and L3 Spanish. The higher percentage of errors from the total de errors was related to six prepositions: *de*, *en*, *a*, *con*, *para*, and *por*. Concretely, the highest amount of errors was related the preposition *a*, followed by *en*, *por*, *de*, *con*, and *para*.

In the same vein, Campillos Llanos (2014) analyses the use of prepositions (production and errors) in the speech of forty learners of Spanish and compares it with the usage by native speakers. Data belong to a learner corpus of oral interviews with university learners from more than nine language backgrounds (Italian, French, Portuguese, English, German, Dutch, Polish, Chinese, and Japanese) at intermediate level (A2 and B1). The methodology used is Learner Corpus Research (Computer assisted Error Analysis and Contrastive Interlanguage Analysis). The paper describes the error analysis, in which errors hardly decreased in B1. The prepositions most prone to errors were: *a*, *de*, *en*, and *por*. Similar results were reached by Fernández (1994), who examined the acquisition of Spanish in the case of 108 students of various L1s (German, Japanese, Arabic, and French) and like the previous authors concluded that the prepositions most prone to errors are: *a*, *en*, and *de*, which are the most used, too.

Likewise, one relevant study on the acquisition of pronouns is García’s (2014), conducted on 90 English-speaking students learning Spanish as a foreign language at a medium-size university. Specifically, there were 30 participants for each level of proficiency: 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> semesters of Spanish as a foreign language. Error analysis was used and a lexicogrammatical taxonomy was created to count, identify, describe, and classify the written errors found in the 90 unaided compositions. Surprisingly, the category with the highest internal error rate in 2<sup>nd</sup>- and 4<sup>th</sup>-semester courses and the second highest in 3<sup>rd</sup>-semester courses was pronouns. Also, the category where most errors were found in absolute numbers was verbs, followed by prepositions, and the single area with the highest number of errors was failing to write the ‘personal a’. An obvious cause for errors was found to be the interference of the L1.

Furthermore, several studies highly relevant were developed in the Catalan context with immigrant students, learners of Spanish and/or Catalan.

Gràcia (2007) conducted two parallel analyses: one on the study of verb inflectional errors produced by adult Chinese and Romanian learners of Catalan and Spanish, and another data regarding syntactic word order problems in three groups of speakers (Chinese, Romanian, and Punjabi). The results are similar for Catalan and Spanish, so they are treated jointly. The conclusions reached are that L1 influence is clear in all the cases, but it's stronger in the acquisition of the verb inflection than in the syntactic word order. Likewise, the results of the study reveal that regardless of their L1, all the participants presented difficulties related to the verbal inflection. That notwithstanding, Romanian speakers make fewer errors of verbal inflection than the Chinese ones. Regarding the use of number and person, Romanians make a considerable amount of errors of person forms, substituting personal forms for non-personal ones. Also relevant is the presence of inflection errors of 3<sup>rd</sup> person singular and plural and 1<sup>st</sup> person singular, which occur in very specific cases, and sometimes related to the functioning of the L1. Lastly, Romanian speakers use erroneously tense, mood, and aspect forms, as a consequence of the use in L1 of tenses and moods. Specifically, they use the Present Tense for other forms, mainly the Imperfect, or the Present Perfect for the Preterite.

Chireac (2010) examines the oral language productions of 60 students of 12, 14, and 16 years old from the 6<sup>th</sup> grade of Primary Education and 2<sup>nd</sup> and 4<sup>th</sup> grade of Compulsory Secondary Education. Regarding the origin, there were 12 autochthonous students and 48 immigrants (24 Romanian and 24 Chinese). The predictor variables used for the study were length of residence, gender, age (grade), and mother tongue. The results revealed that the Chinese groups made more errors than the Romanian groups in both Spanish and Catalan, regardless of the length of residence. Also, it was observed that the Romanians of shorter length of residence produce a higher percentage of exchange of Present Perfect for other tenses and it was concluded that the difficulty in using the Present Perfect and the Preterite is rooted in the fact that in Romanian language only the Present Perfect is used to express past actions. Likewise, the noun determinants/articles were problematic for the aforementioned group, since in Romanian, the definite article are attached to the end of the noun as enclitics (the agglutination of the definite articles), this resulted in the use of indefinite article for the definite one, the addition of definite article to express transportation, the omission of article as in Romanian language. Lastly, the most

problematic from the other categories was the use of prepositions and pronouns. Specifically, Romanians omitted the preposition *a* in front of direct object of person in Spanish and in Catalan used *a* instead of the correct *en*. Regarding the pronouns, Romanians make more pronoun errors than the Chinese; high percentage of pronoun errors for Romanians, as the incorrect use of *lo* and *ho*.

In the same vein, Chireac, Serrat, and Huguet (2011) conducted a research on a more diverse sample of eight autochthonous, eight Romanian, and eight immigrants of other origins (four Ukrainians and four Bulgarians), all students of 2<sup>nd</sup> and 4<sup>th</sup> grade of CSE. The instruments used were four subtests, two oral and two written assessing language competence in Spanish and Catalan. The participants' length of residence in the host country was between 8 to 24 months. The results revealed no differences in the level of language competence between the Romanian students and those with L1 different (non-Romance languages). Regarding the Romanian students, most errors according to error type were commission ones, followed by omission, addition, and order, while most errors by linguistic category were related to verb, preposition, pronoun, noun, and others. Also, the errors due to L1 influence from Romanian were associated with the agglutinated definite article, with neutral nouns, verb errors related to number and person, commission of Preterite for Present Perfect, etc. Finally, according to the language production, in oral the results were similar for both languages, while in written better scores were found in Catalan than in Spanish.

Lastly, there are also several studies focused only on the acquisition of Catalan language by immigrant learners with different mother tongues. Specifically, Serrat, Gràcia, and Perpiñá (2007) conducted their study on 12 students, ages 6 to 12 years old, with L1 Chinese, Tagalog, and Soninke. The results reveal that the error percentages are equal among the learners of the three languages, and the most frequent errors are related to omission of definite article, number and gender errors in nominal inflection, errors for 3<sup>rd</sup> person singular in verb inflection, while there were no significant differences regarding tense, mood, and aspect use. Also, the conclusion reached is that there is an L1 influence on L2 at a morphological level in young learners. On the other hand, Gràcia and Serrat (2003) present examples of L1 influence regarding verb inflection in Catalan learning for immigrants of Arabic, Soninke, and Chinese origin. Also, a large number of verb inflection errors was encountered.

In the next section, we look at the error typology developed in the literature and consequently used in the research conducted in the field, with special emphasis on those that served as basis for the empirical part of the present study.

### ***2.2.1.1 Classification of errors***

As expected, given the importance and the spread that EA has achieved, various typologies were established and different classifications were proposed.

To begin with, Vázquez (1999) presented a classification according to six main criteria: linguistic, etiological, communicative, pedagogical, pragmatic, and cultural, each structured as follows:

#### **1. Linguistic criteria:**

- addition errors
- omission errors
- incorrect selection errors
- incorrect collocation errors
- juxtaposition errors

#### **2. Etiological criteria:**

- interlingual errors
- intralingual errors
- simplification errors

#### **3. Communicative criteria:**

- ambiguity errors
- irritating errors
- stigmatizing errors

#### **4. Pedagogical criteria:**

- induced vs. creative errors
- transitory vs. permanent errors
- fossilized vs. fossilizables errors
- individual vs. collective errors
- written production vs. oral production errors

5. Pragmatic criteria:

- relevance errors
- speech errors

6. Cultural criteria

Further, Richards (1971) in perhaps one of the first and most important studies conducted in the field of Error Analysis distinguished three categories according to the source of errors:

- interference errors
- intralingual errors
- developmental errors

According to the same author, intralingual errors are also subdivided in the following categories:

- overgeneralization errors
- ignorance of rule restrictions
- incomplete application of rules
- false hypothesis

However, as Schachter and Celce-Murcia (1977) pointed out, the distinction between intralingual and developmental errors is rather ambiguous. As a result, Richards (1974a) classified errors, according to their causes, into two categories later on. The two categories are as follows:

- interlingual errors
- intralingual and developmental errors

Regarding this distinction, Gass (2013) stated that interlingual errors are those that can be attributed to the NL (they involve cross-linguistic comparisons), whereas intralingual errors are those due to the language being learned, independent of the NL. One would therefore expect similar intralingual errors to occur from speakers of a wide variety of L1s.

That notwithstanding, some experts believed that the distinction between intralingual and interlingual errors is not always so straight-forward. They also claimed that it is more difficult to identify different types of intralingual errors than Richards (1971) described.

In order to deal with this problem, Dulay and Burt (1974b) classified learners' errors into three broad categories:

- developmental errors, as the errors that are similar to L1 acquisition
- interference errors, as the errors that reflect the structure of the L1
- unique errors, as the errors that are neither developmental nor interference

We will further discuss in more detail the error taxonomies proposed by Durão (2007). Concretely, the criteria used by the author when developing the classifications were:

1. Linguistic criteria (based on Burt & Kiparsky, 1972):

- addition
- omission
- absence of sentence order (or false collocation/positioning)
- incorrect formation of words and structures, due to false election/selection

2. Grammatical criteria (based on Corder, 1973):

- phonetic and phonologic errors
- orthographic errors
- morphological errors
- syntactic errors
- lexico-semantic errors
- speech errors

3. Etiological criteria (based on Selinker, 1972):

- transitory (or developmental)
- permanent

Furthermore, the same author states that errors caused by transfer can be classified as:

- production errors:
  - substitution
  - calque
  - inventing a new word
- subproduction errors:
  - superproduction errors
  - faulty interpretation (or pragmatic) errors

- hipercorrection errors
- intralingual errors due to:
  - simplification
  - generalization
  - induction
  - excessive production (also called subproduction)
- pedagogical criteria, which comprises:
  - comprehension errors
  - production errors
  - individual errors
  - collective errors
  - oral errors
  - written errors

Additionally, we will present a classification of errors of essential importance in the proceeding of the analysis for the present study, the one of Dulay, Burt, and Krashen (1982). As can be seen, the authors developed four different taxonomies:

#### 1. Error types based on Linguistic category

These linguistic category taxonomies classify errors according to either the language component or the particular linguistic constituent affected by the error or both of the above mentioned.

Language components include phonology (pronunciation), syntax and morphology (grammar), semantics and lexicon (meaning and vocabulary), and discourse (style). Constituents include the elements that comprise each language component.

#### 2. Surface strategy taxonomy

A surface strategy taxonomy highlights the ways surface structures are altered: learners may *omit* necessary items or *add* unnecessary ones; they may *misform* items or *misorder* them.

- Omission

Omission errors are characterized by the absence of an essential morpheme or word that must appear in grammatically correct sentence.

These errors are expected to be more frequent and across a greater variety of morphemes during the early stages of L2 acquisition. In intermediate stages, when learners have been exposed to more of the language, misformation, misordering, or overuse of grammatical morphemes are more likely to occur.

- Addition

Addition errors are the opposite of omissions. They are characterized by the presence of a redundant or not appropriate morpheme or word that must not appear in a well-formed utterance.

These errors tend to feature in writing on the intermediate level, when the L2 learners have already acquired some rules they tend to use them overconfidently.

- Misformation

Misformation errors are characterized by the use of the wrong form of the morpheme or structure. While in omission errors the item is not supplied at all, in misformation errors the learner supplies something, although it is incorrect.

- Misordering

As the label suggests, misordering errors are characterized by the incorrect placement of a morpheme or group of morphemes in an utterance.

Regarding this particular taxonomy and the impact it could have in this field, the authors state that analysing errors from a surface strategy perspective could constitute a useful tool for researchers concerned with identifying cognitive processes that underlie the learner's reconstruction of the new language. Additionally, the authors consider that it could also make researchers aware of the fact that learners' errors are based on some logic.

### 3. Comparative taxonomy

The classification of errors in a comparative taxonomy is based on comparisons between the structure of L2 errors and certain other types of constructions. Consequently, the three categories of errors are:

- developmental errors
- interlingual errors
- other

#### 4. Communicative effect taxonomy

Lastly, the communicative effect taxonomy deals with errors from the perspective of their effect on the listener or reader.

To sum up, from the aforementioned taxonomies, the authors add that among the most common errors are: omitting grammatical morphemes, double marking a semantic feature, regularizing rules, using two or more forms in random alternation, and misordering items.

A more recent classification, based on the one previously presented is James' (1998). Following, he presented the same two taxonomies:

##### 1. Linguistic category classification

##### 2. The Surface structure taxonomy

- Omission
- Addition
- Misformation
- Misordering
- Blends

Nevertheless, the novelty in his approach resides from the suggestion of combining the two taxonomies, instead of seeing them as if they were two alternative taxonomies (James, 1998). By doing so, the considerable advantages of multidimensional taxonomies emerge.

#### *The importance of errors in SLA*

To conclude this chapter of the present work, we will focus on the importance of errors in the study of SLA. Specifically, errors can be of great value to all those concerned: teachers, students, and the researchers, for various reasons.

According to Corder (1967), errors provide the researcher valuable information regarding how a language is acquired and what strategies the learner uses. Researchers are, therefore, interested in errors because they contain data on the strategies that learners use to acquire a language (Richards, 1974a; Taylor, 1975; Dulay & Burt, 1974b).

Additionally, Richards (1974a: 15) states that “at the level of classroom experience, error analysis will continue to provide one means by which the teacher assesses learning and

teaching and determine priorities for future effort”. Similarly, Corder (1974) adds that EA has two objects: one theoretical and another applied. The theoretical object serves to elucidate what and how a learner learns when he/she studies an L2, while the applied object serves to enable the learner to learn more efficiently by exploiting our knowledge of his dialect for pedagogical purposes.

Systematically analysing errors made by language learners makes it possible to determine a student’s progress and the areas that need reinforcement in teaching (Corder, 1967, 1974). In the same manner, Selinker (1972) defined errors as ‘red flags’ that provide evidence of the learner’s knowledge of the L2. Consequently, EA is an important source of information to teachers. According to Richards, Plott, and Platt (1996), it has been conducted to identify strategies which learners use in language learning, to track the causes of learner’s errors, obtain information on common difficulties in language learning or on how to prepare teaching materials.

In the same vein, Candling (2001) considers EA as the process of monitoring and analysis of learner’s language and adds that the L2 learners’ errors are potentially important for the understanding of the processes of SLA. Likewise, according to Ancker (2000), making mistakes or errors is a natural process of learning and must be considered as part of cognition.

Similarly, Olasehinde (2002) also argues that learners make errors inevitably. He also cited that errors are unavoidable and a necessary part of the learning curve. In the same way, Mitchell and Myles (2004) claim that errors, if studied, could reveal a developing system of the students’ L2 language and this system is dynamic and open to changes and resetting of parameters. Therefore, the teachers need to view students’ errors positively and should not regard them as the learners’ failure to grasp the rules and structures, but view errors as process of learning.

In conclusion, EA is useful in L2 learning because it reveals to teachers, syllabus designers, and textbook writers what the problematic areas are. Likewise, Corder (1967) states that errors are visible proof of the fact that learning is taking place. He has also emphasised that errors, if studied systematically, can provide significant insights into how a language is actually learned by a foreigner. He subscribes to the view that studying students’ errors of usage has immediate practical application for language teachers, thus emphasising the goal of great part of the work on EA, which is pedagogical remediation (Gass, 2013).

## 3 OBJECTIVES

### 3.1 GENERAL OBJECTIVE

The present study focuses on Romanian immigrant students, as the data provided by the Spanish National Institute of Statistics reveals that the Romanian group is one of the most represented immigrant groups in the Catalan bilingual education system. Consequently, since the academic year 2007-2008, Romanian students were granted the possibility to attend classes of Romanian language, culture, and civilization. This is particularly relevant when we consider the impact of L1 in the acquisition of second languages (L2s) (Jarvis & Pavlenko, 2008) and Cummins' Linguistic Interdependence Hypothesis (1979, 1981), which purports the notion that, if some conditions are favourable, abilities acquired in a certain language (Lx) can be transferred to another language (Ly).

Accordingly, in a context of immigration, such as Catalonia's, the foreign population arrives to the host country with its own cultural and linguistic background. Consequently, the concept of language transfer emerges from this diversity of languages in contact. In this sense, Odlin (1989) states that the degree of similarity between two languages is a key factor in LT. In the case of Romanian immigrant students in Catalonia, the common linguistic elements between Romanian and the two official languages of the region (Spanish and Catalan) could influence the process of language acquisition.

With this framework, our study comes as an answer to the necessities and the research lack in our field, as it deals with the process of second language acquisition and language transfer in the case of the Romanian immigrant students of two L2 simultaneously (Spanish and Catalan). Also, an analysis of the participants' mother tongue is presented, given its importance due to the "privileged status" (Schmid & Köpke, 2007: 1) it occupies in the human mind. To our knowledge, the latter study is currently unique in the Catalan context, since the studies conducted with Romanians (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia, 2007) or other immigrant groups (Gràcia & Serrat, 2003; Huguet, 2014; Huguet et al., 2013; Serrat, Gràcia, & Perpiñá, 2007) focus on analysing the two official languages, but don't take into account the Romanian language as the L1 of the participants.

Further, additional analyses were conducted regarding the effect of attendance at Romanian classes on the total scores at language competence tests and on the proportions of errors in the three languages: the mother tongue and the official languages of Catalonia. Additionally, the evolution of the proportion of errors was examined according to length of residence.

Consequently, the general objective of the present study is to investigate the processes of second language acquisition, first language maintenance, and language transfer in the case of the immigrant Romanian students in Catalonia, as well as the effect of L1 (Romanian) instruction and length of residence on the three languages analysed: Catalan, Spanish, and Romanian.

### **3.2 SPECIFIC OBJECTIVES**

From the aforementioned general objective we can gather several specific objectives:

1. To examine the level of language competence for the three languages studied.
2. To identify the most frequently encountered categories of errors in oral and written language productions for the three languages studied.
3. To examine the effect of attendance at Romanian classes on the language competences for the three languages.
4. To examine the effect of attendance at Romanian classes on the proportion of errors for the three languages.
5. To examine the effect of length of residence on the proportion of errors for the three languages.
6. To conduct an in-depth descriptive analysis of the incorrect use and its cause for the two official languages: Catalan and Spanish in both language productions studied: oral and written.
7. To examine the influence of the mother tongue in the students' oral and written productions in the two vehicular languages, Spanish and Catalan.

## 4 HYPOTHESES

Consequently, from the abovementioned objectives, several hypotheses were formulated.

From the first objective established, regarding the level of language competence for the three languages studied, based on the results encountered in previous studies (Huguet, 2007, 2009; Navarro & Huguet, 2010; Oller, 2008; Oller & Vila, 2011) the hypothesis drawn is the following:

H1. There will be differences in the levels of competence according to language.

From the second objective of the study, several hypotheses were drawn:

H2. There will be significant differences in the proportion of errors according to language.

In this regard, while in the study carried out by Gràcia (2007) the results are similar for Catalan and Spanish, other studies (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Huguet, 2008) encountered differences between the two languages studied.

H3. There will be significant differences in the proportion of errors according to language production.

Likewise, differences were found according to language production in previous studies (Chireac, Serrat, & Huguet, 2011; Oller & Vila, 2011).

H4. The most frequent type of error will be the commission one for the three languages studied.

This hypothesis was constructed based on previous studies that also came to this conclusion (Chireac, 2010; Chireac, Serrat, & Huguet, 2011).

H5. The most frequent linguistic category prone to error will be related to the category of verb for the three languages studied.

Numerous studies (Ambadiang, Camus Bergareche, & García Parejo, 2008; Díaz & Bekiou, 2006) concur that, regardless of the L1, verb inflection is one of the most problematic aspects in the process of SLA. In this sense, various researches were conducted both internationally (Asencion-Delaney & Collentine, 2011; di Franco, 2007; Gutiérrez Quintana, 2005; Kočman, 2011; Leontaridi, Peramos Soler, & Morales Ruiz,

2008; Liskin-Gasparro, 2000; Rakaseder & Schmidhofer, 2014; Salaberry, 1999), and in the Catalan context (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia & Serrat, 2003; Serrat, Gràcia, & Perpiñá, 2007).

Following, from the third objective, aiming at examining the effect of attendance at Romanian classes on the language competences for the three languages, the hypothesis drawn is:

H6. There will be significant differences in the levels of language competence in the three languages studied by attendance at Romanian classes.

We base the aforementioned statement on Cummins' (1981) Interdependence Hypothesis, which suggests that a child's second language competence is partly dependent on the level of competence already achieved in the first language.

Specifically, in the Catalan context, the instruction carried out in Catalan allows to develop reading and writing competences in this language, and would not only enhance the competences in this language, but also would facilitate a conceptual and linguistic competence. Obviously, this implies the existence of a cognitive-academic competence common to all languages (Common Underlying Proficiency - CUP). Also, numerous studies were carried out that test the predictive value of the aforementioned hypothesis (Arnau et al., 1994; Bel, Serra, & Vila, 1993, 1994; Huguet, Vila, & Llurda, 2000; Serra, 1997; Serra & Vila, 1996; Vila, 1995, among others), both with native (Huguet, Vila, & Llurda, 2000; Vila, 1995) and immigrant students (Huguet, 2008, 2014; Oller, 2008; Oller & Vila, 2011).

Additionally, when learners attend a school where the language of instruction is different from their L1, if provided with enough opportunities to improve their competence in the L2, apart from reaching this goal, they will develop their general competence common to both languages. This will be the case if students are also able to use their L1 in social or familiar settings, as this will generate the environments necessary for the transfer of abilities (developed in L2, and vice versa) to take place (Gass, 1996; Jarvis & Pavlenko, 2008).

Therefore, as previously mentioned, the possibility to attend classes of Romanian language, culture, and civilization is highly relevant as Cummins' Linguistic Interdependence Hypothesis (1979, 1981) implies that if some conditions are favourable, abilities acquired in a certain language (Lx) can be transferred to another (Ly), hence the

relevance of studying the effect of knowledge about the L1 on competence in L2(s) (Lasagabaster, 2001).

In the same vein, the fourth objective was to examine the effect of attendance at Romanian classes on the proportion of errors for the three languages. Consequently, the hypothesis built is:

H7. The proportion of errors for the three languages studied will be influenced by attendance at Romanian classes.

Cummins' Interdependence Hypothesis (1979, 1981) states that despite the fact that there is an underlying cognitive/academic proficiency that is common across languages, the surface aspects (e.g., pronunciation, fluency, etc.) of different languages are clearly separate. This approach was represented through the 'dual iceberg' model (Cummins, 1984, 1996), thus emphasizing to what point the experience in one language can promote the development of underlying competences in both languages. Accordingly, research carried out by Huguet (2008, 2014) seems to indicate that interdependence and linguistic transfer processes do take place, with certain linguistic abilities being more likely to be transferred than others. Precisely, those transferred are located at a deeper level of linguistic competence, in contrast to those found at more superficial levels.

In this regard, the analysis we conducted of proportion of errors on morphosyntactic aspects is placed at the surface, thus not conveyed among the concepts that get transferred. That notwithstanding, we aimed to examine which if any, morphosyntactic aspects get transferred at this superficial level and if this transfer is conditioned by attendance at classes of mother tongue. This pursue was based on findings (Collins, 2002) of some effects of the L1 on the tense and aspectual forms that learners choose in an L2, which leads to the speculation that L1 influence must be found in the details rather than in the larger picture.

Furthermore, related to the study of the influence of length of residence on the proportion of errors (fifth objective), the following hypotheses were developed:

H8. The proportion of errors for Catalan and Spanish will be influenced by length of residence.

The importance of the variable length of residence in the process of SLA has been acknowledged in the Catalan context through various studies assessing the language competence of both native and immigrant students from various L1 backgrounds

(Chireac, 2010; Huguet, 2014; Huguet, Navarro, & Janés, 2007; Maruny & Molina, 2000; among others). There is consensus among studies that students with a length of residence longer than 6 years obtain higher averages than their peers with shorter lengths of stay, thus the process of acquisition of the official languages of the host society (Spanish and Catalan) occurs (Huguet et al., 2011, 2012, 2013; Navarro & Huguet, 2010).

H9. There will be significant differences in the proportion of errors in Romanian by length of residence.

As regards to the level of competence in the mother tongue in situations of migration, it is expected for all speakers living in bilingual contexts to experience some degree of deterioration in the L1, a phenomenon triggered by restricted L1 input, by the existence of a dominant L2 in the linguistic environment, and by the psycholinguistic pressures of bilingualism (Cherciov, 2011).

Accordingly, given the fact that we examine the L1 of students in an immigrant context, we were confronted with the hypothesis of a possible L1 loss that occurs in L2 or migrant environments (de Bot & Hulsen, 2002). This rests on the assumption that a certain degree of language attrition can generally be found among migrant populations (Schmid & Dusseldorp, 2010).

Consequently, we speculate it to be a case of language loss of a L1 in an L2 environment (e.g., loss of a native language by migrants), according to the taxonomy proposed by de Bot & Weltens (1985) as cited in van Els, 1986: 4).

Likewise, the sixth objective referred to an in-depth descriptive analysis of the incorrect use and its cause for the two official languages: Catalan and Spanish, in both language productions studied: oral and written.

Although we acknowledge the importance of the study of both correct and incorrect use in order to more thoroughly analyse the Interlanguage of the participants and its linguistic particularities, which has been empirically proven by research, the scope of the present study conveys around the analysis of incorrect use (error analysis) and the consequent evidence of negative transfer or interference. Also, we mainly deal with negative transfer from the L1 in our study, since the possible effects of positive transfer are only determinable through comparisons of the success of groups with different native languages (Odlin, 1989).

Consequently, the developed hypotheses based on previous studies conducted in the Catalan context and also in other contexts with different learners of Spanish as second language are:

H10. The most frequent verb person errors will be related to the 3<sup>rd</sup> person singular for both vehicular languages (see Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia, 2007; Gràcia & Serrat, 2003; Serrat, Gràcia, & Perpiñá, 2007).

H11. The tense most subject to error will be The Simple Present for both vehicular languages (see Chireac, 2010; Gràcia, 2007; Serrat, Gràcia, & Perpiñá, 2007).

H12. The prepositions most frequently prone to error in Spanish will be *con*, *a*, *en*, and *de* (Azevedo, 1980; Campillos Llanos, 2014; Chireac, 2010; Fernández, 1994, 1995a, 1997; Giraldo Silverio, 1997; Gutiérrez Quintana, 2005; Jódar, 2006; Santos Gargallo, 1993).

H13. The proportion of article errors will be higher related to definite article than compared to indefinite article for both languages (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Madrid, 1999; Santos Gargallo, 1993; Serrat, Gràcia, & Perpiñá, 2007).

Lastly, the seventh objective of the present study was to examine the evidence of L1 (Romanian) influence in the students' oral and written productions in the two vehicular languages, Spanish and Catalan.

Currently, various studies highlight the importance of L1 as a relevant factor in SLA (Alemán Bañón, Fiorentino, & Gabriele, 2014; Corder, 1983; Cuza et al., 2012; Ellis, 1994; Jarvis & Pavlenko, 2008; Larrañaga et al., 2011; Luk & Shirai, 2009; Montrul, Dias, & Santos, 2010; Rothman, 2011), and its influence, which can occur at all levels: phonological (Leather, 1997; Levis, 1999), semantic (Ringbom, 2001; Whitley, 2004), and morphosyntactic (Gràcia, Crous, & Garganta, 2008; Jarvis & Pavlenko, 2008; Odlin, 2005). Similarly, the importance of L1 as a source of errors was also widely examined in various linguistic contexts (Chondrogianni, 2008; Madrid, 1999; Navarro & Nicoladis, 2005; Ortega, 2008; Phillips, 2007).

In the Catalan context, the literature provides significant information concerning the influence of Romanian (L1) in the learning of Spanish and/or Catalan (L2s) at morphosyntactic level (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia & Serrat, 2003), and specifically in the case of attributive, existential, locative, and possessive constructions (Gràcia, Crous, & Garganta, 2008), and verb morphology (Gràcia, 2007).

Consequently, the corresponding hypotheses were designed mainly based on the conclusions reached by the studies conducted with Romanian students in Catalonia:

H14. The 3<sup>rd</sup> person singular of verb will be erroneously used instead of the 3<sup>rd</sup> person plural as an influence of Romanian language.

H15. There will be an incorrect use of Present Perfect for the Preterite as an influence from the mother tongue.

H16. There will be high percentages of preposition and pronoun errors that can be related to the L1 of the participants.

H17. There will be errors related to the definite article as an influence from the mother tongue.

H18. There will be more elements transferred from the mother tongue in the case of students with a shorter length of residence and thus a lower competence compared to their peers with a longer length of residence (Celaya, 2007; Celaya & Torras, 2001; Hirakawa, 1990; Navés, Miralpeix, & Celaya, 2005; Ortega, 2008; Woodall, 2002).

## 5 METHODOLOGY

After presenting the objectives and hypotheses developed for the study, through this chapter we will review all the methodological aspects of the study: the variables investigated, the characteristics of the sample, the instruments employed, the procedure and the transcription and codification system developed to process the data obtained, as well as the statistical treatment.

### 5.1 VARIABLES

The analysis was conducted according to the variables:

- **length of residence**

The variable length of residence was divided in three categories in agreement with previous studies in similar contexts (Huguet et al., 2011, 2012, 2013; Huguet, Navarro, & Janés, 2007; Navarro & Huguet, 2005, 2010; Maruny & Molina, 2000) and for purposes of better handling the data, as follows:

- students with less than three years in the host country
- students with a length of residence between three and six years in the host country
- students with more than six years in the host country

- **attendance at Romanian classes**

We aimed to analyse the influence of L1 (Romanian) instruction on the learning of the L2s (Catalan and Spanish). Consequently, the sample was divided into two categories according to attendance at Romanian classes:

- students who attended Romanian classes in the past or were attending them when the study was conducted
- students who never attended Romanian classes.

- **language**

The three languages studied were:

- Catalan
- Spanish

- Romanian
- **language production**

Also, the study was conducted on students' oral and written language production.

- **error typology**

The present study developed the error typologies according to which the analysis was conducted based on Dulay, Burt, and Krashen (1982) and James (1998)<sup>10</sup>. Additionally, we have chosen to combine the features of the aforementioned taxonomies, as encouraged by the latter author. Likewise, other similar studies conducted in the same context (Chireac, 2010; Chireac, Serrat, & Huguet, 2011) were taken into account in the process of elaboration of the aforementioned classifications.

Firstly, errors were classified according to linguistic category into five classes: noun, article, verb, preposition, and pronoun.

For this typology we used James' (1998) *Linguistic category classification*. This taxonomy classifies errors "based on the linguistic item which is affected by the error" (Dulay, Burt, & Krashen, 1982: 146).

Secondly, following other well-known error taxonomies (Corder, 1967; Dulay, Burt, & Krashen, 1982; James, 1998) we developed three categories of errors based on surface taxonomy: omission, addition, and commission. We considered omission errors the cases in which a necessary part of speech is omitted. Addition errors were those when an unnecessary part of speech was added. Commission errors were those in which the participant erroneously replaced one word for another, or one verb tense, person or number, for another. Similarly, Dulay, Burt, and Krashen (1982: 162-63) state that substitution is characterized by an incorrect language item which replaces the intended language item as in word-for-word translations of the L1.

We labelled as commission errors what other studies name selection errors (Corder, 1967), misformation errors (Dulay, Burt, & Krashen, 1982; James, 1998), incorrect formation of words and structures, due to false election/selection (Durão, 2007), or incorrect selection errors (Vázquez, 1999), among others.

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<sup>10</sup> See Dulay, Burt, and Krashen (1982) and James (1998) for a full description of different types of taxonomies depending on the classification criteria.

Thirdly, the previous two taxonomies were merged to create a third classification that takes into account both linguistic category and the surface taxonomy. Consequently, 15 subtypes emerged: noun omission, noun addition, noun commission, article omission, article addition, article commission, verb omission, verb addition, verb commission, preposition omission, preposition addition, preposition commission, pronoun omission, pronoun addition, and pronoun commission.

Furthermore, concerning the procedure by which students' errors were investigated, the steps were the following: first, the researcher paid attention to the actual corpus of errors created by students and then attempted to identify and classify these errors, and even explain their causes. This information is conveyed in the form of a classification or taxonomy.

## **5.2 PARTICIPANTS**

### **5.2.1 Selection of the sample**

The study was conducted on 130 students of Compulsory Secondary Education and Upper Secondary Education (Bachillerato)<sup>11</sup> in Catalonia aged between 12 and 19 years old ( $M = 15.05$ ,  $SD = 1.58$ ). The sample was chosen in order to comprise the entire population of Romanian students from the two provinces who were attending Romanian classes when the research was carried out and their classmates who attended them in the past. In order to realise the comparison, their peers who did not attend Romanian classes were also selected for the study.

The sample was formed by students enrolled in seven institutes from the provinces of Lleida and Tarragona (Catalonia). Furthermore, the sample included 57 (43.8%) boys and 73 (56.2%) girls.

### **5.2.2 Characteristics of the sample**

Firstly, the Table 5 presents the number of students enrolled in each of the institutes of the two provinces. As can be observed, the majority of the participants in the study were enrolled in institutes of secondary education (IES) from Lleida.

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<sup>11</sup> The specific education levels with their corresponding terminology in English were adapted from Idescat (2015c).

**Table 5. Sample distribution by institute and province**

Province	Institute	Number of students
Lleida	IES Sagrada Família (Lleida)	7
	IES Manuel de Montsuar (Lleida)	21
	IES Torrevicens (Lleida)	27
	IES Màrius Torres (Lleida)	15
	IES Joan Oro (Lleida)	15
	IES Escola del Treball (Lleida)	23
	<b>Total</b>	<b>108</b>
Tarragona	IES Ramón Berenguer IV (Amposta)	22
	<b>Total</b>	<b>22</b>

**Grade and age**

If we look at the distribution of the sample according to both grade and age, we notice that the students from 1<sup>st</sup> grade of Compulsory Secondary Education (CSE) were between 12 and 14 years old, the ones from 2<sup>nd</sup> grade of CSE between 13 and 15 years old, the ones from 3<sup>rd</sup> grade of CSE between 14 and 17 years old, and the ones from 4<sup>th</sup> CSE between 15 and 18 years old. Regarding the participants that were enrolled in Upper Secondary Education (Bachillerato), the ones from the 1<sup>st</sup> grade were between 16 and 18 years old, and the ones from 2<sup>nd</sup> grade were between 17 and 19 years old.

**Table 6. Sample distribution by grade and age**

Grade	Age <sup>a</sup>	No. participants
1 <sup>st</sup> CSE	12.63	16
2 <sup>nd</sup> CSE	13.81	31
3 <sup>rd</sup> CSE	15.18	28
4 <sup>th</sup> CSE	15.96	25
1 <sup>st</sup> B	16.58	26
2 <sup>nd</sup> B	18.00	4

<sup>a</sup> participants' means of age

**Length of residence**

As previously seen, the division of the sample according to the length of residence in the host society is the following:

- students with less than 3 years (< **3 years**)
- students with between 3 and 6 years (**3-6 years**)
- students with more than 6 years of stay (> **6 years**)

Table 7 presents the number of participants according to grade for each category of length of residence. From it we can notice that the grade with fewer participants in the study is the 2<sup>nd</sup> grade of Upper Secondary Education (Bachillerato).

**Table 7. Sample distribution by length of residence and grade**

Length of residence	Grade	No. participants
< 3 years	1 <sup>st</sup> CSE	2
	2 <sup>nd</sup> CSE	5
	3 <sup>rd</sup> CSE	5
	4 <sup>th</sup> CSE	5
	1 <sup>st</sup> B	5
	2 <sup>nd</sup> B	1
	<b>Total</b>	<b>23</b>
3-6 years	1 <sup>st</sup> CSE	6
	2 <sup>nd</sup> CSE	13
	3 <sup>rd</sup> CSE	11
	4 <sup>th</sup> CSE	11
	1 <sup>st</sup> B	13
	2 <sup>nd</sup> B	3
	<b>Total</b>	<b>57</b>
> 6 years	1 <sup>st</sup> CSE	8
	2 <sup>nd</sup> CSE	13
	3 <sup>rd</sup> CSE	12
	4 <sup>th</sup> CSE	9
	1 <sup>st</sup> B	8
	<b>Total</b>	<b>50</b>

In addition, from Table 8 we can observe that the three groups constructed according to length of residence have similar means of age.

**Table 8. Descriptive statistics of the participants' age according to length of residence**

Length of residence	<i>N</i>	<i>M</i>	<i>SD</i>
< 3 years	23	15.09	1.47
3-6 years	57	15.25	1.67
> 6 years	50	14.82	1.52

### Attendance at Romanian classes

Taking into consideration that attendance at Romanian classes is one of the main variables of the present study, it is relevant to present the distribution of the sample by it.

## *Methodology*

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First of all, we noticed that from the entire sample, 32.3% of the students participated to Romanian classes and 67.7% of them did not. Gender wise, from the group that attended Romanian classes 15 were boys and 27 girls, and from the participants that did not attend them 42 were boys and 46 girls.

Table 9 presents the means of age according to the variable attendance at Romanian classes.

**Table 9. Descriptive statistics of the participants' age according to attendance at Romanian classes**

<b>Attendance at Romanian classes</b>	<b><i>N</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>
Yes	42	14.79	1.63
No	88	15.18	1.55

Lastly, Table 10 presents the number the participants in the research according to the two main variables of the study: attendance at Romanian classes and length of residence.

**Table 10. Sample distribution by attendance at Romanian classes and length of residence**

<b>Attendance at Romanian classes</b>	<b>Length of residence</b>	<b>No. participants</b>
Yes	< 3 years	12
	3-6 years	17
	> 6 years	13
No	< 3 years	11
	3-6 years	40
	> 6 years	37

### **Place of origin**

Regarding the place of origin of the participants within the Romanian state, we can observe that the highest numbers came from the counties: Cluj (15 participants), Bacău (13 participants), Ilfov (11 participants), Neamț (9 participants), and Hunedoara (9 participants).



Figure 17. County of origin of the participants

## 5.3 INSTRUMENTS

### 5.3.1 Language competences tests

Three parallel language competences tests were used for the study: the Spanish and Catalan tests developed by Bel, Serra, and Vila (1993) for the Catalan Education Service (SEDEC) and supported by previous research in immigrant contexts (Chireac, Serrat, & Huguet, 2011; Huguet, 2008, 2014; Huguet et al., 2011, 2012, 2013; Huguet & González-Riaño, 2002; Navarro & Huguet, 2005; Oller & Villa, 2008, 2011; Vila, 2008;), and their adapted version in Romanian.

#### *Construction of the Romanian test*

In order to obtain a valid and reliable parallel test for the Romanian language the process of test construction was carried out in Romania. We developed two parallel versions of the test, following the structure and composition of the Spanish and Catalan language competence tests. These versions were applied to a group of 159 Romanian secondary education students from urban and rural schools. Following, using a series of theoretical and statistical criteria, such as means, standard deviations, frequency distributions, inter-

item correlations and item-total correlations, we chose the most adequate sub-tests from each version and compiled the Romanian language competence test. The Cronbach's alpha for this final version of the test was of .72.

### ***5.3.1.1 Structure of the tests***

Each of the three tests used analyse various tasks focused on: oral comprehension (OC), morphosyntax (MS), orthography (ORT), written comprehension (WC) and written expression (WE), oral expression lexico-morphosyntax (LMS), oral expression information organisation (IO), phonetics (PhO), reading correctness (R-C), and reading intonation (R-I).

In its application, for each language the test comprises two parts: a group test, which is carried out with the use of a response booklet and includes all of the written tests (OC, MS, ORT, WC, WE) and an individual test, which corresponds to the oral tests (LMS, IO, PhO, R-C, R-I) and is carried out with the help of specific materials for the oral part.

A time limit is applied for each of the sub-tests. Concretely, the participants had 90-145 minutes to solve the group part and 15-20 minutes for the individual part for each of the three languages studied, Catalan, Spanish, and Romanian.

For the present study we used all the tests for the language competence analysis (see Table 11).

Additionally, for the errors analysis we employed the WE test from the written language production and the LMS and IO tests from the oral language production (see Annex 3). The structure of the selected tests is as follows:

- WE: the students can choose one of the three options of compositions, which require them to write a letter, either formal or informal.
  - production of a written text
- LMS: this test comprises two types of exercises that require the students to produce simple or more complex oral messages based on certain images.
  - production of oral messages: two stories, each composed by four images on which the students have to narrate the corresponding story.
  - production of sentences: the students are presented with ten different images, for each image they are asked a question that requires a short, simple answer based on the observation of the images.

- IO: the students are required to narrate with details the story presented to them through a picture.
  - organisation of the information: the students are asked to first carefully observe the entire scene in the image and then to explain everything that they see there, without leaving out any detail.

<b>WRITTEN PART - SUB TESTS</b>				
<b>Oral comprehension</b>	<b>Morphosyntax</b>	<b>Orthography</b>	<b>Written comprehension</b>	<b>Written expression</b>
<ul style="list-style-type: none"> <li>• Interpreting and identifying oral texts</li> <li>• Recognizing typologically diverse oral texts</li> <li>• Recognizing figurative use of phrasal and idiomatic chunks</li> <li>• Oral text comprehension</li> </ul>	<ul style="list-style-type: none"> <li>• Plural formation</li> <li>• Verbal inflection</li> <li>• Word replacement in sentences</li> <li>• Identifying nouns, verbs and adjectives in sentences</li> </ul>	<ul style="list-style-type: none"> <li>• Phonetic discrimination</li> <li>• Orthography</li> </ul>	<ul style="list-style-type: none"> <li>• Interpreting directives</li> <li>• Identifying basic information in a text</li> <li>• Deploying comprehension strategies</li> <li>• Identifying words in relation to their meaning</li> </ul>	<ul style="list-style-type: none"> <li>• Writing a text on a simple topic chosen by the student</li> </ul>
<b>ORAL PART - SUB TESTS</b>				
<b>Oral expression-LM</b>	<b>Oral expression-OI</b>	<b>Phonetics</b>	<b>Reading Correctness</b>	<b>Reading Intonation</b>
<ul style="list-style-type: none"> <li>• Producing simple oral messages</li> <li>• Producing words or simple sentences</li> </ul>	<ul style="list-style-type: none"> <li>• Describing an image: structural narrative order and balance between parts, lexical precision, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Reproducing sounds</li> <li>• Reading appropriately</li> <li>• Phonetic discrimination</li> </ul>	<ul style="list-style-type: none"> <li>• Error analysis (reading)</li> </ul>	<ul style="list-style-type: none"> <li>• Error analysis (intonation)</li> </ul>

**Table 11. Tasks carried out in the sub-tests for the three languages (Huguet, 2014: 6)**

### **5.3.2 Socio-linguistic survey**

Relevant information about the participants was collected with the help of a socio-linguistic survey, as it contained information regarding:

- grade
- length of residence
- age
- gender
- attendance at Romanian classes
- place of birth

## **5.4 PROCEDURE**

In order to obtain the necessary permits to apply the tests we contacted the Department of Education of Catalonia. The education authorities themselves guided us in the selection of the seven secondary education centres considered to be ideal for our research. Afterwards, we approached the authorities of the selected centres to establish the schedule of application.

The tests and the survey were applied during the final term of the school year by specialised personnel thoroughly trained for this purpose. The anonymity of the participants was maintained, as well as the confidentiality of the data obtained was guaranteed.

## **5.5 TRANSCRIPTION AND CODIFICATION SYSTEM<sup>12</sup>**

For the process of transcription we used The Child Language Data Exchange System (CHILDES). More specifically, we used the two main programs of the system: CHAT (Codes for the Human Analysis of Transcripts) for the transcription of the data and CLAN (Computerized Language Analysis) for the codification of it. Regarding the coding process, from CLAN we used the frequency command (FREQ) to extract the relevant information for the purpose of the study. Also, KWAL command was employed in order to extract the necessary data for the qualitative analysis. Though the CHILDES-project is primarily designed for language acquisition research, the transcript guidelines

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<sup>12</sup> For a detailed presentation of the program, see MacWhinney (1999).

from CHAT and the analysis-procedures from CLAN are very flexible and can be adapted to all kinds of transcripts of spoken or written language. Therefore, we adapted the program in order to transcribe our data and we developed a codification system that will later on be presented.

### **5.5.1 Transcription system**

As previously mentioned, for the transcription of the data we used the CHAT program. It comprises three different types of tiers: header lines, main lines, and dependent lines.

Concerning the header lines, every CHAT file begins with a series of @-headers that state information about the child, other participants, date of recording/transcription, etc. The collected data, which comes after the @-headers, is divided into lines. Each line begins with a ‘tier’. The tiers are an important tool for the CLAN programs in data searching. Every transcript must begin with the line @Begin and end with the line @End. Between @Begin and @End we encounter headers with information about the transcript, main lines for transcription and dependent lines for further annotations.

The CHAT format has main tiers for all speakers’ utterances (\*NAME), which are followed by three capitals that indicate the name of the child and then the transcription of the actual utterance. Furthermore, the %-tiers are ‘dependent tiers’. They always refer to the previous utterance of the child and are followed by three small letters that represent a code. The most important ‘tiers’ are the \*-tiers and the %-tiers.

Example of the basic structure of a CHAT document from the study:

@Begin

@Languages:

@Participants:

@ID: [ID child]

@ID: [ID investigator]

@Transcriber:

@Date:

@Location:

\*CHI:

%mor: [codification of the noun phrase]

%cod: [codification of the verb phrase]

%err: [codification of the errors]

@End

### **5.5.2 Morphosyntactic codification and error codification system**

The three dependent tiers used for the codification (the % lines) of the present study are as follows: %mor for the codification of the correct use of the noun phrase, %cod for the codification of the correct use of the verb phrase and %err for the codification of the errors.

The codification was carried out based on the part-of-speech analysis. Although the complete system of codification is thoroughly described in the annexes of the study (see Annex 1), the pattern of codification for the main parts of speech studied will be presented next.

#### **Pattern of correct use codification**

##### **Noun**

n|standard form-gender and number

ex.: n|gorro-mp (for “gorros”)

n:prop|María (for “María”)

n|barco-dim-fs (for “barquita”)

##### **Article**

det:art:type|standard form-gender and number

ex.: det:art:def|el-ms (for “el”)

det:art:ind|un-fp (for “unas”)

##### **Verb**

v|infinitive form-person and number&tense

ex.: v|pone-3s&PRE (for “pone”)

v|habe-X&PRE (for “hay”)

v|elegi-3p&PER (for “han+elegido”)

v|hace-X&PRE (for “hace”)

### **Pattern of error codification**

\$type of error|part of speech|initial form structure=correct form structure

ex.: \$ADD|PREP|a=0

\$COM|V|3p=3s

\$COM|PREP|a=en

\$OMI|ART:DEF|0=fs

### **Example of extract of codification from the study:**

\*CHI: <a la primera> [/] a [\*] la primera viñeta se trata (.) de  
un niño que viene de la escuela.

%mor: det:art:def|el-fs n|viñeta-fs det:art:ind|un-ms n|niño-ms  
det:art:def|el-fs n|escuela-fs.

%cod: v|trata-3s&PRE v|veni-3s&PRE.

%err: \$COM|PREP|a=en

Further examples that can better exemplify how the systems of transcriptions and codifications for the three languages were adapted to the needs of the research are provided in the annex section of the study (see Annex 2).

## **5.6 STATISTICAL TREATMENT**

To analyse the data we used the program SPSS v.20.0 for Windows. More specifically, for our research we conducted the analyses of variances one-way independent ANOVA and factorial repeated measures ANOVA.

## 6 QUANTITATIVE RESULTS

This chapter presents the results of the study conducted according to the objectives and hypotheses previously described.

Specifically, the chapter is divided in three parts. The first part presents the total scores (SC) from the assessment of language competence for the three languages studied: Romanian, Spanish, and Catalan, and also the effect of attendance at Romanian classes on those scores. Further, the second and third part comprise analyses regarding the proportion of errors encountered in the students' oral and language productions in the three languages studied. Specifically, one part details the analysis of the proportion of errors by language, language production, linguistic category, and error typology, and the other explores the influence of attendance at Romanian classes and length of residence in the host society on the aforementioned proportion of errors.

### 6.1 LANGUAGE COMPETENCE

#### 6.1.1 General results

Firstly, the present sections detail the total scores obtained by the participants at the test in Romanian, Spanish, and Catalan language.

As can be seen graphically represented in Figure 18, the means for all three languages studied are fairly low, all been around 30. More specifically, there were similar total scores for the two official languages, Spanish ( $M = 33.77$ ,  $SD = 10.05$ ) and Catalan ( $M = 33.34$ ,  $SD = 8.93$ ), and lower scores for the participants' mother tongue, Romanian ( $M = 30.30$ ,  $SD = 8.51$ ).

Furthermore, the language competences of the students vary by language ( $F_{(2,258)} = 11.34$ ,  $p < .001$ ). Specifically, the competences in Romanian were lower than in Spanish ( $t_{(129)} = -3.73$ ,  $p = .001$ ,  $r = -.22$ ) and Catalan ( $t_{(129)} = -3.49$ ,  $p = .002$ ,  $r = -.21$ ). However, their language competences in Spanish and Catalan were similar ( $t_{(129)} = 0.81$ ,  $p = .001$ ,  $r = .05$ ).

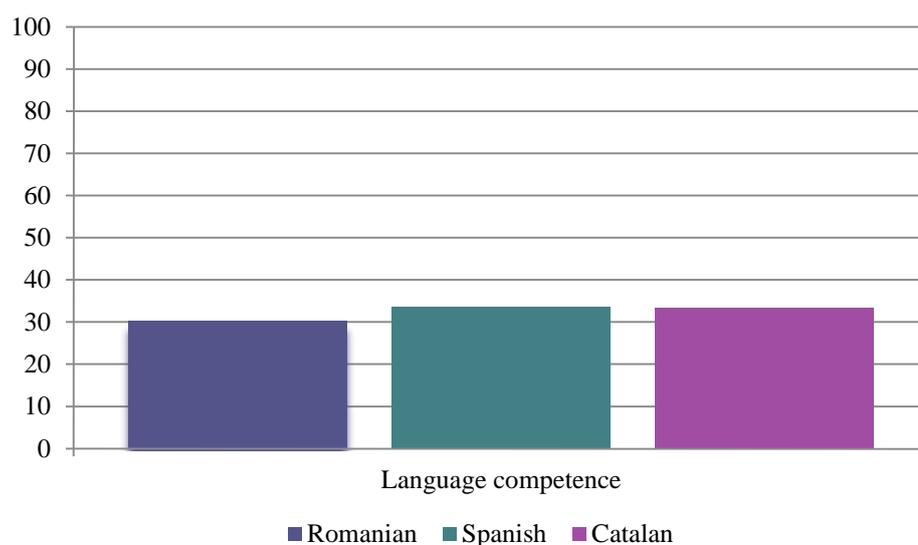


Figure 18. Total scores in language competence for the three languages

### 6.1.2 The effect of attendance at Romanian classes

The effect of attendance at Romanian classes on the total scores for Romanian, Spanish, and Catalan was investigated using t tests for independent samples. The corresponding descriptive statistics and results are presented for Romanian language, Spanish, and Catalan, respectively. As can be seen, the tables present the total scores for oral language production (SC1) and for both oral and written language production (SC2), but also the detailed results according to each task evaluated: oral comprehension (OC), morphosyntax (MS), orthography (ORT), written comprehension (WC) and written expression (WE), oral expression lexico-morphosyntax (LMS), oral expression information organisation (IO), phonetics (PhO), reading correctness (R-C), and reading intonation (R-I).

The analysis conducted on Romanian language revealed that the participants who attended classes in their mother tongue obtained higher total scores than their peers who did not attend those classes for oral language production and for both oral and written language production. Likewise, from the detailed results according to each task evaluated it could be noticed that the students who attended Romanian classes had significantly higher scores compared to their peers who did not attend those classes in the tasks focused on oral comprehension, morphosyntax, orthography, and written expression.

**Table 12. The effect of attendance at Romanian classes on language competence for Romanian language**

Tasks	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
OC	13	4.29	1.70	4.44	<b>2.77</b>	<b>.006</b>	<b>.25</b>
MS	14.21	4.05	12.04	4.21	<b>2.78</b>	<b>.006</b>	<b>.25</b>
ORT	68.80	18.36	59.72	21.08	<b>2.39</b>	<b>.018</b>	<b>.22</b>
WC	9.65	2.66	8.60	3.00	1.93	.056	.18
WE	15.53	3.43	13.97	3.93	<b>2.20</b>	<b>.030</b>	<b>.20</b>
<b>SC1</b>	24.23	5.53	21.01	6.23	<b>2.86</b>	<b>.005</b>	<b>.26</b>
LMS	66.61	10.23	63.84	10.17	1.45	.150	.13
IO	38.89	19.71	32.95	18.91	1.65	.101	.15
PhO	28.59	4.34	27.42	4.93	1.31	.194	.12
R-C	20.83	29.55	11.88	20.33	1.78	.081	.16
R-I	56.55	30.99	47.74	32.29	1.47	.143	.14
<b>SC2</b>	33.26	8.83	28.89	8.02	<b>2.81</b>	<b>.006</b>	<b>.25</b>

Meanwhile, no significant differences were encountered in the scores in Spanish (Table 13) and Catalan (Table 14) language between the students who attended Romanian classes and those who did not attend them.

**Table 13. The effect of attendance at Romanian classes on language competence for Spanish language**

Tasks	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
OC	16.50	6.58	14.72	7.47	1.32	.189	.12
MS	16.63	4.82	15.61	5.98	0.97	.335	.09
ORT	72.62	17.84	70.20	20.36	0.67	.512	.06
WC	11.54	3.66	11.53	4.03	0.01	.994	.00
WE	15.96	2.08	15.50	2.64	0.99	.322	.09
<b>SC1</b>	26.65	6.16	25.51	6.74	0.93	.357	.09
LMS	67.59	13.11	66.09	14.13	0.58	.564	.05
IO	47.22	28.73	41.86	25.27	1.08	.281	.10
PhO	24.93	5.10	24.88	5.43	0.05	.960	.00
R-C	40.95	30.01	47.73	31.97	-1.15	.251	-.10
R-I	28.43	24.19	27.34	26.39	0.23	.822	.02
<b>SC2</b>	34.24	9.99	33.55	10.13	0.37	.715	.03

**Table 14. The effect of attendance at Romanian classes on language competence for Catalan language**

Tasks	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
OC	22.36	6.00	21.86	6.24	0.43	.670	.04
MS	13.89	5.18	12.61	5.02	1.34	.181	.12
ORT	77.57	14.66	77.03	15.72	0.19	.853	.02
WC	12.44	3.66	11.60	3.35	1.30	.196	.12
WE	15.39	2.72	14.57	2.70	1.61	.109	.15
<b>SC1</b>	28.33	5.13	27.54	5.37	0.80	.426	.07
LMS	66.83	11.58	64.75	14.65	0.81	.421	.08
IO	55.16	31.56	57.95	29.58	-0.49	.623	-.05
PhO	22.28	3.88	21.67	3.81	0.86	.391	.08
R-C	29.64	28.10	29.63	28.18	0.00	.997	0
R-I	20.43	23.14	20.55	25.54	-0.03	.980	.00
<b>SC2</b>	33.60	9.15	33.22	8.87	0.23	.823	.02

### 6.1.3 Correlations

Pearson correlations were used to examine the relationships between the degrees of competence in the three languages. In the case of students who attended Romanian classes, the results showed a high positive association between competences in Catalan and Spanish ( $r(41) = .80, p < .001$ ). Competences in Romanian were moderately correlated with competences in Spanish ( $r(41) = .43, p = .004$ ), as well as with competences in Catalan ( $r(41) = .41, p = .007$ ).

Similar patterns were found for students who did not attend Romanian classes. Thus, their competences in Catalan and Spanish were highly correlated ( $r(87) = .81, p < .001$ ). Furthermore, the results indicated moderate correlations between competences in Romanian and Spanish ( $r(87) = .32, p = .002$ ) and between competences in Romanian and Catalan ( $r(87) = .34, p = .001$ ). It can also be noted that the relationships of competences in Romanian with the competences in the two official languages of Catalonia were relatively stronger for the students who attended Romanian classes than for those who did not attend.

## 6.2 PROPORTION OF ERRORS BY LANGUAGE

We first examined the proportion of errors for each of the three languages analysed: Romanian, Spanish, and Catalan. Additionally, the influence of language production (oral

and written), linguistic category (noun, article, verb, preposition, and pronoun), and error typology (omission, commission, and addition) on the proportion of errors was explored in three different subsections.

### 6.2.1 Proportion of errors by language production

The means and standard deviations corresponding to the proportion of errors among the three languages studied according to language production are presented in Table 15.

**Table 15. Descriptive statistics for proportion of errors in function of language production**

Language production	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Oral	3.09	2.31	1.79	1.74	1.07	1.46
Written	4.81	3.75	2.63	2.37	4.04	3.64

A repeated-measures ANOVA was used to examine the patterns of the proportion of errors across the languages (Romanian, Spanish, and Catalan) and depending on the type of language production (oral or written). Both language and language production were introduced as within-subject factors. This technique allowed exploring both the differences determined by language production, as well as the differences in proportion of errors among languages.

The interaction effect between language production and language proved to be significant ( $F_{(1.89, 242.45)} = 14.23, p < .001$ )<sup>13,14</sup>. Further, the interaction was broken down by analysing the simple effects of each variable.

First, we analysed the differences in proportion of errors between the oral and written production for each language, using Bonferroni adjusted comparisons (see Table 16). In this sense, the results indicated that the proportion of errors in the oral language production was lower than the proportion in the written one for the three languages studied.

<sup>13</sup> Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Huynh-Feldt adjustment for the degrees of freedom ( $\chi^2_{(2)} = .921, p = .010, \epsilon = .940$ ).

<sup>14</sup> The results indicated that there was a significant main effect of language ( $F_{(1.65, 213.41)} = 26.65, p < .001$ ), as well as a significant main effect of task ( $F_{(1,129)} = 137.29, p < .001$ ).

**Table 16. Bonferroni corrected tests for the simple effects of language**

		Language								
		Romanian			Spanish			Catalan		
Language production		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Oral	Written	<b>-5.37</b>	<b>&lt;.001</b>	<b>-.43</b>	<b>-4.32</b>	<b>&lt;.001</b>	<b>-.36</b>	<b>-9.77</b>	<b>&lt;.001</b>	<b>-.65</b>

Second, the differences between languages were analysed for each of the two types of language production. On the one hand, as can be seen in Table 17, regarding the oral productions, the percentage of errors was significantly higher in the mother tongue compared to the other two languages. Also, from the analysis related to the vehicular languages it was revealed that there were more errors in Spanish than in Catalan.

**Table 17. Bonferroni corrected tests for the simple effects of language production**

Language		Language production					
		Oral			Written		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Romanian	Spanish	<b>5.16</b>	<b>&lt;.001</b>	<b>.33</b>	<b>5.27</b>	<b>&lt;.001</b>	<b>.41</b>
	Catalan	<b>8.63</b>	<b>&lt;.001</b>	<b>.55</b>	1.73	.264	.14
Spanish	Catalan	<b>7.06</b>	<b>&lt;.001</b>	<b>.45</b>	<b>-4.08</b>	<b>&lt;.001</b>	<b>-.32</b>

On the other hand, concerning the written language production, the proportion of errors in Spanish was significantly lower than both in Romanian and Catalan. However, there was no significant difference between the proportion of errors in Romanian and Catalan. The proportions of errors by language production are represented in Figure 19.

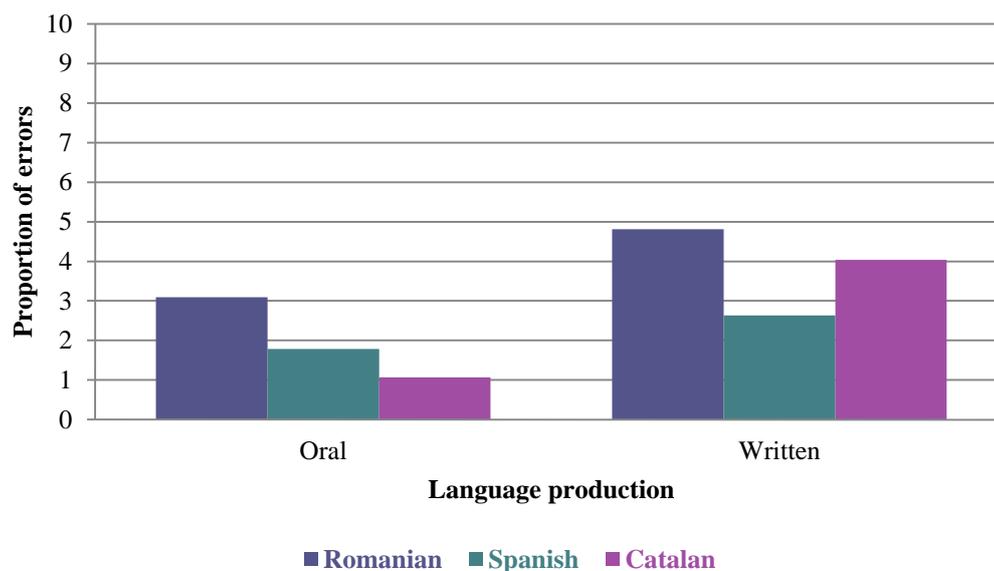


Figure 19. Means of proportion of errors by language production.

## 6.2.2 Proportion of errors by linguistic category

### 6.2.2.1 Oral language production

The means and standard deviations corresponding to the proportion of errors among the three languages studied according to the linguistic category for the oral language production are presented in Table 18.

Table 18. Descriptive statistics for proportion of errors in function of the linguistic category for oral language production

Linguistic category	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Noun	0.15	0.35	0.03	0.21	0.03	0.19
Article	0.30	0.42	0.30	0.61	0.12	0.40
Verb	1.17	1.02	0.55	0.78	0.41	0.70
Preposition	0.98	1.18	0.70	0.61	0.38	0.55
Pronoun	0.49	0.74	0.21	0.33	0.13	0.32

A repeated-measures ANOVA was used to examine the patterns of the proportion of errors across the languages (Romanian, Spanish, and Catalan) and depending on the linguistic category for the oral language production. Both language and linguistic category were introduced as the within-subject factors.

The interaction effect between linguistic category and language proved to be significant ( $F_{(4,70, 606.58)} = 10.24, p < .001$ )<sup>15</sup><sup>16</sup>. Even more, the interaction was broken down by analysing the simple effects of each variable for oral language production.

Firstly, we analysed the differences in proportion of errors according to linguistic category for each language, using Bonferroni adjusted comparisons (see Table 19).

Regarding the effect of linguistic category on the proportion of errors in the participants' mother tongue, the results indicated there were significantly fewer noun errors than article, verb, preposition, and pronoun errors. Also, the proportion of article errors was significantly lower than the proportion of verb and preposition errors. In the same line, the proportions of both verb and preposition errors were significantly higher than pronoun errors. Finally, in Romanian, the proportion of verb errors was the highest one of all five linguistic categories studies, whereas the proportion of noun errors was the lowest one.

Furthermore, for Spanish language, the same pattern of significance was encountered as in the case of Romanian. Specifically, the proportion of noun errors was significantly lower compared to the proportion of errors corresponding to all the others linguistic categories and the proportion of article errors was lower than the proportions of verb and preposition errors. Also, the proportion of verb errors was significantly higher than in the case of the pronoun and article errors.

Lastly, in the case of Catalan language, the proportion of noun errors was significantly lower than the proportion of errors of verb, preposition, and pronoun errors. Among these categories, the proportion of verb errors was the highest one. Further, the participants made fewer article errors than verb and preposition errors.

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<sup>15</sup> Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Greenhouse-Geisser adjustment for the degrees of freedom ( $\chi^2_{(2)} = .05, p < .001, \varepsilon = .588$ ).

<sup>16</sup> The results indicated that there were significant main effects of language ( $F_{(1.26, 162.87)} = 48.81, p < .001$ ) and grammatical category ( $F_{(4, 394.62)} = 91.67, p < .001$ ).

**Table 19. Bonferroni corrected tests for the simple effects of linguistic category for oral language production**

Linguistic category		Language								
		Romanian			Spanish			Catalan		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Noun	Article	<b>-2.80</b>	<b>.029</b>	<b>-.16</b>	<b>-4.59</b>	<b>&lt;.001</b>	<b>-.27</b>	-2.73	.071	-.18
	Verb	<b>11.22</b>	<b>&lt;.001</b>	<b>-.66</b>	<b>-7.33</b>	<b>&lt;.001</b>	<b>-.42</b>	<b>-7.25</b>	<b>&lt;.001</b>	<b>-.47</b>
	Preposition	<b>-8.20</b>	<b>&lt;.001</b>	<b>-.48</b>	<b>11.53</b>	<b>&lt;.001</b>	<b>-.67</b>	<b>-6.75</b>	<b>&lt;.001</b>	<b>-.44</b>
Article	Pronoun	<b>-4.86</b>	<b>&lt;.001</b>	<b>-.28</b>	<b>-4.91</b>	<b>&lt;.001</b>	<b>-.28</b>	<b>-4.52</b>	<b>&lt;.001</b>	<b>-.29</b>
	Verb	<b>-9.67</b>	<b>&lt;.001</b>	<b>-.57</b>	<b>-4.57</b>	<b>&lt;.001</b>	<b>-.27</b>	<b>-6.00</b>	<b>&lt;.001</b>	<b>-.39</b>
	Preposition	<b>-6.80</b>	<b>&lt;.001</b>	<b>-.40</b>	<b>-6.93</b>	<b>&lt;.001</b>	<b>-.40</b>	<b>-4.50</b>	<b>&lt;.001</b>	<b>-.29</b>
Verb	Pronoun	-2.61	.094	-.15	1.86	.644	.11	-0.41	1.00	-.03
	Preposition	1.54	1.00	.09	-2.03	.449	-.12	0.45	1.00	.03
Preposition	Pronoun	<b>6.18</b>	<b>&lt;.001</b>	<b>.36</b>	<b>5.25</b>	<b>&lt;.001</b>	<b>.30</b>	<b>5.19</b>	<b>&lt;.001</b>	<b>.34</b>
	Pronoun	<b>4.90</b>	<b>&lt;.001</b>	<b>.29</b>	<b>9.20</b>	<b>&lt;.001</b>	<b>.53</b>	<b>4.41</b>	<b>&lt;.001</b>	<b>.29</b>

On the other hand, the differences between languages were analysed for each linguistic category for oral language production. As can be seen in Table 22, the proportion of noun errors was significantly higher in Romanian compared to both Spanish and Catalan. Regarding the proportion of article errors, fewer errors were made in Catalan than in Romanian and Spanish. Regarding verb errors, the participants tended to make more errors in Romanian compared to the other two languages. Furthermore, the proportion of preposition errors was higher in the mother tongue compared to the two official languages, and also higher in Spanish than in Catalan. Lastly, in the case pronoun linguistic category, the proportion of errors was significantly higher in Romanian compared to Spanish and Catalan.

As a general observation it can be stated that for the oral language production, regardless of the language, the highest proportions of errors were regarding the verb and preposition linguistic categories, as can be seen in Figure 20.

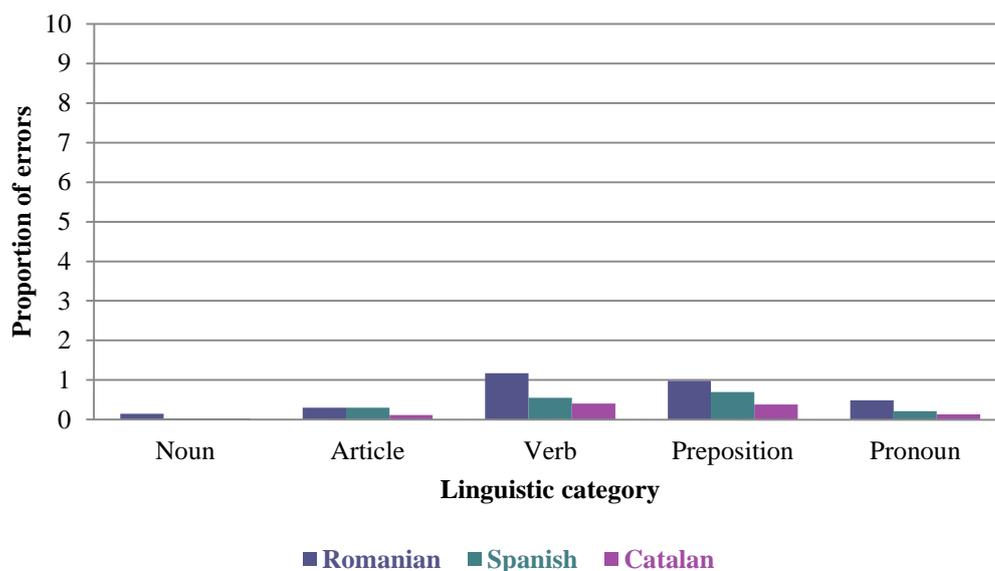


Figure 20. Means of proportion of errors by linguistic category for oral language production.

### 6.2.2.2 Written language production

A repeated-measures ANOVA was used to examine the patterns of the proportion of errors across the languages (Romanian, Spanish, and Catalan) according to linguistic category for the written language production. The corresponding means and standard deviations are presented in Table 20.

Table 20. Descriptive statistics for proportion of errors in function of the linguistic category for written language production

Linguistic category	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Noun	0.53	1.05	0.06	0.24	0.21	0.72
Article	1.98	2.18	0.42	0.84	0.49	0.77
Verb	0.79	0.97	0.80	1.06	2.24	2.27
Preposition	1.02	1.27	1.00	1.03	0.37	0.65
Pronoun	0.49	0.77	0.36	0.71	0.73	1.12

The interaction effect between linguistic category and language for the written language production was found to be significant ( $F_{(4.67, 602.99)} = 41.77, p < .001$ )<sup>17</sup><sup>18</sup>.

Further, the interaction was broken down by analysing the simple effects of each variable. Firstly, we analysed the differences in proportion of errors according to linguistic category for each language, using Bonferroni adjusted comparisons (see Table 21).

Regarding the effect of linguistic category on the proportion of errors in the mother tongue, the proportion of noun errors was significantly lower than the proportions of preposition, pronoun, and article errors. Also, the proportion of article errors was significantly higher compared to the other linguistic categories. In the same line, the proportions of verb and preposition errors were higher than the proportion of pronoun errors. Finally, the results revealed that article errors were the most frequent of all five linguistic categories studied, whereas the fewest errors were those related to pronoun.

Likewise, in the case of Spanish, the proportion of noun errors was significantly lower compared to the proportion of errors corresponding to article, verb, preposition, and pronoun. Similarly, the participants tended to make fewer article errors than verb or preposition errors, and also the proportion of pronoun errors was significantly lower compared to the proportions of both verb and preposition errors.

Regarding the other vehicular language, Catalan, the proportion of noun errors was lower compared to the linguistic categories related to article, verb, and pronoun, while the proportion of verb errors was higher than all the others categories. Finally, there was also a significant difference between the proportions of preposition errors and pronoun errors, as the former was lower than the latter.

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<sup>17</sup> Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Greenhouse-Geisser adjustment for the degrees of freedom ( $\chi^2_{(2)} = .07, p < .001, \varepsilon = .584$ ).

<sup>18</sup> The results indicated that there were significant main effects of both language ( $F_{(1.82, 235.77)} = 14.85, p < .001$ ) and grammatical category ( $F_{(3.30, 429.63)} = 50.06, p < .001$ ).

**Table 21. Bonferroni corrected tests for the simple effects of linguistic category for written language production**

Linguistic category		Language									
		Romanian			Spanish			Catalan			
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	
Noun	Article	<b>-7.25</b>	<b>&lt;.001</b>	<b>-.52</b>	<b>-5.37</b>	<b>&lt;.001</b>	<b>-.32</b>	<b>-3.64</b>	<b>.004</b>	<b>-.22</b>	
	Verb	-2.23	.269	-.16	<b>-7.95</b>	<b>&lt;.001</b>	<b>-.47</b>	-	<b>11.10</b>	<b>&lt;.001</b>	<b>-.68</b>
	Preposition	<b>-3.84</b>	<b>.002</b>	<b>-.27</b>	-	<b>&lt;.001</b>	<b>-.61</b>	-1.87	.626	-.12	
Article	Pronoun	<b>0.40</b>	<b>1.00</b>	<b>.03</b>	<b>-4.66</b>	<b>&lt;.001</b>	<b>-.27</b>	<b>-5.56</b>	<b>&lt;.001</b>	<b>-.34</b>	
	Verb	<b>6.33</b>	<b>&lt;.001</b>	<b>.45</b>	<b>-3.75</b>	<b>.003</b>	<b>-.22</b>	<b>-9.17</b>	<b>&lt;.001</b>	<b>-.57</b>	
	Preposition	<b>4.62</b>	<b>&lt;.001</b>	<b>.33</b>	<b>-5.68</b>	<b>&lt;.001</b>	<b>-.33</b>	1.40	1.00	.09	
Verb	Pronoun	<b>7.49</b>	<b>&lt;.001</b>	<b>.53</b>	0.67	1.00	.04	-2.25	.252	-.14	
	Preposition	-1.74	.828	-.12	-1.60	1.00	-.09	<b>9.13</b>	<b>&lt;.001</b>	<b>.56</b>	
Preposition	Pronoun	<b>2.97</b>	<b>.037</b>	<b>.21</b>	<b>4.45</b>	<b>&lt;.001</b>	<b>.26</b>	<b>7.92</b>	<b>&lt;.001</b>	<b>.49</b>	
Preposition	Pronoun	<b>4.57</b>	<b>&lt;.001</b>	<b>.33</b>	<b>6.15</b>	<b>&lt;.001</b>	<b>.36</b>	<b>-3.21</b>	<b>.017</b>	<b>-.20</b>	

On the other hand, the differences between languages were analysed for each linguistic category for written language category.

As can be seen in Table 23, in the case of noun and article errors, the participants tended to make more errors in their mother tongue compared to the two vehicular languages, Spanish and Catalan. Also, there were more verb errors in Catalan than in Romanian and Spanish, but fewer preposition errors in Catalan compared to the other languages. Furthermore, the proportion of pronoun errors was lower in Spanish than in Catalan.

Generally, it can be stated that different patterns of proportion of errors were encountered across the three languages, one proof is the fact that the highest proportion of errors in Romanian was encountered in the category of articles, whereas in the cases of Spanish and Catalan the highest proportion of errors was corresponding to prepositions and verbs, respectively. The proportions of errors by linguistic category for written language production are represented in Figure 21.

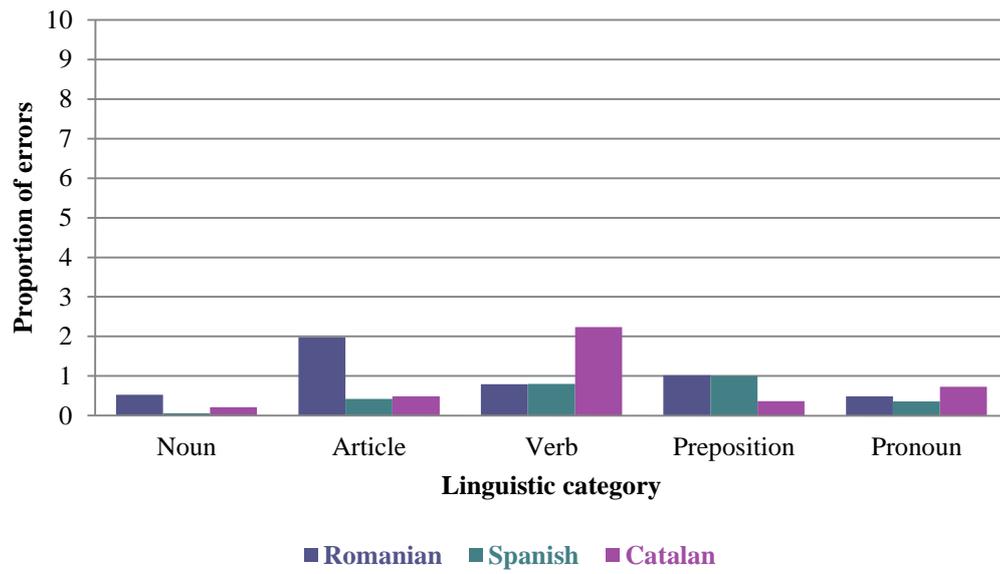


Figure 21. Means of proportion of errors by linguistic category for written language production.

*Quantitative Results*

**Table 22. Bonferroni corrected tests for the simple effects of language for oral language production**

Language		Linguistic category														
		Noun			Article			Verb			Preposition			Pronoun		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Romanian	Spanish	<b>3.27</b>	<b>.004</b>	<b>.28</b>	-0.06	1.00	.00	<b>5.30</b>	<b>&lt;.001</b>	<b>.39</b>	<b>2.48</b>	<b>.043</b>	<b>.19</b>	<b>4.04</b>	<b>&lt;.001</b>	<b>.33</b>
	Catalan	<b>3.53</b>	<b>.002</b>	<b>.30</b>	<b>3.42</b>	<b>.003</b>	<b>.27</b>	<b>7.26</b>	<b>&lt;.001</b>	<b>.53</b>	<b>5.44</b>	<b>&lt;.001</b>	<b>.42</b>	<b>5.00</b>	<b>&lt;.001</b>	<b>.40</b>
Spanish	Catalan	0.24	1.00	.02	<b>4.79</b>	<b>&lt;.001</b>	<b>.37</b>	2.37	.061	.17	<b>4.49</b>	<b>&lt;.001</b>	<b>.35</b>	1.97	.154	.16

**Table 23. Bonferroni corrected tests for the simple effects of language for written language production**

Language		Linguistic category														
		Noun			Article			Verb			Preposition			Pronoun		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Romanian	Spanish	<b>5.40</b>	<b>&lt;.001</b>	<b>.42</b>	<b>7.17</b>	<b>&lt;.001</b>	<b>.53</b>	-0.10	1.00	-0.01	0.14	1.00	.01	1.39	.501	.12
	Catalan	<b>2.98</b>	<b>.010</b>	<b>.23</b>	<b>7.37</b>	<b>&lt;.001</b>	<b>.55</b>	<b>-6.72</b>	<b>&lt;.001</b>	<b>-.50</b>	<b>5.11</b>	<b>&lt;.001</b>	<b>.39</b>	-1.99	.143	-.17
Spanish	Catalan	-2.30	.069	-.18	-0.78	1.00	-.06	<b>-7.05</b>	<b>&lt;.001</b>	<b>-.52</b>	<b>5.83</b>	<b>&lt;.001</b>	<b>.44</b>	<b>-3.69</b>	<b>.001</b>	<b>-.31</b>

## 6.2.3 Proportion of errors by error typology

### 6.2.3.1 Oral language production

We will further present the means and standard deviations corresponding to the proportion of errors among the three languages studied according to error typology for the oral language production are detailed in Table 24.

**Table 24. Descriptive statistics for proportion of errors in function of error typology for oral language production**

Error typology	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Omission	0.65	0.99	0.52	0.56	0.23	0.44
Commission	2.07	1.51	0.91	1.17	0.77	1.22
Addition	0.37	0.53	0.35	0.46	0.07	0.19

A repeated-measures ANOVA was used to examine the patterns of the proportion of errors from the students' oral productions among the languages (Romanian, Spanish, and Catalan) and taking into consideration the type of error (omission, commission, and addition). Both language and error typology were introduced as within-subject factors.

The interaction effect between error typology and language proved to be significant ( $F_{(2.25, 290.38)} = 27.52, p < .001$ )<sup>19,20</sup>. Further, the interaction was broken down by analysing the simple effects of each variable.

Firstly, we analysed the differences in proportion of errors according to error typology for each language for the oral language production, using Bonferroni adjusted comparisons (see Table 25).

Regarding the effect of error typology on the proportion of errors in Romanian, the results indicated that the proportion of commission errors was significantly higher compared to

<sup>19</sup> Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Greenhouse-Geisser adjustment for the degrees of freedom ( $\chi^2_{(2)} = .186, p < .001, \epsilon = .563$ ).

<sup>20</sup> The results indicated that there were significant main effects of language ( $F_{(1.25, 161.93)} = 49.67, p < .001$ ), and of error typology ( $F_{(1.41, 181.46)} = 144.08, p < .001$ ).

*Quantitative Results*

the other two types of errors. Also, omission errors were the second most frequent errors, followed by addition errors.

The same pattern of significance was encountered in the case of the two official languages. That is, there were more commission errors than both omission and addition errors, whereas addition errors represented the lowest proportion of errors.

**Table 25. Bonferroni corrected tests for the simple effects of error typology for oral language production**

Error typology		Language								
		Romanian			Spanish			Catalan		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Omission	Commission	<b>10.29</b>	<b>&lt;.001</b>	<b>-.58</b>	<b>-4.24</b>	<b>&lt;.001</b>	<b>-.33</b>	<b>-5.25</b>	<b>&lt;.001</b>	<b>-.39</b>
	Addition	<b>3.81</b>	<b>.001</b>	<b>.22</b>	<b>3.11</b>	<b>.007</b>	<b>.25</b>	<b>3.92</b>	<b>&lt;.001</b>	<b>.29</b>
Commission	Addition	<b>13.43</b>	<b>&lt;.001</b>	<b>.76</b>	<b>5.62</b>	<b>&lt;.001</b>	<b>.44</b>	<b>6.72</b>	<b>&lt;.001</b>	<b>.50</b>

Secondly, the differences between languages were analysed for each type of errors (omission, commission, and addition) for the oral language production.

As can be seen in Table 26, the participants tended to make fewer omission and addition errors in Catalan than in Spanish and Romanian. Likewise, the proportion of commission errors in Romanian was the highest compared to the other two languages studied.

**Table 26. Bonferroni corrected tests for the simple effects of language for oral language production**

Language		Error typology								
		Omission			Commission			Addition		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Romanian	Spanish	1.39	.499	.10	<b>6.96</b>	<b>&lt;.001</b>	<b>.51</b>	0.33	1.00	.02
	Catalan	<b>4.60</b>	<b>&lt;.001</b>	<b>.08</b>	<b>7.60</b>	<b>&lt;.001</b>	<b>.56</b>	<b>6.26</b>	<b>&lt;.001</b>	<b>.44</b>
Spanish	Catalan	<b>6.04</b>	<b>&lt;.001</b>	<b>.46</b>	1.48	.419	.11	<b>6.68</b>	<b>&lt;.001</b>	<b>.47</b>

As a general observation, regardless of the language, in the participants' oral productions the highest proportion of errors was related to the commission type, as can be seen in Figure 22.

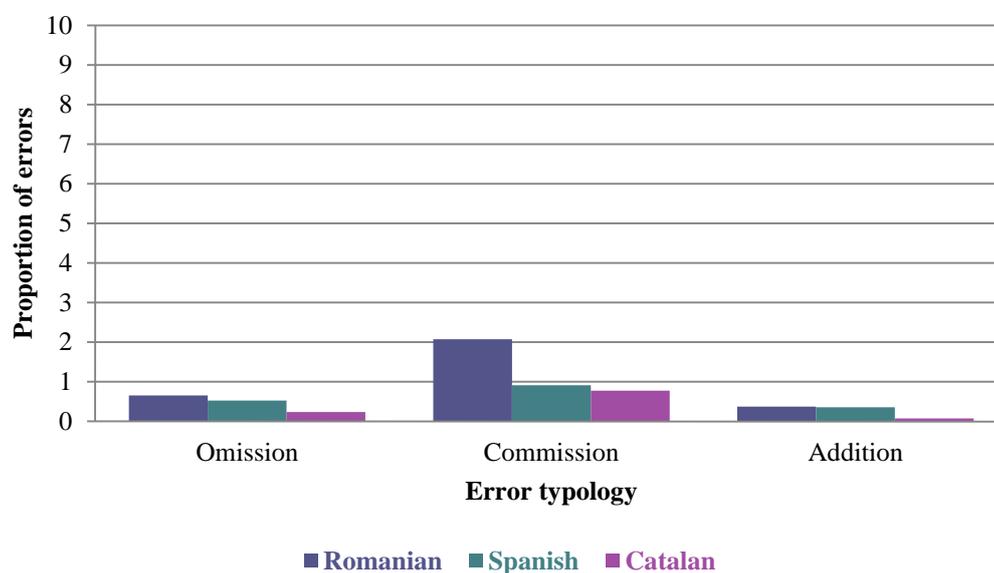


Figure 22. Means of proportion of errors by error typology for oral language production

### 6.2.3.2 Written language production

Table 27 presents the means and standard deviations corresponding to the proportion of errors among the three languages studied according to error typology for the written language.

Table 27. Descriptive statistics for proportion of errors in function of error typology for written language production

Error typology	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Omission	1.33	1.40	0.77	0.98	0.82	1.08
Commission	2.27	2.32	1.55	1.80	2.84	3.01
Addition	1.22	1.47	0.25	0.53	0.36	0.57

A repeated-measures ANOVA was used to examine the patterns of the proportion of errors across the three languages studied and depending on the type of error (omission, commission and addition) for written language production.

## Quantitative Results

The interaction effect between error typology and language was found significant ( $F_{(2.79, 360.06)} = 10.64, p < .001$ )<sup>2122</sup>. Further, the interaction was broken down by analysing the simple effects of each variable.

As can be seen in Table 28, we analysed the differences in proportion of errors according to the error type for each language for the written language production, using Bonferroni adjusted comparisons.

Concerning the effect of error typology in the case of the students' L1, the results revealed that the proportion of commission errors was significantly higher than the proportions of both omission and addition errors. Also, the proportions of omission and addition errors were similar.

Further, in the case of Spanish there were more commission than omission and addition errors. Likewise, the proportion of omission errors was the second highest, followed by the proportion of addition errors.

In Catalan the same pattern of significance was encountered as for Spanish. That is, the participants' highest proportion of errors was related to the commission type, seconded by omission errors. Lastly, addition errors represented once again the lowest proportion of errors.

**Table 28. Bonferroni corrected tests for the simple effects of error typology for written language production**

Error typology		Language								
		Romanian			Spanish			Catalan		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Omission	Commission	<b>-4.33</b>	<b>&lt;.001</b>	<b>-0.34</b>	<b>-4.65</b>	<b>&lt;.001</b>	<b>-0.31</b>	<b>-8.13</b>	<b>&lt;.001</b>	<b>-0.55</b>
	Addition	0.69	1.000	0.06	<b>6.05</b>	<b>&lt;.001</b>	<b>0.41</b>	<b>4.30</b>	<b>&lt;.001</b>	<b>0.29</b>
Commission	Addition	<b>5.41</b>	<b>&lt;.001</b>	<b>0.43</b>	<b>8.24</b>	<b>&lt;.001</b>	<b>0.56</b>	<b>9.42</b>	<b>&lt;.001</b>	<b>0.64</b>

<sup>21</sup> Mauchly's test of sphericity indicated that the assumption of sphericity was not respected, requiring the Greenhouse-Geisser adjustment for the degrees of freedom ( $\chi^2_{(2)} = .32, p < .001, \epsilon = .698$ ).

<sup>22</sup> The results indicated that there were significant main effects of language ( $F_{(1.83, 236.16)} = 15.66, p < .001$ ) and error typology ( $F_{(1.56, 201.14)} = 117.09, p < .001$ ).

Secondly, the differences between languages were analysed for each type of errors (omission, commission, and addition) for the written language production.

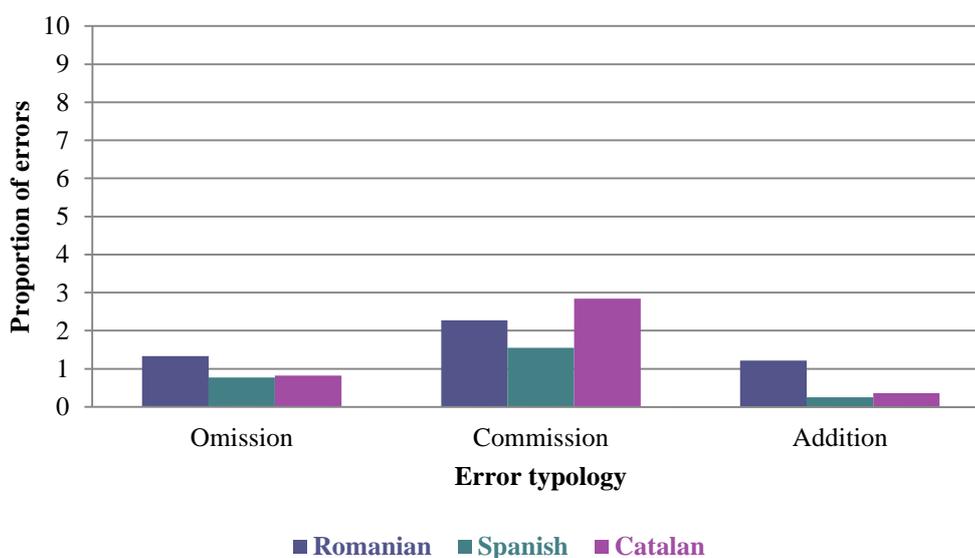
As can be seen in Table 29, there were significantly more omission and addition errors in Romanian than in Catalan and Spanish. There were no significant differences regarding the aforementioned types of errors between the two vehicular languages.

Regarding the commission errors, there were fewer of these errors in Spanish than in the other two languages. However, there was no significant difference as to the proportion of commission errors between Romanian and Catalan.

**Table 29. Bonferroni corrected tests for the simple effects of language for written language production**

Language		Error typology								
		Omission			Commission			Addition		
		<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>	<i>t</i>	<i>p</i>	<i>r</i>
Romanian	Spanish	<b>3.57</b>	<b>.002</b>	<b>0.30</b>	<b>2.64</b>	<b>.027</b>	<b>0.22</b>	<b>7.00</b>	<b>&lt;.001</b>	<b>0.53</b>
	Catalan	<b>3.35</b>	<b>.003</b>	<b>0.28</b>	-1.76	.242	-0.14	<b>6.14</b>	<b>&lt;.001</b>	<b>0.46</b>
Spanish	Catalan	-0.36	1.00	-0.03	<b>-4.44</b>	<b>&lt;.001</b>	<b>-0.36</b>	-1.67	.293	-0.13

In Figure 23 can be observed that commission errors represented the most frequent type of errors encountered in the participants’ written production for all languages studied.



**Figure 23. Means of proportion of errors by error typology for written language production**

## **6.3 THE EFFECT OF OTHER VARIABLES ON THE PROPORTION OF ERRORS**

To build a more detailed image of the relationships between the predictor variables: attendance at Romanian classes and length of residence, and the outcome variable proportion of errors, three separate analyses were conducted for each language for the corresponding language productions, oral and written. Specifically, two error classifications were constructed by taking into account the linguistic category and the error typology.

Further, in order to obtain a more detailed analysis, 15 new different subcategories were developed based on both linguistic category and error type.

### **6.3.1 The effect of attendance at Romanian classes**

Following, the next section aims to investigate the differences between the participants who attended Romanian classes and those who did not attend them, in relation to the proportion of errors for each of the aforementioned classifications. The analyses were conducted for all three languages (Romanian, Spanish, and Catalan) and for the two language productions (oral and written).

#### ***6.3.1.1 Romanian oral language production***

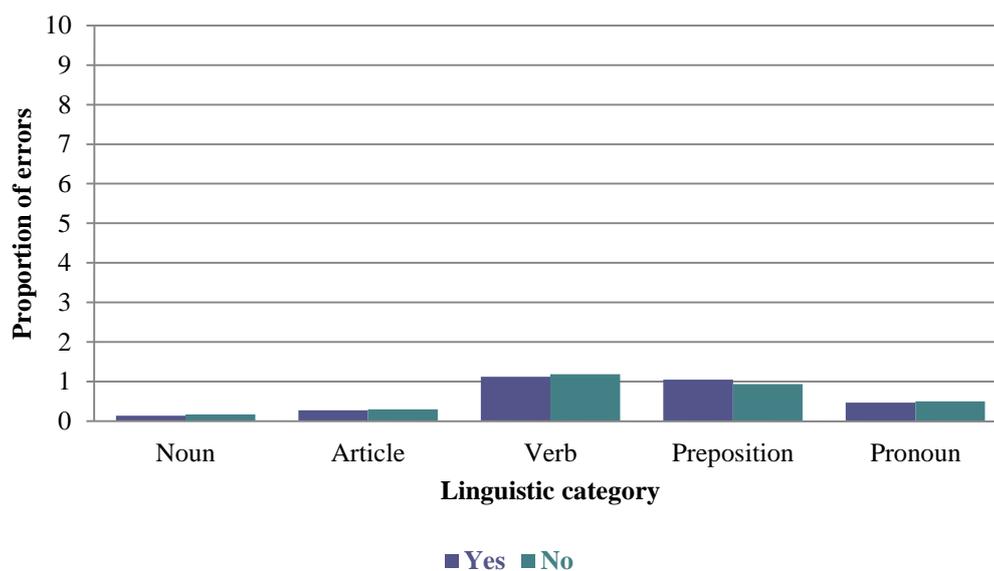
##### *Linguistic category*

The effect of attendance at Romanian classes on the proportion of errors for each linguistic category was investigated using t tests for independent samples. The corresponding descriptive statistics and results for Romanian oral language production are presented in Table 30.

**Table 30. The effect of attendance at Romanian classes on the proportion of errors for each linguistic category for Romanian oral language production**

Linguistic category	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun	0.14	0.30	0.17	0.39	-0.44	.369	-.04
Article	0.28	0.37	0.30	0.44	-.25	.285	-.02
Verb	1.12	0.93	1.19	1.07	-.40	.138	-.04
Preposition	1.05	1.27	0.94	1.13	.47	.727	.04
Pronoun	0.47	0.61	0.50	0.80	-.23	.290	-.02

As can be seen in Figure 24, attendance at Romanian classes did not determined any significant differences in the proportion of errors for any of the linguistic categories studied.

**Figure 24. Means of proportion of errors for each linguistic category for Romanian oral language production by attendance at Romanian classes**

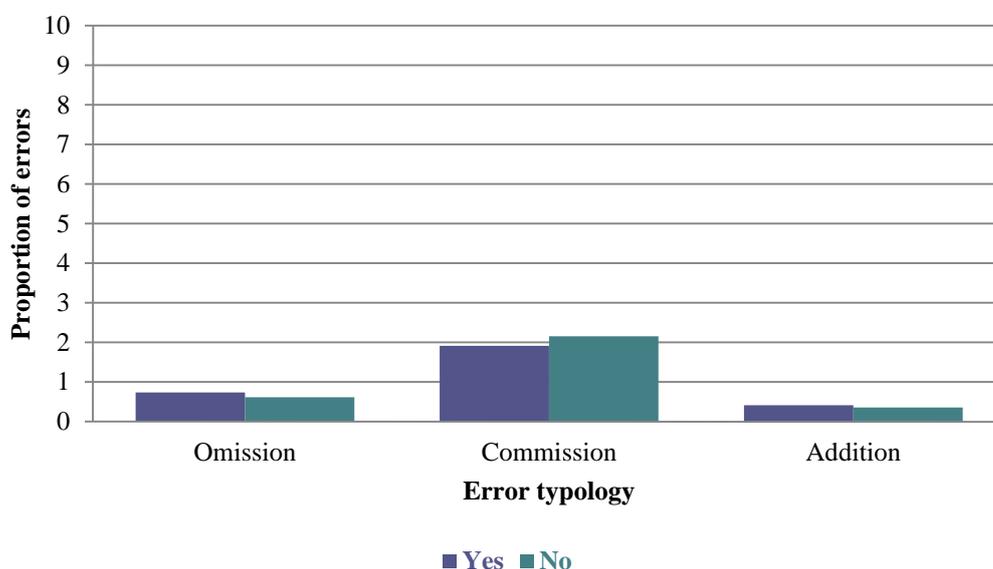
### *Error typology*

Further, we also examined the influence of attendance at Romanian classes on the proportion of errors for each error type. Table 31 summarizes the results of the respective *t* tests for independent samples.

**Table 31. The effect of attendance at Romanian classes on the proportion of errors for each error type for Romanian oral language production**

Error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Omission	0.73	1.17	.61	.91	.66	.554	.06
Commission	1.91	1.35	2.15	1.57	-.86	.310	-.08
Addition	0.41	0.51	0.35	0.54	.67	.921	.06

The results revealed that there were no significant differences in the proportion of omission, commission, and addition errors between the participants who attended Romanian classes and those who did not attend them (see Figure 25).



**Figure 25. Means of proportion of errors for each error type for Romanian oral language production by attendance at Romanian classes**

*Linguistic category and error typology*

In order to obtain a more detailed analysis, we took into consideration both linguistic category and error type. For this purpose, we used independent samples t tests.

The results showed that students who attended Romanian classes made fewer article omission errors than those who did not attend the classes. Also, the proportion of verb omission errors was significantly higher for those who attended Romanian classes compared to their peers who did not.

**Table 32. The effect of attendance at Romanian classes on the proportion of errors for Romanian oral language production**

Linguistic category + error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun Omission	0.00	0.00	0.00	0.00	-	-	-
Noun Commission	0.14	0.30	0.17	0.39	-0.44	.369	-.04
Noun Addition	0.00	0.00	0.00	0.00	-	-	-
Article Omission	0.11	0.20	0.19	0.35	<b>-1.65</b>	<b>.004</b>	<b>-.15</b>
Article Commission	0.11	0.31	0.07	0.23	0.81	.118	.08
Article Addition	0.06	0.19	0.04	0.16	0.66	.228	.06
Verb Omission	0.04	0.21	0.02	0.09	<b>0.98</b>	<b>.048</b>	<b>.09</b>
Verb Commission	1.07	0.95	1.18	1.06	-0.53	.219	-.05
Verb Addition	0.00	0.00	0.00	0.00	-	-	-
Preposition Omission	0.34	0.86	0.20	0.57	1.09	.176	.10
Preposition Commission	0.42	0.49	0.51	0.60	-0.84	.335	-.08
Preposition Addition	0.29	0.39	0.23	0.45	0.71	.973	.07
Pronoun Omission	0.25	0.34	0.21	0.42	0.53	.634	.05
Pronoun Commission	0.17	0.39	0.23	0.39	-0.82	.207	-.08
Pronoun Addition	0.06	0.21	0.07	0.25	-0.28	.561	-.03

Also, as can be seen in Figure 26, some of the subcategories of errors constructed were not reflected in the Romanian oral productions of the participants. Specifically, we found no errors of omission and addition in the use of nouns and no errors of verb addition. Accordingly, mean comparisons were not applicable for these subcategories with zero occurrences.

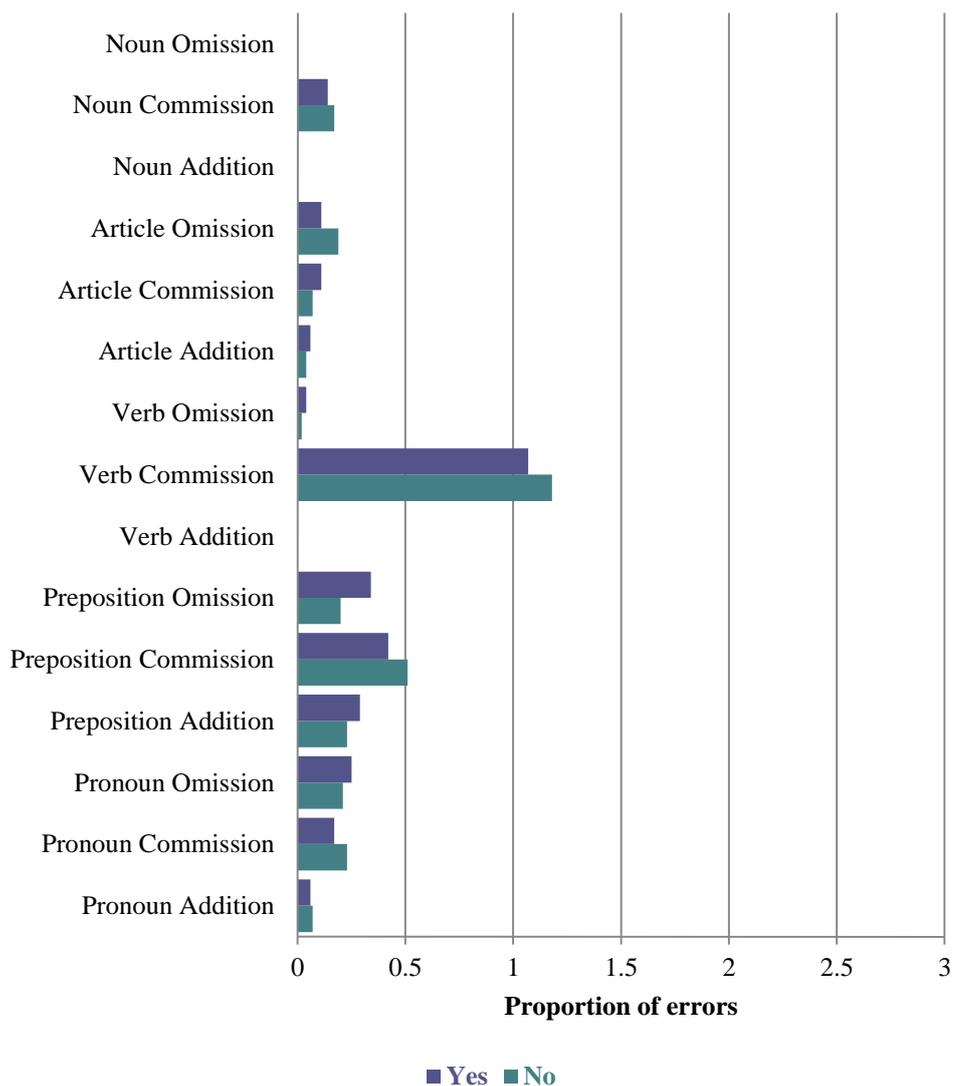


Figure 26. Means of proportion of errors for Romanian oral language production by attendance at Romanian classes

### 6.3.1.2 Romanian written language production

#### Linguistic category

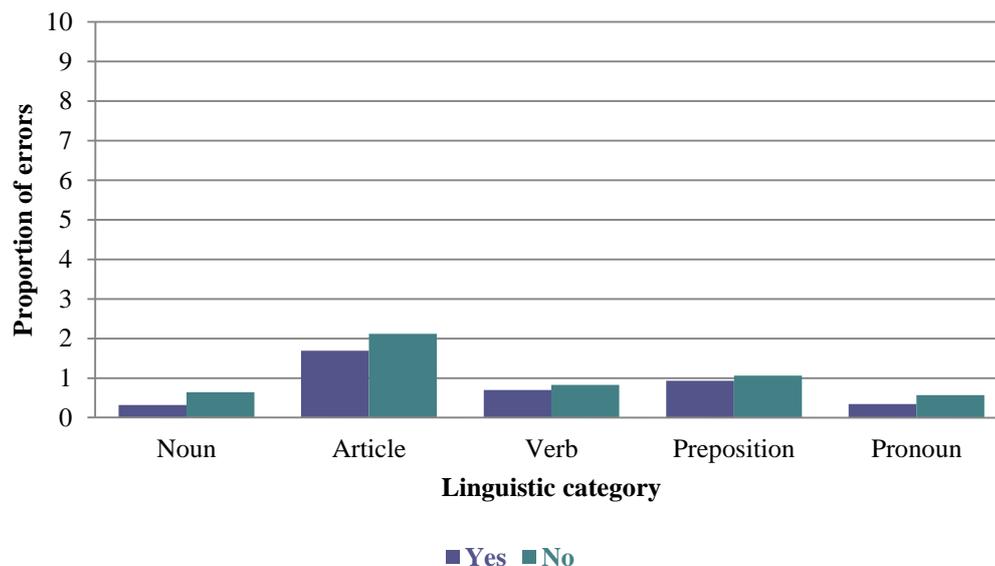
In this section we examined the influence of attendance at Romanian classes on the proportion of errors for each linguistic category. Table 33 presents the corresponding descriptive statistics and results of the t tests for independent samples for Romanian written language production.

**Table 33. The effect of attendance at Romanian classes on the proportion of errors for each linguistic category for Romanian written language production**

Linguistic category	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun	0.32	0.63	0.64	1.19	<b>-1.97</b>	<b>.034</b>	<b>-.18</b>
Article	1.69	2.02	2.12	2.25	-1.06	.205	-.10
Verb	0.70	0.78	0.83	1.05	-0.67	.416	-.06
Preposition	0.93	1.05	1.06	1.37	-0.55	.242	-.05
Pronoun	0.34	0.54	0.57	0.85	<b>-1.89</b>	<b>.005</b>	<b>-.17</b>

In this case, the participants who attended Romanian classes tended to make fewer noun and pronoun errors than those who did not attend mother tongue classes.

Lastly, the proportions of article, verb, and preposition errors did not vary by attendance at Romanian classes (see Figure 27).

**Figure 27. Means of proportion of errors for each linguistic category for Romanian written language production by attendance at Romanian classes**

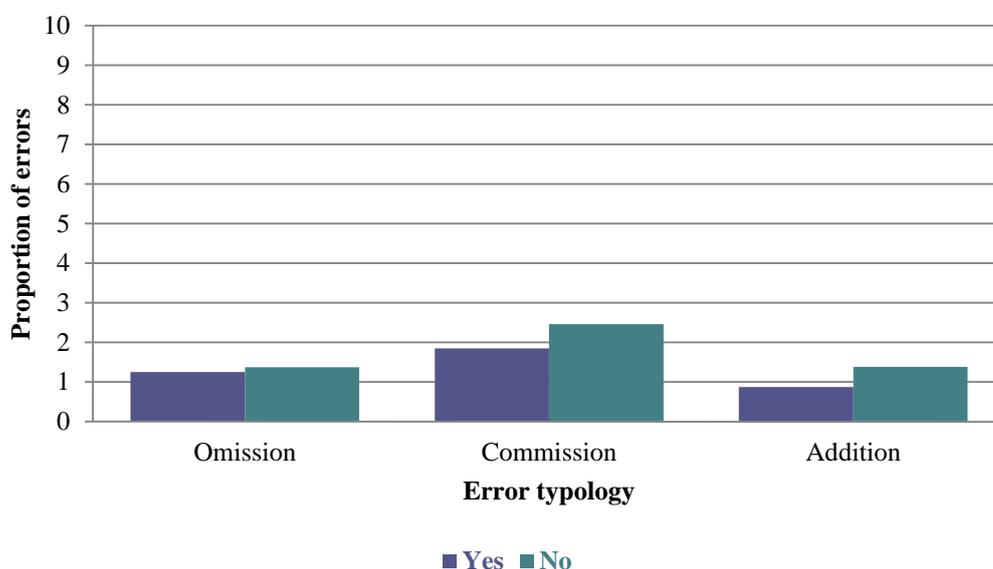
### *Error typology*

Furthermore, t tests for independent samples were conducted in order to examine the effect of attendance at Romanian classes on the proportion of errors for each error type. The descriptive statistics and corresponding results are presented in Table 34.

**Table 34. The effect of attendance at Romanian classes on the proportion of errors for each error type for Romanian written language production**

Error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Omission	1.25	1.49	1.37	1.36	-0.44	.807	-.04
Commission	1.85	1.96	2.46	2.46	-1.40	.120	-.13
Addition	0.87	1.19	1.38	1.57	-1.88	.089	-.17

As can be seen graphically represented in Figure 28, there were no significant differences determined by attendance at Romanian classes on the proportions of omission, commission, and addition errors.



**Figure 28. Means of proportion of errors for each error type for Romanian written language production by attendance at Romanian classes**

*Linguistic category and error typology*

Lastly, Table 35 presents the descriptive statistics and the results of the t tests for independent samples for the analysis of the influence of attendance at Romanian classes on the proportion of errors for written productions for the mother tongue.

**Table 35. The effect of attendance at Romanian classes on the proportion of errors for Romanian written language production**

Linguistic category + error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun Omission	0.00	0.00	0.00	0.00	-	-	-
Noun Commission	0.32	0.63	0.64	1.19	<b>-1.97</b>	<b>.034</b>	<b>-.18</b>
Noun Addition	0.00	0.00	0.00	0.00	-	-	-
Article Omission	0.69	1.04	0.73	1.07	-0.18	.946	-.02
Article Commission	0.27	0.93	0.37	0.86	-0.60	.441	-.06
Article Addition	0.72	1.03	1.02	1.27	-1.34	.137	-.12
Verb Omission	0.02	0.16	0.04	0.21	-0.39	.435	-.04
Verb Commission	0.68	0.79	0.79	0.99	-0.62	.568	-.06
Verb Addition	0.00	0.00	0.00	0.00	-	-	-
Preposition Omission	0.39	0.61	0.38	0.65	0.20	.733	.02
Preposition Commission	0.42	0.58	0.42	0.72	0.01	.342	.00
Preposition Addition	0.12	0.37	0.28	0.70	<b>-1.65</b>	<b>.012</b>	<b>-.15</b>
Pronoun Omission	0.15	0.34	0.23	0.48	<b>-1.22</b>	<b>.022</b>	<b>-.11</b>
Pronoun Commission	0.17	0.40	0.25	0.56	-0.89	.053	-.08
Pronoun Addition	0.03	0.16	0.08	0.33	<b>-1.33</b>	<b>.031</b>	<b>-.12</b>

Firstly, the proportion of noun commission errors was lower in the case of the students who attended Romanian classes compared to their peers who did not. Also, the group that attended mother tongue classes tended to make fewer preposition addition errors.

Furthermore, the proportions of pronoun omission and pronoun addition errors were significantly higher for the participants who did not attend Romanian classes compared to the ones that attended them.

Likewise, in this case, noun omission errors and both noun and verb addition errors were not reflected in the productions of the participants (see Figure 29).

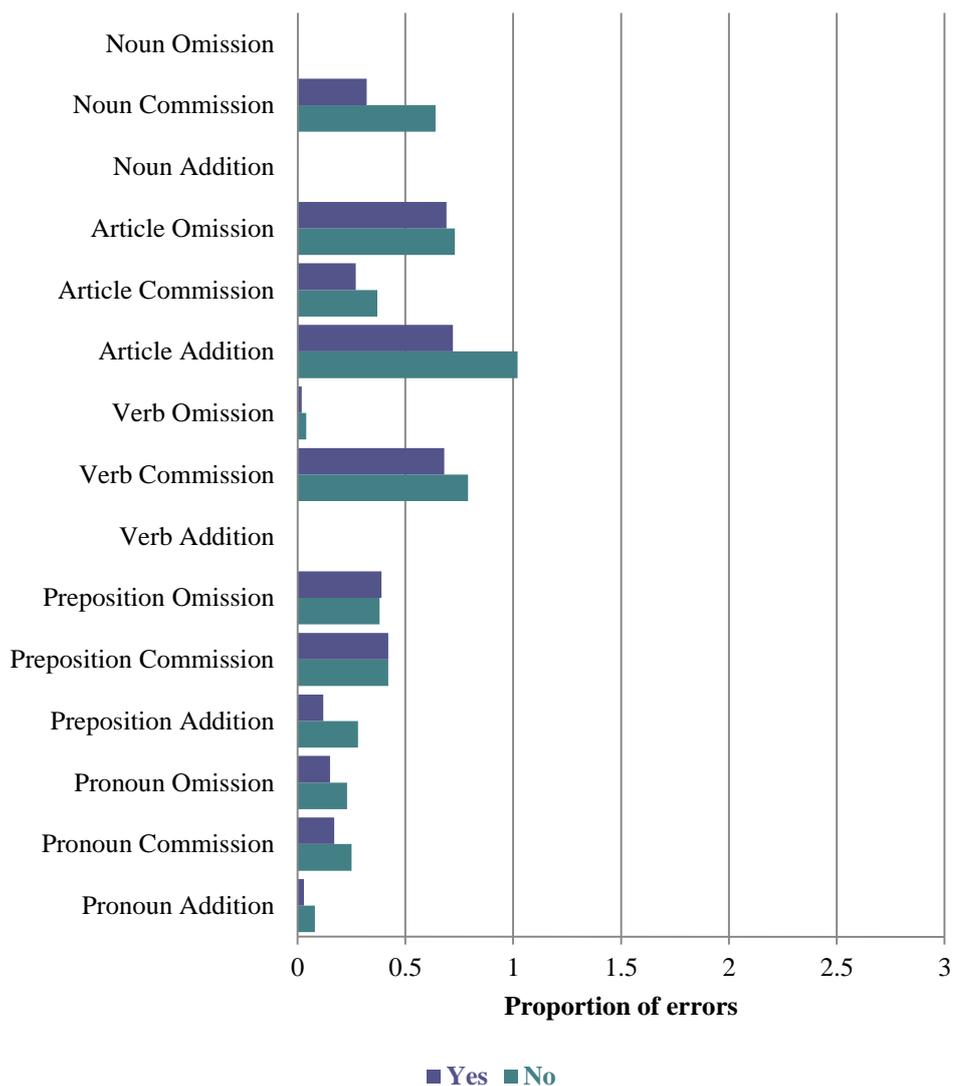


Figure 29. Means of proportion of errors for Romanian written language production by attendance at Romanian classes

### 6.3.1.3 Spanish oral language production

#### Linguistic category

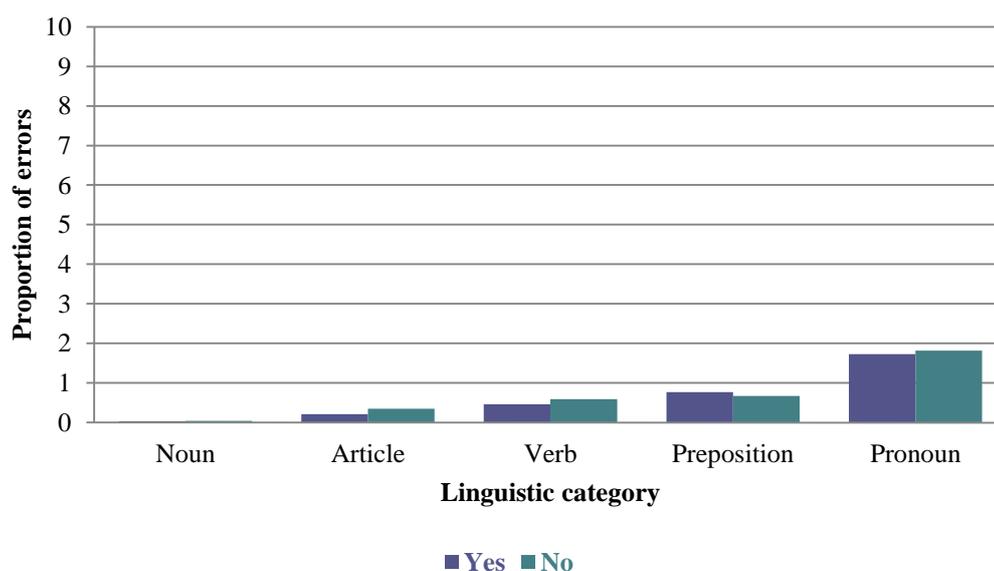
To begin with, t tests for independent samples were employed to examine the influence of attendance at Romanian classes on the proportion of errors for each linguistic category. In this sense, Table 36 presents the corresponding descriptive statistics and results for Spanish oral language production.

**Table 36. The effect of attendance at Romanian classes on the proportion of errors for each linguistic category for Spanish oral language production**

Linguistic category	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun	0.03	0.11	0.04	0.24	-0.35	.483	-.03
Article	0.21	0.30	0.35	0.71	-1.22	.131	-.11
Verb	0.46	0.44	0.59	0.90	-0.93	.339	-.09
Preposition	0.77	0.62	0.67	0.61	0.90	.806	.08
Pronoun	1.73	1.04	1.82	2.00	1.53	.456	.14

In the case of Spanish oral language production, the proportions of errors according to linguistic category did not vary by attendance at Romanian classes.

The means corresponding to each linguistic category are graphically represented in Figure 30.



**Figure 30. Means of proportion of errors for each linguistic category for Spanish oral language production by attendance at Romanian classes**

### *Error typology*

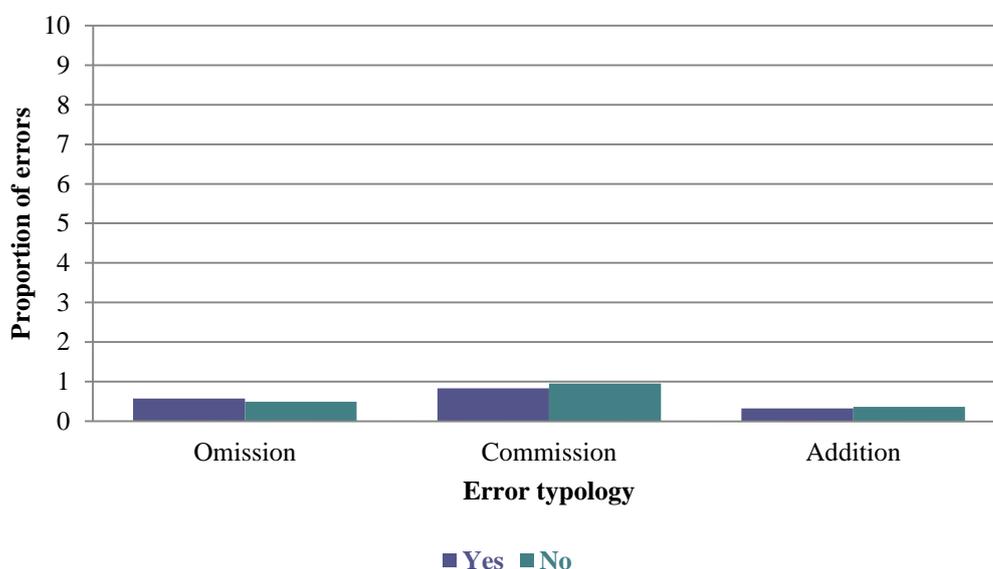
Further, the effect of attendance at Romanian classes on the proportion of errors for each of the three error types studied was examined for Spanish oral language production. The descriptive statistics and the results of the related *t* tests for independent samples are shown in Table 37.

*Quantitative Results*

**Table 37. The effect of attendance at Romanian classes on the proportion of errors for each error type for Spanish oral language production**

Error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Omission	0.57	0.54	0.49	0.57	0.76	.949	.07
Commission	0.83	0.65	0.95	1.35	-0.56	.331	-.05
Addition	0.32	0.45	0.36	0.46	-0.41	.961	-.04

The results (see also Figure 31) showed that attendance at Romanian classes did not determine any significant differences of proportions of omission, commission, or addition errors.



**Figure 31. Means of proportion of errors for each error type for Spanish oral language production by attendance at Romanian classes**

*Linguistic category and error typology*

Lastly, Table 38 presents the descriptive statistics and the results of the related t tests for independent samples regarding the effect of the predictor attendance at Romanian classes on the proportion of errors encountered in the students' Spanish oral productions.

**Table 38. The effect of attendance at Romanian classes on the proportion of errors for Spanish oral language production**

Linguistic category + error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun Omission	0.03	0.11	0.02	0.23	0.01	.970	.00
Noun Commission	0.00	0.00	0.01	0.08	<b>-1.74</b>	<b>.014</b>	<b>-.16</b>
Noun Addition	0.00	0.00	0.00	0.00	-	-	-
Article Omission	0.10	0.18	0.06	0.17	1.09	.085	.10
Article Commission	0.02	0.08	0.10	0.48	<b>-1.54</b>	<b>.045</b>	<b>-.14</b>
Article Addition	0.09	0.18	0.18	0.29	<b>-2.25</b>	<b>&lt;.001</b>	<b>-.21</b>
Verb Omission	0.03	0.10	0.09	0.20	<b>-2.41</b>	<b>&lt;.001</b>	<b>-.22</b>
Verb Commission	0.41	0.42	0.46	0.78	-0.38	.341	-.04
Verb Addition	0.01	0.07	0.02	0.14	-0.38	.437	-.04
Preposition Omission	0.32	0.41	0.27	0.38	0.74	.899	.07
Preposition Commission	0.28	0.35	0.28	0.38	-0.30	.406	-.03
Preposition Addition	0.17	0.30	0.12	0.22	1.09	.083	.10
Pronoun Omission	0.10	0.23	0.04	0.18	0.74	.899	.07
Pronoun Commission	0.12	0.24	0.09	0.20	-0.03	.406	.00
Pronoun Addition	0.06	0.15	0.04	0.14	1.09	.083	.10

The results revealed that the participants who attended Romanian classes made fewer noun commission and verb omission errors compared to their peers who did not attend them.

Likewise, the proportions of article commission and article addition errors were lower in the case of the students who attended Romanian classes compared to their peers who did not attend them.

Also, no significant differences were encountered between the two groups regarding the proportion of errors for the other subcategories. The corresponding mean comparisons are presented in Figure 32.

Once again, since no noun addition errors were encountered, mean comparisons were not applicable for this subcategory with zero occurrences.

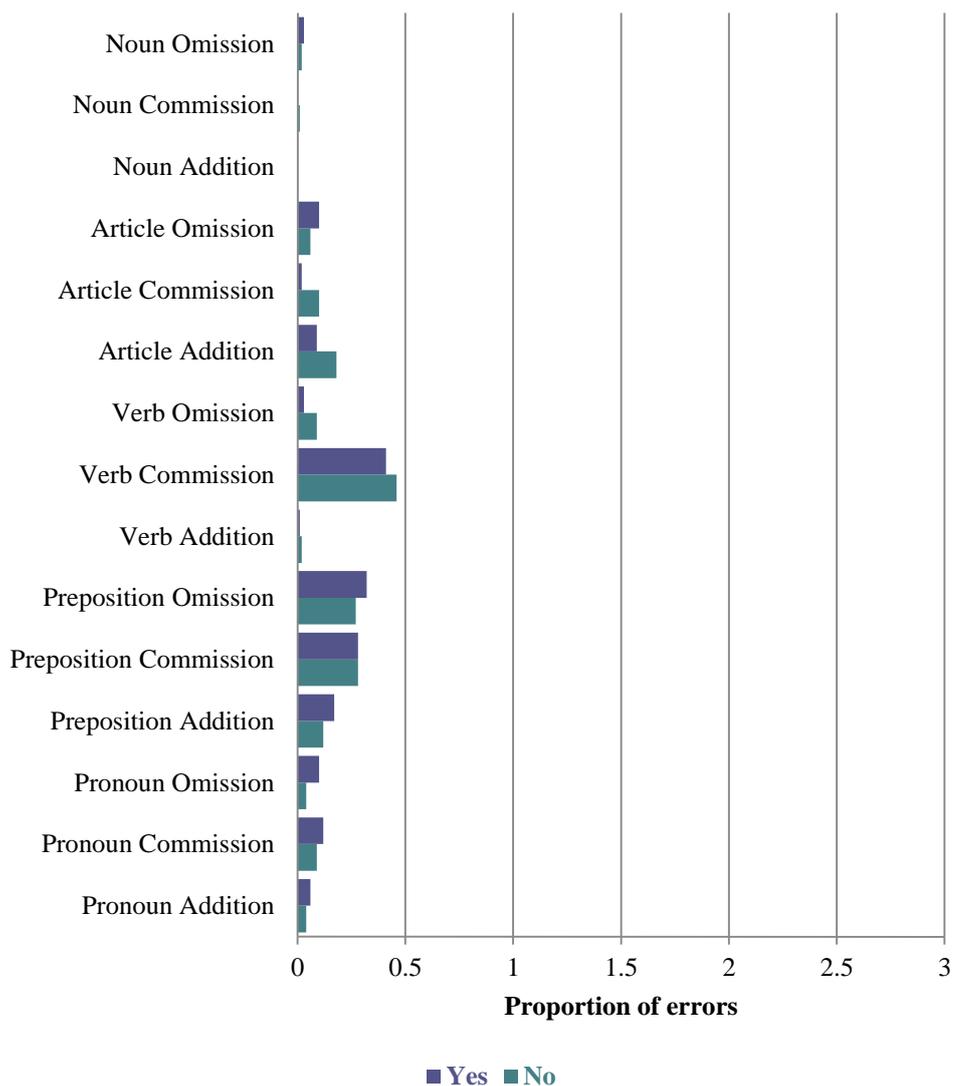


Figure 32. Means of proportion of errors for Spanish oral language production by attendance at Romanian classes

### 6.3.1.4 Spanish written language production

#### Linguistic category

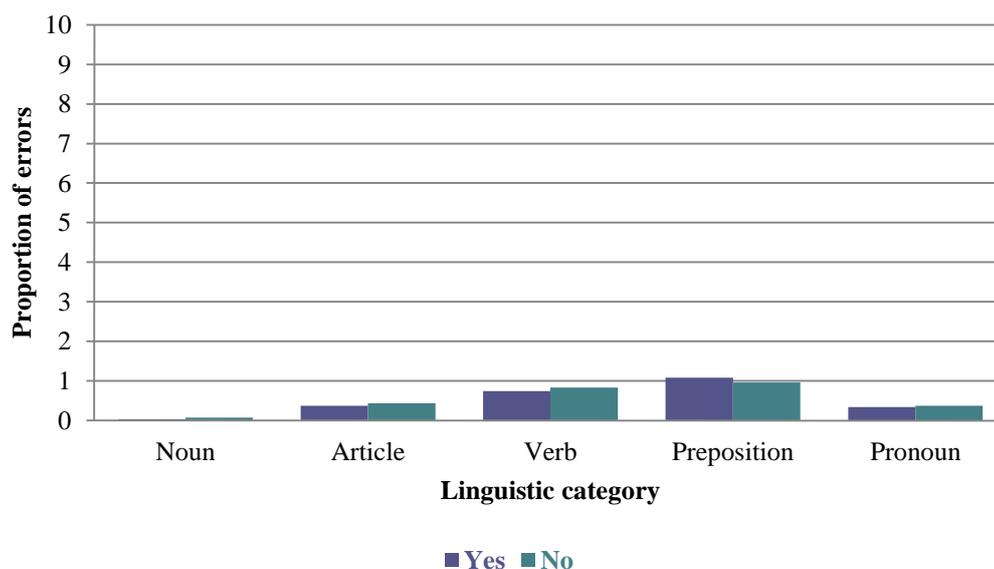
First, t tests for independent samples were conducted in order to determine the influence of attendance at Romanian classes on the proportion of errors for each of the five linguistic categories studied for Spanish written language production. The descriptive statistics and corresponding results are shown in Table 39.

**Table 39. The effect of attendance at Romanian classes on the proportion of errors for each linguistic category for Spanish written language production**

Linguistic category	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun	0.03	0.13	0.07	0.27	<b>-1.33</b>	<b>.029</b>	<b>-.12</b>
Article	0.37	0.60	0.44	0.94	-0.43	.231	-.04
Verb	0.74	1.03	0.83	1.08	-0.45	.930	-.04
Preposition	1.08	1.05	0.96	1.03	0.63	.591	.06
Pronoun	0.34	0.63	0.37	0.75	-0.23	.565	-.02

The results showed that the participants who attended Romanian classes made fewer noun errors than their peers who did not attend them.

Finally, attendance at Romanian classes did not influence the proportion of article, verb, preposition, and pronoun errors (see Figure 33).

**Figure 33. Means of proportion of errors for each linguistic category for Spanish written language production by attendance at Romanian classes**

### *Error typology*

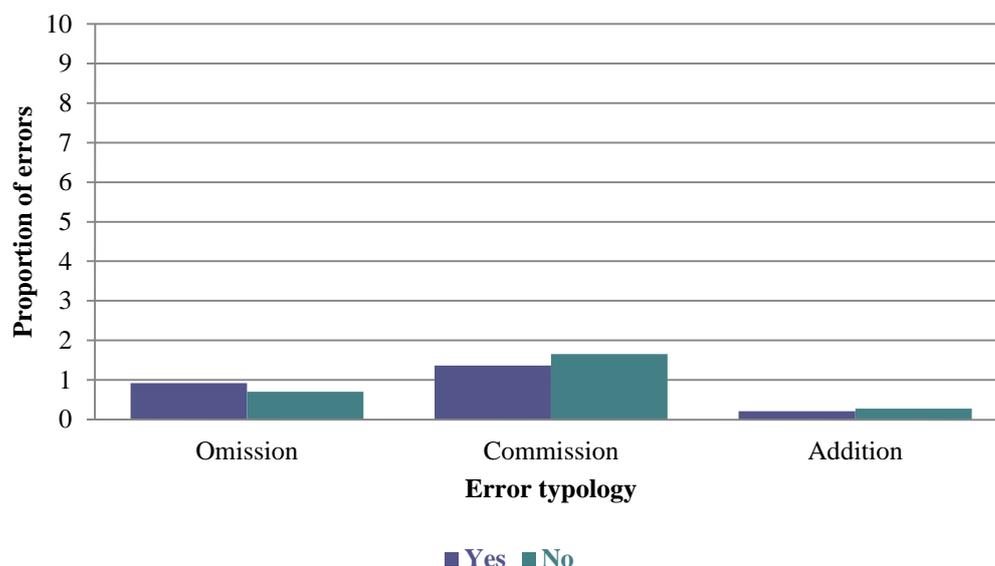
Further, we examined the relationship between attendance at Romanian classes and proportion of omission, commission, and addition errors for Spanish written language production, using t tests for independent samples. In this sense, Table 40 details the descriptive statistics and the results.

**Table 40. The effect of attendance at Romanian classes on the proportion of errors for each error type for Spanish written language production**

Error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Omission	0.92	1.17	0.70	0.87	1.22	.104	.11
Commission	1.36	1.62	1.65	1.88	-0.84	.288	-.08
Addition	0.21	0.42	0.27	0.58	-0.57	.179	-.05

The results showed no significant differences regarding the proportion of errors for each error type in written production between the participants who attended the mother tongue classes and their peers who did not attend them.

The means of the proportion of errors for each error type can be seen in Figure 34.



**Figure 34. Means of proportion of errors for each error type for Spanish written language production by attendance at Romanian classes**

*Linguistic category and error typology*

Lastly, the influence of the variable attendance at Romanian classes on the proportion of errors for Spanish written language production was examined. The consequent descriptive statistics and the results are presented in Table 41.

**Table 41. The effect of attendance at Romanian classes on the proportion of errors for Spanish written language production**

Linguistic category + error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun Omission	0.00	0.00	0.00	0.00	-	-	-
Noun Commission	0.03	0.133	0.07	0.27	<b>-1.33</b>	<b>.029</b>	<b>-.12</b>
Noun Addition	0.00	0.00	0.00	0.00	-	-	-
Article Omission	0.14	0.36	0.12	0.54	0.20	.836	.02
Article Commission	0.18	0.45	0.13	0.48	0.62	.379	.06
Article Addition	0.05	0.20	0.20	0.49	<b>-2.30</b>	<b>&lt;.001</b>	<b>-.21</b>
Verb Omission	0.11	0.37	0.05	0.23	<b>0.97</b>	<b>.033</b>	<b>.09</b>
Verb Commission	0.56	0.97	0.72	1.00	-0.82	.853	-.08
Verb Addition	0.00	0.00	0.00	0.00	-	-	-
Preposition Omission	0.49	0.73	0.46	0.61	0.26	.417	.02
Preposition Commission	0.50	0.64	0.46	0.73	0.27	.831	.03
Preposition Addition	0.09	0.30	0.04	0.17	<b>1.09</b>	<b>.014</b>	<b>.10</b>
Pronoun Omission	0.18	0.44	0.07	0.27	<b>1.53</b>	<b>.001</b>	<b>.14</b>
Pronoun Commission	0.09	0.30	0.26	0.60	<b>-2.20</b>	<b>.001</b>	<b>-.20</b>
Pronoun Addition	0.07	0.25	0.04	0.17	0.81	.102	.08

Concerning Spanish written language production, the participants who attended Romanian classes tended to make fewer noun commission, article addition, and pronoun commission errors compared to the participants who did not attend the classes.

Further, the proportions of verb omission, preposition addition, and pronoun omission errors were higher for those who attended Romanian classes compared to their peers who did not attend those classes.

It is important to mention that, as can be seen represented in Figure 35 too, no noun omission, noun addition, and verb addition errors were encountered and thus, mean comparisons were not applicable for these categories.

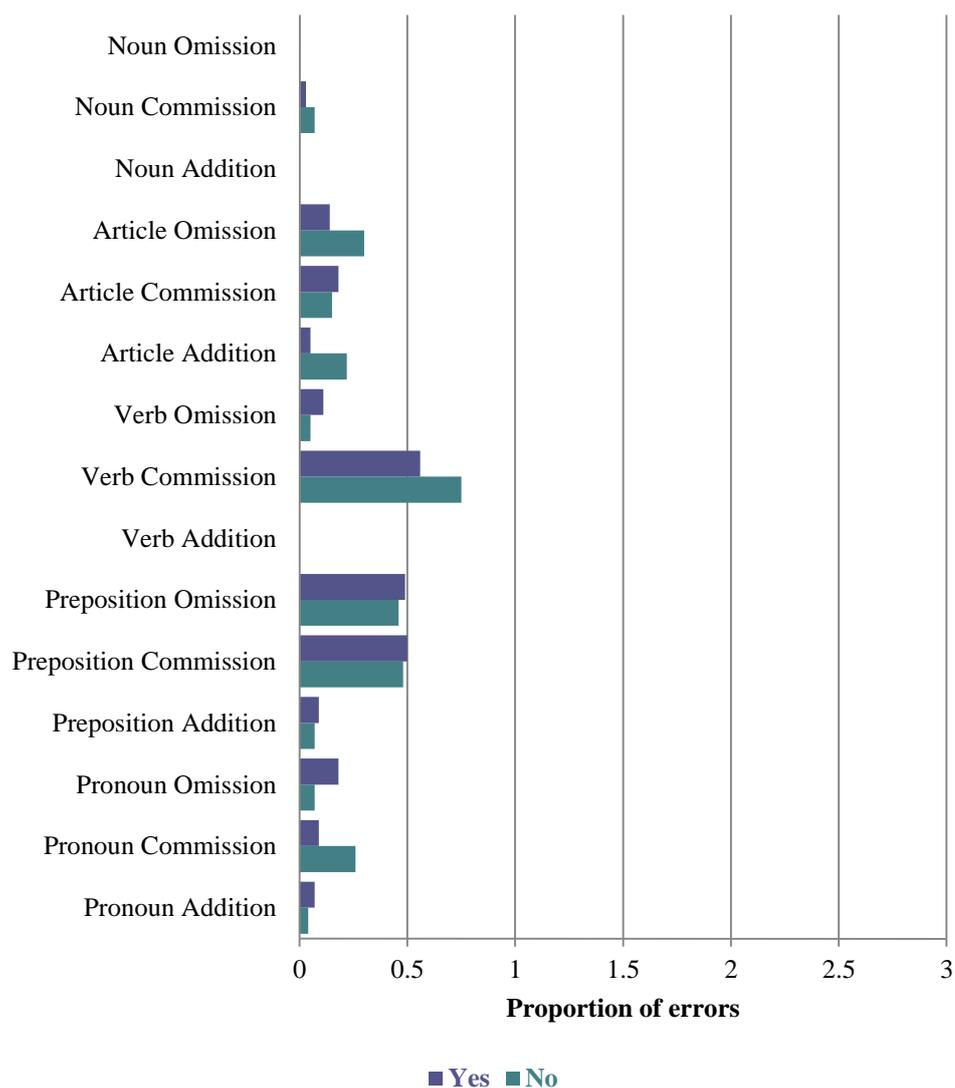


Figure 35. Means of proportion of errors for Spanish written language production by attendance at Romanian classes

### 6.3.1.5 Catalan oral language production

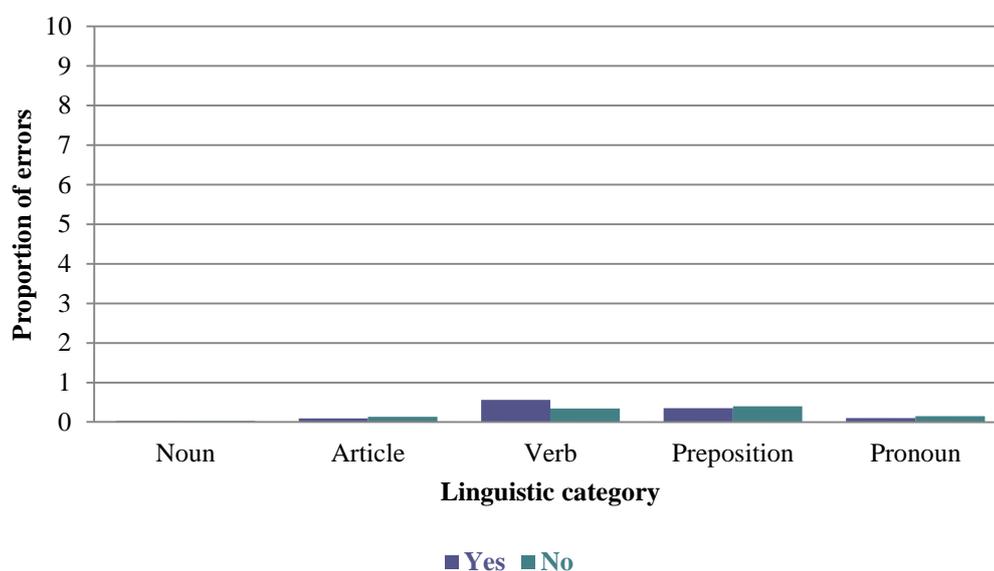
#### Linguistic category

The effect of attendance at Romanian classes on the proportion of errors for each linguistic category was investigated using t tests for independent samples. The corresponding descriptive statistics and results for Catalan oral language production are presented in Table 42.

**Table 42. The effect of attendance at Romanian classes on the proportion of errors for each linguistic category for Catalan oral language production**

Linguistic category	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun	0.03	0.11	0.03	0.22	0.18	.815	.02
Article	0.09	0.26	0.13	0.45	-0.65	.238	-.06
Verb	0.56	0.74	0.34	0.67	1.70	.078	.16
Preposition	0.35	0.70	0.40	0.47	-0.48	.520	-.05
Pronoun	0.10	0.19	0.15	0.37	-0.74	.072	-.07

The results showed that attendance at Romanian classes did not determine any significant difference of noun, article, verb, preposition, and pronoun errors (see Figure 36).

**Figure 36. Means of proportion of errors for each linguistic category for Catalan oral language production by attendance at Romanian classes**

### *Error typology*

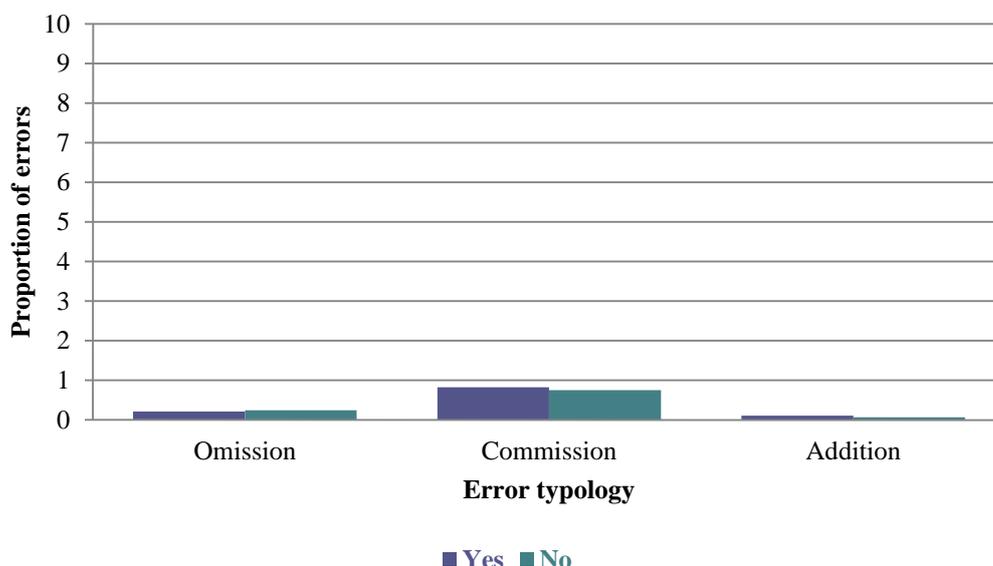
Table 43 reveals the descriptive statistics and results of the *t* tests for independent samples that examined the influence of attendance at Romanian classes on the proportion of omission, commission, and addition errors for Catalan oral language production.

**Table 43. The effect of attendance at Romanian classes on the proportion of errors for each error type for Catalan oral language production**

Error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Omission	0.21	0.42	0.24	0.45	-0.32	.873	-.03
Commission	0.82	1.02	0.75	1.30	0.29	.710	.03
Addition	0.10	0.24	0.06	0.17	<b>1.05</b>	<b>.018</b>	<b>.10</b>

The analysis of the effect of attendance at Romanian classes on the proportion of errors for each error type revealed that the participants who attended those classes made more addition errors than their peers who did not attend them.

The corresponding mean comparisons are represented in Figure 37.



**Figure 37. Means of proportion of errors for each error type for Catalan oral language production by attendance at Romanian classes**

*Linguistic category and error typology*

The last analysis performed for Catalan oral production aimed to look into more detail to the influence of attendance at Romanian classes on students’ proportion of errors. For this purpose, t tests for independent samples were employed and the corresponding descriptive statistics and results are presented in Table 44.

**Table 44. The effect of attendance at Romanian classes on the proportion of errors for Catalan oral language production**

Linguistic category + error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun Omission	0.00	0.00	0.00	0.00	-	-	-
Noun Commission	0.03	0.11	0.03	0.22	0.18	.815	.02
Noun Addition	0.00	0.00	0.00	0.00	-	-	-
Article Omission	0.06	0.21	0.07	0.35	-0.25	.619	-.02
Article Commission	0.01	0.05	0.05	0.19	<b>-1.48</b>	<b>.003</b>	<b>-.14</b>
Article Addition	0.02	0.08	0.01	0.05	0.83	.100	.08
Verb Omission	0.08	0.29	0.05	0.22	0.62	.249	.06
Verb Commission	0.48	0.71	0.29	0.65	1.56	.093	.14
Verb Addition	0.00	0.00	0.00	0.03	-0.69	.165	-.06
Preposition Omission	0.04	0.11	0.06	0.16	<b>-1.21</b>	<b>.029</b>	<b>-.11</b>
Preposition Commission	0.24	0.61	0.30	0.42	-0.56	.733	-.05
Preposition Addition	0.07	0.19	0.04	0.11	<b>0.97</b>	<b>.015</b>	<b>.09</b>
Pronoun Omission	0.03	0.11	0.05	0.13	-0.48	.315	-.05
Pronoun Commission	0.05	0.13	0.09	0.32	-0.77	.107	-.07
Pronoun Addition	0.02	0.08	0.01	0.11	0.31	.578	.03

The results revealed that the proportions of article commission and preposition omission errors were significantly lower for the participants who attended Romanian classes compared to those who did not attend Romanian classes. Meanwhile, those who attended the classes tended to make more preposition addition errors than their peers who did not attend those classes.

Also, as presented in Figure 38, zero occurrences of noun omission and addition errors were encountered. Meanwhile, for the other categories, the proportions of errors did not vary by attendance at Romanian classes.

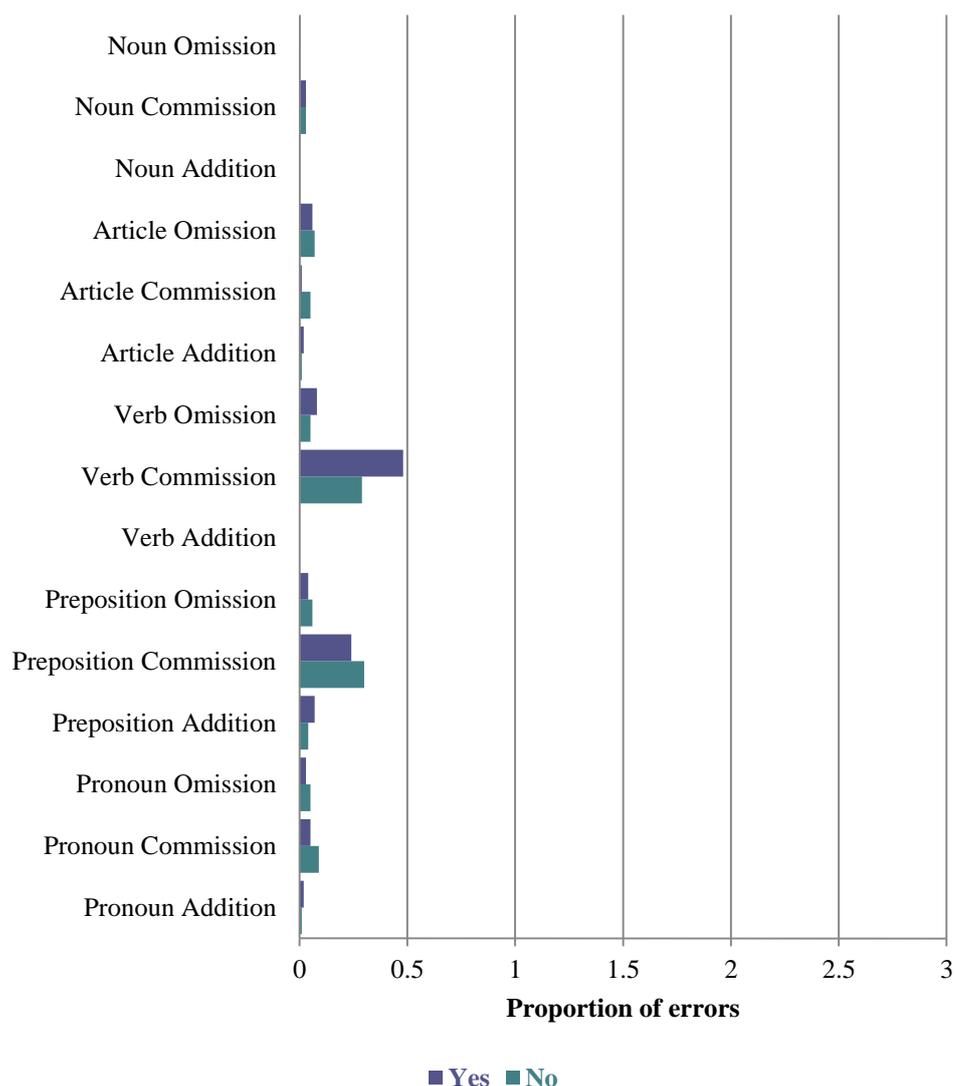


Figure 38. Means of proportion of errors for Catalan oral language production by attendance at Romanian classes

### 6.3.1.6 Catalan written language production

In this subsection dedicated to Catalan written language production we will examine the influence of the variable attendance at Romanian classes on the proportion of errors for three categories: linguistic category, error type, and a combination of the previously two classifications. For this purpose, t tests for independent samples were conducted.

#### *Linguistic category*

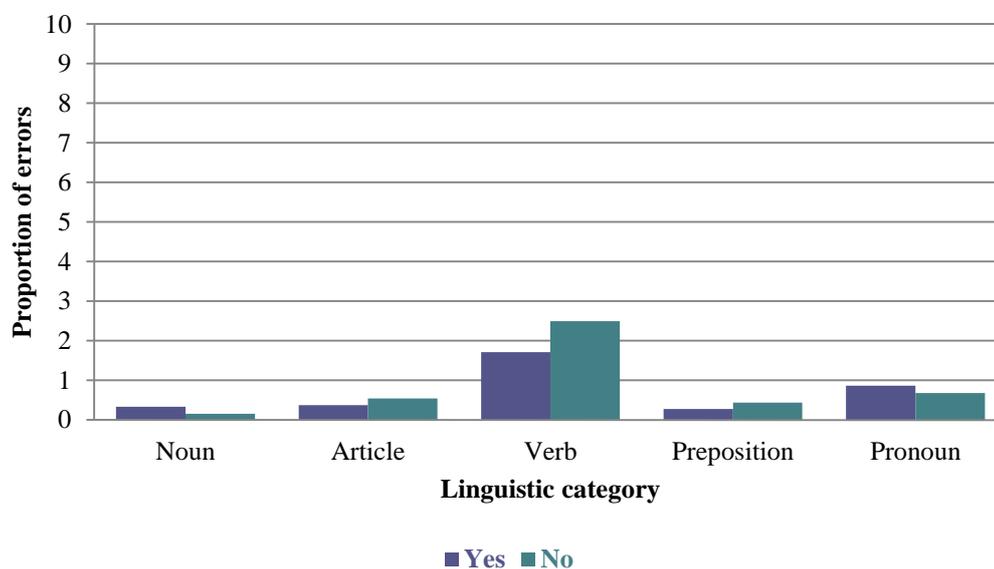
Firstly, the influence of attendance at Romanian classes on the proportion of errors for each of the five linguistic categories studied was examined. The corresponding descriptive statistics and results are further presented in Table 45.

**Table 45. The effect of attendance at Romanian classes on the proportion of errors for each linguistic category for Catalan written language production**

Linguistic category	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun	0.33	1.12	0.15	0.40	<b>1.04</b>	<b>.008</b>	<b>.10</b>
Article	0.37	0.67	0.54	0.81	-1.20	.169	-.11
Verb	1.71	2.07	2.49	2.32	-1.86	.250	-.17
Preposition	0.27	0.53	0.43	0.69	<b>-1.42</b>	<b>.037</b>	<b>-.13</b>
Pronoun	0.86	1.41	0.67	0.95	<b>0.79</b>	<b>.013</b>	<b>.07</b>

The results also detailed in Figure 39 showed that the participants who attended Romanian classes made fewer preposition errors than their peers who did not attend these classes, whereas the proportions of noun and pronoun errors were higher in the case of those who attended Romanian classes compared to the students who did not attend them.

There were no significant differences between the two groups: those who attended Romanian classes and those who did not attend them, concerning the proportions of article and verb errors, respectively.

**Figure 39. Means of proportion of errors for each linguistic category for Catalan written language production by attendance at Romanian classes**

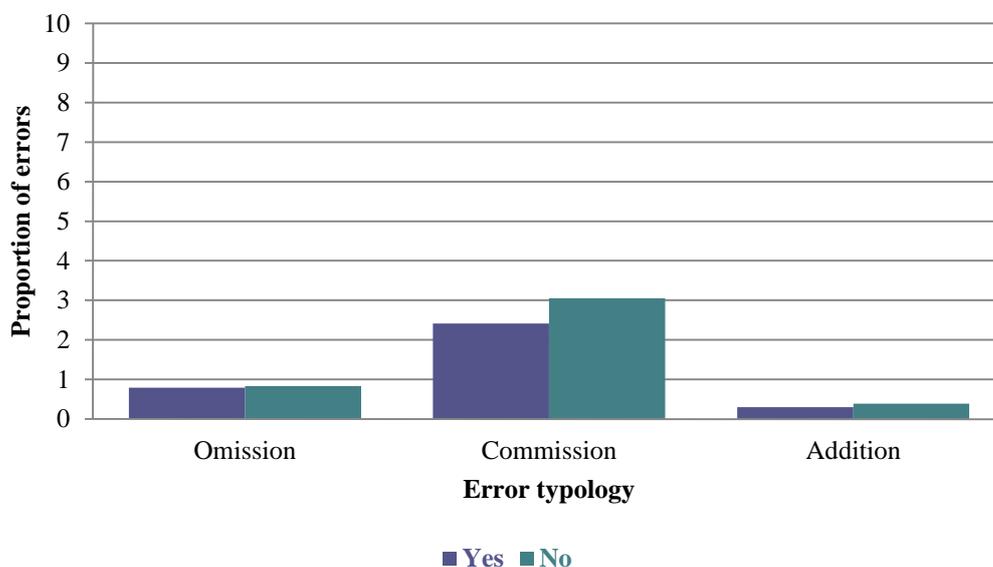
Error typology

Secondly, the effect of the same independent variable on the proportion of omission, commission, and addition errors was explored for Catalan written language production. In this sense, Table 46 presents the related descriptive statistics and results.

**Table 46. The effect of attendance at Romanian classes on the proportion of errors for each error type for Catalan written language production**

Error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Omission	0.79	1.11	0.83	1.07	-0.20	.752	-.02
Commission	2.41	3.49	3.05	2.76	-1.12	.848	-.10
Addition	0.30	0.56	0.39	0.58	-0.81	.380	-.08

There were no significant differences between the two groups according to attendance at Romanian classes regarding the proportion of omission, commission, and addition errors (see Figure 40).



**Figure 40. Means of proportion of errors for each error type for Catalan written language production by attendance at Romanian classes**

Linguistic category and error typology

Third and lastly, a more detailed analysis was conducted, taking into account both linguistic category and error typology. In other words, the influence of attendance at Romanian classes on the proportion of errors for the participants' Catalan written

productions were explored, the subsequent descriptive statistics and results being presented in Table 47.

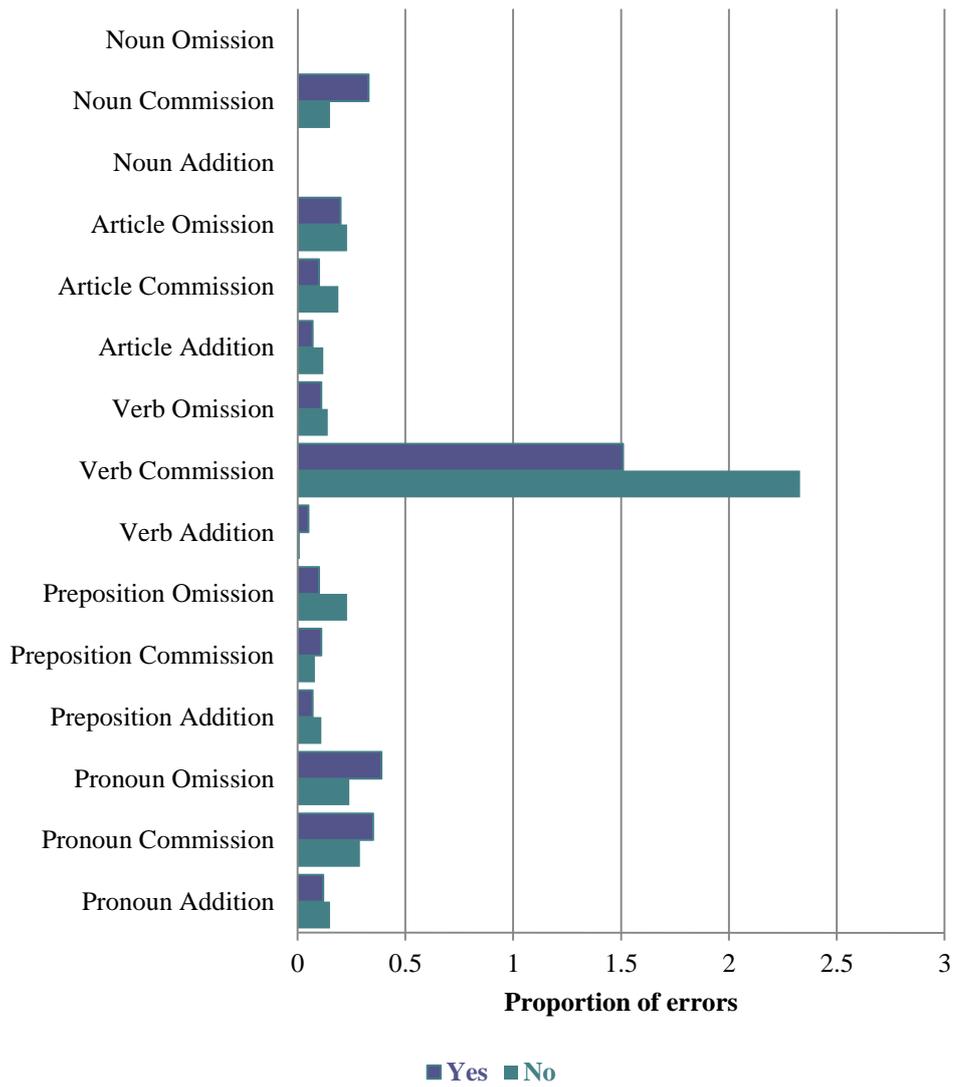
**Table 47. The effect of attendance at Romanian classes on the proportion of errors for Catalan written language production**

Linguistic category + error typology	Attendance at Romanian classes				<i>t</i>	<i>p</i>	<i>r</i>
	Yes		No				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Noun Omission	0.00	0.00	0.00	0.00	-	-	-
Noun Commission	0.33	1.12	0.15	0.40	<b>1.04</b>	<b>.008</b>	<b>.10</b>
Noun Addition	0.00	0.00	0.00	0.00	-	-	-
Article Omission	0.20	0.55	0.23	0.49	-0.31	.734	-.03
Article Commission	0.10	0.34	0.19	0.38	<b>-1.35</b>	<b>.014</b>	<b>-.13</b>
Article Addition	0.07	0.25	0.12	0.33	-0.31	.734	-.03
Verb Omission	0.11	0.31	0.14	0.39	-0.36	.440	-.03
Verb Commission	1.51	2.02	2.33	2.25	-2.01	.233	-.19
Verb Addition	0.05	0.21	0.01	0.09	<b>1.10</b>	<b>.004</b>	<b>.10</b>
Preposition Omission	0.10	0.27	0.23	0.51	<b>-1.98</b>	<b>.001</b>	<b>-.18</b>
Preposition Commission	0.11	0.35	0.08	0.32	0.45	.378	.04
Preposition Addition	0.07	0.25	0.11	0.33	-0.84	.088	-.08
Pronoun Omission	0.39	0.76	0.24	0.51	<b>1.15</b>	<b>.047</b>	<b>.10</b>
Pronoun Commission	0.35	0.71	0.29	0.64	0.51	.437	.05
Pronoun Addition	0.12	0.35	0.15	0.37	-0.34	.574	-.03

As can be seen in Figure 41, the participants who attended these classes tended to make fewer article commission and preposition omission errors compared to their peers who did not attend them.

Additionally, the proportions of noun commission, verb addition, and pronoun omission errors were significantly higher in the case of the participants who attended Romanian classes compared to the participants who did not attend those classes.

Likewise, neither noun omission, nor noun addition errors were reflected in students' productions.



**Figure 41. Means of proportion of errors for Catalan written language production by attendance at Romanian classes**

## 6.3.2 The effect of length of residence

### 6.3.2.1 Romanian oral language production

#### *Linguistic category*

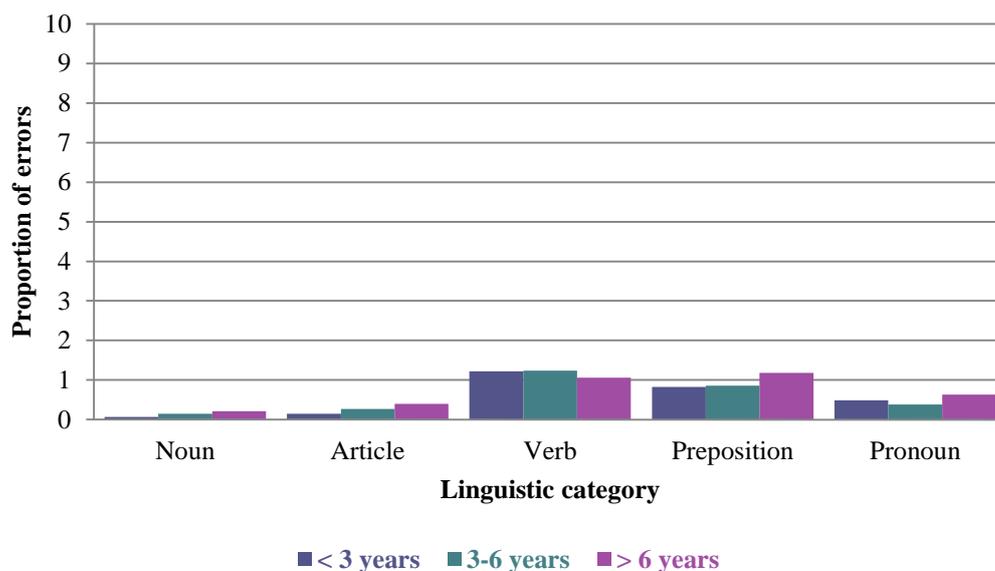
A one-way ANOVA was conducted to compare the effect of length of residence on proportion of errors for each linguistic category. Table 48 presents the descriptive statistics and results for Romanian oral language production.

**Table 48. The effect of length of residence on the proportion of errors for each linguistic category for Romanian oral language production**

Linguistic category	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun	0.07	0.19	0.15	0.37	0.21	0.40	1.21	.303
Article	0.15	0.28	0.27	0.36	0.40	0.51	<b>3.19</b>	<b>.045</b>
Verb	1.22	1.07	1.24	1.12	1.06	0.87	0.43	.651
Preposition	0.83	1.37	0.86	1.17	1.18	1.08	1.20	.303
Pronoun	0.49	0.60	0.38	0.63	0.63	0.90	1.55	.316

Firstly, there was a significant effect of length of residence on the proportion of article errors. The results of the post hoc test showed that there were no significant differences in the proportion of the aforementioned errors between students with more than 6 years of stay and those with a length of residence between 3 and 6 years ( $t_{(129)} = -1.63$ ,  $p = .244$ ,  $r = .14$ ). Also, no significant differences were encountered neither between students with less than 3 years of stay and those with 3-6 years of stay ( $t_{(129)} = -1.10$ ,  $p = .531$ ,  $r = -.10$ ), nor between students with less than 3 years of stay and their peers with more than 6 years of stay ( $t_{(129)} = -2.50$ ,  $p = .059$ ,  $r = -.22$ ).

As can be observed from the mean comparisons graphically presented in Figure 42, length of residence in the host society did not influence the proportion of errors encountered in the participants' oral productions in their mother tongue for noun, verb, preposition, or pronoun.



**Figure 42.** Means of proportion of errors for each linguistic category for Romanian oral language production by length of residence

*Error typology*

An ANOVA was conducted to explore the influence of length of residence on the proportion of errors for the three error type: omission, commission, and addition, and the corresponding results are detailed in Table 49.

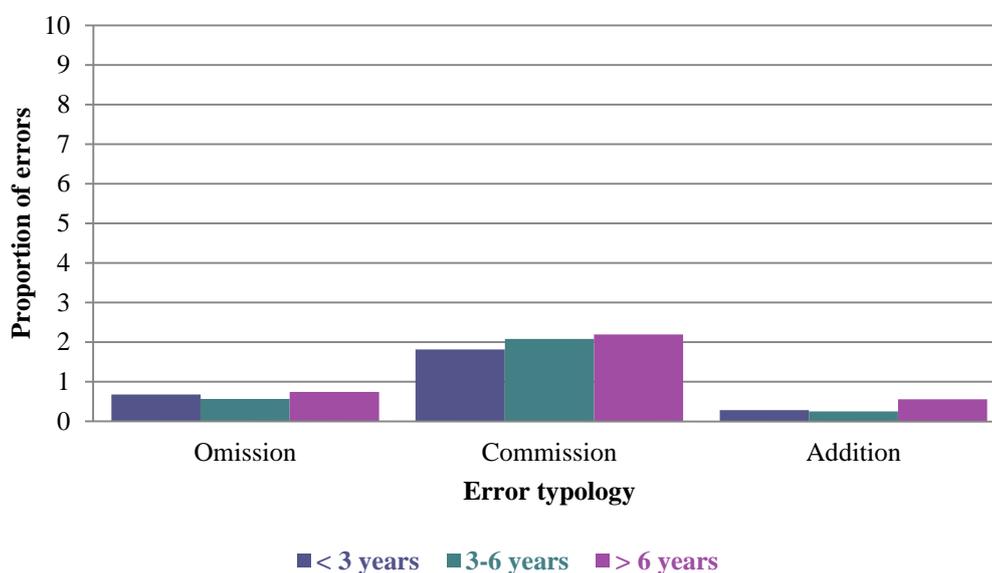
**Table 49.** The effect of length of residence on the proportion of errors for each error type for Romanian oral language production

Error typology	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Omission	0.67	1.24	0.56	0.99	0.74	0.89	0.43	.654
Commission	1.81	1.40	2.08	1.67	2.19	1.36	0.49	.615
Addition	0.28	0.51	0.25	0.44	0.55	0.59	<b>5.06</b>	<b>.008</b>

For Romanian oral language production, there were no significant differences determined by length of residence regarding the proportion of omission errors and commission errors (see also Figure 43).

Meanwhile, there was a significant effect of length of residence on the proportion of addition errors. The post hoc results showed that students with a length of residence between 3 and 6 years made fewer addition errors than those with more than 6 years of stay ( $t_{(129)} = -3.00$ ,  $p = .012$ ,  $r = -.26$ ). No significant differences were encountered in the proportion of addition errors neither between students with less than 3 years of stay and

those with 3 to 6 years of stay ( $t_{(129)} = 0.23$ ,  $p = .972$ ,  $r = .02$ ), nor between students with less than 3 years of stay and their peers with more than 6 years of stay ( $t_{(129)} = -2.08$ ,  $p = .114$ ,  $r = -.18$ ).



**Figure 43. Means of proportion of errors for each error type for Romanian oral language production by length of residence**

#### *Linguistic category and error typology*

Further, Table 50 presents the results of the analysis regarding the effect of length of residence on the students' errors for Romanian oral language production.

As can be seen from Figure 44, in students' oral productions there were no occurrences of omission and addition errors for nouns, and also in the case of verb, no addition errors were found, thus the mean comparison was not applicable.

Concerning the analysis of the influence of length of residence on proportion of article commission error, the results showed that the proportion of these errors was significantly higher for students with more than 6 years in the host society compared to their peers with a length of residence of less than 3 years ( $t_{(129)} = 2.67$ ,  $p = .037$ ,  $r = .23$ ). No significant differences were encountered in the proportion of article commission errors between students with less than 3 years of stay and those with 3 to 6 years of stay ( $t_{(129)} = -0.83$ ,  $p = .744$ ,  $r = -.07$ ). Likewise, length of residence did not influence the proportion of the previously mentioned errors in the case of students with a stay between 3 and 6 years compared to those with more than 6 years of stay ( $t_{(129)} = -2.40$ ,  $p = .059$ ,  $r = -.21$ ).

**Table 50. The effect of length of residence on the proportion of errors for Romanian oral language production**

Linguistic category + error typology	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Noun Commission	0.07	0.18	0.15	0.37	0.21	0.40	1.21	.303
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Article Omission	0.08	0.19	0.18	0.32	0.18	0.35	0.96	.385
Article Commission	0.00	0.00	0.05	0.18	0.16	0.35	<b>4.48</b>	<b>.013</b>
Article Addition	0.06	0.23	0.04	0.13	0.05	0.18	0.25	.782
Verb Omission	0.00	0.00	0.04	0.20	0.01	0.07	0.93	.397
Verb Commission	1.22	1.07	1.20	1.13	1.05	0.87	0.36	.701
Verb Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Preposition Omission	0.28	0.86	0.23	0.66	0.24	0.61	0.06	.940
Preposition Commission	0.44	0.61	0.47	0.58	0.51	0.54	0.15	.863
Preposition Addition	0.11	0.21	0.16	0.33	0.42	0.55	<b>7.08</b>	<b>.001</b>
Pronoun Omission	0.30	0.42	0.12	0.29	0.30	0.47	<b>3.55</b>	<b>.032</b>
Pronoun Commission	0.09	0.20	0.21	0.42	0.25	0.42	1.48	.232
Pronoun Addition	0.10	0.29	0.05	0.20	0.07	0.25	0.50	.608

The post hoc analysis revealed a significant difference among the groups of students according to length of residence on the proportion of preposition addition errors. Specifically, students with a length of residence of more than 6 years made significantly more errors compared to the other two groups: those with a length of residence of less than 3 years ( $t_{(129)} = 3.20, p = .012, r = .27$ ), and also their peers with a length of residence of between 3 and 6 years ( $t_{(129)} = 3.25, p = .006, r = .27$ ). However, the proportion of the preposition addition errors did not vary between the participants with less than 3 years of stay and those with a length of residence between 3 and 6 years ( $t_{(129)} = -0.50, p = .865, r = -.04$ ).

Additionally, the proportion of pronoun omission errors was further analysed. However, the post hoc test showed that the proportion of the above-mentioned errors did not vary between those with less than 3 years of stay and those with 3 to 6 years of stay ( $t_{(129)} = 1.90, p = .157, r = .16$ ), or between the students with less than 3 years in the host society and their peers with more than 6 years ( $t_{(129)} = 0.00, p = .999, r = .00$ ). No significant differences were encountered between students with a length of residence of 3 to 6 years

made fewer errors than their peers with a length of residence of more than 6 years, the differences were not significant ( $t_{(129)} = -1.80, p = .059, r = -.16$ ).

Lastly, length of residence did not influence the proportions of commission errors for noun, verb, preposition, and pronoun, the proportions of omission errors for the categories of article, verb, and preposition, and also the proportions of article and pronoun addition errors.

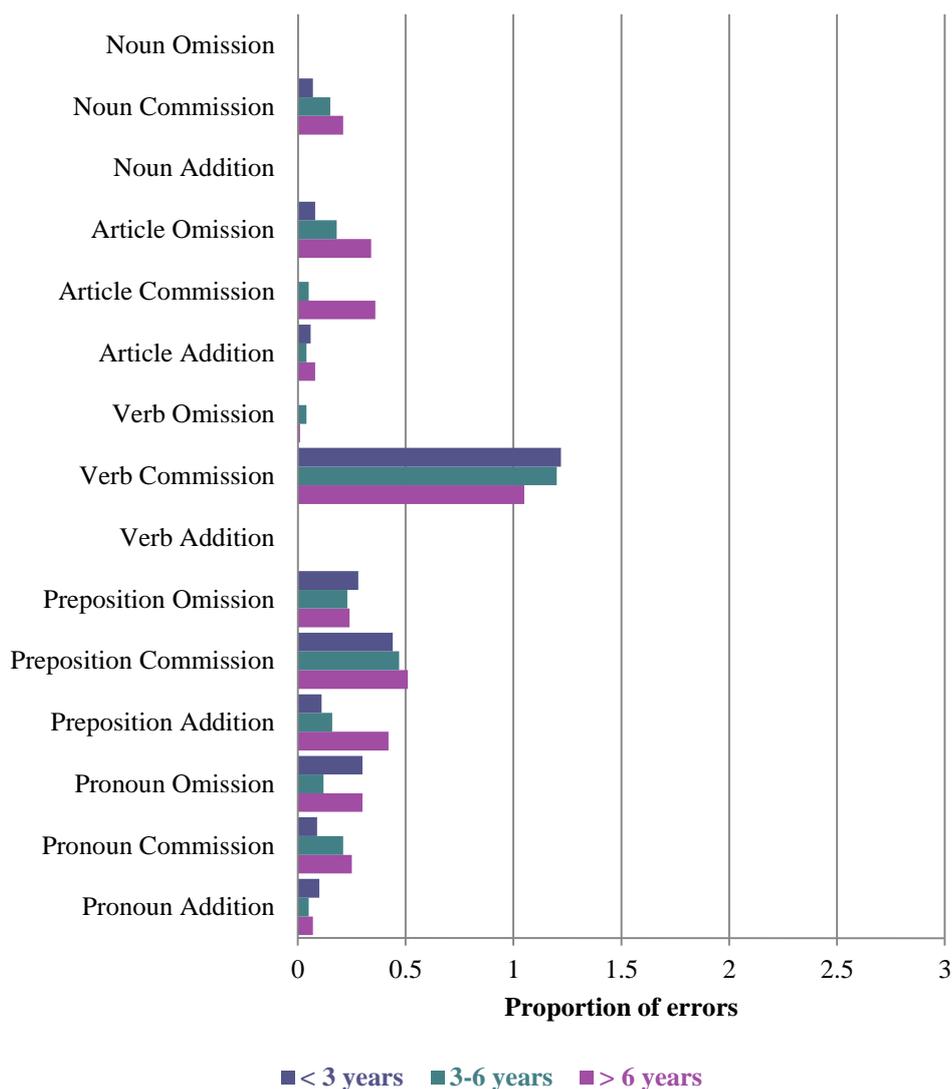


Figure 44. Means of proportion of errors for Romanian oral language production by length of residence

### 6.3.2.2 Romanian written language production

Following, one-way ANOVAs were conducted in order to examine the influence of length of residence on the proportion of errors students’ made in their written productions

in Romanian. For a more detailed view on the matter, the classifications of errors were constructed taking into consideration the linguistic category, the error typology, and also a combination of both of the above-mentioned.

*Linguistic category*

In the first place, Table 51 reveals the descriptive statistics and results of the analysis conducted to investigate the influence of length of residence on the proportion of noun, article, verb, preposition, and pronoun errors, respectively.

**Table 51. The effect of length of residence on the proportion of errors for each linguistic category for Romanian written language production**

Linguistic category	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Noun	0.44	1.25	0.47	0.94	0.65	1.08	0.50	.609
Article	1.17	0.97	1.68	1.99	2.71	2.58	<b>5.22</b>	<b>.007</b>
Verb	0.56	0.92	0.61	0.89	1.09	1.01	<b>4.14</b>	<b>.018</b>
Preposition	0.82	1.06	1.02	1.41	1.10	1.21	0.38	.685
Pronoun	0.20	0.40	0.35	0.54	0.79	0.99	<b>7.06</b>	<b>.001</b>

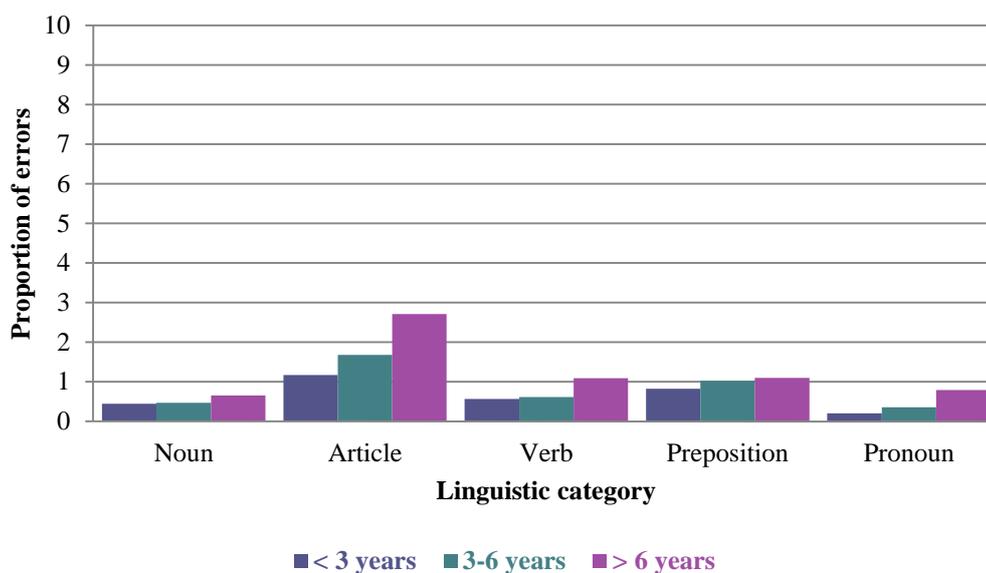
There was a significant influence of length of residence on the proportion of article errors. The results showed that participants with a length of residence of less than 3 years made fewer article than their peers with a stay of more than 6 years ( $t_{(129)} = -2.91, p = .018, r = -.25$ ). Also, the proportion of article errors was lower for students with a stay from 3 to 6 years compared to their peers with a length of residence longer than 6 years ( $t_{(129)} = -2.51, p = .046, r = -.21$ ), while there were no significant differences in the proportions of these errors between those with less than 3 years in the host society and those with a stay from 3 to 6 years ( $t_{(129)} = -0.98, p = .623, r = -.08$ ).

Likewise, as the proportion of verb errors varied by length of residence, post-hoc tests were conducted to compare the three groups of students with different length of residence among themselves. Consequently, the results indicated that the proportion of verb errors was significantly lower in the case of students with a stay of 3 to 6 years compared to their peers with a length of residence longer than 6 years ( $t_{(129)} = -2.67, p = .037, r = -.23$ ). There were no significant differences encountered in the proportion of errors related to verb between participants with less than 3 years of stay and those with 3 to 6 years of stay in the host society ( $t_{(129)} = -0.22, p = .979, r = -.02$ ), and those with a length of

residence of less than 3 years compared to their peers with more than 6 years ( $t_{(129)} = -2.17, p = .093, r = -.19$ ).

Also, as the proportion of pronoun errors varied by length of residence, post-hoc tests were conducted and revealed that the proportion of pronoun errors was significantly higher in the case of students with a length of residence of more than 6 years compared to their peers with less than 3 years ( $t_{(129)} = 3.28, p = .007, r = .28$ ), and their peers with a stay of 3 to 6 years ( $t_{(129)} = 3.14, p = .010, r = .26$ ). There were no significant differences encountered in the proportion of errors related to pronoun between participants with less than 3 years of residence and those with 3 to 6 years in the host society ( $t_{(129)} = -0.83, p = .707, r = -.07$ ).

The proportions of noun and preposition errors did not vary by length of residence (see also Figure 45).



**Figure 45. Means of proportion of errors for each linguistic category for Romanian written language production by length of residence**

#### *Error typology*

Secondly, the influence of length of residence on the proportion of omission, commission, and addition errors is examined. The corresponding results are detailed in Table 52.

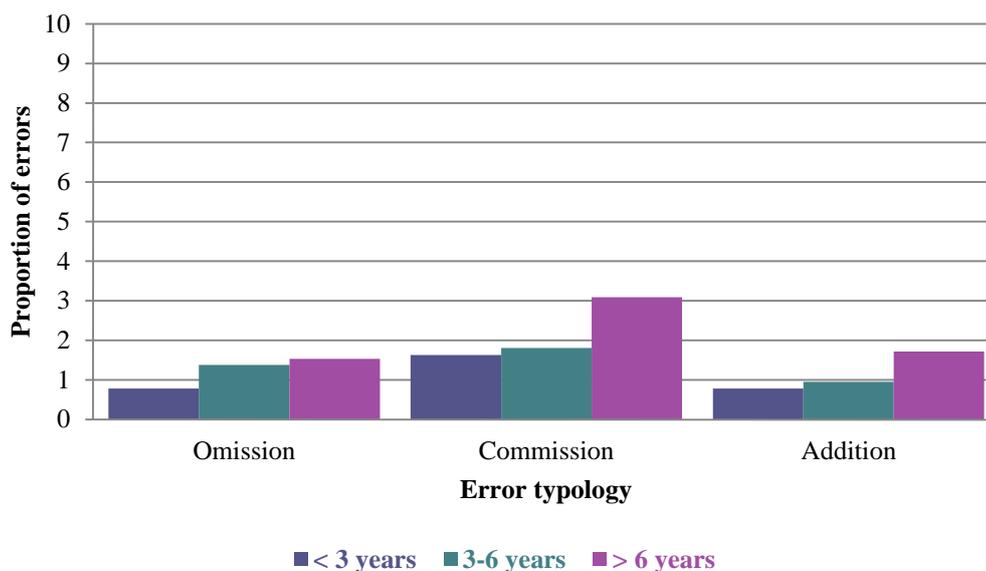
**Table 52. The effect of length of residence on the proportion of errors for each error type for Romanian written language production**

Error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Omission	0.78	0.93	1.38	1.44	1.53	1.48	2.35	.100
Commission	1.63	1.77	1.81	1.74	3.09	2.87	<b>5.45</b>	<b>.005</b>
Addition	0.78	0.78	0.95	1.43	1.72	1.63	<b>5.24</b>	<b>.007</b>

For a more detailed analysis of the effect of length of residence on the proportion of commission errors, the consequent results showed that the proportion of these errors was significantly higher in the case of students with a length of residence of more than 6 years compared to their peers with less than 3 years ( $t_{(129)} = 2.56, p = .040, r = .22$ ), and their peers with a residence of 3 to 6 years ( $t_{(129)} = 2.91, p = .015, r = .25$ ). There were no significant differences encountered in the proportion of errors related to pronoun between participants with less than 3 years of stay and those with 3 to 6 years of stay in the host society ( $t_{(129)} = -0.32, p = .951, r = -.03$ ).

Additionally, the same pattern of significance was encountered regarding the influence of length of residence on the proportion of addition errors. Concretely, the post hoc comparisons revealed that the proportion of addition errors was significantly higher in the case of students with a length of residence of more than 6 years compared to their peers with less than 3 years ( $t_{(129)} = 2.61, p = .035, r = .22$ ), and their peers with 3 to 6 years ( $t_{(129)} = 2.79, p = .022, r = .24$ ). There were no significant differences encountered in the proportion of errors related to pronoun between participants with less than 3 years and those with 3 to 6 years of residence in the host society ( $t_{(129)} = -0.49, p = .896, r = -.04$ ).

As can be seen from the mean comparisons graphically represented in Figure 46, there was no significant influence of length of residence on the proportion of omission errors.



**Figure 46. Means of proportion of errors for each error type for Romanian written language production by length of residence**

#### *Linguistic category and error typology*

Third and lastly, Table 53 presents the results of a more in-depth analysis intended to investigate the influence of participants' length of residence on their proportion of errors, based on errors categories developed taking into account both the linguistic category and the error type.

There were significant differences according to length of residence concerning the proportion of article addition errors. In other words, the participants with a length of residence of less than 3 years tended to make fewer article addition errors than those with more than 6 years ( $t_{(129)} = -2.55, p = .041, r = -.22$ ), and also students with 3 to 6 years of stay made fewer errors than their peers with more than 6 years of stay ( $t_{(129)} = -3.36, p = .005, r = -.28$ ). Meanwhile, no significant differences were encountered between the participants with less than 3 years and their peers with a length of residence of 3 to 6 years ( $t_{(129)} = 0.00, p = 1.000, r = .00$ ).

As length of residence determined significant differences in the proportion of verb commission errors, post hoc analyses were conducted to further investigate it. The proportion of verb commission errors was significantly lower for students with a residence in the host society of 3 to 6 years compared to their peers with a length of residence of more than 6 years ( $t_{(129)} = -3.24, p = .008, r = -.28$ ). Also, the proportion of commission errors related to verb did not vary between the participants with less than 3

*Quantitative Results*

years and those with 3 to 6 years of residence ( $t_{(129)} = 0.14, p = .992, r = .01$ ), as well as it did not vary between those with a length of residence of less than 3 years compared to their peers with more than 6 years ( $t_{(129)} = -2.26, p = .073, r = -.19$ ).

**Table 53. The effect of length of residence on the proportion of errors for Romanian written language production**

Linguistic category + error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Noun Commission	0.44	1.25	0.47	0.94	0.65	1.08	0.50	.609
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Article Omission	0.40	0.61	0.76	1.06	0.81	1.19	1.32	.271
Article Commission	0.13	0.29	0.27	0.68	0.51	1.19	1.79	.171
Article Addition	0.64	0.76	0.64	1.03	1.38	1.40	<b>6.40</b>	<b>.002</b>
Verb Omission	0.00	0.00	0.08	0.28	0.00	0.00	2.66	.074
Verb Commission	0.56	0.92	0.54	0.77	1.09	1.01	<b>5.65</b>	<b>.004</b>
Verb Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Preposition Omission	0.31	0.50	0.38	0.70	0.40	0.62	0.15	.863
Preposition Commission	0.41	0.66	0.33	0.58	0.51	0.78	0.91	.406
Preposition Addition	0.10	0.27	0.31	0.81	0.19	0.45	1.07	.346
Pronoun Omission	0.07	0.25	0.16	0.39	0.32	0.54	<b>3.11</b>	<b>.048</b>
Pronoun Commission	0.08	0.28	0.19	0.45	0.32	0.63	1.98	.142
Pronoun Addition	0.04	0.20	0.00	0.00	0.15	0.43	<b>3.73</b>	<b>.027</b>

Regarding the influence of length of residence on proportion of pronoun omission errors, the results indicated that there were no significant differences between the participants with less than 3 years and those with 3 to 6 years in the host country ( $t_{(129)} = -0.73, p = .735, r = -.06$ ), and neither between students with a length of residence of less than 3 years and their peers with a length of residence of more than 6 years ( $t_{(129)} = -2.27, p = .085, r = -.20$ ). Also, no differences were encountered between those with a stay of 3 to 6 years and their peers with more than 6 years of stay ( $t_{(129)} = -2.00, p = .164, r = -.17$ ).

Furthermore, as length of residence influenced the proportion of addition errors related to pronoun, post hoc test were conducted. The results indicated that the proportion of pronoun addition errors was significantly lower in the productions of students with a length of residence of 3 to 6 years compared to their peers with a length of residence of

more than 6 years ( $t_{(129)} = -3.00$ ,  $p = .029$ ,  $r = -.26$ ). Meanwhile, the proportion of the previously mentioned errors did not vary by length of residence for the participants with less than 3 years in the host society and those with 3 to 6 years ( $t_{(129)} = 0.57$ ,  $p = .834$ ,  $r = .05$ ), and also no significant differences were encountered regarding the proportion of pronoun addition errors between students with a length of residence of less than 3 years and their peers with a length of residence of more than 6 years ( $t_{(129)} = -1.43$ ,  $p = .336$ ,  $r = -.12$ ).

The means presented in Figure 47 show that for Romanian written language production there were no occurrences of addition errors related to noun and verb, or of noun omission errors were encountered in students' written productions, thus the mean comparison was not applicable in those cases.

Additionally, there were no significant differences of length of residence on the proportions of errors related to the following categories: noun commission, article omission and commission, verb omission, preposition omission and commission, preposition addition, and pronoun commission, respectively.

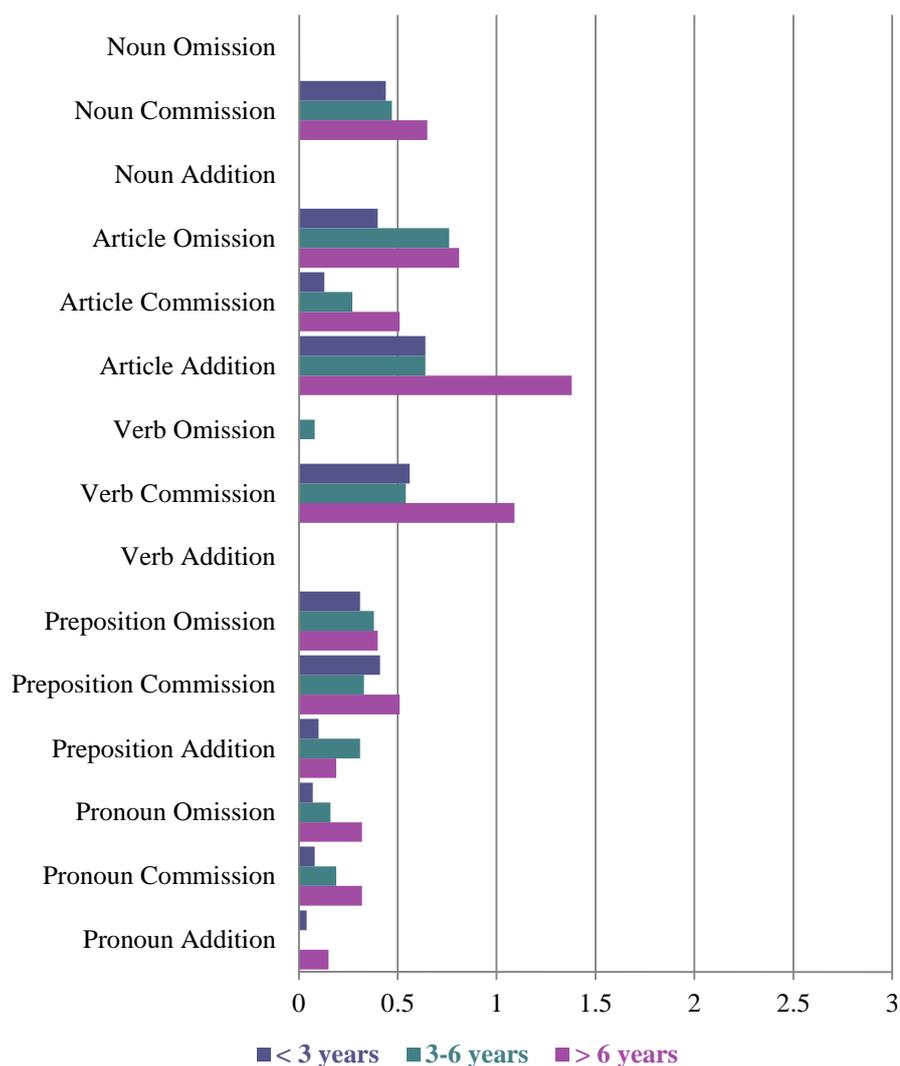


Figure 47. Means of proportion of errors for Romanian written language production by length of residence

### 6.3.2.3 Spanish oral language production

#### Linguistic category

In order to examine the effect of length of residence on the proportion of errors for each of the five linguistic categories studied, a one-way ANOVA was conducted and the corresponding descriptive statistics and results are presented in Table 54.

**Table 54. The effect of length of residence on the proportion of errors for each linguistic category for Spanish oral language production**

Linguistic category	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun	0.06	0.16	0.04	0.29	0.02	0.09	0.34	.713
Article	0.74	1.21	0.23	0.30	0.18	0.34	<b>8.13</b>	<b>&lt;.001</b>
Verb	1.03	1.55	0.45	0.40	0.44	0.47	<b>5.63</b>	<b>.005</b>
Preposition	1.11	0.68	0.74	0.62	0.48	0.45	<b>9.64</b>	<b>&lt;.001</b>
Pronoun	0.52	0.49	0.17	0.27	0.10	0.18	<b>16.86</b>	<b>&lt;.001</b>

The post hoc analysis for the influence of length of residence on the proportion of article errors revealed that students with less than 3 years tended to make more of these errors compared to the other two groups: those with 3 to 6 years of residence ( $t_{(129)} = 3.64$ ,  $p = .002$ ,  $r = .30$ ) and their peers with more than 6 years ( $t_{(129)} = 3.73$ ,  $p = .001$ ,  $r = .31$ ). Also, the proportion of article errors did not vary between students with a length of residence of 3 to 6 years and students with a length of residence of more than 6 years ( $t_{(129)} = 0.45$ ,  $p = .902$ ,  $r = .04$ ).

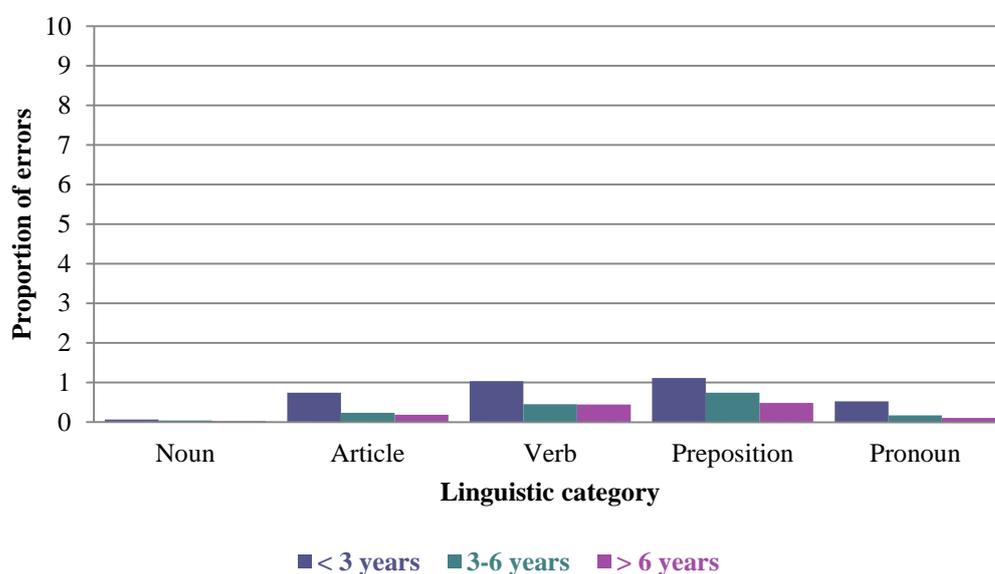
The same pattern of significance emerged from the analysis of the influence of length of residence on the proportion of verb errors. Specifically, students with less than 3 years of stay tended to make more of verb errors compared to the other two groups: those with 3 to 6 years ( $t_{(129)} = 3.05$ ,  $p = .009$ ,  $r = .26$ ) and their peers with more than 6 years ( $t_{(129)} = 3.05$ ,  $p = .011$ ,  $r = .26$ ). Also, the proportion of the errors in question did not vary between students with a length of residence of 3 to 6 years and students with a length of residence of more than 6 years ( $t_{(129)} = 0.00$ ,  $p = 1.00$ ,  $r = .00$ ).

Regarding the analysis of the influence of length of residence on the proportion of preposition errors, the participants with less than 3 years in the host society tended to make more preposition errors compared to their peers with those with a length of residence of 3 to 6 years ( $t_{(129)} = 2.64$ ,  $p = .036$ ,  $r = .22$ ) and also compared to those with more than 6 years ( $t_{(129)} = 4.50$ ,  $p = <.001$ ,  $r = .37$ ). Likewise, no significant differences were found in the proportion of preposition errors between the students with a length of residence of 3 to 6 years and their peers with more than 6 years in the host society ( $t_{(129)} = 2.36$ ,  $p = .070$ ,  $r = .20$ ).

## Quantitative Results

In the case of the effect of length of residence on the proportion of errors related to the linguistic category of pronoun, the results of the post hoc test revealed that it was significantly higher in the case of students with a length of residence of less than 3 years compared to both students with a stay of 3 to 6 years ( $t_{(129)} = 5.00, p < .001, r = .39$ ), and those with more than 6 years of stay, respectively ( $t_{(129)} = 6.00, p < .001, r = .47$ ). Also, the proportion of pronoun errors did not vary between students with a stay in the host society of 3 to 6 years and their peers with a length of residence of more than 6 years ( $t_{(129)} = 1.17, p = .425, r = .09$ ).

Lastly, there was no significant influence of length of residence on the proportions of noun errors (see Figure 48).



**Figure 48. Means of proportion of errors for each linguistic category for Spanish oral language production by length of residence**

### *Error typology*

Following, Table 55 presents the results of the analysis regarding the effect of length of residence on the proportion of omission, commission, and addition errors for the students' oral production for Spanish language.

**Table 55. The effect of length of residence on the proportion of errors for each error type for Spanish oral language production**

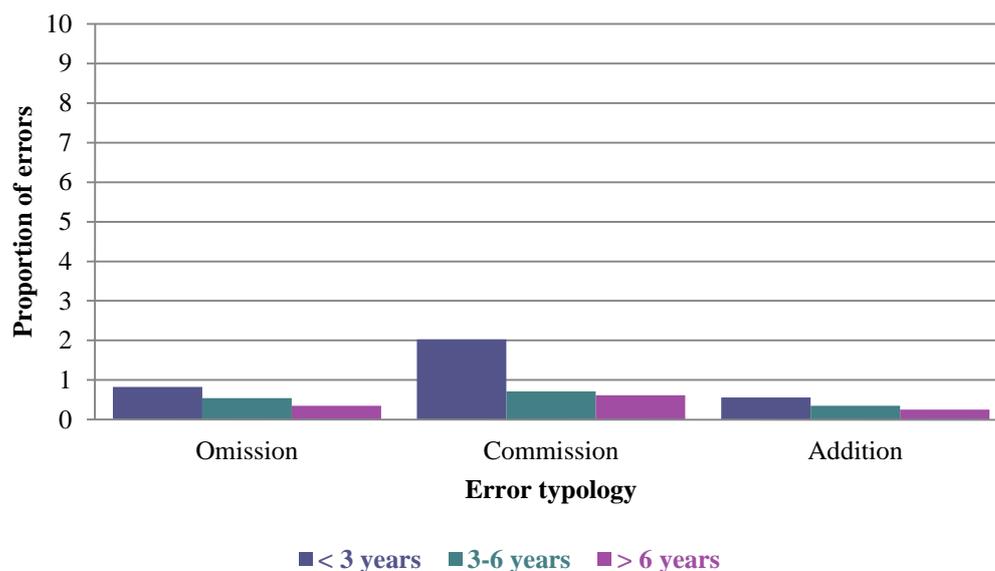
Error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Omission	0.83	0.77	0.54	0.55	0.35	0.36	<b>6.40</b>	<b>.002</b>
Commission	2.03	2.21	0.71	0.61	0.62	0.53	<b>15.74</b>	<b>&lt;.001</b>
Addition	0.56	0.67	0.35	0.37	0.25	0.40	<b>4.01</b>	<b>.021</b>

First, regarding the effect of length of residence on the proportion of omission errors, the corresponding result showed that the students with less than 3 years in the host society made more of these errors than those with more than 6 years ( $t_{(129)} = 3.69$ ,  $p = .002$ ,  $r = .31$ ). Meanwhile, no significant differences were encountered between the participants with a length of residence of less than 3 years and those with a length of residence of 3 to 6 years ( $t_{(129)} = 2.23$ ,  $p = .094$ ,  $r = .19$ ), or between those with 3 to 6 years in the host country and their peers with more than 6 years there ( $t_{(129)} = 1.90$ ,  $p = .193$ ,  $r = .16$ ).

Second, in the case of the commission error type, the post hoc comparisons indicated that the proportion of commission errors was significantly higher for students with less than 3 years compared to those with a residence of 3 to 6 years ( $t_{(129)} = 5.08$ ,  $p < .001$ ,  $r = .40$ ), and also compared to those with more than 6 years ( $t_{(129)} = 5.19$ ,  $p < .001$ ,  $r = .41$ ). Additionally, the proportion of errors related to commission did not vary between the participants with a length of residence of 3 to 6 years and their peers with a stay longer than 6 years ( $t_{(129)} = 0.45$ ,  $p = .912$ ,  $r = .04$ ).

As can be seen in Table 55, length of residence determined significant differences in the proportion of addition errors. The proportion of the aforementioned errors was significantly higher for students with a length of residence of less than 3 years compared to their peers with a length of residence of more than 6 years ( $t_{(129)} = 2.91$ ,  $p = .021$ ,  $r = .25$ ). Meanwhile, there were no significant differences concerning the proportion of addition errors between the group with less than 3 years of stay and the one with a length of residence of 3 to 6 years ( $t_{(129)} = 1.91$ ,  $p = .161$ ,  $r = .16$ ), or between the participants with 3 to 6 years of stay and those with more than 6 years ( $t_{(129)} = 1.22$ ,  $p = .473$ ,  $r = .11$ ).

The mean comparisons are graphically presented in Figure 49.



**Figure 49. Means of proportion of errors for each error type for Spanish oral language production by length of residence**

*Linguistic category and error typology*

Further, a more detailed view on the matter was intended by developing errors categories that take into consideration both the linguistic category and the error type. For this purpose, a one-way ANOVA was conducted to investigate the relationship between length of residence and the proportion of errors for Spanish oral language production.

The results presented in Table 56 revealed that length of residence determined significant differences for the proportions of article commission errors. Specifically, the post hoc test revealed that students with less than 3 years tended to make more of these errors compared to their peers with a length of residence of 3 to 6 years ( $t_{(129)} = 2.80, p = .018, r = .24$ ) and also compared to those with more than 6 years ( $t_{(129)} = 2.90, p = .015, r = .25$ ). No significant differences were encountered in the proportion of article commission errors in the productions of students with 3 to 6 years of residence, compared to their peers with a length of residence of more than 6 years ( $t_{(129)} = 0.13, p = .985, r = .01$ ).

The post hoc comparisons examining the effect of length of residence on the proportion of article addition errors showed that students with a length of residence of less than 3 years made more article addition errors compared to those with more than 6 years ( $t_{(129)} = 3.33, p = .009, r = .28$ ). The proportion of addition errors related to article did not vary between students with a residence of less than 3 years and those with 3 to 6 years ( $t_{(129)} = -2.33, p = .091, r = -.20$ ), or between the participants with 3 to 6 years and their peers with a length of residence longer than 6 years ( $t_{(129)} = 1.20, p = .450, r = .10$ ).

**Table 56. The effect of length of residence on the proportion of errors for Spanish oral language production**

Linguistic category + error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun Omission	0.05	0.15	0.04	0.29	0.00	0.00	0.63	.536
Noun Commission	0.01	0.07	0.00	0.00	0.02	0.09	1.19	.306
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Article Omission	0.14	.026	0.05	0.14	0.07	0.16	2.54	.083
Article Commission	0.31	0.91	0.03	0.11	0.02	0.09	<b>5.00</b>	<b>.008</b>
Article Addition	0.29	0.32	0.15	0.25	0.09	0.23	<b>4.94</b>	<b>.009</b>
Verb Omission	0.00	0.00	0.09	0.21	0.08	0.18	2.33	.101
Verb Commission	0.92	1.27	0.33	0.42	0.36	0.42	<b>7.34</b>	<b>.001</b>
Verb Addition	0.07	0.28	0.00	0.00	0.01	0.06	<b>3.29</b>	<b>.040</b>
Preposition Omission	0.45	0.48	0.32	0.42	0.17	0.25	<b>4.55</b>	<b>.012</b>
Preposition Commission	0.52	0.47	0.27	0.37	0.18	0.26	<b>7.11</b>	<b>.001</b>
Preposition Addition	0.14	0.31	0.15	0.23	0.12	0.24	0.16	.851
Pronoun Omission	0.19	0.36	0.04	0.15	0.03	0.09	<b>6.68</b>	<b>.002</b>
Pronoun Commission	0.27	0.34	0.08	0.17	0.04	0.13	<b>10.76</b>	<b>&lt;.001</b>
Pronoun Addition	0.06	0.14	0.05	0.16	0.03	0.12	0.59	.558

In the case of the analysis of the influence of length of residence on the proportion of verb commission errors, the results revealed that students with less than 3 years of stay tended to make more of these errors compared to their peers with a length of residence of 3 to 6 years ( $t_{(129)} = 3.69$ ,  $p = .002$ ,  $r = .31$ ) and also compared to those with more than 6 years ( $t_{(129)} = 3.50$ ,  $p = .004$ ,  $r = .29$ ). No significant differences were encountered in the proportion of verb commission errors in the productions of students with 3 to 6 years of residence, compared to their peers with a length of residence of more than 6 years ( $t_{(129)} = -0.23$ ,  $p = .976$ ,  $r = -.02$ ).

Concerning the analysis of the influence of length of residence on the proportion of verb addition errors, the participants with less than 3 years made more of these errors than those with 3 to 6 years in the host country ( $t_{(129)} = 2.33$ ,  $p = .048$ ,  $r = .20$ ). Also, there were no significant differences regarding the proportion of verb addition errors between the group with less than 3 years and the students with more than 6 years of residence ( $t_{(129)} = 2.17$ ,  $p = .097$ ,  $r = .19$ ) or between the students with 3 to 6 years and those with a length of residence of more than 6 years ( $t_{(129)} = -0.50$ ,  $p = .944$ ,  $r = -.04$ ).

There were significant differences in the case of the one-way analysis of the effect of length of residence on the proportion of preposition omission errors, therefore post hoc tests were employed to further investigate it. The results indicated that students with less than 3 years tended to make more preposition omission errors compared to their peers with more than 6 years of residence in the host society ( $t_{(129)} = 2.80, p = .018, r = .24$ ). Meanwhile, no significant differences in the proportion of the aforementioned errors were encountered between the participants with a length of residence of less than 3 years and those with 3 to 6 years ( $t_{(129)} = 1.30, p = .384, r = .11$ ), or between those with 3 to 6 years and their peers with a length of residence longer than 6 years ( $t_{(129)} = 2.14, p = .145, r = .18$ ).

Length of residence determined a significant influence on the proportion of commission errors for the linguistic category of preposition. Specifically, the proportion of preposition commission errors was higher for the students with less than 3 years than for their peers with a length of residence of 3 to 6 years ( $t_{(129)} = 2.78, p = .019, r = .23$ ) and also compared to those with more than 6 years ( $t_{(129)} = 3.78, p = .001, r = .32$ ). Additionally, no significant differences were found between the participants with 3 to 6 years and their peers with more than 6 years of residence ( $t_{(129)} = 1.14, p = .468, r = .10$ ).

In order to further examine the effect of length of residence on the proportion of pronoun omission errors, the post hoc test was conducted. The results showed that the proportion of the aforementioned errors was higher in the case of the participants with less than 3 years compared to those with 3 to 6 years ( $t_{(129)} = 3.00, p = .007, r = .25$ ), and also compared to their peers with more than 6 years in the host country ( $t_{(129)} = 3.40, p = .003, r = .29$ ). Also, no significant differences in the proportion of the pronoun omission errors were found between the students with 3 to 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 0.50, p = .907, r = .04$ ).

Also, the proportion of pronoun commission errors varied by length of residence. In other words, students with less than 3 years tended to make more pronoun commission errors compared to their peers with 3 to 6 years of residence ( $t_{(129)} = 3.80, p = .001, r = .31$ ), and also compared to those with a length of residence longer than 6 years ( $t_{(129)} = 4.40, p < .001, r = .36$ ). Meanwhile, the proportion of the aforementioned errors did not vary between those with 3 to 6 years and their peers with more than 6 years ( $t_{(129)} = 1.00, p = .651, r = .08$ ).

Figure 50 reveals that no noun addition errors were encountered in students' oral productions for one of the official languages, Spanish, thus the mean comparison was not applicable.

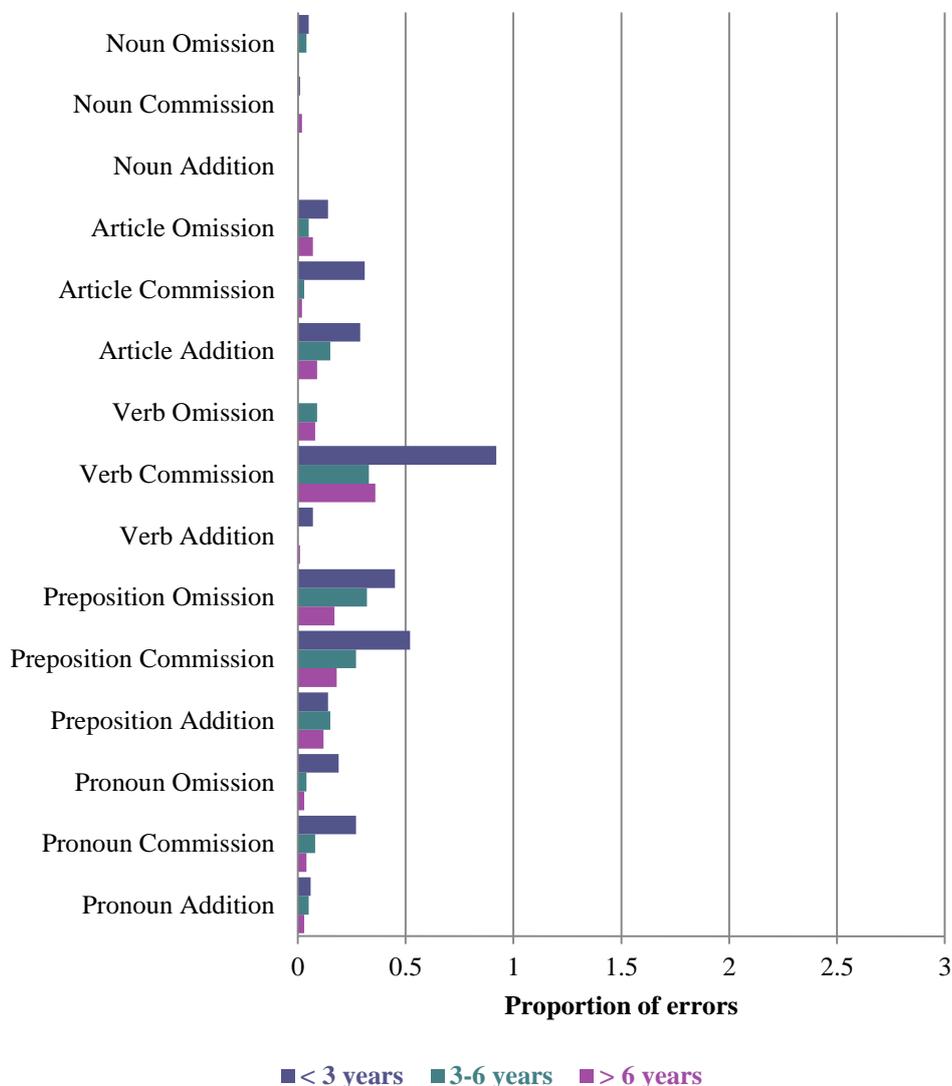


Figure 50. Means of proportion of errors for Spanish oral language production by length of residence

#### 6.3.2.4 Spanish written language production

Further, one-way ANOVAs were conducted with the aim to investigate the effect of length of residence on the proportion of errors students made in their written productions in Spanish language.

Linguistic category

First, the influence of length of residence on the proportion of errors for each of the five linguistic categories studied was examined. Table 57 presents the corresponding descriptive means and results.

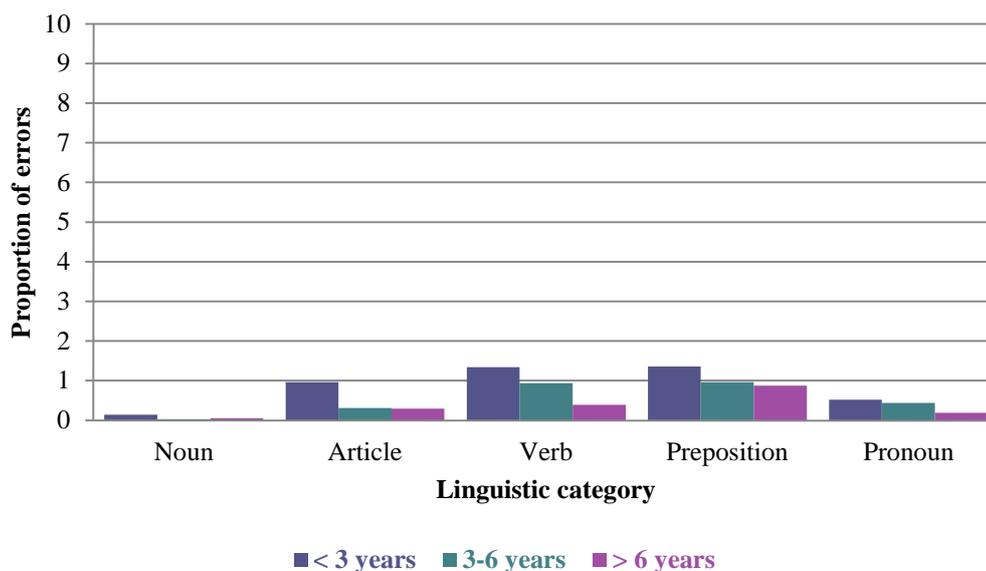
**Table 57. The effect of length of residence on the proportion of errors for each linguistic category for Spanish written language production**

Linguistic category	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Noun	0.14	0.38	0.03	0.15	0.05	0.23	1.55	.217
Article	0.96	1.46	0.31	0.60	0.29	0.58	<b>6.14</b>	<b>.003</b>
Verb	1.34	1.46	0.94	0.97	0.39	0.78	<b>7.89</b>	<b>.001</b>
Preposition	1.36	1.29	0.96	1.01	0.87	0.90	1.84	.163
Pronoun	0.52	0.78	0.44	0.84	0.19	0.46	2.42	.093

There were significant differences by length of residence on the proportion of errors related to the linguistic category of article, and post hoc analyses were conducted to further investigate on the matter. In this case, the proportion of article errors was significantly higher in the case of the students with less than 3 years compared to their peers with a length of residence between 3 and 6 years ( $t_{(129)} = 3.20, p = .007, r = .27$ ), and also compared to those with more than 6 years ( $t_{(129)} = 3.30, p = .006, r = .28$ ). Also, the proportion of article errors did not vary between the participants with a residence of 3 to 6 years in the host society and their peers with more than 6 years ( $t_{(129)} = 0.13, p = .993, r = .01$ ).

For the analysis of the influence of length of residence on the verb proportion of errors, the results of the post hoc test showed that students with less than 3 years made more verb errors than their peers with more than 6 years in the host country ( $t_{(129)} = 3.80, p = .001, r = .32$ ). Also, the proportion of verb errors was statistically higher in the productions of the participants with a length of residence between 3 and 6 years, compared to those with a length of residence longer than 6 years ( $t_{(129)} = 2.75, p = .023, r = .23$ ). Meanwhile, the proportion of the aforementioned errors did not vary between the students with less than 3 years and those with 3 to 6 years of residence ( $t_{(129)} = 1.60, p = .277, r = .13$ ).

There were no significant differences determined by length of residence regarding the proportions of noun, preposition, and pronoun errors (see Figure 51).



**Figure 51.** Means of proportion of errors for each linguistic category for Spanish written language production by length of residence

### *Error typology*

Following, Table 58 reveals the results of the influence length of residence has on the proportion of omission, commission, and addition errors, respectively.

**Table 58.** The effect of length of residence on the proportion of errors for each error type for Spanish written language production

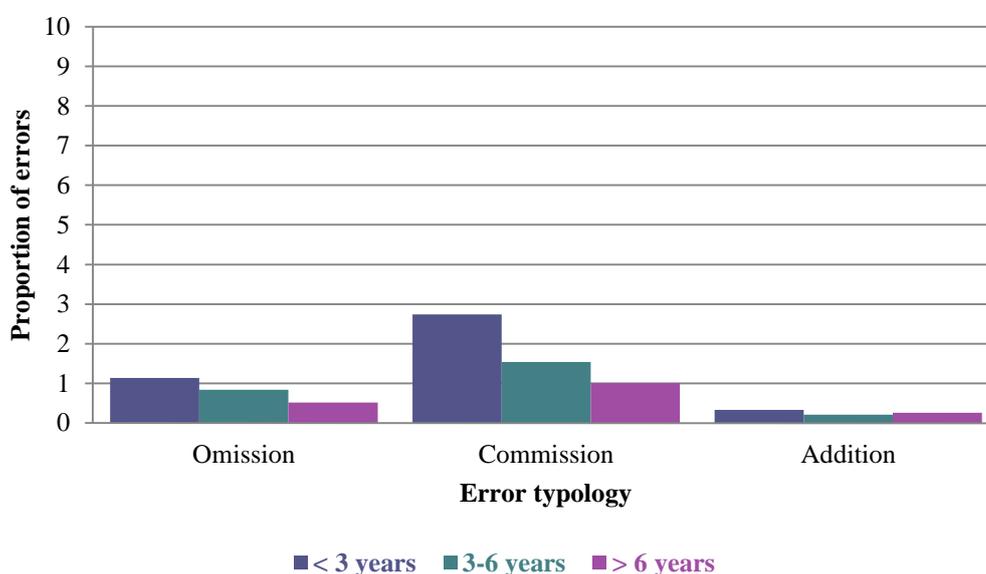
Error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Omission	1.14	1.33	0.84	1.02	0.52	0.65	<b>3.52</b>	<b>.033</b>
Commission	2.74	2.81	1.54	1.53	1.01	1.15	<b>8.04</b>	<b>.001</b>
Addition	0.33	0.58	0.21	0.44	0.26	0.61	0.44	.642

Firstly, the proportion of omission errors encountered in the written productions of students with less than 3 years of residence was statistically higher compared to their peers with more than 6 years ( $t_{(129)} = 2.58$ ,  $p = .042$ ,  $r = .22$ ), while there were no significant differences for the proportion of omission errors between the former group of students and those with a length of residence of 3 to 6 years ( $t_{(129)} = 1.25$ ,  $p = .460$ ,  $r = .11$ ). Also, the proportion of errors related to omission did not vary between students with a length of residence between 3 and 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 1.68$ ,  $p = .233$ ,  $r = .15$ ).

## Quantitative Results

The post hoc test used to further investigate the effect of length of residence on the proportion of commission errors revealed that the participants with a length of residence shorter than 3 years tended to make more commission errors than those with a length of residence between 3 and 6 years ( $t_{(129)} = 2.86, p = .020, r = .24$ ) and also than their peers with a length of residence longer than 6 years ( $t_{(129)} = 4.00, p = .001, r = .33$ ). Likewise, no significant differences were encountered regarding the proportion of the aforementioned errors between students with 3 to 6 years and those with more than 6 years in the host country ( $t_{(129)} = 1.61, p = .287, r = .13$ ).

The corresponding means are graphically represented in Figure 52.



**Figure 52. Means of proportion of errors for each error type for Spanish written language production by length of residence**

### *Linguistic category and error typology*

A more in-depth analysis of the influence of length of residence on the proportion of errors was intended. For this purpose, based on the errors encountered in students' written language productions, various categories were developed taking into consideration both the linguistic category and the error type. Consequently, Table 59 reveals the descriptive statistics and corresponding results of the aforementioned analysis.

**Table 59. The effect of length of residence on the proportion of errors for Spanish written language production**

Linguistic category + error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Noun Commission	0.14	0.38	0.03	0.15	0.05	0.23	1.55	.217
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Article Omission	0.32	0.97	0.12	0.36	0.04	0.19	2.63	.076
Article Commission	0.48	0.92	0.08	0.25	0.07	0.24	<b>7.90</b>	<b>.001</b>
Article Addition	0.16	0.39	0.11	0.39	0.19	0.49	0.51	.602
Verb Omission	0.14	0.32	0.08	0.34	0.03	0.16	1.28	.282
Verb Commission	1.10	1.41	0.76	0.93	0.36	0.72	<b>5.14</b>	<b>.007</b>
Verb Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Preposition Omission	0.56	0.70	0.51	0.72	0.38	0.54	0.85	.431
Preposition Commission	0.78	0.92	0.40	0.59	0.43	0.68	2.71	.071
Preposition Addition	0.02	0.10	0.06	0.19	0.07	0.29	0.38	.683
Pronoun Omission	0.12	0.34	0.13	0.35	0.08	0.32	0.30	.742
Pronoun Commission	0.25	0.45	0.27	0.68	0.11	0.32	1.29	.280
Pronoun Addition	0.15	0.34	0.05	0.20	0.00	0.00	<b>4.84</b>	<b>.009</b>

Firstly, the influence of length of residence on the proportion of article commission errors was significant. The post hoc comparisons revealed that the proportion of these errors was higher for the participants with less than 3 years of residence compared to the other two groups: those with a length of residence between 3 and 6 years ( $t_{(129)} = 3.64, p = .002, r = .30$ ) and their peers with more than 6 years in the host country ( $t_{(129)} = 3.73, p = .002, r = .31$ ). Also, there were no significant differences in the proportion of the above-mentioned errors between students with 3 to 6 years and those with more than 6 years ( $t_{(129)} = 0.11, p = .986, r = .01$ ).

In the case of the analysis related to the effect of length of residence on the proportion of verb commission errors, the corresponding post hoc comparisons showed that students with less than 3 years in the host country made significantly more verb commission errors in their written productions of Spanish compared to their peers with a length of residence longer than 6 years ( $t_{(129)} = 3.08, p = .011, r = .26$ ). Also, the results showed no differences between those with less than 3 years and those with a length of residence of 3 to 6 years ( $t_{(129)} = 1.42, p = .371, r = .12$ ). Likewise, the proportion of commission errors

related to verb did not vary between the participants with 3 to 6 years and their peers with a length of residence of more than 6 years ( $t_{(129)} = 2.11, p = .101, r = .18$ ).

There was a significant difference for the analysis of the effect of length of residence on students' errors of pronoun addition, therefore the need to further investigate on the matter. The post hoc comparisons revealed that the participants with less than 3 years in the host country made significantly more of the aforementioned errors compared to their peers with a length of residence longer than 6 years ( $t_{(129)} = 3.00, p = .009, r = .26$ ). Also, the results showed no differences between those with less than 3 years and those with a length of residence of 3 to 6 years ( $t_{(129)} = 2.00, p = .092, r = .17$ ). Likewise, the proportion of pronoun addition errors did not vary between the participants with 3 to 6 years and their peers with a length of residence of more than 6 years ( $t_{(129)} = 1.25, p = .469, r = .11$ ).

There were no significant differences by length of residence regarding the proportions of commission errors for the linguistic categories of noun, preposition and pronoun.

Likewise, length of residence did not determine significant differences regarding verb, preposition and pronoun omission errors, or related to article and preposition addition errors.

Lastly, as can be seen from the results graphically represented in Figure 53, no occurrences of noun omission and addition errors, or verb addition errors were found in students' written productions in Spanish, thus the mean comparison was not applicable.

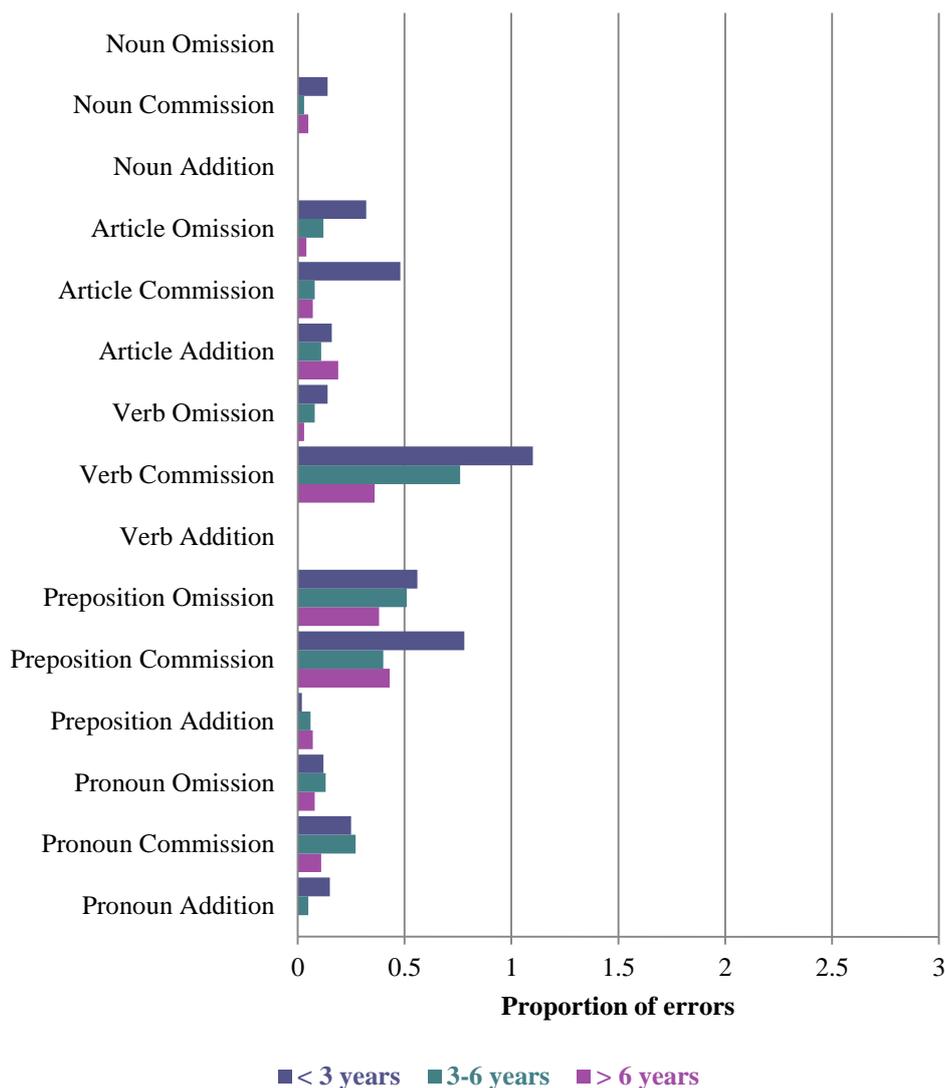


Figure 53. Means of proportion of errors for Spanish written language production by length of residence

### 6.3.2.5 Catalan oral language production

#### *Linguistic category*

A one-way ANOVA was used to examine the patterns of proportion of errors for each of the linguistic category determined by the length of residence in the host society. The corresponding descriptive statistics for Catalan oral language production are shown in Table 60.

The results revealed there were significant differences on the proportion of noun errors by length of residence. Subsequently, the results of the post hoc analysis revealed that the proportion of noun errors was significantly higher for students with less than 3 years

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compared to the other two groups: those with 3 to 6 years ( $t_{(129)} = 3.00, p = .005, r = .25$ ) and their peers who resided more than 6 years in the host country ( $t_{(129)} = 3.00, p = .008, r = .25$ ). Also, the proportion of the aforementioned errors did not vary between the participants with a length of residence of 3 to 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 0.00, p = .990, r = .00$ ).

**Table 60. The effect of length of residence on the proportion of errors for each linguistic category for Catalan oral language production**

Linguistic category	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Noun	0.15	0.44	0.00	0.00	0.01	0.04	<b>6.20</b>	<b>.003</b>
Article	0.42	0.80	0.09	0.26	0.02	0.07	<b>9.16</b>	<b>&lt;.001</b>
Verb	1.12	1.25	0.28	0.41	0.23	0.31	<b>18.55</b>	<b>&lt;.001</b>
Preposition	0.42	0.45	0.41	0.71	0.33	0.36	0.34	.710
Pronoun	0.30	0.57	0.14	0.27	0.05	0.15	<b>4.65</b>	<b>.011</b>

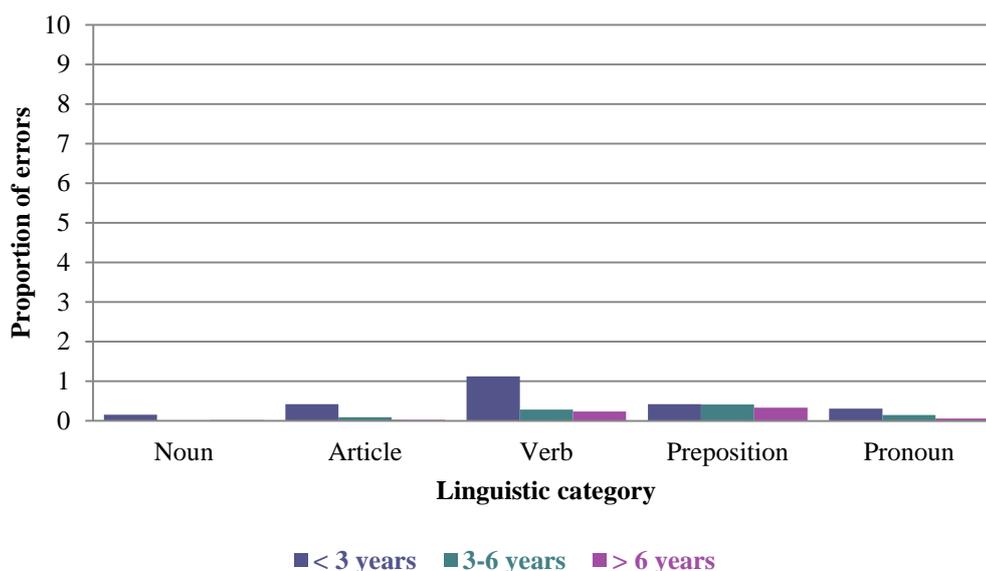
The post hoc analysis regarding the influence of length of residence on the proportion of article errors showed that more article errors were encountered in the productions of students with a length of residence of less than 3 years compared to their peers with 3 to 6 years ( $t_{(129)} = 3.67, p = .003, r = .30$ ) and also compared to those with more than 6 years ( $t_{(129)} = 4.00, p < .001, r = .33$ ). Meanwhile, the proportion of article errors did not vary between students with a length of residence between 3 and 6 years and those with more than 6 years ( $t_{(129)} = 1.00, p = .644, r = .08$ ).

Further, the proportion of verb errors varied according to length of residence; therefore, post hoc comparisons were conducted to investigate the matter into more detail. Consequently, the participants with less than 3 years tended to make more verb errors than both their peers with a length of residence between 3 and 6 years ( $t_{(129)} = 5.60, p < .001, r = .44$ ), and those with more than 6 years ( $t_{(129)} = 5.56, p < .001, r = .43$ ). Meanwhile, no significant differences were encountered between those with 3 to 6 years of stay in the host country and their peers with a length of residence longer than 6 years ( $t_{(129)} = 0.42, p = .923, r = .03$ ).

Lastly, the results of the post hoc analysis revealed that the proportion of pronoun errors was significantly higher for students with less than 3 years compared to their peers who resided more than 6 years in the host country ( $t_{(129)} = 3.00, p = .011, r = .26$ ).

Additionally, the proportion of the aforementioned errors did not vary between the participants with less than 3 years of residence and those with 3 to 6 years ( $t_{(129)} = 2.00$ ,  $p = .127$ ,  $r = .17$ ) or between the participants with a length of residence of 3 to 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 1.33$ ,  $p = .405$ ,  $r = .11$ ).

There were no significant differences determined by length of residence regarding preposition errors (see Figure 54).



**Figure 54.** Means of proportion of errors for each linguistic category for Catalan oral language production by length of residence

#### *Error typology*

Another one-way ANOVA was employed in order to determine the effect of length of residence on the proportion of omission, commission, and addition errors for Catalan oral production, and the results are detailed in Table 61 and graphically represented in Figure 55.

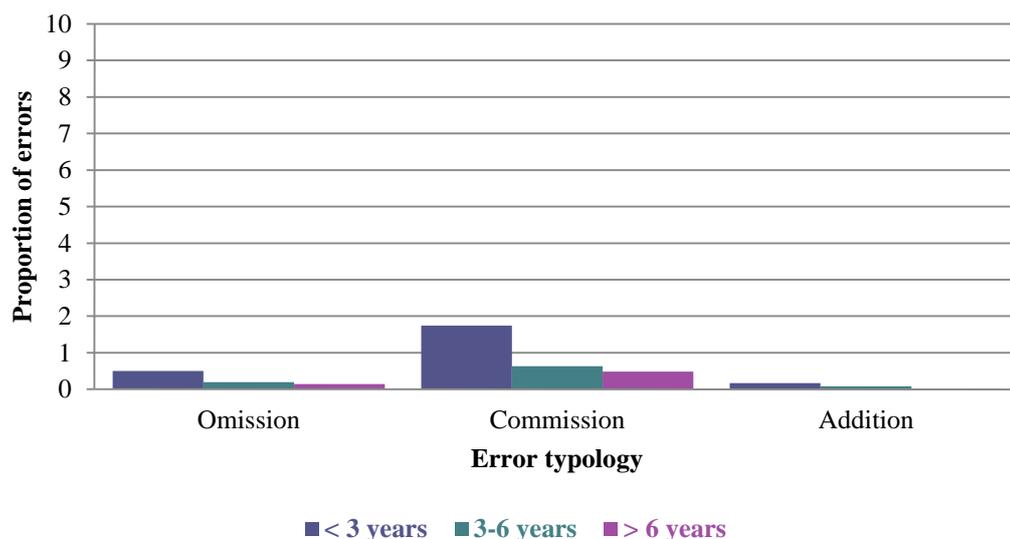
**Table 61.** The effect of length of residence on the proportion of errors for each error type for Catalan oral language production

Error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Omission	0.50	0.76	0.20	0.32	0.14	0.28	<b>5.95</b>	<b>.003</b>
Commission	1.74	2.30	0.63	0.80	0.48	0.50	<b>10.43</b>	<b>&lt;.001</b>
Addition	0.17	0.30	0.08	0.20	0.02	0.07	<b>5.63</b>	<b>.005</b>

On the one hand, length of residence influenced the proportion of omission errors, hence the need to further investigate it. The post hoc comparisons showed that the group with less than 3 years of residence tended to make more errors than the other two groups: those with 3 to 6 years ( $t_{(129)} = 3.00, p = .018, r = .25$ ) and those with more than 6 years ( $t_{(129)} = 3.27, p = .004, r = .28$ ). Also, the proportion of omission errors did not vary in the productions of participants with a length of residence between 3 and 6 years compared to those with a length of residence longer than 6 years ( $t_{(129)} = 0.75, p = .786, r = .06$ ).

Furthermore, the proportion of commission errors was also influenced by length of residence. Consequently, the results revealed that the proportion of commission errors was statistically higher for the students with a length of residence shorter than 3 years compared to those with a stay between 3 and 6 years ( $t_{(129)} = 3.96, p = .001, r = .33$ ), and also to those with a length of residence longer than 6 years ( $t_{(129)} = 4.34, p < .001, r = .36$ ). Meanwhile, no significant differences regarding the commission errors were encountered between the students with 3 to 6 years of residence and their peers with more than 6 years ( $t_{(129)} = 0.68, p = .793, r = .06$ ).

Likewise, the post hoc test examining the effect of length of residence on the proportion of addition errors showed that students with less than 3 years tend to make more errors than those with more than 6 years ( $t_{(129)} = 3.20, p = .005, r = .27$ ), whereas no significant differences in the proportion of the above-mentioned errors were encountered between those with less than 3 years of residence and their peers with 3 to 6 years ( $t_{(129)} = 1.20, p = .141, r = .10$ ). Also, the proportion of addition errors did not vary between the participants with 3 to 6 years and those with more than 6 years in the host society ( $t_{(129)} = 1.50, p = .210, r = .13$ ).



**Figure 55.** Means of proportion of errors for each error type for Catalan oral language production by length of residence

#### *Linguistic category and error typology*

Finally, as can be seen in Table 62, a more detailed analysis was conducted to examine the effect of length of residence on the proportion of errors encountered in students' oral productions for the other official language, Catalan.

Length of residence determined significant differences in the case of the proportion of noun commission errors. The corresponding post hoc comparisons showed that the proportion of errors in question was higher in the case of the students with a length of residence of less than 3 years, compared to those with a length of residence between 3 and 6 years ( $t_{(129)} = 3.00, p = .005, r = .25$ ), and also compared to their peers with more than 6 years in the host country ( $t_{(129)} = 3.00, p = .008, r = .25$ ). Also, no significant differences were encountered regarding the proportion of noun commission errors between the participants with 3 to 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 0.00, p = .990, r = -.00$ ).

The data concerning the post hoc test related to the influence of length of residence on the proportion of article omission errors showed that the group residing for less than 3 years in the host society made more errors than the other two groups: the one with 3 to 6 years ( $t_{(129)} = 3.29, p = .011, r = .28$ ) and the group with more than 6 years ( $t_{(129)} = 3.25, p = .004, r = .28$ ). In the same line, the proportion the article omission errors did not vary

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between those with 3 to 6 years and their peers with a length of residence longer than 6 years ( $t_{(129)} = 0.50$ ,  $p = .887$ ,  $r = .04$ ).

**Table 62. The effect of length of residence on the proportion of errors for Catalan oral language production**

Linguistic category + error typology	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Noun Commission	0.15	0.44	0.00	0.00	0.01	0.04	<b>6.20</b>	<b>.003</b>
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Article Omission	0.27	0.67	0.04	0.17	0.01	0.06	<b>6.23</b>	<b>.003</b>
Article Commission	0.10	0.31	0.04	0.14	0.01	0.04	2.73	.069
Article Addition	0.05	0.13	0.01	0.05	0.00	0.00	<b>5.05</b>	<b>.008</b>
Verb Omission	0.10	0.35	0.05	0.23	0.05	0.18	0.38	.682
Verb Commission	1.02	1.26	0.23	0.36	0.18	0.28	<b>17.58</b>	<b>&lt;.001</b>
Verb Addition	0.00	0.00	0.00	0.00	0.01	0.04	0.80	.453
Preposition Omission	0.07	0.15	0.06	0.14	0.04	0.14	0.34	.711
Preposition Commission	0.23	0.34	0.30	0.63	0.28	0.36	0.16	.853
Preposition Addition	0.13	0.25	0.05	0.12	0.01	0.06	<b>5.55</b>	<b>.005</b>
Pronoun Omission	0.06	0.16	0.04	0.13	0.03	0.10	0.34	.713
Pronoun Commission	0.24	0.52	0.06	0.21	0.02	0.08	<b>5.53</b>	<b>.005</b>
Pronoun Addition	0.00	0.00	0.03	0.15	0.00	0.00	1.53	.221

Likewise, length of residence determined significant differences on the proportion of article addition errors, hence the need to further investigate it. The results of the post hoc test revealed that there were more article addition errors in the productions of students with a length of residence shorter than 3 years compared to both their peers with 3 to 6 years ( $t_{(129)} = 2.00$ ,  $p = .027$ ,  $r = .17$ ), and those with a length of residence longer than 6 years ( $t_{(129)} = 2.50$ ,  $p = .010$ ,  $r = .21$ ). Additionally, there were no significant differences between the participants with 3 to 6 years in the host country and those with more than 6 years ( $t_{(129)} = 1.00$ ,  $p = .867$ ,  $r = .09$ ).

The results of the analysis of the influence of length of residence on the proportion of verb commission errors indicated that the proportion of these errors was statistically higher for the participants with less than 3 years compared to those with 3 to 6 years ( $t_{(129)} = 5.27$ ,  $p < .001$ ,  $r = .41$ ), and also compared to their peers with more than 6 years of

residence ( $t_{(129)} = 5.67, p < .001, r = .44$ ). Also, the proportion of the aforementioned errors did not vary between those with 3 to 6 years and their peers with more than 6 years residing in the host country ( $t_{(129)} = 0.42, p = .895, r = .03$ ).

There was a significant difference of length of residence on the proportion of preposition addition errors, thus post hoc test were conducted in order to further investigate this aspect. The proportion of preposition addition errors was higher for the students with less than 3 years than for their peers with more than 6 years of residence ( $t_{(129)} = 3.67, p = .005, r = .31$ ). Meanwhile, there were no differences concerning the proportion of the aforementioned errors between those with a length of residence of less than 3 years and the students with a length of residence between 3 and 6 years ( $t_{(129)} = 2.67, p = .059, r = .23$ ), and neither between the students with 3 to 6 years and their peers with more than 6 years ( $t_{(129)} = 1.00, p = .454, r = .09$ ).

Additionally, length of residence determined significant differences in the case of the proportion of pronoun commission errors. The corresponding post hoc comparisons showed that the proportion of errors in question was higher in the case of the students with a length of residence of less than 3 years, compared to those with a length of residence between 3 and 6 years ( $t_{(129)} = 2.83, p = .029, r = .24$ ), and also compared to their peers with more than 6 years in the host country ( $t_{(129)} = 3.14, p = .006, r = .27$ ). Also, no significant differences were encountered regarding the proportion of pronoun commission errors between the participants with 3 to 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 0.80, p = .714, r = -.07$ ).

From the results presented in Figure 56, it can be noticed that for the categories of omission and addition errors related to noun, no cases were encountered in the students' oral productions for Catalan language, thus the mean comparison was not applicable.

Likewise, there were no significant differences determined by length of residence as regards to verb omission and addition errors. Also, length of residence did not influence the proportions of preposition omission and preposition commission, or the proportions of pronoun addition and pronoun omission.

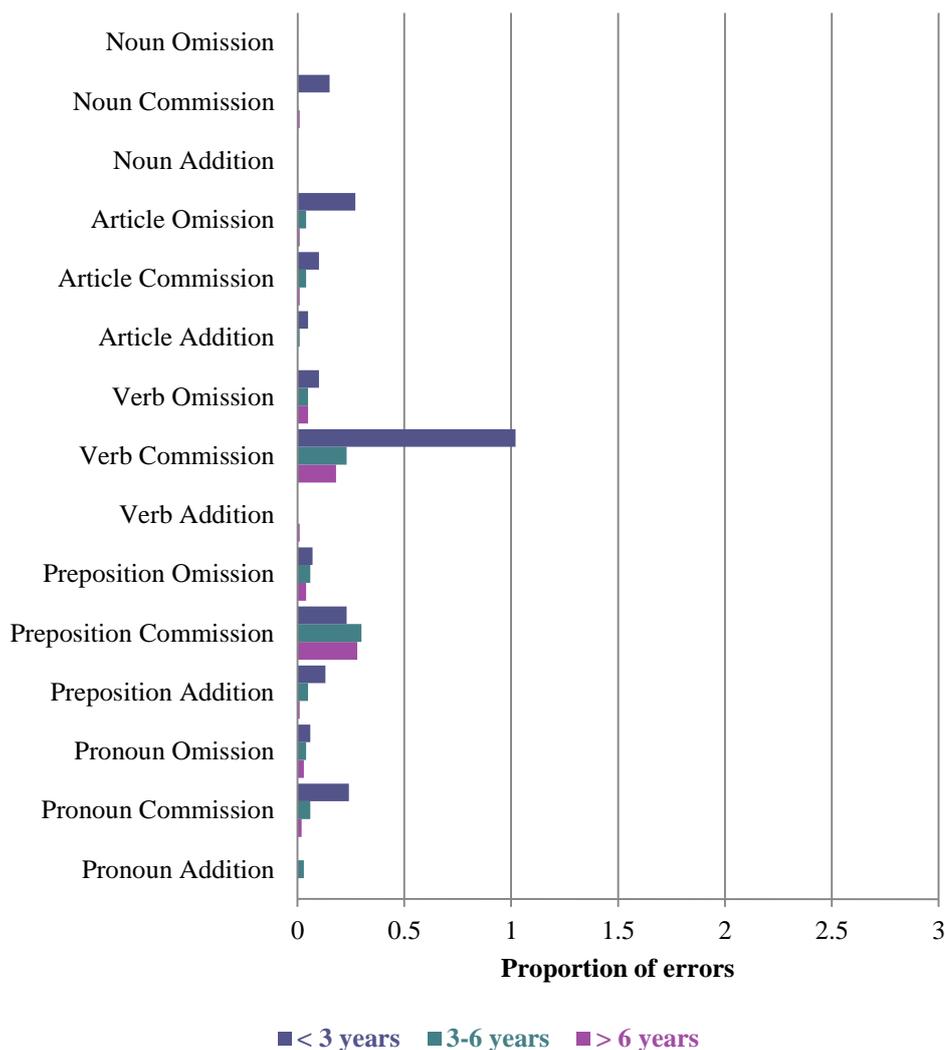


Figure 56. Means of proportion of errors for Catalan oral language production by length of residence

### 6.3.2.6 Catalan written language production

#### Linguistic category

First of all, a one-way ANOVA was conducted to examine the effect of length of residence on the proportion of noun, article, verb, preposition, and pronoun errors for the written productions of the participants in Catalan language. The corresponding descriptive statistics are presented in Table 63.

**Table 63. The effect of length of residence on the proportion of errors for each linguistic category for Catalan written language production**

Linguistic category	Length of residence						<i>F</i>	<i>p</i>
	< 3 years		3-6 years		> 6 years			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Noun	0.68	1.53	0.07	0.23	0.15	0.33	<b>6.78</b>	<b>.002</b>
Article	0.92	0.82	0.44	0.78	0.34	0.66	<b>4.93</b>	<b>.009</b>
Verb	2.88	2.68	2.46	2.38	1.69	1.80	2.70	.071
Preposition	0.47	0.88	0.42	0.67	0.28	0.48	0.88	.419
Pronoun	1.44	1.72	0.76	1.02	0.37	0.62	<b>8.04</b>	<b>.001</b>

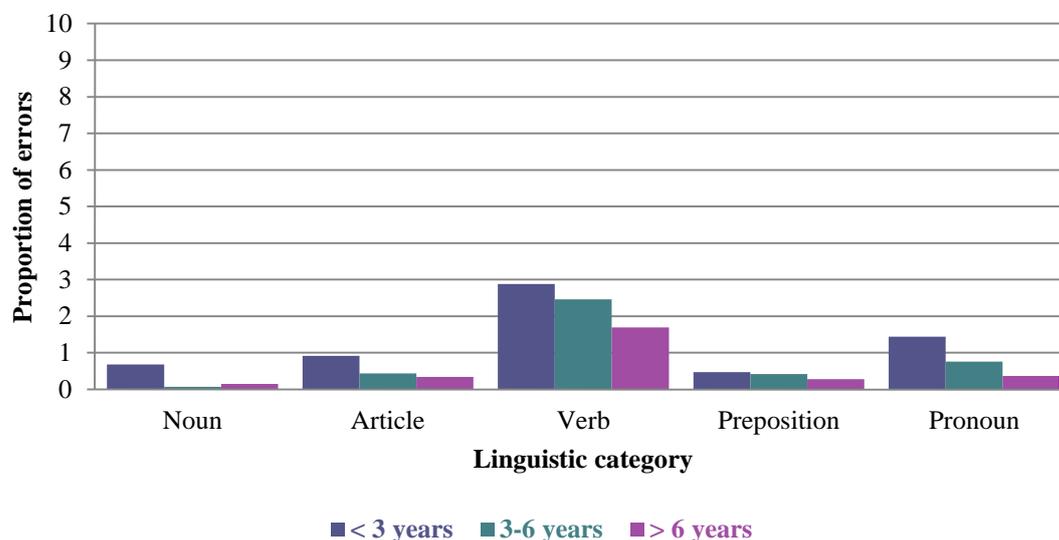
To begin with, a significant influence of length of residence on the proportion of noun errors was encountered. The post hoc comparisons revealed that the proportion of noun errors was significantly higher in the case of students with less than 3 years compared to the other two groups: students with 3 to 6 years ( $t_{(129)} = 3.59, p = .002, r = .30$ ) and their peers with more than 6 years of residence ( $t_{(129)} = 3.12, p = .011, r = .26$ ). Also, the proportion of noun errors did not vary between participants with a length of residence between 3 and 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = -0.62, p = .841, r = -.05$ ).

Further, a similar pattern of significance emerged from the analysis of the influence of length of residence on the proportion of article errors. Specifically, students with less than 3 years of residence tended to make more article errors than the other two groups: students with 3 to 6 years ( $t_{(129)} = 2.61, p = .040, r = .22$ ) and their peers with more than 6 years ( $t_{(129)} = 3.05, p = .010, r = .26$ ). Also, the proportion of article errors did not vary between participants with a length of residence between 3 and 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 0.79, p = .764, r = .07$ ).

Likewise, the proportion of pronoun errors varied by length of residence. The results of the post hoc test showed that the proportion of pronoun errors was statistically higher in the case of students with less than 3 years of residence, compared to the group with 3 to 6 years ( $t_{(129)} = 2.62, p = .038, r = .22$ ) and also compared to those with a length of residence longer than 6 years ( $t_{(129)} = 3.96, p = .001, r = .33$ ). Also, the proportion of pronoun errors did not vary between the group with 3 to 6 years and those with a length of residence longer than 6 years ( $t_{(129)} = 1.86, p = .170, r = .16$ ).

## Quantitative Results

The means corresponding to the proportions of errors by length of residence presented in Figure 57 show there were no significant differences regarding the proportion of verb and prepositions errors.



**Figure 57.** Means of proportion of errors for each linguistic category for Catalan written language production by length of residence

### Error typology

Further, Table 64 summarizes the descriptive data and the associative results of the one-way ANOVA corresponding to the effect of length of residence on the proportion of errors for each error type investigated for Catalan written language production.

**Table 64.** The effect of length of residence on the proportion of errors for each error type for Catalan written language production

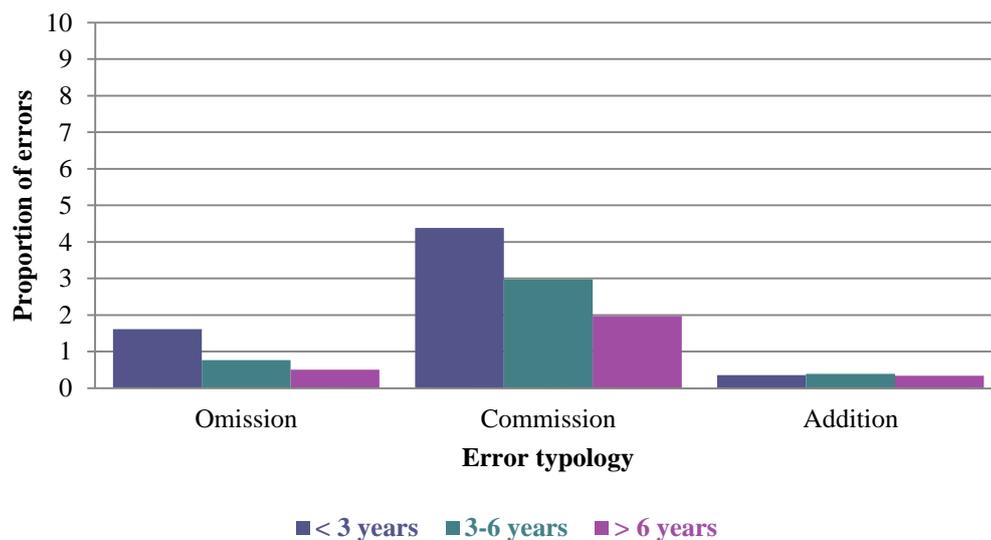
Error typology	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Omission	1.61	1.52	0.77	0.95	0.50	0.78	<b>9.34</b>	<b>&lt;.001</b>
Commission	4.38	4.45	2.98	2.81	1.97	2.04	<b>5.50</b>	<b>.005</b>
Addition	0.36	0.59	0.39	0.60	0.34	0.54	0.10	.907

For the more in-depth analysis concerning the effect of length of residence on the proportion of omission errors, the post hoc test was used. Consequently, the corresponding post hoc comparisons showed that the proportion of omission errors was significantly higher in the case of students with less than 3 years of residence than for those with 3 to 6 years ( $t_{(129)} = 3.36, p = .005, r = .28$ ), and also than those with more than

6 years ( $t_{(129)} = 4.23, p < .001, r = .35$ ). Likewise, the students' written productions did not reveal any significant differences related to the proportion of omission errors between the group with 3 to 6 years and the group with more than 6 years residing in the host country ( $t_{(129)} = 1.35, p = .404, r = .11$ ).

Following, the effect of length of residence on the proportion of commission errors among the three groups of students with different length of residence was examined. The participants with less than 3 years of residence tended to make more commission errors than their peers with more than 6 years ( $t_{(129)} = 3.30, p = .006, r = .28$ ). No significant differences were encountered regarding the proportion of commission errors between students with less than 3 years and those with 3 to 6 years ( $t_{(129)} = 1.94, p = .155, r = .17$ ), or between those with 3 to 6 years residing in the host country and the group with a length of residence longer than 6 years ( $t_{(129)} = 1.77, p = .207, r = .15$ ).

Length of residence did not influence the proportion of addition errors (see Figure 58).



**Figure 58. Means of proportion of errors for each error type for Catalan written language production by length of residence**

#### *Linguistic category and error typology*

Lastly, when examining the patterns of proportion of errors determined by length of residence in the host society, the analysis took into consideration categories that were developed based on a combination of both linguistic category and error typology.

**Table 65. The effect of length of residence on the proportion of errors for Catalan written language production**

Linguistic category + error typology	Length of residence						F	p
	< 3 years		3-6 years		> 6 years			
	M	SD	M	SD	M	SD		
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Noun Commission	0.68	1.53	0.07	0.23	0.15	0.33	<b>6.78</b>	<b>.002</b>
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	-	-
Article Omission	0.46	0.70	0.17	0.44	0.15	0.46	<b>3.38</b>	<b>.037</b>
Article Commission	0.33	0.47	0.18	0.39	0.07	0.25	<b>4.10</b>	<b>.019</b>
Article Addition	0.13	0.34	0.09	0.31	0.11	0.31	0.12	.887
Verb Omission	0.35	0.58	0.10	0.32	0.05	0.22	<b>6.12</b>	<b>.003</b>
Verb Commission	2.49	2.53	2.31	2.34	1.60	1.82	1.92	.151
Verb Addition	0.00	0.00	0.03	0.18	0.02	0.13	0.47	.628
Preposition Omission	0.34	0.76	0.22	0.41	0.08	0.25	2.84	.062
Preposition Commission	0.08	0.28	0.10	0.41	0.07	0.23	0.22	.802
Preposition Addition	0.05	0.22	0.09	0.27	0.13	0.37	0.67	.512
Pronoun Omission	0.45	0.78	0.28	0.63	0.21	0.47	1.26	.288
Pronoun Commission	0.80	1.00	0.31	0.61	0.08	0.35	<b>10.59</b>	<b>&lt;.001</b>
Pronoun Addition	0.19	0.44	0.17	0.42	0.07	0.24	1.24	.293

The descriptive statistics detailed in Table 65 revealed that there were zero occurrences of noun omission and noun addition errors in students' productions, thus the mean comparison was not applicable.

There were significant differences on the proportion of noun commission errors by length of residence, hence the need to further investigate it. The proportion of noun commission errors was higher for the group with less than 3 years of residence compared the one with 3 to 6 years ( $t_{(129)} = 3.59, p = .002, r = .30$ ), and also compared to the one residing for longer than 6 years in the host country ( $t_{(129)} = 3.12, p = .011, r = .26$ ). Meanwhile, no significant differences were encountered between the students with a length of residence of 3 to 6 years and their peers with more than 6 years ( $t_{(129)} = -0.62, p = .841, r = -.05$ ).

In the case of the analysis related to article omission errors, the corresponding post hoc comparisons indicated that the proportion of these errors did not differ significantly between the participants with less than 3 years in the host society and those with 3 to 6 years ( $t_{(129)} = 2.42, p = .069, r = .21$ ), or between those with less than 3 years and their peers with more than 6 years ( $t_{(129)} = 2.38, p = .054, r = .21$ ). Likewise, the same proportion of errors did not vary between the group of students that resided in the host

country between 3 and 6 years and the ones with more than 6 years there ( $t_{(129)} = 0.20, p = .980, r = .02$ ).

Furthermore, the proportion of article commission errors varied by length of residence. Specifically, the participants with less than 3 years tended to make more article commission errors compared to those with a length of residence longer than 6 years ( $t_{(129)} = 0.29, p = .021, r = .02$ ). Also, the proportion of article commission errors did not vary between students with less than 3 years in the host country and those with 3 to 6 years ( $t_{(129)} = 1.67, p = .252, r = .14$ ), or between those with 3 and 6 years and their peers with more than 6 years of residence ( $t_{(129)} = 1.57, p = .304, r = .14$ ).

In the case of the analysis related to verb omission errors, the corresponding post hoc comparisons indicated that the participants with a length of residence shorter than 3 years made more of the above-mentioned errors than those with 3 to 6 years ( $t_{(129)} = 2.78, p = .015, r = .24$ ), and also than those with more than 6 years of residence ( $t_{(129)} = 3.33, p = .004, r = .28$ ). Likewise, the proportion of verb omission errors did not vary between the group of students that resided in the host country between 3 and 6 years and the ones with more than 6 years there ( $t_{(129)} = 0.71, p = .792, r = .06$ ).

Lastly, the proportion of pronoun commission errors also varied by length of residence. The results revealed that the participants with less than 3 years tended to make more pronoun commission errors compared to those with a length of residence between 3 and 6 years ( $t_{(129)} = 3.27, p = .007, r = .27$ ), and also compared to their peers with a length of residence longer than 6 years ( $t_{(129)} = 4.50, p < .001, r = .37$ ). Also, the proportion of pronoun commission errors did not vary between those with a length of residence of 3 to 6 years and their peers with more than 6 years ( $t_{(129)} = 1.92, p = .165, r = .16$ ).

The means corresponding to each category of errors for the three groups of students according to length of residence are graphically represented in Figure 59.

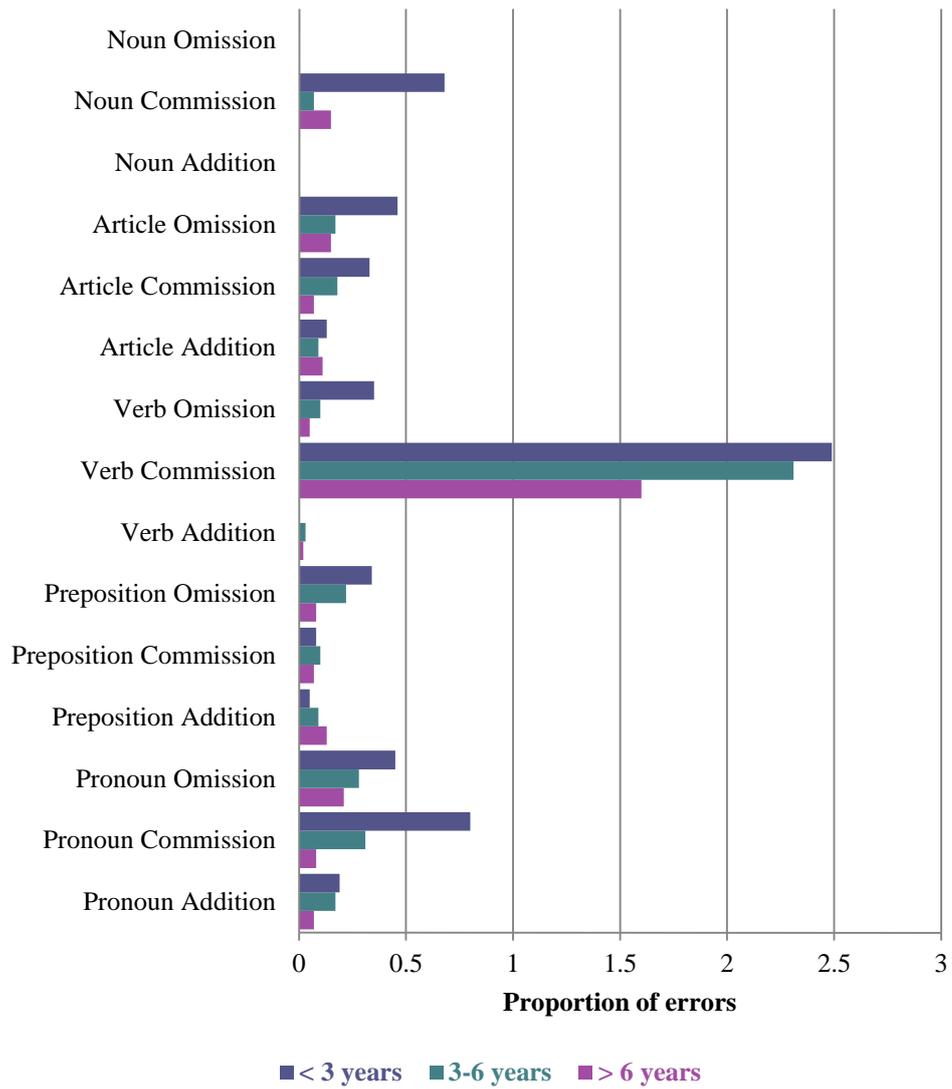


Figure 59. Means of proportion of errors for Catalan written language production by length of residence

## 7 SUMMARY OF RESULTS

The present section aims to review the statistical results exposed earlier in this chapter. Likewise, a summary of the proportions of errors is presented as a justification for the selection of the elements that will be further detailed in the qualitative part of the study.

### 7.1 SUMMARY OF STATISTICAL RESULTS

The analysis conducted to examine the participants' level of language competence revealed that the means for all three languages studied were fairly low, all been around 30. More specifically, there were similar total scores for the two official languages, Spanish and Catalan, and lower scores for the participants' mother tongue, Romanian. Correspondingly, the competences in Romanian were lower than in Spanish and Catalan. However, their language competences in Spanish and Catalan were similar.

Furthermore, the global analysis by language production revealed that that the proportion of errors in the oral language production was lower than the proportion in the written one for the three languages studied. Likewise, within each type of language production, the proportion of errors was significantly higher in Romanian than in the two vehicular languages, and also higher in Spanish than in Catalan for oral production, whereas concerning the written production, the analyses revealed that the proportion of errors in Spanish was lower compared to the other two languages.

#### *Proportion of errors by linguistic category*

On the one hand, the analysis according to linguistic category for oral language productions revealed that in the case of the students' mother tongue, there were significantly fewer noun errors than all the other categories and fewer article errors than verb and preposition errors. Even more, the proportions of both verb and preposition errors were significantly higher than pronoun errors.

Additionally, in the case of Spanish language, the proportion of noun errors was significantly lower compared to the proportion of errors corresponding to all the others linguistic categories, whereas the proportion of verb errors was significantly higher than pronoun and article errors and the proportion of preposition errors was higher than the proportion related to the category of pronoun.

Also, the results of the analyses conducted on the students' oral productions in Catalan showed that the proportion of noun errors was significantly lower than the proportion of errors of verb, preposition, and pronoun. Meanwhile, pronoun errors were fewer than verb and preposition errors.

Likewise, it must be emphasized that the proportions of noun, verb, pronoun, and preposition errors were significantly higher in Romanian compared to the other two languages. Also, the proportion of preposition errors was higher in Spanish than in Catalan, while the proportion of article errors was lower in Catalan than in the other two languages studied.

Lastly, from a global view of the proportions of errors by linguistic category for oral language production, it can be stated that for Romanian and Catalan languages the hierarchy is the same, as verb errors account for the highest proportion of errors, followed by preposition, pronoun, article, and noun errors, respectively. Meanwhile, for Spanish the highest proportion of errors encountered was related to the category of preposition, followed by verb, article, pronoun, and noun.

On the other hand, when analysing the proportion of errors by linguistic category from the participants' written productions in Romanian, we found that the proportion of noun errors was significantly lower than the proportions of preposition, pronoun, and article errors, while the proportion of article errors was significantly higher compared to the other linguistic categories. Also, pronoun errors were fewer than verb and prepositions errors.

For Spanish language, the proportion of noun errors was significantly lower compared to the proportion of errors regarding the others linguistic categories. Meanwhile, there were significantly fewer article and pronoun errors than verb and prepositions errors.

Concerning the other vehicular language, Catalan, the results revealed that, once again, the proportion of noun errors was lower compared to article, verb, and pronoun, whereas the proportion of verb errors was higher than all the other linguistic categories. Moreover, more preposition errors were encountered than pronoun errors.

Additionally, in the case of noun and article errors, the participants tended to make more errors in their mother tongue compared to the other languages, Spanish and Catalan. Regarding the category of verb errors, there were more in Catalan than in Romanian and

Spanish, while the proportion of preposition errors was lower in Catalan compared to Spanish and Romanian. Also, there were fewer pronoun errors in Spanish than in Catalan. Generally, it was noticed that the highest proportion of errors in Romanian was encountered in the category of articles, followed by preposition, verb, article, and pronoun, whereas in the case of Spanish the highest proportion of errors was corresponding to preposition, closely followed by verb, article, pronoun, and noun, respectively. Also, in the participants' written productions in Catalan the highest proportion of errors was related the category of verb, followed by pronoun, article, preposition, and noun.

### ***Proportion of errors by error typology***

From the analyses regarding the proportion of errors by errors typology it was revealed that, regardless of the language production, the proportion of commission errors was significantly higher compared to the other two types of errors for all three languages studied.

Likewise, concerning the oral language production, omission and addition errors were fewer in Catalan than in the other two languages, while commission errors were more in Romanian than in the two official languages of the host society. Meanwhile, from the students' written productions it was revealed that there were more omission and addition errors in Romanian than in the other two languages, whereas there were fewer commission errors in Spanish compared to the other languages studied.

### ***The effect of attendance at Romanian classes***

Firstly, when observing the effect of attendance at Romanian classes on the language competence in the three languages, different patterns emerged. Specifically, the analysis conducted on Romanian language revealed that the participants who attended classes in their mother tongue obtained higher total scores than their peers who did not attend those classes for oral language production and for both oral and written language production. Likewise, from the detailed results according to each task evaluated it could be noticed that the students who attended Romanian classes had significantly higher scores compared to their peers who did not attend those classes in the tasks focused on oral comprehension, morphosyntax, orthography, and written expression. Meanwhile, no significant results were found for the two vehicular languages, Catalan and Spanish. That

notwithstanding, the results of the correlations reveal that in the case of students who attended Romanian classes there was a high positive association between competences in Catalan and Spanish. Likewise, competences in Romanian language were moderately correlated with competences in Spanish, as well as with competences in Catalan. It could also be noted that the relationships of competences in Romanian with the competences in the two official languages of Catalonia were relatively stronger for the students who attended Romanian classes than for those who did not attend.

Secondly, the analysis of the effect of attendance at Romanian classes on the proportion of errors found in the students' oral productions in their mother tongue revealed that the proportion of article omission errors was significantly lower for those who attended Romanian classes compared to those who did not, whereas those who attended Romanian classes tended to make more verb omission errors than those who did not attend the classes. Additionally, it was found that those who attended Romanian classes tended to make fewer noun and pronoun errors in their written productions compared to their peers who did not attend the aforementioned classes. Also, the proportions of noun commission, preposition addition, pronoun omission, and pronoun addition errors were lower for the group that attended the classes of Romanian.

Further, the analysis conducted on the participants' Spanish oral productions showed that the proportions of noun and article commission errors, article addition, and verb omission errors were lower for those who attended Romanian classes compared to the students who did not attend the classes. Correspondingly, concerning the written productions, the group that attended L1 classes tended to make fewer noun commission, article addition, and pronoun commission errors, but more verb omission, pronoun addition, and pronoun omission errors.

Lastly, the analysis carried on the students' oral productions in Catalan revealed that article commission and preposition omission errors are fewer for those who attended Romanian classes than their peers who did not attend them, whereas the proportions of preposition addition errors was higher for the group that attended the classes compared to the group that did not attend the above-mentioned classes. In addition, regarding the written productions in Catalan, errors related to preposition were fewer for those who attended Romanian classes than for their peers who did not attend them, whereas noun and pronoun errors were more for the former group compared to the latter. Also, the

detailed analysis by both error type and linguistic category for written production showed that students who attended Romanian classes tended to make fewer article commission and preposition omission errors, but more noun commission, verb addition, and pronoun omission errors than their peers who did not attend the classes.

### ***The effect of length of residence***

From a general view over the students' oral productions in their mother tongue, it could be observed that those with more than 6 years of residence made more article commission errors than their peers with less than 3 years, and also more preposition addition errors than the other two groups by length of residence.

Further, the analysis conducted on the students' written productions in their L1 showed that the group with a length of residence longer than 6 years tended to make more verb errors than those with 3 to 6 years, and also more article and pronoun errors than the other two groups with a shorter length of residence. Also, the analysis by errors type revealed that those with more than 6 years of residence made significantly more commission and addition errors than the other two groups. Meanwhile, the analysis by both error type and linguistic category brought to light that those with more than 6 years presented higher proportions of verb commission and pronoun addition errors than their peers with 3 to 6 years of residence, while the former group also made more article addition errors compared to the other two groups with a shorter length of residence.

Concerning the participants' Spanish oral language production, it can be stated that several patterns of significance were encountered. Specifically, the analysis according to linguistic category showed that those with less than 3 years of residence made more article, verb, preposition, and pronoun errors than the other two groups with a longer length of residence. Also, concerning the analysis by errors type, the students with less than 3 years made more omission and addition errors than those with more than 6 years, and also more commission errors than the other two groups. Lastly, significant differences in the proportions of errors were encountered regarding the more detailed categories of article commission, verb commission, preposition commission, and pronoun commission and omission, as the proportions of the above-mentioned categories of errors tended to be higher for the groups with less than 3 years compared to both groups with a longer length of residence most cases. Meanwhile, in the case of article addition and preposition omission errors, significant results were found only between those with less

than 3 years and their peers with more than 6 years of residence, and regarding verb addition errors between the students with less than 3 years and those with 3 to 6 years in the host country.

From the analyses conducted on the students' written productions in Spanish it was found that those with less than 3 years make more article errors than the other two groups, whereas in the case of verb errors, both groups with less than 3 years and 3 to 6 years of residence tended to make more errors than the group with more than 6 years. The analysis by error type showed that the proportion of omission errors was higher for the group with less than 3 years compared to their peers with more than 6 years of residence, while the proportion of commission errors was higher for the former group compared to the other two groups by length of residence. Also, the analysis according to both linguistic category and error type showed that the students with less than 3 years tended to make more article commission errors than the other two groups, while for verb commission and pronoun addition errors, there were significant differences between the group with less than 3 years and the group with more than 6 years in the host society, as the former group made more of these errors than the latter.

Furthermore, the effect of length of residence on the proportion of errors encountered in the students' Catalan oral productions was examined. Concretely, according to the analysis by linguistic category, those with less than 3 years of residence made more noun, article, and verb errors than the other two groups, and significantly more pronoun errors than their peers with more than 6 years. Meanwhile, the group with a length of residence shorter than 3 years tended to make more omission and commission errors than the other two groups and also more addition errors than the groups with more than 6 years in the host society. Further, the analysis according to both error typology and linguistic category showed that the proportion of noun commission, article omission, article addition, verb commission, and pronoun commission errors was higher in the case of those with less than 3 years compared to the other two groups. Lastly, students with a length of residence shorter than 3 years made more preposition addition errors than their peers with a length of residence longer than 6 years.

Finally, similar analyses were conducted for the participants' written productions in Catalan language. The result of the analysis by linguistic category revealed that students with less than 3 years of residence tended to make more noun, article, and pronoun errors

than their peers with 3 to 6 years and more than 6 years, respectively. Additionally, according to error type, the group with a length of residence shorter than 3 years made more omission errors than the other 2 groups and more commission errors than the group with a length of residence longer than 6 years. Lastly, the proportions of noun commission, verb omission, and pronoun commission errors were significantly higher for those with less than 3 years compared to their peers with longer lengths of residence, while the proportion of article commission errors was significantly higher for those with less than 3 years, compared to their peers with more than 6 years in the host country.

## **7.2 SUMMARY OF PROPORTIONS OF ERRORS**

### *Oral language production*

As previously seen when dealing with the proportion of errors by language, regardless of the language, the most frequent errors encountered in the participants' oral productions were those related to the linguistic categories of verb and preposition. Likewise, according to error type, the students tended to make more commission errors in all three languages studied (see Table 18 and Table 24).

Furthermore, as we can see in Table 66, which presents the subcategories according to both linguistic category and error typology, verb commission errors were among the most encountered for all three languages. Also, a high percentage of preposition commission errors was found in the mother tongue. Regarding the vehicular languages, there were important proportions of preposition omission and commission errors and article addition errors in Spanish and preposition and pronoun commission errors and article omission errors in Catalan.

**Table 66. Summary of descriptive statistics for proportion of errors for oral language production**

Linguistic category + error typology	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Noun Omission	0.00	0.00	0.02	0.20	0.00	0.00
Noun Commission	0.16	0.36	0.01	0.06	0.03	0.19
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00
Article Omission	0.16	0.31	0.07	0.17	<b>0.07</b>	0.31
Article Commission	0.08	0.26	0.08	0.40	0.04	0.16
Article Addition	0.05	0.17	<b>0.15</b>	0.26	0.01	0.43
Verb Omission	0.02	0.14	0.07	0.18	0.06	0.24
Verb Commission	<b>1.14</b>	1.02	<b>0.44</b>	0.68	<b>0.35</b>	0.67
Verb Addition	0.00	0.00	0.02	0.12	0.00	0.02
Preposition Omission	0.24	0.68	<b>0.29</b>	0.39	0.05	0.14
Preposition Commission	<b>0.48</b>	0.57	<b>0.28</b>	0.37	<b>0.28</b>	0.49
Preposition Addition	0.25	0.43	0.14	0.25	0.05	0.14
Pronoun Omission	0.22	0.40	0.06	0.20	0.04	0.12
Pronoun Commission	0.21	0.39	0.10	0.21	<b>0.08</b>	0.27
Pronoun Addition	<b>0.25</b>	0.43	0.04	0.14	0.01	0.10

Additionally, the analysis by length of residence (see Table 67) showed that the proportions of verb and preposition errors are the most important for all three groups according to length of residence in Romanian and Spanish. On the other hand, in Catalan verb, preposition, and article errors prevail for the participants with less than three years, while preposition and verb errors predominate for those with three to six years in the host country and their peers with a length of residence longer than six years.

In this line, as can be seen in Table 68, the in-depth analysis revealed that, the proportions that prevail for the three groups are those related to verb commission and preposition commission for Romanian language. In the case of Spanish, the proportions of errors that predominate even for the participants with more than six years of stay are those of verb commission, preposition commission and omission. Further, for Catalan language, the preposition commission and verb commission errors present the highest values, and article omission for those with 3 to 6 years of residence.

**Table 67. Summary of means of proportion of errors for each linguistic category for oral language production by length of residence**

Linguistic category	Language								
	Romanian			Spanish			Catalan		
	< 3	3-6	> 6	< 3	3-6	> 6	< 3	3-6	> 6
	years								
	<i>M</i>								
Noun	0.07	0.15	0.21	0.06	0.04	0.02	0.15	0.00	0.01
Article	0.15	0.27	0.40	0.74	0.23	0.18	<b>0.42</b>	0.09	0.02
Verb	<b>1.22</b>	<b>1.24</b>	<b>1.06</b>	<b>1.03</b>	<b>0.45</b>	<b>0.44</b>	<b>1.12</b>	<b>0.28</b>	<b>0.23</b>
Preposition	<b>0.83</b>	<b>0.86</b>	<b>1.18</b>	<b>1.11</b>	<b>0.74</b>	<b>0.48</b>	<b>0.42</b>	<b>0.41</b>	<b>0.33</b>
Pronoun	0.49	0.38	0.63	0.52	0.17	0.10	0.30	0.14	0.05

**Table 68. Summary of means of proportion of errors for oral language production by length of residence**

Linguistic category + error typology	Language								
	Romanian			Spanish			Catalan		
	< 3	3-6	> 6	< 3	3-6	> 6	< 3	3-6	> 6
	years								
	<i>M</i>								
Noun Omission	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00
Noun Commission	0.07	0.15	0.21	0.01	0.00	0.02	0.15	0.00	0.01
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Article Omission	0.08	0.18	0.18	0.14	0.05	0.07	<b>0.27</b>	0.04	0.01
Article Commission	0.00	0.05	0.16	0.31	0.03	0.02	0.10	0.04	0.01
Article Addition	0.06	0.04	0.05	0.29	0.15	0.09	0.05	0.01	0.00
Verb Omission	0.00	0.04	0.01	0.00	0.09	0.08	0.10	0.05	0.05
Verb Commission	<b>1.22</b>	<b>1.20</b>	<b>1.05</b>	<b>0.92</b>	<b>0.33</b>	<b>0.36</b>	<b>1.02</b>	<b>0.23</b>	<b>0.18</b>
Verb Addition	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.01
Preposition Omission	0.28	0.23	0.24	0.45	<b>0.32</b>	0.17	0.07	0.06	0.04
Preposition Commission	<b>0.44</b>	<b>0.47</b>	<b>0.51</b>	<b>0.52</b>	0.27	<b>0.18</b>	0.23	<b>0.30</b>	<b>0.28</b>
Preposition Addition	0.11	0.16	0.42	0.14	0.15	0.12	0.13	0.05	0.01
Pronoun Omission	0.30	0.12	0.30	0.19	0.04	0.03	0.06	0.04	0.03
Pronoun Commission	0.09	0.21	0.25	0.27	0.08	0.04	0.24	0.06	0.02
Pronoun Addition	0.10	0.05	0.07	0.06	0.05	0.03	0.00	0.03	0.00

**Written language production**

## Summary of Results

In the case of the students' written productions, a different pattern emerges. Specifically, as seen in Table 20, in Romanian language the most errors are related to the linguistic categories of article and preposition, in Spanish to preposition and verb, and in Catalan to verb and pronoun. Also, regarding the error type, commission errors were the most encountered in all three languages studied (see Table 27).

Additionally, from the detailed analysis (see Table 69) it can be noticed that for Romanian language, verb commission and article omission errors were the most encountered.

Also, regarding the two vehicular languages, for Spanish, verb commission and preposition commission and omission errors were the most frequent, followed by pronoun commission and article addition and commission. Lastly, in the case of Catalan the proportions of verb commission and pronoun commission errors were the highest, followed by those related to pronoun and article omission.

**Table 69. Summary of descriptive statistics for proportion of errors for written language production**

Linguistic category + error typology	Language					
	Romanian		Spanish		Catalan	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00
Noun Commission	0.53	1.05	0.06	0.24	0.21	0.72
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00
Article Omission	<b>0.71</b>	1.06	0.12	0.49	<b>0.22</b>	0.51
Article Commission	0.08	0.40	0.15	0.47	0.16	0.37
Article Addition	0.15	0.26	<b>0.15</b>	0.43	0.11	0.31
Verb Omission	0.03	0.19	0.07	0.28	0.13	0.36
Verb Commission	<b>0.75</b>	0.93	<b>0.67</b>	0.99	<b>2.07</b>	2.20
Verb Addition	0.00	0.00	0.00	0.00	0.02	0.14
Preposition Omission	0.38	0.64	<b>0.47</b>	0.65	0.19	0.45
Preposition Commission	0.42	0.68	<b>0.48</b>	0.70	0.09	0.33
Preposition Addition	0.23	0.61	0.06	0.22	0.10	0.31
Pronoun Omission	0.21	0.44	0.11	0.34	<b>0.28</b>	0.60
Pronoun Commission	0.22	0.51	<b>0.21</b>	0.53	<b>0.31</b>	0.66
Pronoun Addition	0.06	0.29	0.05	0.20	0.14	0.36

Furthermore, the analysis by length of residence (see Table 70 and Table 67) showed that the proportions of article and preposition errors are the most important for all three groups according to length of residence in Romanian. On the other hand, in Spanish, verb and preposition errors prevail regardless of the length of residence. Lastly, the proportions of verb and pronoun errors were the highest in the case of Catalan language.

**Table 70. Summary of means of proportion of errors for each linguistic category for written language production by length of residence**

Linguistic category	Language								
	Romanian			Spanish			Catalan		
	< 3 years	3-6 years	> 6 years	< 3 years	3-6 years	> 6 years	< 3 years	3-6 years	> 6 years
	<i>M</i>								
Noun	0.44	0.47	0.65	0.14	0.03	0.05	0.68	0.07	0.15
Article	<b>1.17</b>	<b>1.68</b>	<b>2.71</b>	0.96	0.31	0.29	0.92	0.44	0.34
Verb	0.56	0.61	1.09	<b>1.34</b>	<b>0.94</b>	<b>0.39</b>	<b>2.88</b>	<b>2.46</b>	<b>1.69</b>
Preposition	<b>0.82</b>	<b>1.02</b>	<b>1.10</b>	<b>1.36</b>	<b>0.96</b>	<b>0.87</b>	0.47	0.42	0.28
Pronoun	0.20	0.35	0.79	0.52	0.44	0.19	<b>1.44</b>	<b>0.76</b>	<b>0.37</b>

Furthermore, the results synthesised in Table 71 pointed out that for Romanian language the proportions of verb commission and article addition errors prevail for the participants with less than 3 years of residence and those with more than 6 years, while their peers with 3 to 6 years present higher proportions of article addition and article omission errors.

In the case of Spanish, the participants with a length of residence shorter than 3 years tended to make more verb commission and preposition commission errors, whereas their peers with 3 to 6 years had higher proportions of verb commission and preposition omission errors. Also, the students with more than 6 years of residence in the host society presented the highest proportion of errors related to preposition commission and preposition omission errors.

Further, the students' written productions in Catalan language revealed that verb commission and pronoun commission errors were the most frequent for the group with less than 3 years of residence and their peers with 3 to 6 years, while those with more than 6 years in the host country presented higher proportions of verb commission and pronoun omission errors.

*Summary of Results*

**Table 71. Summary of means of proportion of errors for written language production by length of residence**

Linguistic category + error typology	Language								
	Romanian			Spanish			Catalan		
	< 3	3-6	> 6	< 3	3-6	> 6	< 3	3-6	> 6
	years								
	<i>M</i>								
Noun Omission	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Noun Commission	0.44	0.47	0.65	0.14	0.03	0.05	0.68	0.07	0.15
Noun Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Article Omission	0.40	0.76	<b>0.81</b>	0.32	0.12	0.04	0.46	0.17	0.15
Article Commission	0.13	0.27	0.51	0.48	0.08	0.07	0.33	0.18	0.07
Article Addition	<b>0.64</b>	<b>0.64</b>	<b>1.38</b>	0.16	0.11	0.19	0.13	0.09	0.11
Verb Omission	0.00	0.08	0.00	0.14	0.08	0.03	0.35	0.10	0.05
Verb Commission	<b>0.56</b>	0.54	<b>1.09</b>	<b>1.10</b>	<b>0.76</b>	0.36	<b>2.49</b>	<b>2.31</b>	<b>1.60</b>
Verb Addition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.02
Preposition Omission	0.31	0.38	0.40	0.56	<b>0.51</b>	<b>0.38</b>	0.34	0.22	0.08
Preposition Commission	0.41	0.33	0.51	<b>0.78</b>	0.40	<b>0.43</b>	0.08	0.10	0.07
Preposition Addition	0.10	0.31	0.19	0.02	0.06	0.07	0.05	0.09	0.13
Pronoun Omission	0.07	0.16	0.32	0.12	0.13	0.08	0.45	0.28	<b>0.21</b>
Pronoun Commission	0.08	0.19	0.32	0.25	0.27	0.11	<b>0.80</b>	<b>0.31</b>	0.08
Pronoun Addition	0.04	0.00	0.15	0.15	0.05	0.00	0.19	0.17	0.07

## **8 IN-DEPTH ANALYSIS OF THE RECURRENT ERRONEOUS ASPECTS**

The results presented in the previous section influenced in the selection of the specific data to be further examined in the descriptive part of the study. Specifically, the following analysis aims to present into detail the subcategories most affected by errors for the two vehicular languages, Spanish and Catalan, in oral and written productions. Concretely, errors related to verb, article, preposition, and pronoun were further analysed. Also, the evolution of the aforementioned types of errors was examined across all groups of participants by length of residence and relevant examples from students' productions were exposed and discussed.

Before proceeding with the analysis, it must be pointed out that for written language production the examples provided throughout the section are extracts from the tests, hence the orthographic representation was preserved in order to be consistent with the participants' original version.

Additionally, the examples provided have interlinear glossing and translations; the glosses are not exhaustive, as they are adapted to the immediate purpose of the present study. Specifically, only the erroneous form was glossed<sup>23</sup>.

### **8.1 DISTRIBUTION OF VERB INFLECTION ERRORS**

The first aspect that will be further analysed is verb inflection, more precisely the errors related to verb commission encountered in the students' productions, since it was seen that they were among the most frequent errors the participants' made, regardless of the language, for both oral and written language productions.

#### **8.1.1 Spanish oral language production**

Firstly, as presented in Table 72, the highest number of errors related to verb inflection was found involving the incorrect use of the 3<sup>rd</sup> person singular, followed by the incorrect use of non-personal mood Infinitive, and of the personal moods Subjunctive and the

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<sup>23</sup> For the glossing in this chapter we followed the Leipzig Glossing Rules (cf. <https://www.eva.mpg.de/lingua/resources/glossing-rules.php>).

## Results

Simple Present. Likewise, an important number of verb errors was assigned to the category ‘ambiguous’, which comprises anomalous forms that could not be assigned to an existing correct form.

**Table 72. Errors in the verb inflection for Spanish oral language production**

	No.	%*
3 <sup>rd</sup> person singular	34	<b>27.42</b>
3 <sup>rd</sup> person plural	9	7.26
Infinitive	2	1.61
The Simple Present	15	<b>12.10</b>
The Present Perfect	2	1.61
The Preterite	6	4.84
Imperfect	2	1.61
Subjunctive	16	<b>12.90</b>
Future	1	1.61
Gerund	7	5.65
Ambiguous	19	<b>15.32</b>

\*Percentage of the total number of verb inflection errors [124]

Furthermore, Table 73 reveals that the aforementioned errors prevail among all three groups of participants according to length of residence. Generally, it can be seen that errors related to the 3<sup>rd</sup> person singular remain fairly similar. Lastly, errors related to the Subjunctive mood experience a decrease.

**Table 73. Errors in the verb inflection for Spanish oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
3 <sup>rd</sup> person singular	13	<b>10.48</b>	10	<b>8.06</b>	11	<b>8.87</b>
3 <sup>rd</sup> person plural	3	2.42	2	1.61	4	3.23
Infinitive	1	0.81	0	0.00	1	0.81
The Simple Present	7	<b>5.65</b>	4	3.23	4	3.23
The Present Perfect	0	0.00	1	0.81	1	0.81
The Preterite	2	1.61	2	1.61	2	1.61
Imperfect	1	0.81	0	0.00	1	0.81
Subjunctive	6	<b>4.84</b>	7	<b>5.65</b>	3	2.42
Future	0	0.00	0	0.00	1	0.81
Gerund	3	2.42	0	0.00	4	3.23
Ambiguous	6	<b>4.84</b>	8	<b>6.45</b>	5	<b>4.03</b>

\*Percentage of the total number of verb inflection errors [124]

Regarding the incorrect use of the 3<sup>rd</sup> person singular, regardless of the length of residence of the participants, all the instances encountered were related to the use of the aforementioned form instead of the 3<sup>rd</sup> person plural (examples (1) and (2)).

(1)

- a. cinco personas está [\*] (.) esperando el bus  
 five persons **be-PRS.3SG** waiting the bus  
 ‘Five persons are waiting for the bus’
- b. los vecinos sale [\*] para ver qué pasa  
 the neighbours **come.out-PRS.3SG** to see what happens  
 ‘the neighbours come out to see what is happening’
- c. los niños va [\*] al colegio  
 the children **go-PRS.3SG** to the school  
 ‘the children go to school’

(2)

- a. ha+venido [\*] dos hombres para arreglarlo.  
**come-PRF.3SG** two men to fix it  
 ‘two men came to fix it’
- b. es [\*] los chicos que están+esperando el autobús  
**be-PRS.3SG** the children who are waiting for the bus  
 ‘there are the children who are waiting for the bus’

Likewise, the reverse tendency was observed, since the 3<sup>rd</sup> person plural was employed instead of the 3<sup>rd</sup> person singular:

(3)

- a. el niño se lo [\*] están [\*] desabrochando.  
 the boy CL CL **be-PRS.3PL** them unbuttoning  
 ‘the boy is unbuttoning them’
- b. una vecina con una escoba en la mano están [\*] mirando.  
 a neighbour with a broom in the hand **be-PRS.3PL** watching

‘a neighbour with a broom in the hand is watching’

In the case of the groups of students with less than 3 years of residence and their peers with 3 to 6 years a tendency was noticed in using the The Present Subjunctive instead of The Simple Present, mainly related to the irregular verbs, such as *to scold* (reñir) and *to regret* (arrepentirse) (examples 4). Additionally, in the productions of students with less than 3 years of residence, a number of errors are due to the reverse use, that is, The Simple Present for The Present Subjunctive, as in the examples 5.

(4)

- a. el pájaro se escapa por la ventana (.) y el niño se arrepienta [\*].

the bird escapes through the window and the boy **regret-SUB.3SG**

‘the bird escapes through the window and the boy regrets it’

- b. cuando llega la madre riña [\*] al niño

when arrives the mother **scold-SUB.3SG** to the boy

‘the mother scolds the boy when she arrives’

(5)

- a. veo que está+señalando a [\*] un taxi para que para [\*] para llevarlo a la escuela.

I see that he is waving to a taxi to **stop-PRS.3SG** to take him to the school

‘I see that he is waving to a taxi to stop and take him to school’

- b. el niño lo deja salir para que vuela [\*] en [\*] la habitación.

the boy sets it free to **fly-PRS.3SG** in the room

‘the boy sets it free to fly around the room’

Lastly, regarding the errors labelled ‘ambiguous’, in the case of the participants with a length of residence shorter than 3 years, the erroneous attempt to form the Participle are most frequent source of errors (examples 6), while for the other two groups according to length of residence the same occurs with the non-personal mood Gerund (examples 7) and The Simple Present (examples 8), again related to the formation of irregular verbs.

(6)

- a. todos han+asistado [\*]

all **assist-AMB**

‘they all assisted’

- b. el chico se ha+despertad [\*].

the boy CL **awake-AMB**

‘the boy woke up’

(7)

- a. y aquí la madre le está reñando [\*]

and here the mother is **scold-AMB** him

‘and here the mother is scolding him’

(8)

- a. y la madre reña [\*] al hijo por dejar salir al pájaro.

and the mother **scold-AMB** the son for let go out to the bird

‘and the mother scolds the son for letting the bird out’

### 8.1.2 Spanish written language production

From a global view (see Table 74), it can be noticed that among the higher percentage of errors for Spanish written language production are those related to the 3<sup>rd</sup> person singular, the Simple Present, and the category ‘ambiguous’.

**Table 74. Errors in the verb inflection for Spanish written language production**

	No.	%*
3 <sup>rd</sup> person singular	21	<b>21.21</b>
3 <sup>rd</sup> person plural	6	6.06
Infinitive	6	6.06
The Simple Present	17	<b>17.17</b>
The Present Perfect	3	3.03
The Preterite	5	5.05
Imperfect	4	4.04
Subjunctive	7	7.07
Future	2	2.02
Gerund	0	0.00
Ambiguous	20	<b>20.20</b>

\*Percentage of the total number of verb inflection errors [99]

As previously seen, the errors related to the 3<sup>rd</sup> person singular have the highest percentage. From the presentation of the distribution of error according to length of residence presented in Table 75 it can be seen that the errors with the 3<sup>rd</sup> person singular

are the most in the case of those with a length of residence between 3 and 6 years, and the fewer in the case of their peers with less than 3 years in the host society. However, regardless of the amount of errors for each group by length of residence, in most of the cases the 3<sup>rd</sup> person singular is used erroneously instead of the correct for in the 3<sup>rd</sup> person plural, as in the examples:

(9)

- a. a my me gusta [\*] mucho los juegos online.

I **like-PRS.3SG** a lot the games online

‘I like a lot online games’

- b. aqui las cosas funciona [\*] por lo siguiente si te pegas con alguien te expulsa [\*].

here things **work-PRS.3SG** like this if you get in a fight with somebody they **expel-PRS.3SG** you

‘here things work as follows if you get in a fight with somebody they expel you’

- c. espero que os guste [\*] las vistas.

I hope you **like-PRS.3SG** the view

‘I hope you like the view’

Additionally, the reverse phenomenon occurs with the 3<sup>rd</sup> person plural, as it is incorrectly use instead of the 3<sup>rd</sup> person singular (examples 10).

(10)

- a. y si necesitas algo te ayudan en todo lo que esten [\*] a su alcance.

and if you need something they help you with everything that **be-SUB.3PL** in their power

‘and if you need anything they help you with everything that is in their power’

- b. los profesores se notan [\*] que son buenas personas

the professors CL **notice-PRS.3PL** they are good people

‘you can see the professors are good people’

**Table 75. Errors in the verb inflection for Spanish written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
3 <sup>rd</sup> person singular	4	<b>3.92</b>	12	<b>11.76</b>	5	<b>4.90</b>
3 <sup>rd</sup> person plural	1	0.98	3	<b>4.90</b>	2	<b>2.94</b>
Infinitive	3	2.94	1	0.98	2	1.96
The Simple Present	6	<b>5.88</b>	10	<b>9.80</b>	1	0.98
The Present Perfect	1	0.98	2	1.96	0	0.00
The Preterite	3	2.94	2	1.96	0	0.00
Imperfect	0	0.00	1	0.98	3	2.94
Subjunctive	2	1.96	5	<b>4.90</b>	0	0.00
Future	0	0.00	2	1.96	0	0.00
Gerund	0	0.00	0	0.00	0	0.00
Ambiguous	8	<b>7.84</b>	4	3.92	8	<b>7.84</b>

\*Percentage of the total number of verb inflection errors [99]

Furthermore, regarding the incorrect use of the Simple Present, students with 3 to 6 years of residence seem to make the most errors of this kind, followed by their peers with less than 3 years. Also, this tense was used to erroneously substitute the Present Simple Subjunctive (examples 11) for both groups and the Imperfect (examples 12) for those with 3 to 6 years of residence.

(11)

- a. espero que podemos [\*] venir

I hope that **can-PRS.1PL** come

‘I hope we can come’

- b. estoy encantada de que te vienes [\*] a vivir aqui.

I am thrilled you **come-PRS.2SG** to live here

‘I am thrilled that you will come to live here’

(12)

- a. al llegar a casa le pregunte amy madre si me deja [\*] dormir en casa de marin.

when get home I asked my mom if she **let-PRS.3SG** me sleep in home of Marin

‘when I got home I asked my mom if she let me sleep over at Marin’s place’

Likewise, in the productions of the participants with 3 to 6 years of residence there were 5 cases of incorrect use of the Present Simple Subjunctive, 3 of which were cases it was used instead of the Simple Present, as in the examples:

(13)

- a. si te fijas [\*] bien tambien veras el patio  
if you **look-SUB.2SG** good also will see the patio  
'if you look closely you will see the patio too'
- b. y otros que esten [\*] un poco mal.  
and others who **be-SUB.3PL** a little bad  
'and other who are a little bad'

Lastly, the errors from the category 'ambiguous' prevailed among the students with less than 3 years of residence and those with more than 6 years, respectively. In this case the changing patterns were diverse, as the ambiguous forms were product of attempts to form the Simple Present Subjunctive (example 14), the Simple Present (examples 15), or the 3<sup>rd</sup> person singular (example 16), among others. It must be pointed out that in most cases the difficulty arose regarding irregular verbs, such as *hacer* (to do), *querer* (to want), *tener* (to have), *poder* (can), etc.

(14)

- a. espero que no aiga [\*] teoria porque ami no me gusta hacer teoria.  
I hope that not **be-AMB** theory because I don't like do theory  
'I hope there will be no theory classes because I don't like theory'

(15)

- a. espero un mensaje porquè quieremos [\*] venir.  
I wait a message because **want-AMB** come  
'I will wait for a message because we want to come'
- b. podei [\*] traer lo que querais de vuestra casa tenemo [\*] sitio para todos  
**can-AMB** bring anything you want from your home **have-AMB** space for everything  
'you can bring anything you want from your home we have space for everything'

(16)

- a. tien [\*] muchísimas aulas.

**have-AMB** a lot of classrooms

‘there are a lot of classrooms’

### 8.1.3 Catalan oral language production

Table 76 presents the verb inflection errors for Catalan oral language production, and it can be noticed that the most recurrent errors were those related to 3<sup>rd</sup> person singular, the Present Perfect, the Simple Present, and the category of ambiguous forms.

**Table 76. Errors in the verb inflection for Catalan oral language production**

	No.	%*
3 <sup>rd</sup> person singular	31	<b>24.03</b>
3 <sup>rd</sup> person plural	6	4.65
Infinitive	2	1.55
The Simple Present	13	<b>10.08</b>
The Present Perfect	21	<b>16.28</b>
The Preterite	3	2.33
Imperfect	3	2.33
Subjunctive	3	2.33
Future	2	1.55
Gerund	3	2.33
Ambiguous	27	<b>20.93</b>

\*Percentage of the total number of verb inflection errors [129]

Regarding the category of errors related to the 3<sup>rd</sup> person singular, the data presented in Table 77 reveals that they drop considerably for the groups with a longer length of residence. Further, regardless of the length of residence, in nearly all the cases the 3<sup>rd</sup> person singular was used instead of the correct verb form in 3<sup>rd</sup> person plural (17 errors for those with less than 3 years, 7 errors for each of the other two groups).

(17)

- a. són dos homes que mira [\*] un televisor

are two men who **watch-PRS.3SG** TV

‘there are two men watching the TV’

- b. un nen i una nena es besa [\*].

a boy and a girl **kiss-PRS.3SG**

‘a boy and a girl are kissing’

c. els pares el [\*] porta [\*] un regal

the parents CL **bring-PRS.3SG** a gift

‘his/her parents bring him/her a gift’

**Table 77. Errors in the verb inflection for Catalan oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
3 <sup>rd</sup> person singular	17	<b>13.18</b>	7	<b>5.43</b>	7	<b>5.43</b>
3 <sup>rd</sup> person plural	2	1.55	2	1.55	2	1.55
Infinitive	2	1.55	0	0.00	0	0.00
The Simple Present	5	<b>3.88</b>	5	<b>3.88</b>	3	2.33
The Present Perfect	14	<b>10.85</b>	4	3.10	3	2.33
The Preterite	3	2.33	0	0.00	0	0.00
Imperfect	2	1.55	1	0.78	0	0.00
Subjunctive	1	0.78	0	0.00	2	1.55
Future	2	1.55	0	0.00	0	0.00
Gerund	0	0.00	3	2.33	0	0.00
Ambiguous	8	<b>6.20</b>	12	<b>9.30</b>	7	<b>5.43</b>

\*Percentage of the total number of verb inflection errors [129]

It is important to mention that, for the group with less than 3 years of residence, there were 14 cases of use of the Present Perfect instead of the Preterite, as in the examples 18. However, with a longer length of residence, this type of errors decreased considerably.

(18)

a. ahir quan he+sortit [\*] de l'institut he+anat [\*] a jugar amb els amics.

yesterday when I **leave-PRF.1SG** from school I **go-PRF.1SG** to play with the friends

‘yesterday when I left school I went to play with my friends’

b. ahir en sortir de l'institut m'he+anat [\*] a casa a menjar.

yesterday in leave from the school I **go-PRF.1SG** home to eat

‘yesterday after leaving school I went home to eat’

c. després vam+tornar cap a casa i vam+mirar la tele i hem+fet [\*] els deures.

after we returned home and we watched TV and **do-PRF.1PL** the homework

‘after we returned home and watched TV and did our homework’

Likewise, the Simple Present was mainly used instead of the Imperfect in 5 cases (example 19), the Preterite (example 20), and the Present Simple Subjunctive (example 21) in 3 instances each. This type of errors remains relatively constant in frequency across the three group according to length of residence.

(19)

- a. i llavors se va+dormir i el pròxim dia se va+despertar somiant que està [\*] tocant amb [\*] un concert.

and then s/he went to sleep and the next day s/he woke up dreaming that s/he **be-PRS.3SG** playing with a concert

‘and then s/he went to sleep and the next day s/he woke up dreaming that s/he was playing at a concert’

(20)

- a. quan arriba [\*] a casa totes les robes se les va+treure mentre ell saltava.

when s/he **arrive-PRS.3SG** at home s/he took off all the clothes while jumping

‘when s/he got home s/he took off all the clothes while jumping’

(21)

- a. i això fa que para [\*] tot el concurs.

and that causes to **stop-PRS.3SG** all the contest

‘and that causes all the contest to stop’

Finally, in most cases the anomalous forms in the category “ambiguous” represent attempts to form the 3<sup>rd</sup> person singular (examples 22), 1<sup>st</sup> person singular (example 23), or the Gerund (examples 24).

(22)

- a. un home empenya [\*] el seu cotxe.

a man **fix-AMB** the his car

‘a man is fixing his car’

- b. l'home que no té casa s'encalenta [\*] com pot.

the man who does not have house **warm.up-AMB** as he can

‘the man who does not have a home warms up as he can’

(23)

- a. *vec* [\*] a [\*] un noi sentat@s [: *cat assegut*] a un llit.

**see-AMB** to a boy sitting on a bed

‘I see a boy sitting on a bed’

(24)

- a. *l'home està estenyent* [\*] *la roba*.

the man is **hang-AMB** the clothes

‘the man is hanging the clothes’

- b. *un home està empenyant* [\*] *un cotxe*.

a man is **fix-AMB** a car

‘a man is fixing a car’

### 8.1.4 Catalan written language production

When analysing students’ written productions in the other official language of the community, Catalan, the most common errors are those attributed to the category ‘ambiguous’, followed by those related to the Simple Present, the Present Perfect, and the 3<sup>rd</sup> person singular (see Table 78).

**Table 78. Errors in the verb inflection for Catalan written language production**

	No.	%*
3 <sup>rd</sup> person singular	36	<b>11.39</b>
3 <sup>rd</sup> person plural	3	0.95
Infinitive	9	2.85
The Simple Present	45	<b>14.24</b>
The Present Perfect	47	<b>14.87</b>
The Preterite	4	1.27
Imperfect	8	2.53
Subjunctive	4	1.27
Future	5	1.58
Gerund	0	0.00
Ambiguous	120	<b>37.97</b>

\*Percentage of the total number of verb inflection errors [316]

Regarding the errors related to 3<sup>rd</sup> person singular, reveals that they are distributed evenly across the three groups by length of residence. Further, regardless the length of residence, this person and number is used to incorrectly substitute the 3<sup>rd</sup> person plural in the majority of cases (11 such errors for those with less than 3 years of stay, 13 for those with 3 to 6 years of residence, and 12 instances for their peers with a length of residence longer than 6 years). Also, as can be seen in the examples that follow, the noun of the sentence is after the verb:

(25)

- a. m'ha+agradat [\*] molt els animals de la granja.

I **like-PRF.3SG** a lot the animals from the farm

‘I liked a lot the animals at the farm’

- b. es prohibeixi [\*] els cotxes per ally.

**forbit-PRS.3SG** the cars around there

‘the cars are forbidden around there’

- c. els monitors hens ha+deixat [\*] marxar.

the instructors **let-PRF.3SG** us leave

‘the instructors let us leave’

As for the incorrect use of the Simple Present, there was an increase in occurrences with a longer length of residence, since the participants with 3 to 6 years had 23 errors of this type and those with more than 6 years in the host country, 16 errors. Likewise, the Simple Present was used to erroneously substitute mainly the Infinitive (examples 26), the Present Simple Subjunctive (example 27), the Preterite (example 28), and the Present Perfect (example 29), respectively.

(26)

- a. us volia explica [\*]

CL I wanted to **explain-PRS.3SG**

‘I wanted to explain to you’

- b. i no podem estar o parla [\*] una mica despres de les classes.

and we cannot stay or **talk-PRS.3SG** a while after the classes

‘and we cannot stay or talk for a while after class’

(27)

- a. anar a la escola 0a que t'ensenyen [\*] a cuidar animals  
to go to school so they **teach-PRS.3PL** how to take care of animals  
'to go to school to teach you how to take care of animals'

(28)

- a. el que mes m'agrada [\*] va+ser la caseta dels conills  
what most I **like-PRS.3SG** was the house of the rabbits  
'what I liked the most was the rabbit house'

(29)

- a. m'ha+encantat quan les vaques han+menjat l'herba tòxica i es transformen [\*] en  
vaques voladores devora homes.  
I enjoyed when the cows ate the toxic grass and **transform-PRS.3PL** in man-eating  
cows  
'I enjoyed when the cows ate the toxic grass and transformed in man-eating cows'

Table 79 reveals that a high percentage of errors related to the Present Perfect was registered for the group with a length of residence of less than 3 years and 3 to 6 years, the number decreased considerably for those with more than 6 years in the host country. Almost exclusively the Present Perfect was used incorrectly instead of the Preterite (8 out of 10 occurrences for those with less than 3 years of residence and 29 out of 30 for their peers with 3 to 6 years).

(30)

- a. despres ens hem+repartit [\*] en dos grups i despres el primer grup va+fer unes  
coses molt boniques.  
after we **divide-PRF.1PL** into two groups and after the first group did some things  
very nice  
'after we divided in two groups and after the first group did some very nice  
things'
- b. m'ho he+passat [\*] molt bé sobretot quan vam+anar al riu a banyar-nos.  
I **have-PRF.1SG** a good time, especially when we went to the river to swim

‘I had a really good time, especially when we went to the river to swim’

- c. la setmana pasada a classe hem+llegit [\*] el teu llibre.

last week in class we **read-PRF.1PL** your book

‘last week in class we read your book’

**Table 79. Errors in the verb inflection for Catalan written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
3 <sup>rd</sup> person singular	11	<b>3.48</b>	13	<b>4.11</b>	12	<b>3.80</b>
3 <sup>rd</sup> person plural	0	0.00	3	0.95	0	0.00
Infinitive	4	1.27	2	0.63	3	0.95
The Simple Present	6	1.90	23	<b>7.28</b>	16	<b>5.06</b>
The Present Perfect	10	<b>3.16</b>	30	<b>9.49</b>	7	2.22
The Preterite	0	0.00	4	1.27	0	0.00
Imperfect	4	1.27	3	0.95	1	0.32
Subjunctive	1	0.32	1	0.32	2	0.63
Future	1	0.32	3	0.95	1	0.32
Gerund	0	0.00	0	0.00	0	0.00
Ambiguous	14	<b>4.43</b>	55	<b>17.41</b>	51	<b>16.14</b>

\*Percentage of the total number of verb inflection errors [316]

Finally, as previously seen, the errors labelled ‘ambiguous’ were by far the most numerous from all the categories encountered. Additionally, from Table 80 can be seen that in most of the cases the anomalous forms represent attempts to form: the Infinitive, the 3<sup>rd</sup> person singular, the Present Simple Subjunctive, the Present Simple, the Imperfect, and the 1<sup>st</sup> person singular, among others.

Firstly, regarding the failed formation of the Infinitive, it can be seen that in almost all the cases the error emerges from the omission of the final ‘r’, which in pronunciation is a silent consonant in Catalan when dealing with Infinitives. Furthermore, from the examples it can be noticed that this error is recurrent both in the formation of compound tenses (examples 31) or when employing the Infinitive alone (examples 32).

(31)

- a. després hem+visita [\*] molt [\*] animals

after we **visit-AMB** many animals

‘after we visited many animals’

b. el que menys hem va+agrada [\*] va+se [\*] el cami.

what we least **enjoy-AMB be-AMB** the journey

‘what we least enjoyed was the journey’

c. vaig+llegir el teu llibre i em va+agrada [\*] molt.

I read the your book and I **enjoy-AMB** very much

‘I read your book and I enjoyed it very much’

(32)

a. i pot have [\*] hi uns possibles accidents.

and can **have-AMB** CL potential accidents

‘and there can be potential accidents’

b. et volem donar felicitacions per fe [\*] el libre.

we want to congratulate you for **do-AMB** the book

‘we want to congratulate you for writing the book’

c. ho voldre repeti [\*]

I would want to **repeat-AMB** it

‘I would want to repeat it’

**Table 80. Ambiguous errors in the verb inflection for Catalan written language production**

	No.	%*
AMB=INF	26	<b>8.23</b>
AMB=3s	18	<b>5.70</b>
AMB=3p	3	0.95
AMB=1s	8	2.53
AMB=GER	6	1.90
AMB=1p	3	0.95
AMB=IPF	9	2.85
AMB=ISU	5	1.58
AMB=PRE	10	<b>3.16</b>
AMB=SUB	16	<b>5.06</b>
AMB=PAR	4	1.27

\*Percentage of the total number of verb inflection errors [316]

Secondly, there were various incorrect forms instead of the correct one in the 3<sup>rd</sup> person singular. Also, from the following examples it can be observed that most errors emerge from changing the final vowel of the verb to an *-e*, probably as a result of the colloquial pronunciation of the 3<sup>rd</sup> person singular, and mainly for the Imperfect (examples 33) and for the Simple Present (examples 34).

(33)

- a. la olor ere [\*] insoportable.

the smell **be-AMB** unbearable

‘the smell was unbearable’

- b. el pati ere [\*] molt gran

the playground **be-AMB** very big

‘the playground was very big’

- c. el seu pare tenie [\*] tots els retalls del diari

the his father **have-AMB** all the cuttings from the newspaper

‘his father had all the newspaper cuttings’

- d. gent què estave [\*] davant de incidenci

people who **be-AMB** at the incident

‘people who were at the incident’

(34)

- a. li tire [\*] una corda a la noia

he **throw-AMB** a robe to the girl

‘he threw a robe to the girl’

- b. sempre passe [\*] el mateix

always **happen-AMB** the same

‘it always happens the same’

Further, another main source of errors in the category ‘ambiguous’ was the formation of the Subjunctive mood, both the Present Simple Subjunctive (examples 35) and the Imperfect Subjunctive (examples 36).

(35)

- a. espero que et [\*] repite [\*] aquesta excursió.

I hope that CL **repeat-AMB** this trip

‘I hope we will repeat the trip’

- b. vull que sapiguís [\*]

I want that **know-AMB**

‘I want you to know’

- c. espero que tu vingues [\*] a la nostra escola.

I hope that you **come-AMB** to the our school

‘I hope you will come to our school’

(36)

- a. li agrairia que em fessés [\*] cas en aquesta carta.

I would appreciate that CL **take-AMB** seriously this letter

‘I would appreciate if you would take this letter seriously’

- b. estaria molt bé també si poguesses [\*] venir a visitar la nostra classe.

it would be really good also if you **can-AMB** come to visit the our class

‘it would be really good if you could come to visit our class’

Lastly, in the examples 37 are presented instances of failed attempts to form the Present Simple. Also, regarding the 1<sup>st</sup> person singular, all the occurrences were related to the verb *voler* (to want), as in the examples 38a and 38b.

(37)

- a. creguem [\*] que això ho podria arreglar el ajuntament aquest any.

we **think-AMB** that this CL could arrange by the town council this year

‘we think that this could be arranged this year by the town council’

- b. tots els alumnes arriben [\*] tard a les classes.

all the pupils **arrive-AMB** late to the classes

‘all the pupils arrive late to class’

(38)

- a. vuli [\*] donar les gràcies per la guia.

I **want-AMB** thank you for the guided tour

‘I want to thank you for the guided tour’

- b. li vui [\*] dir que a+sigut un llibre fantastic.

CL I **want-AMB** to tell that was a book amazing

‘I was to tell you that it was an amazing book’

## 8.2 DISTRIBUTION OF PREPOSITION ERRORS

### 8.2.1 Spanish oral language production

From a more detailed analysis conducted on the participants’ oral productions in Spanish it was revealed that the prepositions most prone to incorrect use by commission were *con*, *a*, and *en*, according to the percentage of errors encountered (see Table 81). It must be emphasized that errors related to the preposition *con* represent almost 42% of the preposition errors encountered, the proportion is nearly double compared to the other most-represented prepositions.

**Table 81. Preposition commission errors for Spanish oral language production**

	No.	%*
a	20	<b>21.74</b>
con	38	<b>41.30</b>
de	6	6.52
en	20	<b>21.74</b>
por	4	4.35
para	3	3.26
a=de	2	2.17
a=en	17	<b>18.48</b>
con=a	2	2.17
con=de	1	1.09
con=en	35	<b>38.04</b>
en=a	13	<b>14.13</b>
en=para	2	2.17
en=por	5	5.43

\*Percentage of the total number of preposition commission errors [92]

We will begin the analysis with the preposition most encountered, *con*. The preposition was used instead of the correct *en* to express means of transportation, as presented in the following examples:

(39)

- a. los niños van al colegio con [\*] el [\*] bus.

the children go to the school **PREP** the bus

‘the children go to school by bus’

(40)

- a. pasa un taxi lo llama para que se pueda ir con [\*] el [\*] taxi.

a taxi passes by, s/he calls for it so s/he can go **PREP** the taxi

‘a taxi passes by s/he calls for it so s/he can go by taxi’

Also, regarding the incorrect use of the preposition *a*, there were two instances in which the aforementioned preposition was used instead of *de* to express position of the body, as seen in the following example:

(41)

- a. y entonces el autocar se va y el hijo se queda a [\*] pie.

and then the bus leaves and the boy remains **PREP** foot

‘and then the bus leaves and the boy is standing’

However, in the majority of cases, and representing more than 18 % of the total number of preposition errors, the preposition *a* was used erroneously to substitute *en*, mostly to introduce a place complement and thus express static location (examples 42a to 42d).

(42)

- a. este hombre que está+mirando hacia los niños con un periódico a [\*] l [\*] mano.

this man who is looking towards the children with a newspaper **PREP** the hand

‘this man who is looking towards the children with a newspaper in his hand’

- b. a [\*] un bloque de pisos un ascensor se ha+roto.

**PREP** a building of flats the elevator CL broke down

‘in a building of flats the elevator broke down’

- c. el señor está+sentado a [\*] un banco.  
the man is sitting **PREP** a bench  
'the man is sitting on a bench'
- d. a [\*] la primera viñeta se trata de un niño que viene de la escuela  
**PREP** the first image there is a child who comes from the school  
'in the first image there is a child who returns from school'

Furthermore, the preposition *en* was used instead of *a* to express dynamic location, thus introducing an adverb of place, in the majority of cases related to the expression 'a casa'.

(43)

- a. viene su madre con un pájaro en [\*] casa.  
comes his/her mother with a bird **PREP** home  
'his/her mother comes home with a bird'
- b. ir con los amigos en [\*] la piscina.  
go with the friend **PREP** the pool  
'to go with my friends to the pool'
- c. para no llegar tarde en [\*] el sitio que quiere ir coge un taxi.  
so s/he does not arrive late **PREP** the place that s/he wants to go s/he takes a taxi  
's/he wants to take a taxi so s/he does not arrive late to the place s/he wants to go'

Lastly, *en* was chosen to erroneously replace *por*, in order to express route or course of a movement.

(44)

- a. el pájaro se escapó y está [\*] volando en [\*] casa.  
the bird escaped and is flying **PREP** house  
'the bird escaped and was flying around the house'

As for the evolution of the aforementioned preposition errors across the groups of participants according to length of residence, from Table 82 can be noticed that the errors related to the preposition *a* are the most for those with 3 to 6 years of residence and overall do not seem to decrease in the case of the students with a longer length of

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residence. Meanwhile, in the case of the prepositions *con* and *en*, the proportion of errors seems to increase for those with a length of residence longer than 6 years.

**Table 82. Preposition commission errors for Spanish oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
a	3	3.26	10	<b>10.87</b>	7	<b>7.61</b>
con	13	<b>14.13</b>	18	<b>19.57</b>	7	<b>7.61</b>
de	1	1.09	3	3.26	2	2.17
en	9	<b>9.78</b>	4	4.35	7	<b>7.61</b>
por	1	1.09	3	3.26	0	0.00
para	1	1.09	0	0.00	2	2.17

\*Percentage of the total number of preposition commission errors [92]

### Preposition omission

Regarding the preposition omission errors encountered in the students' oral productions in Spanish, the data revealed that the prepositions most frequently involved in this type of errors were *a*, *de*, and *por*, respectively. Table 83 presents the raw counts of errors for each preposition and the corresponding percentage of the total number of preposition omission errors encountered.

**Table 83. Preposition omission errors for Spanish oral language production**

	No.	%*
a	39	<b>54.17</b>
con	1	1.39
de	16	<b>22.22</b>
en	7	9.72
por	8	<b>11.11</b>
para	1	1.39

\*Percentage of the total number of preposition omission errors [72]

Furthermore, the analysis taking into account the length of residence of the participants showed that the errors related to the preposition *a* tend to increase for the groups with a longer length of residence, whereas in the case of *de* and *por*, the higher percentage of errors is encountered in the productions of those with 3 to 6 years, and then considerably decrease for those with a longer length of residence. Also, in the case of the preposition *en*, the group with more than 6 years of residence presents the highest percentage of errors.

**Table 84. Preposition omission errors for Spanish oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
a	9	12.50	18	<b>25.00</b>	12	<b>16.67</b>
con	0	0.00	0	0.00	1	1.39
de	5	6.94	9	<b>12.50</b>	2	2.78
en	1	1.39	2	2.78	4	<b>5.56</b>
por	3	4.17	5	<b>6.94</b>	0	0.00
para	0	0.00	1	1.39	0	0.00

\*Percentage of the total number of preposition omission errors [72]

To begin with, the majority of cases of incorrect use of the preposition *a* were related to the direct object of person, with requires the aforementioned preposition in Spanish.

(45)

- a. los mecánicos están+intentando sacar 0a los niños del ascensor.  
the technicians are trying to take.out Ø the children of the elevator  
'the technicians are trying to take the children out of the elevator'
- b. han+abierto la puerta y han+sacado 0a la gente de allí.  
they opened the door and took.out Ø the people from there  
'the opened the door and took the people out of there'
- c. el ascensor se ha+roto y han+llamado 0a dos técnicos para que lo arreglen.  
the elevator broke.down and they called Ø two technicians to fix it  
'the elevator broke down and they called two technicians to fix it'
- d. después llega la madre y empieza+a+reñir 0a el niño.  
afterwards arrives the mother and she starts to scold Ø the child  
'afterwards the mother arrives and she is scolding the child'

Also, there were cases of preposition in which *a* is required by the verb before infinitive constructions to express purpose, as in the following examples:

(46)

- a. se ve que el técnico vino 0a arreglar el ascensor.  
we can see that the technician came Ø fix the elevator  
'we can see that the technician cam to fix the elevator'

b. y la madre está+ayudando 0a subir al hijo.

and the mother is helping Ø climb the son

‘and the mother is helping the son to climb’

Regarding the cases of omission of the preposition *de*, they were related to the verb phrase ‘dar(se) cuenta’, which is followed by an object introduced by the preposition *de* when the object is a subordinate clause introduced by the conjunction *que*.

(47)

a. el niño se da cuenta 0de que pierde el bus.

the child realizes Ø that he loses the bus

‘the child realizes that he is losing the bus’

b. cuando gira la cabeza se da cuenta 0de que el bus se ha+ido.

when s/he turns the head s/he realizes Ø that the bus CL left

‘when s/he turns his/her head s/he realizes that the bus is gone’

Lastly, there were 8 instances in which the preposition *por* was omitted from the causal conjunction *porque*.

(48)

a. la madre le está+regañando al niño 0por que salió el pájaro.

the mother CL is scolding the son Ø that got.out the bird

‘the mother is scolding the son because the bird got out’

b. pues veo un chico que está contento 0por que su madre le ha+comprado bueno es un loro.

well I see a boy who is happy because Ø that his mother CL bought him well it is a parrot

‘well I see a boy who is very happy because his mother bought him, well, it is a parrot’

### **8.2.2 Spanish written language production**

Following, we will further analyse the preposition commission errors encountered in students’ written productions for Spanish. In this sense, Table 85 reveals that the highest

percentage is attributed to the preposition *a*, followed by *en* and *con* and *de* with the same percentage of errors allocated to them.

Additionally, the data presenting preposition-related errors across the three groups according to length of residence confirms that the aforementioned prepositions seem to be the most problematic even for those with a length of residence of more than 6 years in the host country. Even more, the percentages of preposition errors tend to increase with a longer length of residence or remain the same, instead of decreasing in the case of *a* and *con*, or the percentage remains fairly similar, as in the case of the prepositions *de* and *en*.

**Table 85. Preposition commission errors for Spanish written language production**

	No.	%*
<i>a</i>	21	<b>28.38</b>
<i>con</i>	12	<b>16.22</b>
<i>de</i>	12	<b>16.22</b>
<i>en</i>	19	<b>25.68</b>
<i>por</i>	7	9.46
<i>sobre</i>	1	1.35
Ambiguous	2	2.70
<i>a=de</i>	1	1.35
<i>a=en</i>	19	<b>25.68</b>
<i>a=por</i>	1	1.35
<i>en=a</i>	12	<b>16.22</b>
<i>en=con</i>	1	1.35
<i>en=de</i>	4	5.41
<i>en=por</i>	2	2.70

\*Percentage of the total number of preposition commission errors [74]

Firstly, in the case of the preposition *a*, from the total of 21 instances encountered, 19 were represented by the incorrect use of the aforementioned preposition instead of the preposition *en* with the aim to express location, thus introducing a place complement.

(49)

- a. *y como es la vida a* [\*] Sevilla?  
and how is the life **PREP** Seville?  
'and how is life in Seville?'
- b. *y con un gran supermercado a* [\*] la esquina.  
and with a big supermarket **PREP** the corner

‘and with a big supermarket around the corner’

- c. casi a [\*] todas las aulas hay un ordenador.

almost **PREP** all the classrooms there is a computer

‘in almost all the classrooms there is a computer’

Secondly, regarding the incorrect use of the preposition *en*, in the vast majority the cases was an erroneous substitute for the preposition *a* to introduce an adverb of place and indicating movement from a place to another (examples 50). Also, there were two instances of use of *en* instead of *de*, to express part of a whole (examples 51). Lastly, the examples 52 present the occurrences when *en* was chosen to erroneously replace *por*, in order to express route or course of a movement.

(50)

- a. vas+a+venir en [\*] una escuela.

you will come **PREP** a school

‘you will come to a school’

- b. se volvera+a+mudar en [\*] Sevilla.

s/he will move again **PREP** Seville

‘s/he will move again to Seville’

(51)

- a. eramós yo y ella las únicas rumanas en [\*] toda la classe.

I and she were the only Romanians **PREP** all the class

‘we were the only Romanians in the whole class’

- b. en total son docientas clases en [\*] las quales quince son de informatica.

in total there are two hundred classrooms **PREP** which 15 are IT ones

‘there are two hundred classrooms in total, of which 15 are IT ones’

(52)

- a. y podemos pasear por las afueras como lo hacíamos antes en [\*] nuestra ciudad.

and we can walk around the outskirts as we did before **PREP** our town

‘and we can go walking around the outskirts of our town, as we did before’

Furthermore, the preposition *con* was used instead of the correct *en* in most of the cases to express means of transportation (examples 53), but also to form a prepositional complement with other meanings (examples 54).

(53)

- a. tengo+que+ir con [\*] l' [\*] autobus.

I have to go **PREP** the bus

‘I have to go by bus’

- b. si venis con [\*] el [\*] avión

if you come **PREP** the plane

‘if you come by plane’

(54)

- a. confiamos uno con [\*] el otro.

we trust one **PREP** the other

‘we trust each other’

- b. los profesores son muy amables y siempre intentan ayudarte con [\*] todo lo que pueden [\*].

the professors are very nice and always they try to help you **PREP** everything CL they can

‘the professors are very nice and they always try to help you with everything they can’

Additionally, the preposition *de* was chosen in four instances instead of *sobre* to express theme or subject (examples 55) and another four times instead of *por* to express time of day (example 56a) and reason (example 56b).

(55)

- a. he recibido unes [\*] informaciones de [\*] l camping

I received some information **PREP** the camping

‘I received information about the camping’

- b. me gustaria que me informe [\*] de [\*] las actividades

I would like that you tell me **PREP** the activities

‘I would like you to give me more information regarding the activities’

(56)

a. a las diez menos veinte acabaremos las clases de [\*] la mañana

at twenty to ten we will finish the classes **PREP** the morning

‘at twenty to ten we finish school in the morning’

b. no teneis que preocuparos de [\*] la educación de vuestros hijos

you don’t have to worry **PREP** the education of your children

‘you don’t have to worry for the education of your children’

Also, regarding the same preposition *de*, there were two instances when it was used instead of *a* (example 57a) and *en* (example 57b), respectively.

(57)

a. por esa carretera de [\*] la izquierda.

on the highway **PREP** the left

‘on the highway to the left’

b. as+hecho una buena eleccion de [\*] venir aqui a esta escuela.

you made a good decision **PREP** coming here to this school

‘you made a good decision in coming here to this school’

Finally, there were seven instances of the use of the preposition *por* instead of *para*:

(58)

a. te escribo esta carta por [\*] informar-te de [\*] como es esta escuela.

I write this letter **PREP** inform you **PREP** how is this school

‘I write this letter to inform you about how is this school’

b. ahora por [\*] empezar te explicaré un poco como es nuestro instituto.

now **PREP** begin I will explain to you briefly how is our school

‘not to begin with, I will briefly explain to you how our school is’

**Table 86. Preposition commission errors for Spanish written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
a	3	4.05	10	<b>13.51</b>	8	10.81
con	2	2.70	4	5.41	6	<b>8.11</b>
de	4	5.41	5	6.76	3	4.05
en	6	8.11	7	<b>9.46</b>	6	8.11
por	3	4.05	3	4.05	1	1.35
sobre	0	0.00	0	0.00	1	1.35
Ambiguous	0	0.00	0	0.00	2	2.70

\*Percentage of the total number of preposition commission errors [74]

### *Preposition omission*

An important percentage of the preposition errors encountered in the participants' written productions in Spanish were related to omission. Specifically, the results presented in Table 87 revealed that the preposition most prone to this type of errors was *a*, closely followed by *de* and *en*.

**Table 87. Preposition omission errors for Spanish written language production**

	No.	%*
a	23	<b>34.85</b>
con	2	3.03
de	22	<b>33.33</b>
en	11	<b>16.67</b>
por	2	3.03
para	6	9.09

\*Percentage of the total number of preposition omission errors [66]

Additionally, the analysis of the evolution of the aforementioned errors by length of residence showed that in the case of the preposition *a* and *de* the proportion of errors increases with a longer length of residence, and those with 3 to 6 years present the highest ones from the three groups. Also, as for the errors related to the preposition *en*, the group with a length of residence longer than 6 years presented the highest rates of preposition omission errors.

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**Table 88. Preposition omission errors for Spanish written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
a	3	<b>4.55</b>	13	<b>19.70</b>	7	<b>10.61</b>
con	0	0.00	1	1.52	1	1.52
de	5	<b>7.58</b>	10	<b>15.15</b>	7	<b>10.61</b>
en	0	0.00	4	6.06	7	<b>10.61</b>
por	0	0.00	2	3.03	0	0.00
para	2	3.03	3	<b>4.55</b>	1	1.52

\*Percentage of the total number of preposition omission errors [66]

In the case of the preposition *a*, the majority of erroneous use was related to the direct object of person, which requires the aforementioned preposition in Spanish (examples 59a and 59b).

(59)

- a. creo que ha+sido muy duro dejar Øa tus amigos y tu escuela de Sevilla.

I imagine it must have been hard leave Ø your friends and your school from Seville

‘I imagine it must have been hard to leave your friends and your school from Seville’

- b. fue de lo más divertido ya que se conoce Øa mucha gente.

it was the most fun because you meet Ø a lot of people

‘it was a lot of fun because you meet a lot of people’

Also, there were cases of verbs that require the preposition *a* and it was omitted (example 60a) or when the same preposition was missing from expression regarding the time of day (example 60b).

(60)

- a. me acuerdo el dia cuando empecé Øa estudiar en este instituto.

I remember the day when I started Ø study at this school

‘I remember the day when I started to study at this school’

- b. espero que tambien te quedaras en el comedor Øa el mediodia asi podemos hablar mas y conocerte mejor.

I hope you will also stay to eat at the dining room Ø the noon so we can talk more and I get to know you better

‘I hope you will also stay to eat at the dining room at noon so we can talk more and get to know each other’

Furthermore, there was a high percentage of omission of the preposition *de* in cases verbs that are followed by an object introduced by this preposition:

(61)

- a. y te escribo esta carta por [\*] que antes Øde que llegues me conozcas un poco.

I am writing this letter **PREP** that before Ø that you arrive to know me a little

‘I am writing this letter so you get to know me a little before you arrive’

- b. estoy segura Øde que te gustará vivir aquí porque es un pueblo tranquilo.

I am sure Ø that you will like living here because it is a quiet village

‘I am sure that you will like living here because it is a quiet village’

- c. me llamo Diana y me entere Øde que el año que viene estudiaras en nuestra clase@s [: spa clase].

my name is Diana and I found.out Ø that the next year you will study in our class

‘my name is Diana and I found out that the next year you will study in our class’

- d. te informo Øde que Lleida es una ciudad muy grande i@s [: spa y] muy guapa.

I inform you Ø that Lleida is a very big and very beautiful town

‘I inform you that Lleida is a very big and very beautiful town’

In the same line, the preposition *en* was omitted when introducing defining relative clauses:

(62)

- a. soy un chico del barrio Øen Øel que te mudaras tu.

I am a boy from the neighborhood Ø that you will move

‘I am a boy from the neighborhood where you will move’

- b. ya me han+dicho que el proximo año has+decidido hacerlo aquí en el instituto Øen Øel que yo estudio.

I heard that next year you decided to study here at the school Ø that I study

‘I was told that next year you decided to come to study at the school where I study’

### 8.2.3 Catalan oral language production

In this section we will deal with the preposition commission errors encountered in the oral production of students in Catalan language. In this regard, Table 89 shows that the most frequent errors in this area were those related to the preposition *amb*, followed by the preposition *en*.

Firstly, there was a considerable number of uses of the preposition *amb* instead of *en* to express location, introducing a place complement (examples 63), this representing 46.81 % of the total number of preposition commission errors from Catalan oral productions.

(63)

- a. està+tocant la guitarra amb [\*] un concert.

s/he is playing the guitar **PREP** a concert

‘s/he is playing the guitar at a concert’

- b. amb [\*] aquesta imatge veig una cursa de bicicletes.

**PREP** this image I see a bike race

‘in this image I see a bike race’

- c. i que tocava davant de molta gent amb [\*] un escenari.

and that s/he was playing in front of a lot of people **PREP** a stage

‘and that s/he was playing on a stage in front of a lot of people’

Also, 32.98% of the preposition errors were of incorrect use of *amb* instead of *a* to introduce a place complement (examples 64).

(64)

- a. està+mirant amb [\*] un costat.

s/he is looking **PREP** a side

‘s/he is looking to the side’

- b. dos homes 0qui van+anar amb [\*] una botiga de teles.

two men who went **PREP** a TV shop

‘two men who went to a TV shop’

- c. el pare està assentat amb [\*] una cadira.

the father is sitting **PREP** a chair

‘the father is sitting on a chair’

Additionally, there were isolated cases of the use of *en* instead of *amb* (example 65a), *contra* (example 65b), or *de* (example 65c).

(65)

- a. hi ha un home crec que està vestit en [\*] una pijama.

there is a man I think who is wearing **PREP** some pyjamas

‘there is a man I think who is wearing pyjamas’

- b. aquest home està apunt de xocar en [\*] la farola.

this man is almost hitting **PREP** a lamp-post

‘this man is almost hitting a lamp-post’

- c. està en [\*] peus.

s/he is **PREP** feet

‘s/he is standing’

Furthermore, the preposition *en* was chosen erroneously as a substitute for *a* on 3 occasions, to introduce a place complement, mainly to express a figurative space (examples 66a and 66b).

(66)

- a. en [\*] la televisió apareix un home que fa atletismo.

**PREP** the TV appears a man who is practising athletics

‘on the TV appears a man who is practising athletics’

- b. i està corriendo@s [: cat corrent] en [\*] su@s [: cat seva] casa.

and s/he is running **PREP** his/her home

‘and s/he is running to his/her home’

## Results

Also, there were also 4 instances of use of the preposition *a* instead of *en* as part of the prepositional phrase *pensar en* ('thinking of').

(67)

a. un xiquet se desperta i pensa a [\*] una guitarra.

a boy wakes.up and he is thinking **PREP** a guitar

'a boy wakes up and he is thinking of a guitar'

**Table 89. Preposition commission errors for Catalan oral language production**

	No.	%*
a	5	5.32
amb	79	<b>84.04</b>
de	3	3.19
en	7	<b>7.45</b>
amb=a	31	<b>32.98</b>
amb=contra	3	3.19
amb=en	44	<b>46.81</b>
amb=per	1	1.06
en=a	3	<b>3.19</b>
en=amb	2	2.13
en=contra	1	1.06
en=de	1	1.06
en=per	0	0.00

\*Percentage of the total number of preposition commission errors [94]

Lastly, from the distribution of preposition errors according to length of residence it can be seen that the percentage of preposition errors seems to increase with a longer length of residence for the preposition *amb*, but remains constant for the other prepositions encountered.

**Table 90. Preposition commission errors for Catalan oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
a	1	1.06	2	2.13	2	2.13
amb	8	<b>8.51</b>	39	<b>41.49</b>	32	<b>34.04</b>
de	1	1.06	1	1.06	1	1.06
en	3	3.19	1	1.06	3	3.19

\*Percentage of the total number of preposition commission errors [94]

### 8.2.4 Catalan written language production

The data presented in Table 91 reveals the overall proportion of preposition errors encountered in students' written productions in Catalan was considerably lower compared to the previously-presented cases. Specifically, errors related to the preposition *de* were the most encountered, followed by *en* and *amb*, respectively.

**Table 91. Preposition commission errors for Catalan written language production**

	No.	%*
a	1	7.69
amb	2	15.38
de	5	<b>38.46</b>
en	3	<b>23.08</b>
per	1	7.69
en=a	2	15.38
de=per	5	38.46

\*Percentage of the total number of preposition commission errors [13]

Further, from the analysis according to length of residence it can be seen that the highest proportions of errors were encountered in the productions of the participants with a length of residence between 3 and 6 years (see Table 92).

**Table 92. Preposition commission errors for Catalan written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
a	0	0.00	1	7.69	0	0.00
amb	0	0.00	2	<b>15.38</b>	0	0.00
de	1	<b>7.69</b>	2	<b>15.38</b>	2	<b>15.38</b>
en	0	0.00	2	<b>15.38</b>	1	7.69
per	0	0.00	1	7.69	0	0.00

\*Percentage of the total number of preposition commission errors [13]

As previously mentioned, there were 5 instances of incorrect use of the preposition *de* instead of *per*, mainly to express reason.

(68)

- a. i que son molt nets els seus llocs de [\*] dormir.  
and that are very clean their places **PREP** sleep  
'and that their places to sleep are very clean'

- b. *hus volia agrair la vostra amabilitat i de [\*] les coses tan importants i divertides que van+explicar.*

I want to thank you for your kindness and **PREP** the important and fun things you explained

‘I want to thank you for your kindness and for the important and fun things you explained to us’

Finally, the preposition *amb* was incorrectly used instead of *a* to express dynamic location, as in the example 69a. Also, the preposition *en* is erroneously used instead of *a* in the expression *a terra* (example 69b).

(69)

- a. *algún dia m'agradaria anar amb [\*] una granja escola*

someday I would like to go **PREP** a farm school

‘someday I would like to go to a farm school’

- b. *el ciclista que estava apunt de passar la meta pos es veu que perd l'equilibri i cau en [\*] terra.*

the cyclist who was close to pass the finish line we can see that he lost the balance and falls **PREP** ground

‘the cyclist who was close to pass the finish line we can see that he loses the balance and falls on the ground’

### 8.3 DISTRIBUTION OF PRONOUN ERRORS

#### 8.3.1 Spanish oral language production

From the analysis conducted on the participants’ oral productions in Spanish it was revealed that the pronouns more prone to errors were according to frequency: third-person singular indirect object pronoun *le*, third-person masculine singular direct object pronoun *lo*, and the neuter demonstrative pronoun *esto* (see Table 93).

**Table 93. Pronoun commission errors for Spanish oral language production**

	No.	%*
le	15	<b>46.88</b>
lo	5	<b>15.63</b>
esto	4	<b>12.50</b>
ello	2	6.25
el	1	3.13
la	2	6.25

\*Percentage of the total number of pronoun commission errors [32]

Additionally, the analysis performed by length of residence showed that the proportion of errors related to the indirect object pronoun *le* decrease for the groups with a longer length of residence, and the same occurs in the case of direct object pronoun *lo*, whereas for the neuter demonstrative pronoun *esto* the decrease in proportion can be observed only for the group with a length of residence longer than 6 years. The corresponding raw counts and percentages are detailed in Table 94.

**Table 94. Pronoun commission errors for Spanish oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
le	6	<b>18.75</b>	5	<b>15.63</b>	4	<b>12.50</b>
lo	3	<b>9.38</b>	1	3.13	1	3.13
esto	2	<b>6.25</b>	2	<b>6.25</b>	0	0.00
ello	1	3.13	1	3.13	0	0.00
el	0	0.00	1	3.13	0	0.00
la	1	3.13	0	0.00	1	3.13

\*Percentage of the total number of pronoun commission errors [32]

Firstly, in the majority of instances, the third-person singular indirect object pronoun *le* was erroneously used to refer to inanimate direct objects (examples 70a and 70b) or the incorrect use of the singular indirect object instead of the plural equivalent *les* (example 70c).

(70)

- a. el chico ha+visto una flor y le [\*] ha+cogido y la olora@s [: spa huele].

the boy saw a flower and **PRON** he picked.up and smelled it

‘the boy saw a flower and he picked it up and smelled it’

- b. el chico ve un gato y le [\*] saluda.

the boy sees a cat and **PRON** greets

‘the boy sees a cat and greets it’

- c. llaman al técnico bueno llaman a dos técnicos para que le [\*] ayuden a salir.

they call the technician, well they call two technicians to **PRON** help to get.out

‘the call the technician, well, they call two technicians to help them get out’

Regarding the incorrect use of the masculine singular direct object pronoun *lo*, it was mainly used instead of the masculine plural equivalent form *los* (examples 71a and 71b).

(71)

- a. los señores salen fuera y lo [\*] ven y avisan a los técnicos.

the men get out and they **PRON** see and call to the technicians

‘the men get our and they see it and call the technicians’

- b. y después vienen dos hombres para ayudarlo [\*] Oa salir.

and after, two men arrive to help **PRON** get out

‘and after, two men arrive to help them get out’

Lastly, the neuter demonstrative pronoun *esto* is used erroneously instead of the masculine singular demonstrative pronoun *este* referring to an animate entity.

(72)

- a. esta abuela mira que pasa y esto [\*] también ¿no?

this grandmother is watching what is happening and **PRON** too, right?

‘this grandmother is watching what is happening and this one too, right?’

- b. esto [\*] está+mirando.

**PRON** is watching

‘s/he is watching’

- c. finalmente lo arregló esto [\*].

finally fixed it **PRON**

‘finally s/he fixed it’

### 8.3.2 Spanish written language production

The pronoun commission errors most encountered in students' written productions in Spanish were related to the demonstrative pronouns *este/esta*, the third-person masculine plural direct object pronoun *los*, the relative phrase *el que*, and the Catalan reflexive pronoun *us/vos*. Likewise, data presented in Table 96 shows that the percentage of errors related to the aforementioned pronouns tend to increase with a longer length of residence and are the highest in the case of those with 3 to 6 years of stay.

**Table 95. Pronoun commission errors for Spanish written language production**

	No.	%*
le	1	3.23
lo	2	6.45
este/esta	3	<b>9.68</b>
los	5	<b>16.13</b>
el que	4	<b>12.90</b>
la	2	6.45
us/vos	4	<b>12.90</b>

\*Percentage of the total number of pronoun commission errors [31]

Firstly, the relative phrase errors involved the use of a personal form instead of the neuter *lo que*, as in the following examples:

(73)

- a. tambien tenemos un bar donde te podras comprar el bocadillo o el [\*] que quieras.  
we also have a bar where you can buy a sandwich or **PRON** that you want  
'we also have a bar where you can buy a sandwich or whatever you want'
- b. nos hicimos muy amigos y despues ella me fallo contando a la jente el [\*] que yo le decia.  
we became very good friends and then she disappointed me telling other people **PRON** that I've told her  
'we became very good friends and then she disappointed me by telling other people what I've told her'

Concerning the demonstrative pronouns, the errors were related to an incorrect choice of number or person (examples 74a and 74b) or the use of a personal form instead of the neuter one (example 74c).

(74)

- a. m'agrada@s [: spa gusta] esta [\*] cole.

I like **PRON** school

'I like this school'

- b. te escribo una [\*] frases para Oque saber [\*] algo de este [\*] escuela.

I will write to you a few lines so you know something about **PRON** school

'I will write you a few line so you know something about this school'

- c. quiero saber está [\*] de la [\*] usted porquè en [\*] la gente no Ola puedes creer.

I want to know **PRON** from you because you cannot trust the people

'I want to know this from you because you cannot trust people'

In the same line, the third-person masculine plural direct object pronoun *los* was erroneously used instead of the indirect object pronoun *les*.

(75)

- a. todo el mundo estaba en su contra, nadie los [\*] querría ver juntos.

everybody was against them, nobody **PRON** wanted see together

'everybody was against them, nobody wanted to see them together'

- b. es un parque muy bonito y a los niños los [\*] gusta jugar allí.

it is a very beautiful park and the children **PRON** love playing there

'it is a very beautiful park and the children love playing there'

**Table 96. Pronoun commission errors for Spanish written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
le	0	0.00	0	0.00	1	3.23
lo	1	3.23	1	3.23	0	0.00
este/esta	3	<b>9.68</b>	0	0.00	0	0.00
los	0	0.00	3	<b>9.68</b>	2	<b>6.45</b>
el que	0	0.00	2	<b>6.45</b>	2	<b>6.45</b>
la	0	0.00	2	<b>6.45</b>	0	0.00
us/vos	0	0.00	4	<b>12.90</b>	0	0.00

\*Percentage of the total number of pronoun commission errors [31]

Finally, there was four cases of use of the Catalan reflexive pronoun *us/vos* instead of the Spanish equivalent *os* (examples 76).

(76)

- a. us [\*] podeis sentir como en familia con los vecinos.

**PRON** can feel as with family with the neighbours

‘you can feel as with family with the neighbours’

- b. vivo en este barrio y me gustaria darvos [\*] la bienvenida en [\*] este barrio.

I live in this neighbourhood and I would like to welcome **PRON** to this neighbourhood

‘I live in this neighbourhood and I would like to welcome you to this neighbourhood’

### 8.3.3 Catalan oral language production

From the analysis of the oral productions of the students in one of the vehicular languages, Catalan (see Table 97), the higher percentages of errors were encountered regarding the pronoun in its Spanish form *le* and the direct object pronoun *el*, the latter one in both his full form (‘forma plena’) and its reinforced form (‘forma reforçada’), too.

**Table 97. Pronoun commission errors for Catalan oral language production**

	No.	%*
le	12	<b>40.00</b>
el/lo	9	<b>30.00</b>
els	2	6.67
les	2	6.67
li	2	6.67

\*Percentage of the total number of pronoun commission errors [30]

Further, the proportion of errors related to the pronoun *le* considerably decrease with a longer length of residence, while those regarding *el/lo* increase for the groups with 3 to 6 years and their peers with more than 6 years of residence, respectively.

As previously mentioned, the most recurrent error related to pronoun commission was the use of the Spanish pronoun *le* for indirect object, instead of the correct Catalan form *li*.

(77)

- a. a ell no le [\*] agrada la flauta.

he **PRON** does not like the flute

‘he doesn’t like the flute’

- b. els seus pares le [\*] han+regalat un regal.

his/her parents **PRON** gave a gift

‘his/her parents gave him/her a gift’

Further, there were 9 cases of incorrect use of the direct object pronoun *el*, in both his reinforced and full form.

(78)

- a. el home està a casa es deixa els kets la roba el [\*] tira a tota reu i salta.

the man is at home and he takes off his shoes and clothes and **PRON** throws everywhere and jumps

‘the man is at home and he takes off his shoes and clothes and throws it everywhere and jumps’

- b. després els seus pares el [\*] regalen alguna cosa i no li regalen una guitarra.

after his/her parents **PRON** make a gift and they do not give him/her a guitar

‘after his/her parents make him/her a gift and they do not give him/her a guitar’

**Table 98. Pronoun commission errors for Catalan oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
le	11	<b>36.67</b>	1	3.33	0	0.00
el/lo	2	6.67	3	<b>10.00</b>	3	<b>10.00</b>
els	0	0.00	0	0.00	0	0.00
les	1	<b>3.33</b>	1	<b>3.33</b>	0	0.00
li	1	3.33	0	0.00	1	3.33

\*Percentage of the total number of pronoun commission errors [30]

### *Pronoun omission*

The data presented in Table 99 reveals that the pronouns more prone to error by omission were two weak object pronouns: the adverbial pronoun *hi* and the neuter pronoun *ho*. Also, it is important to emphasize that the percentage of errors related to the pronoun *hi* is the highest for the group with 3 to 6 years of stay and it generally tends to increase with a

longer length of residence, while all the errors regarding the pronoun *ho* are encountered in the productions of the group with a length of residence shorter than 3 years (see Table 100).

**Table 99. Pronoun omission errors for Catalan oral language production**

	No.	%*
em	1	6.25
hi	10	<b>62.50</b>
ho	4	<b>25.00</b>
lo	1	6.25

\*Percentage of the total number of pronoun omission errors [16]

From the cases encountered related to the adverbial pronoun *hi*, the vast majority were omission of this pronoun from the predicate *haver-hi* with the meaning of ‘there be’, where the clitic *hi* is obligatory (examples 79a to 79c). Also, there were cases of omission of the aforementioned pronouns from expressions of place, in which *hi* would correspond to ‘there’ (examples 79d and 79e).

(79)

- a. aquí Øhi hay@s [: cat ha] un noi que està+pensant que vol regalar-li de [\*] Øel su@s [: cat seu] aniversari.

there Ø is a boy who is thinking what he would like to receive as a present for his birthday

‘there is a boy who is thinking what he would like to receive as a present for his birthday’

- b. i ell s’està acalentant@s [: cat escalfant] les mans a la foguera que Øhi ha adins del barril.

and he is warming his hands to a fire that Ø is in a barrel

‘and he is warming his hands to a fire that there is in a barrel’

- c. estaven [\*] dos senyors que passaven pel carrer i de repent Øhi havia una televisió molt gran i es posen a mirar.

there were two men passing by on the street and suddenly Ø was a very big TV and they watch it

‘there were two men passing by on the street and suddenly there was a very big TV and they watch it’

- d. i Ohi s'ha+trobat un clarinet o una flauta.  
 and Ø s/he found a clarinet or a flute  
 ‘and there s/he found a clarinet or a flute’
- e. i tota la gent que estaven mirant la cursa s’han+quedat amb la boca oberta del que  
 Ohi ha+passat.  
 and everybody who was watching the race was shocked by what Ø happened there  
 ‘and everybody watching the race was shocked by what happened there’

Further, there were 4 instances of omission of the neuter pronoun *ho*, as in the following examples:

(80)

- a. aquests estan+mirant como@s [: cat com] Oho estan fent i estan...  
 these ones are watching how Ø they are doing and they are...  
 ‘these ones are watching how they are doing it and they are...’
- b. tampoco@s [: cat tampoc] Oho sé.  
 I don’t know Ø either  
 ‘I don’t know it either’

**Table 100. Pronoun omission errors for Catalan oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
em	0	0.00	1	6.25	0	0.00
hi	0	0.00	6	<b>37.50</b>	4	<b>25.00</b>
ho	4	<b>25.00</b>	0	0.00	0	0.00
lo	0	0.00	0	0.00	1	6.25

\*Percentage of the total number of pronoun omission errors [16]

### 8.3.4 Catalan written language production

The errors concerning the pronoun commission from the students’ written productions will also be further dealt with, since they constitute a significant part of the overall proportion of errors encountered. In this sense, it must be emphasized that the distribution of the pronouns was highly heterogeneous which made it difficult to construct a classification of them with the corresponding frequencies. That notwithstanding, Table

101 presents some of the most recurrent errors found in students' written productions and it can be seen that the demonstrative pronoun feminine singular *aquesta* is the most prone to errors, followed by the direct object pronoun *lo*, in its full form ('forma plena'). Also, the data presented in Table 102 reveals that the errors related to the abovementioned demonstrative pronoun are encountered exclusively in the written productions of the group with less than 3 years of residence, whereas in for the pronoun *lo* there are more occurrences for those with a longer length of residence.

**Table 101. Pronoun commission errors for Catalan written language production**

	No.	%*
nos	3	6.25
lo	5	<b>10.42</b>
los/els	3	6.25
aquesta	6	<b>12.50</b>

\*Percentage of the total number of pronoun commission errors [48]

Firstly, we will look into the errors related to the direct object pronoun, full form *lo*. As can be seen from example 81a the majority were cases of use of *lo* instead of the neuter pronoun *ho*, or instead of *els*, as in the example 81b.

(81)

- a. vullia [\*] que l'any que ve es repeteixi i pasar lo [\*] mes bé que aquet any.

I would like to repeat it next year and have **PRON** even more fun than this year

'I would like to repeat it next year and have even more fun than this year'

- b. abans tenia dos gatets i no sabia com poder lo [\*] banyar sense que m'arrunyes.

I had two kittens and I didn't know how to bath **PRON** without getting scratched

'I had two kittens and I didn't know how to bath them without getting scratched'

Also, there were cases of incorrect use of the demonstrative pronoun in feminine singular *aquesta* instead of the form in masculine singular *aquest*, in all instances accompanying the noun *problema* (problem).

(82)

- a. el director i els pares també estan preocupats amb aquesta [\*] problema i volen fer una cosa.

the principle and the parents are also worried about **PRON** problem and they want to take action

‘the principle and the parents are also worried about this problem and they want to take action’

- b. i els professors están molt desperads perquè també volen enviar una carta amb aquesta [\*] problema.

and the professors are very desperate because they also want to send a letter regarding **PRON** problem

‘and the professors are very desperate because they also want to send a letter regarding this problem’

Further, there were cases of different pronouns used as an incorrect substitute for the indirect object pronoun *li*:

(83)

- a. amb la presència d’aquesta carta le [\*] vull informar del nostre problema davant l’institut.

with this letter I want to inform **PRON** of the problem we have in front of school

‘with this letter I want to inform you of the problem we have in front of school’

Lastly, the following examples represent erroneous replacement of the pronoun *es*:

(84)

- a. estem molt impresionats de la manera com els [\*] cuiden tots els animals.

we are very impressed with the way you **PRON** take care of all the animals

‘we are very impressed with the care all the animals receive’

- b. espero que et [\*] repite [\*] aquesta excursió.

I hope **PRON** we will repeat the trip

‘I hope we will repeat this trip’

**Table 102. Pronoun commission errors for Catalan written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
nos	1	2.08	1	2.08	1	2.08
lo	1	2.08	2	<b>4.17</b>	2	<b>4.17</b>
los/els	1	2.08	1	2.08	1	2.08
aquesta	6	<b>12.50</b>	0	0.00	0	0.00

\*Percentage of the total number of pronoun commission errors [48]

### *Pronoun omission*

For Catalan language the most numerous pronoun omission errors encountered were regarding the adverbial pronouns *hi* and *en* and the neuter pronoun *ho* (see Table 103).

**Table 103. Pronoun omission errors for Catalan written language production<sup>24</sup>**

	No.	%*
en	8	<b>19.51</b>
ho	10	<b>24.39</b>
hi	11	<b>26.83</b>
el	2	4.88
te	2	4.88

\*Percentage of the total number of pronoun omission errors [41]

Additionally, the analysis according to length of residence revealed that the aforementioned errors tended to increase in the case of the participants with a longer length of residence, regardless of the pronoun in question.

**Table 104. Pronoun omission errors for Catalan written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
en	1	2.44	4	<b>9.76</b>	3	<b>7.32</b>
ho	1	2.44	5	<b>12.20</b>	4	<b>9.76</b>
hi	3	7.32	4	<b>9.76</b>	4	<b>9.76</b>
el	2	4.88	0	0.00	0	0.00
te	1	2.44	1	2.44	0	0.00

\*Percentage of the total number of pronoun omission errors [41]

First, the highest percentage of errors was encountered for the pronoun *hi*, representing 26.83% of the total number of pronoun omission errors. Also, as presented in examples 85a and 85b, in the majority of cases the pronoun *hi* was omitted from the predicate

<sup>24</sup> For space reasons the pronoun errors with only one occurrence were not included.

*haver-hi*. Additionally, there were cases of omission of the aforementioned pronouns from expressions of place (example 85c).

(85)

- a. tot que Ohi havia en la granja ens ha+agradat però més les ovelles i els cavalls.  
everything Ø was at the farm we liked but more the sheep and the horses  
'we liked everything there was at the farm, but especially the sheep and the horses'
- b. el capítol quatre m'ha+agradat molt és quan comença Oa haver Ohi més acció on s'expliquen més coses.  
chapter four I enjoyed a lot it is when Ø is more action and more things are explained  
'I enjoyed a lot chapter four, it is when there is more action and more things are explained'
- c. i estic segura de que tots Ohi posen empeny.  
I am sure that everybody Ø is trying their best  
'I am sure that everybody is trying their best'

Second, there were ten instances of omission of the neuter pronoun *ho*.

(86)

- a. acalde si podrieu [\*] ficar semafors ús Oho agrairiem.  
mayor if you could install traffic light Ø we would appreciate  
'mayor, if you could install traffic light we would appreciate it'
- b. jo per exemple li volia sugerir que Oho facin de tal manera que es pugui anar lleugerament pel canto de l'escola  
I for examples wanted to suggest to do Ø in a way so we could walk without difficulties near the school  
'for examples, I wanted to suggest doing it in a way so we could walk without difficulties near the school'

Lastly, 19.51% of the pronoun omission errors encountered were related to the adverbial pronoun *en*, as presented in examples 87a and 87b.

(87)

- a. gracies pel llibre tan bo que has+escrit i a veure si 0en escrius un altre.  
 thank you for such a good book that you've written and maybe Ø you will write another one  
 'thank you for such a good book that you've written and maybe you will write another one'
- b. a continuació em 0en recordo que també hem+anat [\*] al següent pavelló on hi havien les vaques i les cabres.  
 next Ø I remember that we also went to the next section where there were cows and goats  
 'next, I remember that we also went to the next section where there were cows and goats'

## 8.4 DISTRIBUTION OF ARTICLE ERRORS

### 8.4.1 Spanish oral language production

Following, we will focus on the participants' errors related to article addition, since it was previously seen they constitute a considerable percentage of the error found in Spanish oral language production. Also, from the information presented in Table 105 it can be seen that the vast majority of errors in this area are related to the definite article, masculine singular.

**Table 105. Article addition errors for Spanish oral language production**

	No.	%*
Definite	42	<b>84.00</b>
Indefinite	8	16.00
Definite masculine singular	35	<b>70.00</b>
Definite masculine plural	2	4.00
Definite feminine singular	3	6.00
Indefinite masculine singular	7	<b>14.00</b>
Indefinite feminine singular	1	2.00

\*Percentage of the total number of article addition errors [50]

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Additionally, the analysis according to length of residence reveals that the highest percentage of definite article errors was made by the participants with a length of residence between 3 and 6 years, followed by their peers with less than 3 years in the host society. Meanwhile, in the case of the indefinite article the percentage of errors is double for the group with more than 6 years of residence compared to their peers.

**Table 106. Article addition errors for Spanish oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
Definite	15	<b>30.00</b>	18	<b>36.00</b>	9	<b>18.00</b>
Indefinite	2	4.00	2	4.00	4	<b>8.00</b>

\*Percentage of the total number of article addition errors [50]

Furthermore, regardless of the length of residence, for the definite article there were encountered several patterns of incorrect use. On the one hand, there were various cases of addition of definite article to express mean of transportation, as in the examples 88, with the observation that in these cases the addition of definite article accompanies always an incorrect use of the preposition required to express mean of transportation, too. On the other hand, also predominated the instances of addition of definite article before names or other proper nouns (examples 89).

(88)

- a. los niños van al colegio con [\*] el [\*] bus.  
the children go to school with **ART.DEF** bus  
'the children go to school by bus'
- b. en un edificio (.) están+subiendo con [\*] el [\*] ascensor.  
in a building, they are going up with **ART.DEF** elevator  
'in a building, they are going up by elevator'

(89)

- a. y creo que a la [\*] Rumania.  
and I think that to **ART.DEF** Romania  
'and I think that to Romania'
- b. la madre de l [\*] Juan da de comer al loro.

the mother of **ART.DEF** Juan feeds the parrot

‘Juan’s mother feeds the parrot’

Likewise, a great amount of cases where the participants unnecessarily add the article before the noun when indicating directions (examples 90).

(90)

a. a la [\*] mano derecha una puerta abierta

on **ART.DEF** left hand an open door

‘on the left, an open door’

b. entonces a la [\*] mano izquierda ha+salido un señor

then on **ART.DEF** left hand a man comes out

‘then on the left, a man comes out’

Finally, as noticed in the examples 91, the few errors of indefinite article are also related to means of transportation.

(91)

a. después pues tiene+que+ir en un [\*] taxi.

after he has to go with **ART.IND** taxi

‘after he has to go by taxi’

b. los niños van al colegio con [\*] un [\*] autobús.

the children go to school with **ART.IND** bus

‘the children go to school by bus’

#### **8.4.2 Spanish written language production**

The analysis conducted on students’ written productions in Spanish showed that the article addition errors encountered were almost exclusively related to the definite article, as presented in Table 107. Likewise, the proportions of errors caused by definite articles in masculine singular and feminine singular are similar.

As for the distribution of the aforementioned errors according to length of residence, Table 108 reveals that the percentage of article addition errors increases with a longer

## Results

length of residence, to the extent that in the case of the students with more than 6 years the proportion of definite article errors is nearly double compared to the other two groups.

**Table 107. Article addition errors for Spanish written language production**

	No.	%*
Definite	23	<b>95.83</b>
Indefinite	1	4.17
Definite masculine singular	11	<b>45.83</b>
Definite masculine plural	0	0.00
Definite feminine singular	12	<b>50.00</b>
Indefinite masculine singular	1	<b>4.17</b>
Indefinite feminine singular	0	0.00

\*Percentage of the total number of article addition errors [24]

**Table 108. Article addition errors for Spanish written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
Definite	6	25.00	7	29.17	10	<b>41.67</b>
Indefinite	0	0.00	0	0.00	1	<b>4.17</b>

\*Percentage of the total number of article addition errors [24]

On the one hand, the errors of addition of definite article in masculine singular were mainly related to phrases expressing means of transportation (examples 92a and 92b) or to proper names (examples 92c and 93c).

(92)

- a. tengo+que+ir con [\*] l' [\*] autobus.

I have to go with **ART.DEF** bus

'I have to go by bus'

- b. si venis con [\*] el [\*] avión podeis coger el metro un taxi o el autobús.

if you come with **ART.DEF** plane you can take the tube a taxi or the bus

'if you come by plane you can take the tube, a taxi or a bus'

- c. sóy el [\*] Madalin.

I am **ART.DEF** Madalin

'I am Madalin'

- d. y estoy+estudiando aqui en el [\*] Torrevicens que es donde tu estudiaras.

and I am studying here at **ART.DEF** Torrevicens where you will study

‘and I am studying here at Torrevicens where you will study’

On the other hand, the majority of cases of incorrect use of the definite article feminine singular were related to proper names, as in the following examples:

(93)

- a. soy la [\*] Nicoleta una compañera de la escuela Oen Ola que te has+matriculado.

I am **ART.DEF** Nicoleta a classmate from the school where you enrolled

‘I am Nicoleta, a classmate from the school where you enrolled’

- b. soy la [\*] Marta una companyera tuya.

I am **ART.DEF** Marta one of your classmates

‘I am Marta, one of your classmates’

### 8.4.3 Catalan oral language production

In the case of the productions in Catalan language, the errors related to article omission were analysed due to their high frequency. Specifically, the results revealed that the errors encountered were exclusively of definite article, as presented in Table 109.

**Table 109. Article omission errors for Catalan oral language production**

	No.	%*
Definite	24	<b>100.00</b>
Indefinite	0	0.00
Definite masculine singular	14	<b>58.33</b>
Definite masculine plural	2	8.33
Definite feminine singular	8	<b>33.33</b>

\*Percentage of the total number of article omission errors [24]

Likewise, the analysis according to length of residence showed that the aforementioned errors were mainly encountered in the productions of the participants with less than 3 years, and the percentage of article omission errors decreases considerably for their peers with a longer length of residence (see Table 110).

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**Table 110. Article omission errors for Catalan oral language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
Definite	19	<b>79.17</b>	3	12.50	2	8.33

\*Percentage of the total number of article omission errors [24]

Following, the patterns encountered from this type of errors will be presented. As regards to the errors of omission of the definite article in masculine singular, in the majority of cases the article should have accompanied a proper noun (examples 94a and 94b), but there also cases of omission before common noun (example 94c).

(94)

- a. Oel Joan va+començar a córrer.

Ø Joan started to run

‘Joan started to run’

- b. Oel Joan i Oel Pere passejaven per la ciutat.

Ø Joan and Ø Pere were walking in the town

‘Joan and Pere were walking in the town’

- c. aquest home en Oel primer dibuix pensa en una guitarra que vull [\*].

this man in Ø first image is thinking of a guitar he wants

‘this man in the first image is thinking of a guitar he wants’

Additionally, the cases of omission of definite article in feminine singular were only related to common noun, as in the following examples:

(95)

- a. i vaig+anar a buscar Ola ma germana a la guarderia.

and I went to pick.up Ø my sister from kindergarten

‘and I went to pick my sister up from kindergarten’

- b. quan vaig+arribar Ola meva mare m'esperava amb el dinar preparat.

when I arrived Ø my mother was waiting for me with the lunch ready

‘when I arrived my mother was waiting for me with the lunch ready’

Finally, there were two instances of the omission of definite article in masculine plural:

(96)

- a. arriba a casa i Oels sons pares li fan un regal.

s/he arrives home and Ø her/his parents give her/him a present

‘s/he arrives home and her/his parents give her/him a present’

#### 8.4.4 Catalan written language production

The analysis of the students’ written language productions regarding the article omission errors revealed that there were considerably more errors related to definite article than to indefinite article (see Table 111). Also, within the errors of definite article, the most encountered were cases of omission of definite article in masculine singular, which represented 56.25% of the total number of article omission errors.

Furthermore, the analysis according to length of residence revealed that in the cases of definite article omission errors, the percentages are higher for those with a longer length of residence, whereas the reversed tendency was encountered regarding indefinite article errors.

**Table 111. Article omission errors for Catalan written language production**

	No.	%*
Definite	28	<b>87.50</b>
Indefinite	4	12.50
Definite masculine singular	18	<b>56.25</b>
Definite masculine plural	2	6.25
Definite feminine singular	5	<b>15.63</b>
Definite feminine plural	3	<b>9.38</b>
Indefinite masculine singular	2	6.25
Indefinite feminine singular	2	6.25

\*Percentage of the total number of article omission errors [32]

**Table 112. Article omission errors for Catalan written language production by length of residence**

	< 3 years		3-6 years		> 6 years	
	No.	%*	No.	%*	No.	%*
Definite	6	18.75	11	<b>34.38</b>	11	<b>34.38</b>
Indefinite	4	<b>12.50</b>	0	0.00	0	0.00

\*Percentage of the total number of article omission errors [32]

On the one hand, regardless of the gender or number, the omission errors related to the definite article were linked to both proper noun (examples 97a to 97c) and common nouns (examples 97d).

(97)

- a. i tambe el quart capitol que parlava de com Øel Joan comença+a+tenir super poderes.

and also the forth chapter which presents how Ø Joan started to have super powers

‘and also the forth chapter which presents how Joan started to have super powers’

- b. hola soc Øla Cristina.

hello I am Ø Cristina

‘hello, I am Cristina’

- c. primer m’agradaria donar-le Øel enorabona per Øel llibre.

first I would like to give you Ø congratulations for Ø book

‘first, I would like to congratulate you for the book’

- d. i també li vull donar Øles gràcies a ella que em va+ajudar i em va+portar a Øla enfermeria quan vaig+caure i em vaig+fer mal al genoll.

and also I want to give Ø thanks because she helped me and took me to Ø nurse’s room when I fell and hurt my knee

‘and also I want to thank her because she helped me and took me to the nurse’s room when I fell and hurt my knee’

Lastly, as expected, the omission errors of indefinite article were exclusively related to common nouns:

(98)

- a. abans de que l’hem+començat [\*] a llegir a classe pensava que serà [\*] Øun d’aquells llibres tant avorrits que sempre fem a l’institut.

before we started to read it in class I thought it would be Ø of those books very boring that we always study at school

‘before we started to read it in class I thought it would be one of those boring books that we always study at school’

### **8.5 EVIDENCE OF L1 INFLUENCE**

The present section aims to synthesise of the descriptive results previously presented and also to attempt to establish a link between the most encountered categories of errors in both Spanish and Catalan and the morphological characteristics of the mother tongues, Romanian. A complete presentation of the Romanian language is out of the scope of this study, therefore, only the aspects relevant for our analysis will be briefly presented and demonstrated through examples<sup>25</sup>.

To begin with, we will revise the patterns of errors encountered regarding verb inflection. From the analysis conducted for Spanish language the results revealed that, regardless of the language production, the errors most frequent were those of use of the 3<sup>rd</sup> person singular instead of the 3<sup>rd</sup> person plural. Additionally, a high percentage of use of the Simple Present instead of the Present Simple Subjunctive or Imperfect was found, as well as the Present Subjunctive for the correct form in the Simple Present, mainly related to irregular verbs. Also, in the students’ oral productions for the aforementioned language, a considerable percentage of use of the impersonal mood Infinitive for a personal mood was found.

Furthermore, the most frequent categories of erroneous use in the other vehicular language, Catalan, for both oral and written productions were examined. The results revealed that the percentages of the errors that prevailed were related to the incorrect use of the 3<sup>rd</sup> person singular instead of 3<sup>rd</sup> person plural, the use of the Present Perfect for the Preterite, and the Simple Present instead of the Subjunctive or past tenses (Present Perfect, Imperfect, and Preterite).

Following, we will discuss the possible influence of the mother tongue as a cause for the aforementioned errors.

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<sup>25</sup> For a thorough presentation of Romanian grammar in English, see Pană Dindelegan (2013), Gönczöl (2007), and Krause and Flagner (2014), in Spanish, see Avram and Sala (2013), Chireac (2010), and in Catalan, see Lamuela and Ani (2005).

Firstly, it must be mentioned that according to the Romanian Grammar (Romanian Academy, 2008) in Romanian the verbs of the 1<sup>st</sup> inflectional class<sup>26</sup> (with the Infinitive ending in *-a*, both subclasses with and without the supplementary suffix *-ez*) have the same verb form for the 3<sup>rd</sup> person singular and 3<sup>rd</sup> person plural of the Simple Present (examples 1a and 1b).

1.
  - a. Copilul **așteaptă** autobuzul  
the child **wait-PRS.3SG=3PL** the bus  
'the child is waiting for the bus'
  - b. Copiii **așteaptă** autobuzul  
the children **wait-PRS.3PL=3SG** the bus  
'the children are waiting for the bus'

The same situation is encountered for the Romanian verbs belonging to the 5<sup>th</sup> class with the Infinitive ending in *-î* that do not have the supplementary suffix *-ăsc* (Pană Dindelegan, 2013) (examples 2a and 2b). Also, the same applies in the case of the verbs from the class 4 (ending in *-i*) without the supplementary suffix *-esc* (examples 3a and 3b).

2.
  - a. Copilul **coboară** din autobuz  
the child **get.off-PRS.3SG=3PL** the bus  
'the child gets off the bus'
  - b. Copiii **coboară** din autobuz  
the children **get.off-PRS.3PL=3SG** the bus  
'the children get off the bus'
3.
  - a. Copilul **oferă** flori

---

<sup>26</sup> According to the Romanian Grammar (Romanian Academy, 2008) the Romanian language has 5 conjugations or classes, each with its corresponding subclasses (except for the class in *-ea*) depending on other endings that are inflectionally relevant.

the child **offer-PRS.3SG=3PL** a flower

‘the child offers flowers’

b. Copiii **oferă** flori

the children **offer-PRS.3PL=3SG** flowers

‘the children offer flowers’

Secondly, there was an important amount of cases in which the Simple Present was incorrectly used instead of the Subjunctive or past tenses (Present Perfect, Imperfect, and Preterite) in subordinate clauses. In Romanian, the tense sequence from the main clause and the subordinate clause(s) is more flexible, as in the subordinate clause(s) tenses such as the present and the future are correct even when the verb in the main clause is in a past tense (example 4). The same rule does not apply to Spanish and Catalan, where in this case past tenses are required for the subordinate clauses. However, the cases of use of the Simple Present instead of the Subjunctive cannot be related to an influence of the L1, since in Romanian the tense used in adverbial clauses of purpose is also the Subjunctive (example 5). Hence, this type of error seems to be caused by the students’ difficulty in acquiring the Subjunctive, not by the mother tongue influence.

4.

a. **A visat** que **este** la un concert.

**dream-PRF.3SG** that **be-PRS.3SG** at a concert

‘S/he dreamt that s/he was at a concert’

5.

a. **Am venit** ca să **plătesc** factura.

**come-PRF.1SG** to **pay-SUB.1SG** the bill

‘I came to pay the bill’

Likewise, the incorrect use of the Present Perfect for the Preterite arises as a consequence of L1 influence, since in Romanian only the Present Perfect is used to express past actions (example 6a). The Preterite is used to narrate, mainly in works of literature and history (example 6b), or as part of regional talk (Romanian Academy, 2010; Gönczöl, 2007).

6.

a. Ieri **am mers** la plajă.

yesterday **go-PRF.1SG=1PL** to the beach

‘Yesterday I went to the beach’

- b. Prințul **văzu** un glob de foc.

the prince **see-PST.3SG** a fire ball

‘The prince saw a fire ball’

From the analysis regarding preposition errors for Spanish language it was found that the most frequent cases of preposition commission in both oral and written productions were concerning the use of the *con* instead of *en* to express means of transportation, the use of *a* instead of *en* to express static location, and the use of *en* for *a* to express dynamic location. Also, there were instances of incorrect use of *de* instead of *sobre* to express theme or subject and of the preposition *por* instead of *para*.

Additionally, in the case of errors caused by preposition omission in Spanish, regardless of the language production, the most omitted preposition was *a* introducing a direct object of person in the majority of cases, and from infinitive constructions, in several other instances. In the same line, the preposition *de* was omitted from constructions with verbs that are followed by an object introduced by this preposition. Lastly, *en* was omitted from defining relative clauses, whereas the preposition *por* from contexts where the causal conjunction *porque* was required.

On the other hand, the cases of incorrect use of prepositions encountered in the participants’ oral and written productions in Catalan were concerning the use of *amb* instead of *en* to express static location and instead of *a* to express a place complement.

When analysing the preposition errors, the first L1 influence emerges from the use of the preposition *con* to express means of transportation, as it would be done in Romanian (example 7). In this sense, it must be mentioned that in all the instances encountered in Spanish, the preposition *con* was always followed by the definite article, as it would be required in Romanian.

(7)

- a. Copiii merg la școală **cu** autobuzul.

the children go-PRS.3PL to school **PREP ART.DEF** bus

‘The children go to school by bus’

That notwithstanding, in this case, the use of the incorrect preposition *con* could be a consequence of Catalan also, as the equivalent preposition *amb* is the one used to express means of transportation, too (example 8).

(8)

- a. Els nens van al cole **amb** bus.

the children go-PRS.3PL to school **PREP** bus

‘The children go to school by bus’

Furthermore, the omission of the preposition *a* in Spanish introducing a direct object of person also has its roots in the morphology of the mother tongue. Specifically, Romanian is the only Romance languages that does not use to mark the dative case a preposition derived from the Latin preposition *ad* (meaning ‘to, towards’).

(9)

- a. Mama ceartă copilul

the mother scold-PRS.3SG=3PL  $\emptyset$  the child<sup>27</sup>

‘The mother scolds the child’

In the same vein, there are verbs which in Spanish and/or Catalan require a preposition (as for example the Spanish ‘darse cuenta **de** algo’ or ‘empezar **a** hacer algo’), while in Romanian language it is not necessary, and consequently the participants tend to omit the prepositions in those cases, as they would have done in their mother tongue (examples 10a and 10b).

(10)

- a. Îmi amintesc ziua în care am început să studiez in această școală.

remember-PRS.1SG the day when I start-PRF.1SG  $\emptyset$  study-SUB.1SG at this school

‘I remember the day I started to study at the school’

- b. Când a întors capul, și-a dat seama că autobuzul a plecat.

when s/he turn-PRF.3SG his/her head, s/he realize-PRF.3SG  $\emptyset$  the bus leave-PRF.3SG

‘When s/he turned her/his head, s/he realized the bus left’

<sup>27</sup> The symbol  $\emptyset$  is used in the gloss to point out where the element in question would be located in the other language(s) studied.

Another linguistic category that was highly prone to errors for both vehicular languages was the pronoun. As regards to Spanish, the most encountered cases of pronoun commission were related to the incorrect use of the direct (*lo*) and indirect object (*le*) pronouns. Concretely, the direct object pronoun was used instead of the indirect one, and the latter was used with inanimate objects. There were also errors caused by incorrect person agreement for the direct object singular pronoun *lo*, as it was used instead of the correct plural form *los*. Likewise, there were cases of erroneous substitution of the neuter demonstrative pronoun *esto* for the masculine singular demonstrative *este*. The incorrect use of neuter forms of pronouns could be a consequence of L1 influence, as in Romanian the pronouns do not have a different neuter form in these cases, but uses the feminine pronoun forms for this purpose (example 11).

(11)

- a. **Asta** nu mă convinge.

**this-PRON.F.SG** not convince-PRS.3SG me

‘It does not convince me’

Concerning the pronoun errors encountered in students’ productions in Catalan, different patterns of erroneous use emerged. Specifically, from the oral productions the most frequent errors were due to the use of the indirect object pronoun in Spanish *le* instead of the Catalan equivalent *li*. This type of errors could point towards a lateral transfer between the two official languages. Even more, once again the direct object pronoun *el/lo* was used instead of the indirect object pronoun *li*.

From the written productions in Catalan the most encountered commission errors related to pronoun were of incorrect number agreement for the demonstrative pronoun, as the feminine singular *aquesta* was used instead of the masculine singular correct form *aquest*, always for the noun problem (*problema*). As this last type of errors was encountered mainly in the case of the group with a length of residence shorter than 3 years, which could prove that the errors are due to the participants’ uncertainty regarding a masculine noun ending in *-a*, the widely-known suffix that marks feminine gender for nouns. Also, there were instances of use of the direct object pronoun *lo* instead of the neuter form *ho*. As mentioned in the case of the neuter pronouns in Spanish, the errors related to these

pronouns could be caused by the fact that in the mother tongue the pronouns do not have a distinct neuter form or are not used at all in similar contexts (example 12).

(12)

- a. Sper să petrecem și mai bine ca anul trecut.

I hope-PRS.1SG we Ø have.fun-SUB.1PL even better than last year

‘I hope we will have even more fun than last year’

Lastly, in the participants’ productions in Catalan there was a high percentage of pronoun omission, mainly of the pronoun *hi*, *ho*, and *en*, which, as previously mentioned, do not have equivalent forms in the L1 (examples 13a and 13b) and thus present additional difficulty in the process of acquisition.

(13)

- a. Nu știu.

not Ø know-PRS.1SG

‘I don’t know it’

- b. Mulțumesc pentru carte și sper să scrii alta.

thank-PRS.1SG for book and hope-PRS.1SG Ø write-SUB.2SG another one

‘Thank you for the book and I hope you will write another one’

Finally, regardless of the language or the language production taken into account, the proportions of article errors represent a considerable part of the total number of errors encountered.

On the one hand, for Spanish language the error type most frequently found concerning the article was addition. Specifically, the definite article was added to express means of transportation in the majority of cases. This error arises from the influence of the mother tongue, since in Romanian, as previously mentioned when dealing with prepositions, to express means of transportation the preposition used is *cu* (with), and it is always followed by a noun determined by a definite article (see example 7). Also, there were cases of article addition before names or other proper nouns, aspect that can be attributed to the influence of Catalan, where the article is required before names.

On the other hand, in the case of Catalan language, for both oral and written language productions, from all the article errors encountered, the omission ones prevailed.

Concretely, the definite article was omitted before both common nouns and proper nouns. Once again, these errors can have their source in the participants' L1 due to the fact that in Romanian the definite articles are attached to the end of the noun as enclitics, thus the phenomenon of article agglutination occurs (Romanian Academy, 2008; Pană Dindelegan, 2013):

(14)

- a. M-am dus să o iau pe sora mea de la grădiniță.

I go-PRF.1SG pick.up-SUB.1SG **ART.DEF** my sister from kindergarten

'I went to pick my sister up from kindergarten'

- b. Când a ajuns acasă părinții săi i-au dat un cadou.

when arrive-PRF.3SG home **ART.DEF** her/his parents give-PRF.3PL her/him a present

'When s/he arrived home, her/his parents gave her/him a present'

# 9 DISCUSSION AND CONCLUSIONS

## 9.1 DISCUSSION

The main purpose of the present study has been to investigate the processes of second language acquisition, first language maintenance, and language transfer in the case of the immigrant Romanian students in Catalonia, as well as the effect of L1 (Romanian) instruction and length of residence on the three languages analysed: Catalan, Spanish, and Romanian.

Following, the results of the empirical study will be discussed in relation to the objectives and hypotheses established and the findings of previous research.

The analysis conducted to examine the participants' level of language competence revealed that there were similar total scores for the two official languages, Spanish and Catalan, and lower scores for the participants' mother tongue, Romanian. Correspondingly, the hypothesis H1 was partially confirmed, as the competences in Romanian were lower than in Spanish and Catalan, but the students' language competences in Spanish and Catalan were similar. These results go in line with the ones of other studies conducted in the Catalan context (Huguet, 2007, 2009; Navarro & Huguet, 2010; Oller, 2008; Oller & Vila, 2011).

Regarding the analysis of the proportion of errors according to language production, the results showed that the proportion of errors in the oral language production was lower than the proportion in the written one for the three languages. These findings confirm our expectations (H3) and follow the results found in previous studies (Chireac, Serrat, & Huguet, 2011; Oller & Vila, 2011). The explanation lays in the distinction drawn by Cummins (1981) between basic interpersonal communicative skills (BICS), which are deployed in oral interaction and cognitive/academic language proficiency (CALP), which is linked to written language, and the time span necessary to acquire each. Consequently, since the communicative skills require fewer years (are acquired at a functional level within about two years after the initial exposure to the second language), it is expected to find lower proportions of errors in the oral productions.

Further, from the analysis according to language, different patterns emerged for oral and written language production, which seems to confirm our hypothesis (H2) and go in line with the findings of previous studies (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Huguet, 2008). Specifically, in oral production, the proportion of errors was significantly higher in Romanian than in the two vehicular languages, and also higher in Spanish than in Catalan. This results follow the findings of Chireac (2010) and are justified by the fact that the students are schooled in Catalan and therefore exposed to an academic level of the language, whereas Spanish is present on an average of 3 hours weekly, under the subject 'Spanish language and literature' (Generalitat de Catalunya, 2007).

On the other hand, the results obtained from the written productions indicate that the proportion of errors in Spanish was lower compared to the other two languages. The latter results regarding the official languages contradict our expectations, since the percentage of errors in Catalan languages was expected to be lower, as it is the vehicular language of the school. In order to shed light on these apparently contradictory results, more information should be provided regarding aspect such as the TTR (Type-Token Ratio) and other data regarding the richness of correct use, etc., which could provide a more complex and accurate view on the results obtained.

As could be seen from the analysis conducted according to linguistic category, verb errors were among the most encountered ones, which confirms the results of similar studies (Ambadiang, Camus Bergareche, & García Parejo, 2008; Díaz & Bekiou, 2006) that concur that, regardless of the L1, verb inflection is one of the most problematic aspects in the process of SLA. Various researches were conducted in this sense both internationally (Asencion-Delaney & Collentine, 2011; Barnwell, 1987; di Franco, 2007; Fernández, 1997; García, 2014; Gutiérrez Quintana, 2005; Kočman, 2011; Leontaridi, Peramos Soler, & Morales Ruiz, 2008; Liskin-Gasparro, 2000; Martínez Guillem, 2010; Rakaseder & Schmidhofer, 2014; Salaberry, 1999; Santos Gargallo, 1993), and also in the Catalan context (Chireac, Serrat, & Huguet, 2011; Gràcia, 2007; Gràcia & Serrat, 2003; Serrat, Gràcia, & Perpiñá, 2007).

However, our hypothesis (H5) was partially confirmed, since in the students' oral and written productions in Spanish prepositions accounted for the highest percentage of errors, closely followed by verb, while in the written productions in the mother tongue, articles were most prone to error, followed by preposition errors. In the same vein,

previous studies (Chireac, 2010; Chireac, Serrat, & Huguet, 2011) also found that prepositions and pronouns account for a high percentage of the students' errors. The high percentage of errors related to pronouns and prepositions draws the attention upon these problematic aspects in second language acquisition, which seem to have been somewhat neglected until present, and the consequent need for them to receive the due importance in the classrooms and also when constructing the corresponding textbooks.

Additionally, the influence of attendance at Romanian classes was examined, on both the students' language competences in the languages studied and the proportions of errors encountered in their productions.

Firstly, when observing the effect of attendance at Romanian classes on the language competence in the three languages, different patterns emerged. Specifically, as expected (H6), the analysis conducted on Romanian language revealed that the participants who attended classes in their mother tongue obtained higher total scores and higher scores in the tasks focused on oral comprehension, morphosyntax, orthography, and written expression than their peers who did not attend those classes. This seems to indicate that attending classes in the L1 helps the participants preserve their level of competence in their mother tongue.

Meanwhile, the findings from the analysis conducted on the two vehicular languages do not seem to meet our expectations (H6), since no significant results were found for the competences in Catalan and Spanish between the students who attended Romanian classes and those who did not. However, these findings should not be interpreted as a contradiction of the Interdependence Hypothesis (Cummins, 1981) or a lack of transfer among the languages in question. In this regard, when we examined the correlations between language competences for the two groups determined by attendance it was revealed that the relationships of competences in Romanian with the competences in the two official languages were relatively stronger for the students who attended Romanian classes than for those who did not attend. This seems to indicate that the interdependence and linguistic transfer processes do take place (Huguet, 2008, 2014), but not as significantly as expected. These findings could be related to the structure of the course in question and its approach, which may be more focused on civilization and culture, rather than on linguistic aspects. Additionally, it is possible that the approach of the course is more communicative or written/academic. Consequently, a closer look has to be taken on

how the classes are conducted, which are the objectives set for them, and lastly, how they can be adjusted in order to further serve our purpose.

Similarly, the limitations conveyed by the construction of the above-mentioned variable in a binary (yes/no) manner must be acknowledged, since this is somehow restrictive as for the information provided. In this sense, future studies are desirable in order to examine more in-depth the issue of attendance at classes of L1, e.g., the frequency of attendance, students' participation and commitment regarding the classroom activities, students' perception of the utility of the aforementioned classes, etc.

Further, the influence of attendance at mother tongue classes on the proportions of errors was analysed (H7).

We are fully aware of the fact that Cummins' Interdependence Hypothesis (1981) states that despite the fact that there is an underlying cognitive/academic proficiency that is common across languages, the surface aspects of different languages are clearly separate and thus the analysis we conducted of proportion of errors on morphosyntactic aspects is not conveyed among the concepts that get transferred. Nevertheless, we sought to examine which if any, morphosyntactic aspects get transferred at this superficial level and if this transfer is conditioned by attendance at classes of mother tongue.

The corresponding results showed that in the case of the mother tongue, the students who attended Romanian classes tended to make fewer errors than their peers who did not attend those classes on different categories of errors: article omission, noun commission, preposition addition, pronoun omission, and pronoun addition errors. However, the proportion of verb omission errors found in the students' oral productions was higher in the case of those who attended Romanian classes compared to their peers who did not. To understand these apparently contradictory results, we must take into account that verb omission errors could be linked to a feature of oral or informal speech in the mother tongue, which could have been enhanced due to attendance at Romanian classes, and thus make it more prone to overgeneralization by the students.

In the case of the two official languages of Catalonia, Catalan and Spanish, it was noticed that Romanian classes benefit the students who attended them in the proportions of errors related to the vast majority of categories studied, in both oral and written productions: noun and article commission errors, article addition, verb and preposition omission errors,

pronoun commission, etc. That notwithstanding, the students who attended the aforementioned classes tended to make more errors related to a few categories (preposition addition, verb omission, pronoun addition, and pronoun omission errors), mostly in the case of written productions.

Taking into account that the same areas were benefited in the oral productions, these latter results should not be interpreted as contradictory. That is, as previously mentioned, the written language is linked to the cognitive/academic language proficiency (Cummins, 1981), which requires more time to be fully acquired, therefore the difficulties encountered by the participants in their written productions. Additionally, the cognitive-academic language proficiency (CALP) is the one that goes beyond each of the languages that the student learns, and once it develops, can be applied to any linguistic context. Even more, the linguistic categories involved in the apparent contradictory results are those of verb, preposition, and pronoun, which was already established by the findings of the present study and of previous ones (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; García, 2014; Gràcia, 2007, among others) that they represent the most problematic aspects when acquiring the L2s in question, and also the ones that prevail even in the case of the participants with a longer length of residence in the host country. The results are supported by the analysis conducted to examine the participants' level of language competence, which reveal that the means for all three languages studied were fairly low. Likewise, these findings go in line with the ones of previous research which found that even after more than 6 years of stay and after acquiring a high level of competence in the vehicular languages, the immigrant students still present problematic aspects with which they struggle and thus making them score lower than their native peers (Huguet et al., 2011, 2012, 2013; Maruny & Molina, 2000; Navarro & Huguet, 2005, 2010).

In the same vein, as could be seen from the results, the relationships of competences in Romanian with the competences in the two official languages of Catalonia were stronger for the students who attended Romanian classes. Therefore, the results could indicate that attendance at Romanian classes enhances the transfer (including negative transfer, too) between the two official languages and from the mother tongue. Thus, the increased percentage of preposition addition and pronoun omission errors in Catalan could be a consequence of the correct use in Spanish and/or Romanian language. Furthermore, the problematic aspects (prepositions and pronouns) are both overused (added) and omitted,

which could indicate that these aspects have been acquired by the learners<sup>28</sup> but they still present difficulty in use (theory sustained by the fact that these types of errors prevail even in the case of those with longer length of residence), which makes the participants to use them overconfidently or avoid them altogether. Accordingly, it has been previously established that the learners have a tendency to avoid uncertain aspects of the target language (Schachter, 1974), which could lead to omission errors. This theory has also been confirmed by previous studies conducted on specific areas of second language acquisition (Fernández, 1995a; Santos Gargallo, 1993).

Taking into account the previously presented, these findings are highly important for the present study and also for the research in the field for two main reasons. On the one hand, there are numerous studies examining and confirming the importance of the interdependence hypothesis (Huguet, 2008, 2014; Lasagabaster, 2001; Vila, 2006) with elements located at a deeper level of linguistic competence. However, the novelty of the present study resides in the fact that it seems to validate the aforementioned theory when analysing surface elements, as it is the case of the error analysis we conducted on morphosyntactic aspects. On the other hand, it supports the importance of attendance at Romanian classes (i.e., maintaining the contact with the mother tongue at an academic level) in abating the process of L1 loss or deterioration (Cherciov, 2011; de Bot & Weltens, 1985 as cited in van Els, 1986) by the Romanian immigrant students.

Following, we examined the effect of the variable length of residence on the proportion of errors encountered in the participants' oral and written productions for the three languages studied: Romanian, Catalan, and Spanish.

Length of residence influences the proportion of errors, as expected (H8). Specifically, when comparing the three groups according to the length of residence in the host country for the two official languages, the results revealed that the proportions of errors were significantly lower for the group with more than 6 years of residence compared to their peers with a shorter length of residence, for the different categories and subcategories established. Thus, these results seem to confirm previous research in the Catalan context assessing the language competence of both native and immigrant students from various L1 backgrounds (Chireac, 2010; Huguet, 2014; Huguet, Navarro, & Janés, 2007; Maruny

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<sup>28</sup> See Dulay, Burt, and Krashen (1982) and James (1998) on how different types of errors reveal different levels of competence.

& Molina, 2000, among others), which revealed that students with a length of residence longer than 6 years obtain higher averages than their peers with shorter lengths of residence, thus the process of acquisition of the official languages of the host society occurs (Huguet et al., 2011, 2012, 2013; Navarro & Huguet, 2010).

In the case of the participants' mother tongue, the students with a longer length of residence in the host society tended to make more errors in both oral and written productions, which affected most of the linguistic categories studied (article, verb, preposition, etc.), thus confirming hypothesis H9. Given that in this case Romanian represents a mother tongue in situations of migration, it is expected for all speakers living in bilingual contexts to experience some degree of deterioration in the L1 (Cherciov, 2011) or loss of a native language by migrants (de Bot & Weltens, 1985 as cited in van Els, 1986).

In a preliminary study conducted on Romanian immigrant students in Catalonia analysing verb inflection errors in Spanish and Romanian languages, Popa, Chireac, and Huguet (2015) also observed that the errors in the participants' mother tongue increase with a longer length of residence. The authors draw the attention on the fact that the hypothesis of incomplete acquisition of the mother tongue cannot be discarded either. We do not have in our study the necessary data to conclude if it is the case of incomplete acquisition of language loss. In order to completely certify this speculation, further studies should focus on examining additional variables, such as the participants' age at emigration and whether they were schooled in their country of origin or not and for what period of time (see the study by Oller & Vila (2011) on the importance of the participants' schooling in their home country in the process of interdependence/ transfer of knowledge).

In this sense, de Bot, Gommans, and Rossing (1991) point out the linear relation between time and attrition when there is low contact with the L1. Correspondingly, Schmid and Köpke (2007) state that L1 attrition is a process governed by two factors: the presence and development of the L2 system on the one hand, and diminished exposure to and use of the L1 on the other. Taken to our context and given the apparent process of language deterioration underwent by the L1 of the Romanian immigrant students, this could indicate that they have reduced access to Romanian language, since the use they make of it in the L2 society could mainly resume to their family members and at an oral level. As a consequence, they underperform at academic levels of the language.

Summarising, from the different analyses conducted on the participants' mother tongue we can conclude that it suffers a visible process of deterioration. However, this process could decrease by maintaining the contact with the L1 through attendance at Romanian classes.

Furthermore, an in-depth analysis was conducted in order to examine the process of second language acquisition underwent by the participants. The results regarding verb inflection confirmed our expectations (H10), since for the languages studied, both oral and written productions, the most frequent verb person errors were related to the 3<sup>rd</sup> person singular. This error is a recurrent one regardless of the students' L1 (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia, 2007; Gràcia & Serrat, 2003; Serrat, Gràcia, & Perpiñá, 2007), and one explanation could be that the verb form of 3<sup>rd</sup> person singular is a less marked verb form from a morphological point of view (Serrat, Gràcia, & Perpiñá, 2007). Also, as expected (H14), the 3<sup>rd</sup> person singular was erroneously used instead of the 3<sup>rd</sup> person plural as an influence of the mother tongue, since in Romanian language there are several classes of verbs with the same form for 3<sup>rd</sup> person singular and plural for the Simple Present.

Regarding the tense with the highest percentage of incorrect use, the Simple Present was the one for Spanish and the Present Perfect for Catalan, in both oral and written. Accordingly, the corresponding hypothesis (H11) received partial confirmation. Likewise, the Simple Present was incorrectly used instead of the Subjunctive or past tenses (Present Perfect, Imperfect, and Preterite) in subordinate clauses, the latter as a consequence of the correct use in the L1, since in Romanian the agreement of the tenses from the main clause and the subordinate clause(s) is more flexible. However, the use of the Simple Present instead of the Subjunctive seems to be caused by the students' difficulty in acquiring this tense, not by the mother tongue influence, which has been proven by previous studies, too (di Franco, 2007; Fernández, 1995a; Madrid, 1999; Santos Gargallo, 1993; Schachter, 1974). In this regard, Gràcia (2007) mentions that the Simple Present is acquired before the Present Simple Subjunctive, although the latter tense also exists in the L1 of the Romanian immigrant group, which leads Chireac (2010) to speculate that the erroneous use of the Subjunctive could be due to the mother tongue, since in Romanian the subjunctive has a different use than in Catalan and Spanish, as an influence from Greek.

Further, what does seem to indicate an influence from the L1 is the incorrect use of the Present Perfect for the Preterite (H15), conclusion reached also by similar studies (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia, 2007). Additionally, it is noteworthy that the use of the Present Perfect for the Preterite occurred more in Catalan than in Spanish, which go in consensus with the conclusions reached by Gràcia (2007).

Summarizing the results regarding the influence of the mother tongue verb-wise, they go in line with other studies that showed that the students followed the pattern of their L1 in several aspects of verbal usage (Gràcia, 2007; Navarro & Nicoladis, 2005; Phillips, 2007).

The incorrect use of prepositions in Spanish confirmed our expectations (H12), as most preposition errors encountered in the students' oral and written productions were related to the prepositions *con*, *a*, *en*, and *de*, findings that go in line with previous research in the field (Azevedo, 1980; Campillos Llanos, 2014; Chireac, 2010; Fernández, 1994, 1995a, 1997; Giraldo Silverio, 1997; Gutiérrez Quintana, 2005; Jódar, 2006; Santos Gargallo, 1993). The general difficulty in acquiring this syntactic class, as well as other relatively 'closed classes' of function words, could be related to their little lexical meaning.

On the other hand, the cases of incorrect use of prepositions encountered in the participants' oral and written productions in Catalan were concerning the use of *amb* instead of *en* to express static location and instead of *a* to express a place complement. As for the influence of the mother tongue in the use of the aforementioned class (H16), it emerged in Spanish from the use of the preposition *con* to express means of transportation, as it would be done in Romanian language. That notwithstanding, in this case, the use of the incorrect preposition *con* could be a consequence of Catalan also, as the equivalent preposition *amb* is the one used to express means of transportation, too. This could indicate a possible bidirectional (Herdina & Jessner, 2002; Pavlenko & Jarvis, 2000) or multidirectional (Wlosowicz, 2012) transfer. In the same vein, we must be aware of the fact that crosslinguistic influence is often bidirectional or even multidirectional. Consequently, the subjects' performance can be very heterogeneous and some error sources can only be established by means of plausible interpretation. The aforementioned theory could also explain the considerable percentage of incorrect use in Spanish as an influence from Catalan of the preposition *a* instead of *en* to express static location and of the preposition *por* instead of *para* (Solé, 2003).

Similarly, the omission of the preposition *a* in Spanish introducing a direct object of person could also have its roots in the morphology of the mother tongue (Chireac, 2010; Chireac, Serrat, & Huguet, 2011). However, it ought to be mentioned that the personal preposition *a* is a difficult aspect to acquire for learners of Spanish as L2, regardless of the background (Fernández, 1995a, 1997; Guijarro-Fuentes & Marinis, 2007). Interestingly, most transfer related to prepositions affects Spanish. As previously mentioned, this is probably also a consequence of the fact that it is not the vehicular language of the school.

Another category that was highly prone to errors for both vehicular languages was the pronoun, both in oral and written tests. On the matter of errors caused by transfer, it was noticed that it occurs from the mother tongue, confirming our hypothesis (H16). Even more, there was evidence indicating transfer from Spanish and Catalan and vice versa, which could point towards a lateral transfer between the two official languages. It is important to highlight that most pronoun errors seem to be constant or even increase by length of residence (the same as in the study conducted by Chireac, 2010), which draws the attention upon pronouns as one of the most problematic aspects in second language acquisition (Chireac, 2010, Chireac, Serrat, & Huguet, 2011; García, 2014).

Additionally, from the in-depth analysis of the recurrent erroneous pronoun use it was noticed that in the oral productions in Catalan the pronoun *en* does not stand out, despite the well-known (Chireac, 2010) difficulty learners face in acquiring the Catalan clitics ('pronomes febles'). The explanation could reside in the structure and particularities of the oral tests used for the study (see section Methodology for a detailed presentation of the instruments), which could have not fostered the appropriate contexts for using the mentioned pronoun.

As expected (H13), the vast majority of article errors encountered in the participants' oral and written productions in Catalan and Spanish were related to the definite article, conclusion reached by other studies too (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Madrid, 1999; Santos Gargallo, 1993; Serrat, Gràcia, & Perpiñá, 2007). Similarly, there were significant cases of incorrect article use as a consequence of the mother tongue influence (H17), as for instance the definite article omission errors because of the agglutination of the definite article in Romanian language or the cases of addition of definite articles to express transportation. There was also a high percentage of article

commission errors too, namely the use of indefinite article for the definite one as a consequence of the existence of neuter gender in Romanian. These findings go in line with the ones of previous studies with immigrant students with the same L1 (Chireac, 2010; Chireac, Serrat, & Huguet, 2011). Once again, there was also evidence of lateral transfer (Spanish-Catalan), since the cases of article addition before names or other proper nouns in Spanish can be attributed to the influence of Catalan, where the article is always required before names.

That notwithstanding, it must be mentioned that errors regarding the article found in numerous other studies prove that it is one of the most problematic aspects to acquire in an L2 (Dušková, 1969; Jarvis, 2002; Lado, 1957; Madrid, 1999; Master, 1997; Santos Gargallo, 1993; Serrat, Gràcia, & Perpiñá, 2007; Zdorenko & Paradis, 2008, 2011). Specifically, article omissions were reported in learners of English whose L1s did not have articles (Huebner, 1985; Lardiere, 2004; Parrish, 1987; Robertson, 2000; White, 2003), and such learners' difficulties with articles were naturally attributed to the influence of their L1s. Also, difficulty in choosing appropriate articles was documented in these learners, who produced more errors of substitution than speakers of languages with article systems similar to English, such as French (Sarko, 2008), Greek (Hawkins et al., 2006), or Spanish (Ionin, Zubizarreta, & Maldonado, 2008; Snape, Leung, & Ting, 2006). Omission and substitution errors were documented in learners from no-article L1 backgrounds of all proficiency levels, even in learners who reached the final state of L2 development (Lardiere, 2004; Zdorenko & Paradis, 2011; White, 2003).

Another aspect that confirms our expectations (H18) and goes in line with previous research in the same context (Chireac, 2010; Chireac, Serrat, & Huguet, 2011; Gràcia, 2007) is that the errors that are a consequence of the L1 influence seem to be more frequent in the case of the participants with a shorter length of residence, hence less proficient in the L2(s), and decrease with a longer length of residence, mostly in the case of verb and preposition errors. This seems to follow the theory that language transfer occurs mostly with less proficient learners. Correspondingly, studies focusing on competence concluded that students with low competence tended to transfer more elements of their L1 than more advanced students (Celaya, 2007; Celaya & Torras, 2001; Hirakawa, 1990; Navés, Miralpeix, & Celaya, 2005; Ortega, 2008; Woodall, 2002).

Our findings regarding the influence of the mother tongue coincide with results obtained in other contexts examining the importance and influence of the L1 in process of SLA

internationally (Alemán Bañón, Fiorentino, & Gabriele, 2014; Corder, 1983; Cuza et al., 2012; Ellis, 1994; Jarvis & Pavlenko, 2008; Larrañaga et al., 2011; Luk & Shirai, 2009; Montrul, Dias, & Santos, 2010; Navarro & Nicoladis, 2005; Odlin, 2005; Ortega, 2008; Rothman, 2011) and also in the Catalan context (Chireac, 2010; Chireac, Serrat, & Hugueta, 2011; Gràcia, 2007; Gràcia, Crous, & Garganta, 2008; Gràcia & Serrat, 2003). Similarly, the importance of L1 as a source of errors was widely examined in various linguistic contexts (Chondrogianni, 2008; Madrid, 1999; Navarro & Nicoladis, 2005; Ortega, 2008; Phillips, 2007) and also confirmed by the results of the present study.

## **9.2 CONCLUSIONS**

The present study comes as an answer to the necessities and the research lack in our field, as it deals with the process of second language acquisition and language transfer in the case of the Romanian immigrant students of two L2s simultaneously (Catalan and Spanish). Additionally, it provides new information that has not been previously studied, as it analyses the evolution of the L1 (Romanian) of the participants and the effect of attendance at Romanian classes and length of residence on the three languages analysed: the mother tongue and the two official languages of Catalonia. To our knowledge, the L1 study is currently unique in the Catalan context, since the studies conducted with Romanians focus on analysing the two official languages, without taking into account the mother tongue of the participants.

As previously seen, one of the main foci of the study is the importance of the study of the participants' mother tongue.

On the one hand, empirical research on individual L1 loss in an L2 environment has started only recently. In the investigation previously described we tried to find within-group characteristics that might influence language maintenance and loss in such a setting. The focus was on two factors: attendance at classes of mother tongue and length of residence in the host country.

Accordingly, given that models of first language attrition are intrinsically related to models of forgetting, of acquiring a second language, and of interlinguistic interference (Cherciov, 2011), the study of the mother tongue acquires even more relevance in our context. Indeed, the different analyses conducted on the participants' mother tongue

revealed that it suffers a severe process of deterioration. The dangerous consequence of ignoring this reality resides in the fact that studies with children were able to show complete L1 loss. However, this process is considerably decreased by maintaining the contact with the L1, so the implementation of the classes of Romanian language, culture, and civilization represents a step forward in the right direction. Subsequently, analogous studies with immigrant students of different L1 would be desirable to examine if their mother tongues undergo a similar process.

On the other hand, on the basis of Cummins' (1981) Linguistic Interdependence theory, attendance at Romanian classes benefices the acquisition of the official languages of the host society, too. Regarding this aspect, our study's findings are also important for the research in the field since they validate the aforementioned theory when analysing surface elements, as it is the case of the morphosyntactic aspects. To sum up, all the above-mentioned corroborates the importance and relevance of maintaining and encouraging attendance at classes of mother tongue.

Furthermore, the implications of the present study in language teaching are multiple and complex.

Firstly, it highlights the necessity to grant errors the fundamental role in language acquisition they ought to receive. In this regard, Fernández (1995b) related errors to interlanguage, and thus saw errors as an essential part and strategy of the process of language learning, which involves different stages or interlanguages until reaching the target language. Specifically, according to Corder (1974) the investigation of learner's errors can serve two pedagogic purposes: diagnostic (to pinpoint a problem in learner production) and prognostic (to guide pedagogic decision-making about how to solve a specific problem once identified). The latter author subscribes to the view that studying students' errors of usage has immediate practical application for language teachers, thus emphasising the goal of great part of the work on EA, which is pedagogical remediation (Gass, 2013). Also, researchers are interested in errors because they contain data on the strategies that learners use to acquire a language (Dulay & Burt, 1974b).

In our study, the error analysis conducted draws the attention upon several problematic aspects in second language acquisition, especially some that seem to have been somewhat neglected until present (e.g., pronouns and prepositions). Subsequently, at a didactic level, this should encourage teachers, syllabus designers, and textbook writers to rethink important aspects of second language teaching – learning, so that the process of Catalan

and Spanish acquisition could be hastened by taking into account the initial problematic aspects.

In the same vein, it makes practical sense that if teachers know what is hard to acquire and practice it more in the classroom, they will be in a more favourable position to help learners achieve better command in the L2(s). Accordingly, the study of SLA enables teachers to examine critically the principles upon which the selection and organization of teaching have been based and also the methodological procedures they have chosen to employ. Every time teachers make a pedagogic decision about content or methodology, they are, in fact, making assumptions about how learners learn.

That notwithstanding, error analysis has its limitations. Classification of errors depends on error being localisable to the domains of phonology/graphology, morphology, syntax, lexis, discourse, etc. This is by no means always unproblematic, for example when inaccurate pronunciation or orthography produces another word<sup>29</sup>. Also, it is often difficult to decide whether an error is caused by language transfer or not, thus caution is recommended when interpreting the evidence of language transfer. In this regard, it would be useful for future studies to also examine the correct use of the learners, which would provide a more complex and complete view upon the process of language acquisition. Also, we need to draw attention to the necessity of future research in order to contrast the present results with those of studies that take into account more factors (e.g., age, age at emigration, schooling in the country of origin, etc.) and that involve a native control group for the assessment of the level of competence in the two official languages, Catalan and Spanish.

Additionally, we need to acknowledge the limitation of conducting an error analysis from the linguistic-cognitivist perspective, and the corresponding necessity of future studies in the same context conducted according to the patterns and methodology proposed by the newer SLA approaches. For example, a conversation analysis would be highly recommended and enriching in such a context.

Secondly, the necessity to take into account the L1 background of the students when teaching second languages emerges, especially at elementary levels, since the errors that are a consequence of the L1 influence seem to be more frequent in the case of the less

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<sup>29</sup> We created the category 'ambiguous' in the attempt to cover this type of errors.

proficient learners (Celaya, 2007; Celaya & Torras, 2001; Hirakawa, 1990; Navés, Miralpeix, & Celaya, 2005; Ortega, 2008; Woodall, 2002). However, we must be aware that L1 transfer is not only a great concern in early stages of L2 acquisition but also in later stages, especially if the learners do not find the right path of development in L2 acquisition (Larrañaga et al., 2011). Accordingly, teachers and researchers in the field of SLA must acknowledge that the linguistic particularities of the L1 and the possible similarities between it and the instructed language could be an important factor in the acquisition process. Even more, being aware of the particularities of the learner's L1 could help the teacher foresee an error and strengthen that area before the error occurs (Martínez Guillem, 2010). Accordingly, Slabakova (2002: 186) states that “much more precise research questions can be formulated if L1 transfer is taken into account and properties that differ in the L1 and the L2 are investigated”.

Specifically, at pedagogical level, the importance of taking into account the students' linguistic background resides from two main reasons: on the one hand, in this matter possible difficulties due to interferences with the L1 can be overcome; on the other hand, and somehow related to the first point, students' previous knowledge can be used as the foundation on which new linguistic knowledge can be built. In this sense, teachers must acknowledge that an immigrant student's mind is not a ‘tabula rasa’, he/she comes with a background baggage, which is highly diverse and complex.

Additionally, teachers and syllabus designers should militate against a ‘universal teaching’ and aim for a customized L2 teaching, not for learners, but for Romanian learners, which takes into account the linguistic particularities of the three Romance languages and the similarities and possible problematic aspects that emerge from those similarities. For example, in such customised syllabus, apart from the attention drawn on the distinction Preterite – Imperfect, due to the difficulties learners generally have in acquiring it in Spanish and Catalan, the distinction Preterite - Present Perfect should also receive special curriculum attention, since, as previously seen, it represents one of the main challenges faced by the Romanian learners of Spanish and Catalan.

Accordingly, as we can nowadays encounter, for instance, textbooks of ‘Spanish for English speakers’, ideally, textbooks should be designed for a specific group of learners (i.e., ‘Spanish for Romanian speakers’, in this case) according to their linguistic background, thus facilitating and encouraging the customized teaching previously mentioned.

Similarly, language policies should foster the changing towards a more personalized learning of the vehicular languages. In other words, policies that foster a ‘customized learning’ of the second languages are needed, avoiding the learning ‘melting pot’ phenomenon, where all immigrant students are taught regardless of their background and previous academic experience. For instance, in the reception classrooms (‘aules d’acollida’) present in Catalonia, a contrastive study of the L2s and the L1s of the immigrant students is advisable. Also, policies regarding the maintenance of the mother tongue are mandatory, given the present findings and for the reasons previously detailed.

Summarising, information regarding the children’s linguistic diversity and language acquisition patterns is important for the development of sustainable educational practices (Verdon, McLeod, & Winsler, 2014).

Likewise, the present study deals mainly with the analysis of L1 influence. However, language transfer can occur not only from an L1 to an L2 (forward transfer), but also from an L2 to an L3 (lateral transfer). Although encountered in our participants’ productions, lateral transfer was out of scope for our study, but it would be a vital aspect to develop in future studies in order to better understand the process of second language acquisition and all it entails in a bilingual context, such as the one of Catalonia.

Furthermore, the study of second language acquisition in migration context is relevant also at social level. Language education, and in particular the learning of the language(s) of the host country, has a major role to play in supporting the integration of young and adult migrants into educational systems, the labour market, and society at large. With this background frame, it seems that the language approach carried on in school will be very important for the acquisition of a new L2, as the difference between the students’ L1 and the school language can represent an obstacle in their integration (Ibarraran, Lasagabaster, & Sierra, 2008). In this regard, in the Catalan context several educational initiatives were promoted, which were targeted at the needs of immigrant students (e.g., the LIC Plan and the reception rooms, the Romanian language, culture, and civilization classes). Thus, those responsible for language policies can profit from studies coming from the fields of both language acquisition and language loss in order to advance a long-lasting multilingualism.

To conclude, we aimed to analyse the processes of L2 acquisition, L1 loss, and language transfer, taking into consideration the length of residence and attendance at Romanian

classes of the participants. We hope the present findings will encourage researchers to focus their attention on these processes as concurrent and further investigate to what degree they are interdependent.

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# ANNEXES

## Annex 1. Manual for codification system

### Correct use

For the codification of the correct use two different lines were used, one for the noun phrase (%mor line) and one for the verb phrase (%cod line).

### *Noun phrase*

#### *Abbreviations used*

n	noun
det	determinant
art	article
def	definite article
ind	indefinite article
dim	diminutive noun
prop	proper noun
ms	masculine, singular
mp	masculine, plural
fs	feminine, singular
fp	feminine, plural
nn	neuter noun
np	neuter plural
ns	neuter singular
pl	pluralia tantum
st	singularia tantum
AMB	ambiguous

***Pattern of codification for noun***

n|standard form-gender and number

Examples:

%mor: n|gorro-mp (for *gorros*)

%mor: n:prop|María (for *María*)

%mor: n|barco-dim-fs (for *barquita*)

***Pattern of codification for articles***

det:art:type|standard form-gender and number

Examples:

%mor: det:art:def|el-ms (for *el*)

%mor: det:art:ind|un-fp (for *unas*)

**The Romanian agglutinated definite article**

Since in Romanian language the definite article is agglutinated, unlike the other two Romance language studied (Catalan and Spanish), the codification system was slightly modified to adjust to this particularity.

***Abbreviation used***

A agglutinated definite articles

***Pattern of codification***

det:art:type|A-gender and number

Examples:

\*CHI: bunicii

%mor: n|bunic-mp+det:art:def|A-mp

\*CHI: un bunic

%mor: det:art:ind|un-ms n|bunic-ms.

\*CHI: impresiile mele

%mor: n|impresie-fp+det:art:def|A-fp det:pos|mele

***Verb phrase***

*Abbreviations used*

v	verb
aux	auxiliary verb
1s	first person singular
2s	second person singular
3s	third person singular
1p	first person plural
2p	second person plural
3p	third person plural
X	non-personal form
AMB	ambiguous

***Pattern of codification for personal moods***

v|infinitive form-person and number&tense

Examples:

\*CHI: él pone

%cod: v|pone-3s&PRE

\*CHI: hay

%cod: v|habe-X&PRE

\*CHI: me han+elegido

%cod: v|elegi-3p&PER

Table 113. Presentation of tenses and moods in Catalan, Spanish, and Romanian

Code	ENGLISH	SPANISH	CATALAN	ROMANIAN	Examples (Spanish, Catalan, Romanian)
<b>INDICATIVE</b>					
FUT	The Simple Future	Futuro Simple	Futur simple	Viitorul Simplu	cantaré, cantaré, voi cânta
PFU	The Future Perfect	Futuro Perfecto	Futur perfet	Viitorul anterior	habré cantado, hauré cantat, voi fi cântat
PRE	The Simple Present	Presente	Present	Prezentul	canto, canto, cânt
PER	The Present Perfect	Pretérito Perfecto Compuesto	Pretèrit Perfet	Perfectul compus	he cantado, he cantat, am cântat
IPF	The Imperfect	Pretérito Imperfecto	Pretèrit Imperfet	Imperfectul	cantaba, cantava, cântam
PLU	The Past Perfect (Pluperfect)	Pretérito Pluscuamperfecto	Pretèrit Plusquamperfet	Mai-mult-ca-perfectul	había cantado, haguí cantat, cântasem
PAS	The Preterite	Pretérito Perfecto Simple	Pretèrit perfet simple	Perfectul simplu	canté, cantí/vaig cantar, cântai
<b>SUBJUNCTIVE</b>					
SUB	The Present Simple Subjunctive	Presente	Present	Conjunctiv Prezent	cante, canti, să cânt
PSU	The Present Perfect Subjunctive	Pretérito Perfecto	Pretèrit Perfet	Conjunctiv Perfect	haya cantado, hagi cantat, să fi cântat
ISU	The Imperfect Subjunctive	Pretérito Imperfecto	Pretèrit Imperfet	-	cantara, cantés, X
PLS	The Past Perfect (Pluperfect) Subjunctive	Pretérito pluscuamperfecto	Pretèrit Plusquamperfet	-	hubiera cantado, hagués cantat, X

*Annexes*

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**CONDITIONAL**

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CON	The Conditional	Present	Condicional simple	Condicional	Condițional prezent	cantaría, cantaria, aș cânta
PCO	The Perfect	Conditional	Condicional compuesto	Condicional compost	Condițional perfect	habría cantado, hauria cantat, aș fi cântat

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**IMPERATIVE**

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IMP	The Imperative		Imperativo	Imperatiu	Imperativ	canta, canta, cântă
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***Pattern of codification for non-personal moods***

INF Infinitive

%cod: inf|sabe-INF (for *saber*)

GER Gerund

%cod: ger|construi-GER (for *construir*)

PPAR past participle

%cod: par|construi-PPAR (for *construir*)***Pattern of codification for verb expressions***

v|infinitive form-person and number&tense+second element(preposition)+third element (if verb-  
INF, GER, PAR, codify as such).

**Examples:**

\*CHI: te van+a+ayudar mucho más

%cod: v|i-3p&amp;PRE +a+inf|ayuda-INF

\*CHI: estaba+pensando

%cod: v|esta-1s&amp;IPF+ger|pensa-PROG

**Incorrect use**

The codification of the incorrect forms for all the linguistic categories analysed (noun, article, verb, preposition, and pronoun) was made on a different line (%err line).

*Types of errors*

OMI omission

ADD addition

COM commission

AMB ambiguous

***Noun phrase****Abbreviations used*

N noun

ART article

ART:DEF	definite article
ART:IND	indefinite article
def	definite
ind	indefinite
C	case
N	nominative
A	accusative
G	genitive
D	dative
V	vocative

***Pattern of error codification for noun phrase***

\$type of error|part of speech|initial structure=correct structure

**Examples:**

**For Catalan language:**

\*CHI: una excursió a la [\*] granja

%err: \$COM|ART|def=ind

\*CHI: limpiar (.) els animal [\*]

%err: \$COM|N|ms=mp

**For Spanish language:**

\*CHI: són class [\*]

%err: \$COM |N|fs=fp

\*CHI: ablamos otro dias [\*]

%err: \$COM|N|mp=ms

\*CHI: dos stacion [\*] de bus

%err: \$COM |N|fs=fp

\*CHI: 0el instituto

%err: \$OMI|ART:DEF|0=ms

\*CHI: porque la [\*] nicoleta  
 %err: \$ADD|ART:DEF|fs=0

\*CHI: con clase [\*] de  
 %err: \$COM|N|fs=fp

\*CHI: 0de 0las classes@s [: spa clases]  
 %err: \$OMI|ART:DEF|0=fp

\*CHI: me gustaria pasar un [\*] semana  
 %err: \$COM|ART:IND|ms=fs

\*CHI: hay la [\*] ventana  
 %err: \$COM|ART|def=ind

\*CHI: llama a [\*] 0un taxi  
 %err: \$OMI|ART:IND|0=ms

**For Romanian language:**

\*CHI: la matuse [\*] si la bunici  
 %err: \$COM|N|AMB=fp

\*CHI: lui [\*] bunicul [\*]  
 %err: \$COM|N:C|N=D

\*CHI: dragă bunic [\*]  
 %err: \$COM|N:C|N=V.

\*CHI: prin pădurii [\*] pentru a lu-a bureți  
 %err: \$COM |N|AMB=fp

\*CHI: cei patru membri ai familia [\*]  
 %err: \$COM|N:C|N=D

\*CHI: e tata [\*] unor copii  
 %err: \$COM|ART:DEF|tata=tatal

\*CHI: dragiii [\*] mei bunici.  
 %err: \$ADD|ART:DEF|mp=0

\*CHI: cu parinti [\*] ma inteleg foarte bine

%err: \$OMI|ART:DEF|0=mp

\*CHI: dragii [\*] bunicii [\*].

%err: \$ADD|ART:DEF|mp=0 \$ADD|ART:DEF|mp=0

### ***Verb phrase***

#### *Abbreviations used*

GER gerund

INF infinitive

PAR past participle

V verb

aux auxiliary verb

#### ***Pattern of error codification for verb phrase***

\$type of error|part of speech|initial structure=correct structure

Examples:

#### **For Catalan language:**

\*CHI: i m' Oha agradat molt

%err: \$OMI|V|0=aux.

\*CHI: un motiu més perque m'agradi [\*] el teu llibre

%err: \$COM|V|SUB=PRE

\*CHI: espécies d'animals que hi havien [\*]

%err: \$COM|V|3p=X

#### **For Spanish language:**

\*CHI: los niños es [\*]

%err: \$COM|V|3s=3p

\*CHI: me han dijo [\*] otras personas

%err: \$COM|V|PAS=PAR

\*CHI: espero que vienes [\*] a mi fiesta.

%err: \$COM|V|PRE=SUB

\*CHI: Oir al parque

%err: \$OMI|V|0=INF

\*CHI: me gustaria que me informe [\*]

%err: \$COM|V|SUB=ISU

### **For Romanian language:**

\*CHI: totul va+fii [\*] bine.

%err: \$COM|V|AMB=FUT

\*CHI: o mancam de [\*] 0când 0vb micuț

%err: \$ADD|PREP|de=0 \$OMI|ADV|0=cand \$OMI|V|0=vb

\*CHI: în prima imagine este [\*] <un> [/] trei persoane care (.) merge [\*] (.) de [\*] vacanțe (.) <cu> [/] cu mașină [\*].

%err: \$COM|V|3s=3p \$COM|V|3s=3p \$COM|PREP|de=in \$OMI|ART:DEF|0=fs

### ***Preposition and pronoun***

#### *Abbreviations used*

PREP preposition

PRON pronoun

#### ***Pattern of error codification for prepositions and pronouns***

\$type of error|part of speech|initial form structure=correct form structure

#### **Examples:**

#### **For Catalan language:**

\*CHI: he+vist en [\*] la granja

%err: \$COM|PREP|en=a

\*CHI: pero lo [\*] que me ha+agradat més ha+sigut la gallina

%err: \$COM|PRON|lo=el

**For Spanish language:**

\*CHI: ir en [\*] de vacaciones

%err: \$ADD|PREP|en=0

\*CHI: 0de 0las classes@s [: spa clases]

%err: \$OMI|PREP|0=de

\*CHI: me [\*] puedo jugar

%err: \$ADD|PRON|me=0

\*CHI: jugar a [\*] facebook

%err: \$COM|PREP|a=en

\*CHI: pasear me [\*] por el bosque

%err: \$ADD|PRON|me=0

\*CHI: te escribo esta carta por [\*] informar-te

%err: \$COM|PREP|por=para

\*CHI: esta [\*] cole

%err: \$COM|PRON|esta=este

**For Romanian language:**

\*CHI: ajunge [\*] (.) de [\*] excursie

%err: \$COM|V|3s=3p \$COM|PREP|de=in

## **Annex 2. Excerpts of codifications from the study**

### **Oral language production**

#### *Catalan*

@Begin

@Languages: cat

@Participants: CHI Andrei\_Simon Target\_Child, SPO Simona\_Popa Investigator

@ID: cat|popa|CHI|12;|male|||Target\_Child|||

@ID: cat|popa|SPO|25;|female|||Investigator|||

@Transcriber: SPO

@Date: 07-NOV-2013

@Location: Lleida (Sagrada Familia)

@Bg: story1

\*CHI: pos hi ha un noi que va a dormir i (.) <pensa que> [/] pensa en una guitarra.

%mor: det:art:ind|un-ms n|noi-ms det:art:ind|una-fs n|guitarra-fs.

%cod: v|have-X&PRE v|ana-3s&PRE inf|dormi-INF v|pensa-3s&PRE.

\*CHI: i <quan> [/] quan s'adorm somia que està en un concert.

%mor: det:art:ind|un-ms n|concert-ms.

%cod: v|adormi-3s&PRE v|somia-3s&IPF v|esta-3s&PRE.

\*CHI: i que <té molts> [/] hi ha molta gent <que> [/] que el miren [\*] i l'animen [\*] i tot això.

%mor: det:qua|molta n|gent-fs.

%cod: v|have-X&PRE.

%err: \$COM|V|3p=3s \$COM|V|3p=3s.

\*CHI: i el dia següent segon els dibuixos (.) sembla que sigui el seu aniversari.

%mor: det:art:def|el-ms n|dia-ms det:art:def|el-mp n|dibuix-mp  
det:art:def|el-ms det:pos|seu n|aniversari-ms.

%cod: v|sembla-3s&PRE v|se-3s&SUB.

\*CHI: i ell espera que li donin de regal una guitarra.

%mor: n|regal-ms det:art:ind|una-fs n|guitarra-fs.

%cod: v|espera-3s&PRE v|dona-3p&SUB.

\*CHI: i quan li donen el regal ell l'obra.

%mor: det:art:def|el-ms n|regal-ms.

%cod: v|dona-3p&PRE v|obri-3s&PRE.

\*CHI: i fica mala cara perquè ha+vist que li han+regalat <un> [//] una  
flauta i no <un> [//] una guitarra.

%mor: n|cara-fs det:art:ind|una-fs n|flauta-fs det:art:ind|una-fs  
n|guitarra-fs.

%cod: v|veure-3s&PER v|regala-3p&PER.

@Eg: story1

@Bg: story2

\*CHI: <hi ha dos> [/] hi ha dos homes que miren en una tenda@s  
[: cat botiga] hi ha unes televisions.

%mor: det:qua|dos n|home-mp det:art:ind|una-fp n|televisió-fp.

%cod: v|have-X&PRE v|mira-3p&PRE v|have-X&PRE.

\*CHI: i miren un home que està+fent atletisme i està+saltant.

%mor: det:art:ind|un-ms n|home-ms n|atletisme-ms.

%cod: v|mira-3p&PRE v|esta-3s&PRE+ger|fe-PROG v|esta-3s&PRE+ger|salta-PROG.

\*CHI: i (.) ho vol intentar fer ell també.

%cod: v|vole-3s&PRE inf|intemnta-INF inf|fe-INF.

\*CHI: i comença+a+còrrer (.) i salta (.) i se treu la roba.

%mor: det:art:def|la-fs n|roba-fs.

%cod: v|comença-3s&PRE+a+inf|corre-INF v|salta-3s&PRE v|treure-3s&PRE.

\*CHI: i després cau en unes altres sabates.

%mor: det:art:ind|una-fp n|sabata-fp.

%cod: v|caure-3s&PRE.

\*CHI: <i a la ultima> [//] i a l'últim dibuix fica com està+descansant.

%mor: det:art:def|el-ms n|dibuix-ms.

%cod: v|fica-3s&PRE v|esta-3s&PRE+ger|descansa-PROG.

@Eg: story2

@End

### *Spanish*

@Begin

@Languages: spa

@Participants: CHI Alexandru\_Purda Target\_Child, SPO Simona\_Popa

Investigator

@ID: spa|popa|CHI|17;|male|||Target\_Child|||

@ID: spa|popa|SPO|25;|female|||Investigator|||

@Transcriber: SPO

@Date: 22-JUL-2013

@Location: Amposta (Amposta)

@Bg: story1

\*CHI: un grupo de personas está+esperando (.) a [\*] la parada del bus

(.) <el vehicle> [//] el bus.

%mor: det:art:ind|un-ms n|grupo-ms n|persona-fp det:art:def|el-fs

n|parada-fs det:art:def|el-ms n|bus-ms det:art:def|el-ms n|bus-ms.

%cod: v|esta-3s&PRE+ger|espera-PROG.

%err: \$COM|PREP|a=en.

\*CHI: pero cuando viene (.) suben todos <uno> [///] (.) menos el pequeño

que no tiene puesto con el gato.

%mor: det:art:def|el-ms n|pequeño-ms n|puesto-ms det:art:def|el-ms

n|gato-ms.

%cod: v|veni-3s&PRE v|subi-3p&PRE v|tene-3s&PRE.

\*CHI: bueno (.) está+hablando con el gato (.) y se olvida del bus.

%mor: det:art:def|el-ms n|gato-ms det:art:def|el-ms n|bus-ms.

%cod: v|esta-3s&PRE+ger|habla-PROG v|olvida-3s&PRE.

\*CHI: y después <cuando gira la cabeza> [/] cuando gira la cabeza se da  
cuenta 0de que (.) el bus se ha+ido y se ha+quedado solo aquí.

%mor: det:art:def|el-fs n|cabeza-fs n|cuenta-fs det:art:def|el-ms n|bus-ms.

%cod: v|gira-3s&PRE v|da-3s&PRE v|i-3s&PER v|queda-3s&PER.

%err: \$OMI|PREP|0=de.

\*CHI: finalmente él (.) coge el taxi y se va <se va cap a> [///] se´n@s  
[: spa se] va a casa o al puesto respectivo.

%mor: det:art:def|el-ms n|taxi-ms n|casa-fs det:art:def|el-ms n|puesto-ms.

%cod: v|coge-3s&PRE v|i-3s&PRE v|i-3s&PRE.

@Eg: story1

@Bg: story2

\*CHI: la madre del hijo (.) le ha portado@s [: spa traído] un pájaro.

%mor: det:art:def|el-fs n|madre-fs det:art:def|el-ms n|hijo-ms  
det:art:ind|un-ms n|pájaro-ms.

\*CHI: y le ha+dicho que (.) se [\*] tiene que ser [\*] cerrado porque es muy  
rápido y escapa y se va muy rápido.

%cod: v|deci-3s&PER v|tene-3s&PRE v|se-3s&PRE v|escapa-3s&PRE v|i-3s&PRE.

%err: \$ADD|REF|se=0 \$COM:SEM|V|ser=estar.

\*CHI: cuando se marcha su madre (.) él no respecta@s [: spa respeta] <su>  
[//] lo que ha+dicho su madre y abre <la> [/] la casa del pájaro.

%mor: det:pos|su n|madre-fs det:pos|su n|madre-fs det:art:def|el-fs  
n|casa-fs det:art:def|el-ms n|pájaro-ms.

%cod: v|marcha-3s&PRE v|deci-3s&PER v|abri-3s&PRE.

\*CHI: y (.) el pájaro muy (.) desgraciado se´n@s [: spa se] va per@s  
[: spa por] la finestra@s [: spa ventana].

%mor: det:art:def|el-ms n|pájaro-ms.

%cod: v|i-3s&PRE.

\*CHI: finalmente cuando llega su madre a casa (.) le hace una bronca (.) y  
el hijo se pone+a+llorar así.

%mor: det:pos|su n|madre-fs n|casa-fs det:art:ind|un-fs n|bronca-fs  
det:art:def|el-ms n|hijo-ms.

%cod: v|llega-3s&PRE v|hace-3s&PRE v|pone-3s&PRE+a+inf|llora-INF.

@Eg: story2

@End

### **Romanian**

@Begin

@Languages: rum

@Participants: CHI Raluca\_Giurgiu Target\_Child, SPO Simona\_Popa Investigator

@ID: rum|popa|CHI|16;female||Target\_Child||

@ID: rum|popa|SPO|25;female||Investigator||

@Transcriber: SPO

@Date: 01-JUL-2013

@Location: Lleida (Torrevecens)

@Bg: story1

\*CHI: o familie merge în excursie de [\*] camping.

%mor: det:art:ind|o-fs n|familie-fs n|excursie-fs n|camping-ns.

%cod: v|merge-3s&PRE.

%err: \$COM|PREP|de=in.

\*CHI: și au+făcut pană.

%mor: n|pana-fs.

%cod: v|face-3p&PER.

\*CHI: s-a+făcut de [\*] noapte și atunci doar 0ce ajungeau [\*].

%mor: n|noapte-fs.

%cod: v|face-3s&PER.

%err: \$ADD|PREP|de=0 \$OMI|PRON|0=ce \$COM|V|IPF=PER.

\*CHI: au+trecut prin față [\*] la [\*] un [\*] castel.

%mor: n|fata-fs n|castel-ns.

%cod: v|trece-3p&PER.

%err: \$OMI|ART:DEF|0=fs \$ADD|PREP|la=0 \$COM|ART:DEF|un=unui.

\*CHI: și și-au+făcut o poză.

%mor: det:art:ind|o-fs n|poza-fs.

%cod: v|face-3p&PER.

@Eg: story1

@Bg: story2

\*CHI: mama a+fost să+cumpere un brad (.) de crăciun.

%mor: n|mama-fs+det:art:def|A-fs det:art:ind|un-ms n|brad-ms

n:prop|craciun.

%cod: v|fi.3s&PER v|cumpara-3s&SUB.

\*CHI: tatăl l-a+montat (.) și noi am+pus (.) bilele.

%mor: n|tata-ms+det:art:def|A-ms n|bila-fp+det:art:def|A-fp.

%cod: v|monta-3s&PER v|pune-1p&PER.

\*CHI: și acum (.) gata.

@Eg: story2

@End

## Written language production

### *Catalan*

@Begin

@Languages: cat

@Participants: CHI Andrei\_Simon Target\_Child, SPO Simona\_Popa Investigator

@ID: cat|popa|CHI|12;|male|||Target\_Child|||

@ID: cat|popa|SPO|25;|female|||Investigator|||

@Transcriber: SPO

@Date: 11-NOV-2013

@Location: Lleida (Sagrada Familia)

\*CHI: us agraïm el fet d'acompanyar-nos a l'excursió de la granja.

%mor: det:art:def|el-ms n|fet-ms det:art:def|la-fs n|excursió-fs  
det:art:def|la-fs n|granja-fs.

%cod: v|agrai-1p&PRE inf|acompanya-INF.

\*CHI: ha+sigut una sortida molt divertida (.) a part de ser molt educativa  
pel fet de coneixer de més a prop els animals de la granja.

%mor: det:art:ind|una-fs n|sortida-fs det:art:def|el-ms n|fet-ms  
det:art:def|el-mp n|animal-mp det:art:def|la-fs n|granja-fs.

%cod: v|se-3s&PER inf|se-INF inf|coneix-INF.

\*CHI: ha+estat molt ben elaborada (.) amb visites a tots els animals.

%mor: n|visita-fp det:art:def|el-mp n|animal-mp.

%cod: v|esta-3s&PER.

\*CHI: els guies ens han+explicat moltes coses interessants que no sabem.

%mor: det:art:def|el-mp n|guia-mp det:qua|moltes n|cosa-fp.

%cod: v|explica-3p&PER v|sabe-1p&IPF.

\*CHI: el que ens ha+agradat més de la sortida han+sigut els conills.

%mor: det:art:def|la-fs n|sortida-fs det:art:def|el-mp n|conill-mp.

%cod: v|agrada-3s&PER v|se-3p&PER.

\*CHI: però hi ha+hagut companys que han+dit que també els hi [\*]  
ha+agradat [\*] els cavalls i altres animals.

%mor: n|company-mp det:art:def|el-mp n|cavall-mp n|animal-mp.

%cod: v|have-X&PER v|di-3p&PER.

%err: \$ADD|PRON|hi=0 \$COM|V|3s=3p.

\*CHI: a tots ens ha+semblat molt guay l'excursió i esperem fer-ne més.

%mor: det:art:def|la-fs n|excursió-fs.

%cod: v|semba-3s&PER v|espera-1p&PRE inf|fe-INF.

@End

### **Spanish**

@Begin

@Languages: spa

@Participants: CHI Viorica\_Zaharia Target\_Child, SPO Simona\_Popa

Investigator

@ID: spa|popa|CHI|17;|female|||Target\_Child|||

@ID: spa|popa|SPO|25;|female|||Investigator|||

@Transcriber: SPO

@Date: 03-SEP-2013

@Location: Amposta (Amposta)

\*CHI: soy la responsable del turismo de amposta y me enterré [\*] Ode que

buscaís una vivienda por aquí.

%mor: det:art:def|el-fs n|responsable-fs det:art:def|el-ms n|turismo-ms

n:prop|amposta det:art:ind|un-fs n|vivienda-fs.

%cod: v|se-1s&PRE v|busca-2p&PRE.

%err: \$OMI|PREP|0=de \$COM|V|PAS=PER.

\*CHI: en amposta hay bastantes oportunidades para que seaís complacidos y

vos [\*] guste la ciudad.

%mor: n:prop|amposta n|oportunidad-fp det:art:def|el-fs n|ciudad-fs.

%cod: v|habe-X&PRE v|se-2p&SUB v|gusta-3s&SUB.

%err: \$COM|PRON|vos=os.

\*CHI: si teneís hijos hay escuelas y tambien autobuses.  
 %mor: n|hijo-mp n|escuela-fp n|autobús-mp.  
 %cod: v|tene-2p&PRE v|habe-X&PRE.

\*CHI: el transporte no es un medio exhaustivo ya que no hay mucha  
 circulación y tenemos muchos parquings.  
 %mor: det:art:def|el-ms n|transporte-ms det:art:ind|un-ms n|medio-ms  
 det:qua|mucha n|circulación-fs det:qua|muchos n|parquin-mp.  
 %cod: v|se-3s&PRE v|habe-X&PRE v|tene-1p&PRE.

\*CHI: es una ciudad bonita (.) en la qual puedes tener todo lo que quieras.  
 %mor: det:art:ind|un-fs n|ciudad-fs.  
 %cod: v|se-3s&PRE v|pode-2s&PRE inf|tene-INF v|quere-2s&SUB.

\*CHI: en conclusión si quieres [\*] mudarós aquí es la opción perfecta.  
 %mor: n|conclusión-fs det:art:def|el-fs n|opción-fs.  
 %cod: inf|muda-INF v|se-3s&PRE.

%err: \$COM|V|2s=2p.

\*CHI: el domingo podeis venir a visitar amposta y yo vos [\*] ayudare a  
 conocerla.  
 %mor: det:art:def|el-ms n|domingo-ms n:prop|amposta.  
 %cod: v|pode-2p&PRE inf|veni-INF inf|visita-INF v|ayuda-1s&FUT.  
 %err: \$COM|PRON|vos=os.

\*CHI: un saludo cordial.  
 %mor: det:art:def|un-ms n|saludo-ms.

@End

### **Romanian**

@Begin

@Languages: rum

@Participants: CHI Cristian\_Calugar Target\_Child, SPO Simona\_Popa

Investigator

@ID: rum|popa|CHI|16;|male|||Target\_Child|||

@ID: rum|popa|SPO|25;|female|||Investigator|||

@Transcriber: SPO

@Date: 20-JUN-2013

@Location: Lleida (Amposta)

\*CHI: danie şa+cumparat o motoretă nouă pe care a+dat mulți bani.

%mor: n:prop|danie det:art:ind|o-fs n|motoreta-fs det:qua|multi n|ban-mp.

%cod: v|cumpara-3s&PER v|da-3s&PER.

\*CHI: a doua zi după ce a+cumpărato va+rupto.

%mor: det:qua|doua n|zi-fs.

%cod: v|cumpara-3s&PER v|rupe-3s&PER.

\*CHI: și tatal sau a+dus motoreta la mecanic.

%mor: n|tata-ms+det:art:def|A-ms det:pos|sau

n|motoreta-fs+det:art:def|A-fs n|mecanic-ms.

%cod: v|duce-3s&PER.

\*CHI: după o saptana [\*] ia+aduso acasa [\*] si daniel iera iara fericit.

%mor: det:art:ind|o-fs n|saptamana-fs n:prop|daniel.

%cod: v|aduce-3s&PER v|fi-3s&IPF.

%err: \$ADD|ART:DEF|fs=0 \$ADD|ART:DEF|fs=0.

\*CHI: la vârsta de optisprezece ani a+luat carnetu [\*] de mașină.

%mor: n|varsta-fs+det:art:def|A-fs det:qua|optisprezece n|an-mp

n|carnet-ns n|masina-fs.

%cod: v|lua-3s&PER.

%err: \$COM|ART:DEF|AMB=ns.

\*CHI: tatal sau ia+cumparat o masina [\*] nou [\*] pe care a+luato de la un

vecin de pe strada 0pe care locuește daniel.

%mor: n|tata-ms+det:art:def|A-ms det:pos|sau det:art:ind|o-fs n|masina-fs

det:art:ind|un-ms n|vecin-ms n|strada-fs+det:art:def|A-fs

n:prop|daniel.

%cod: v|cumpara-3s&PER v|lua-3s&PER v|locui-3s&PRE.

%err: \$ADD|ART:DEF|fs=0 \$COM|ADJ|ms=fs \$OMI|PREP|0=pe.

@End

### **Annex 3. Instruments: language competence tests**

**Annex 12.3.1 Catalan Oral**

**Annex 12.3.2 Catalan Written**

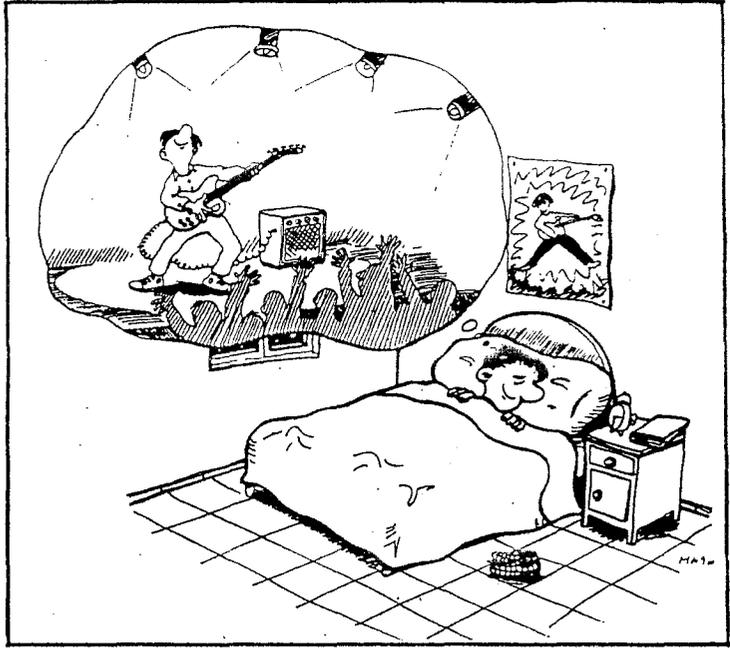
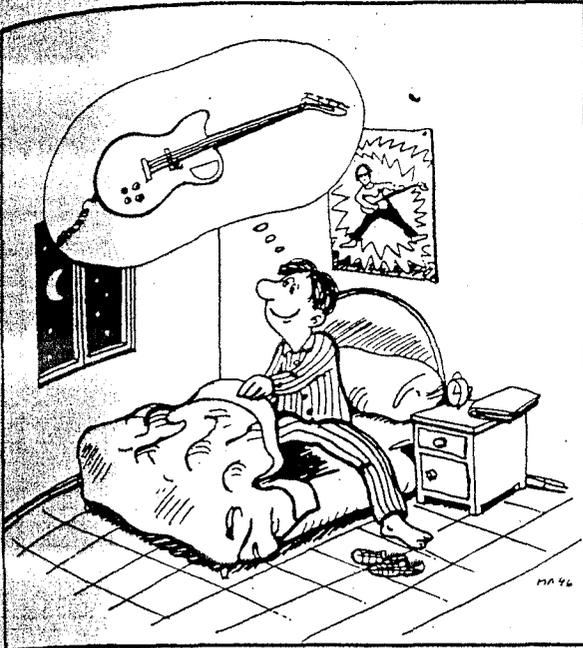
**Annex 12.3.3 Spanish Oral**

**Annex 12.3.4 Spanish Written**

**Annex 12.3.5 Romanian Oral**

**Annex 12.3.6 Romanian Written**

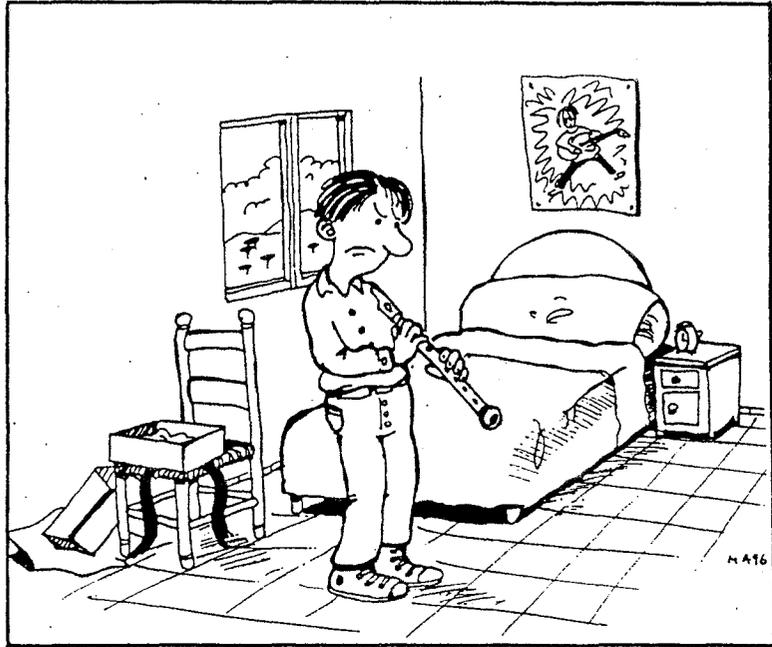
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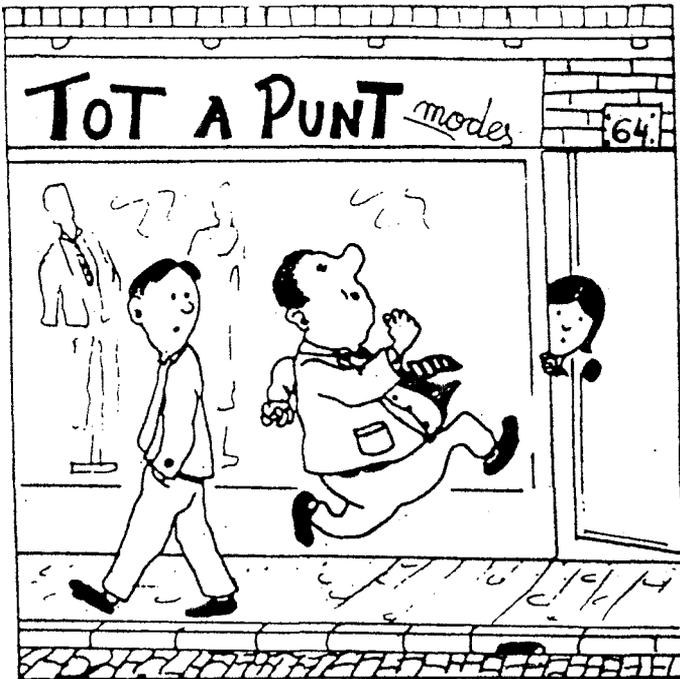
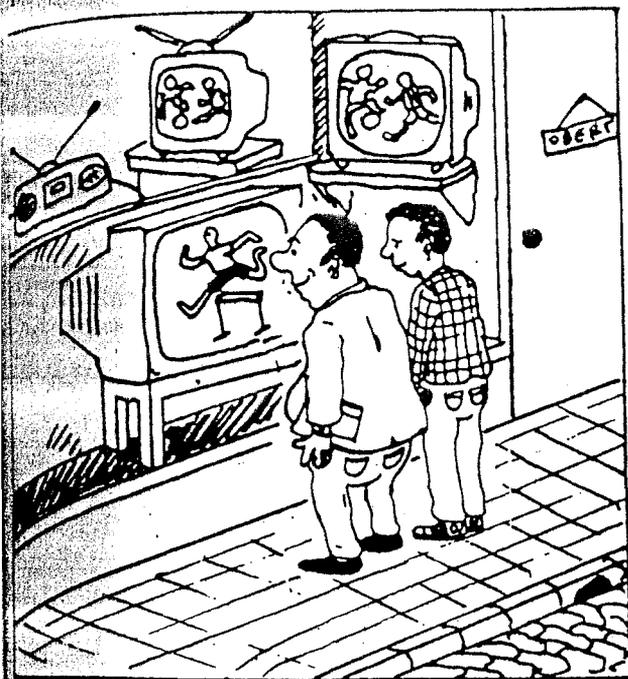
3



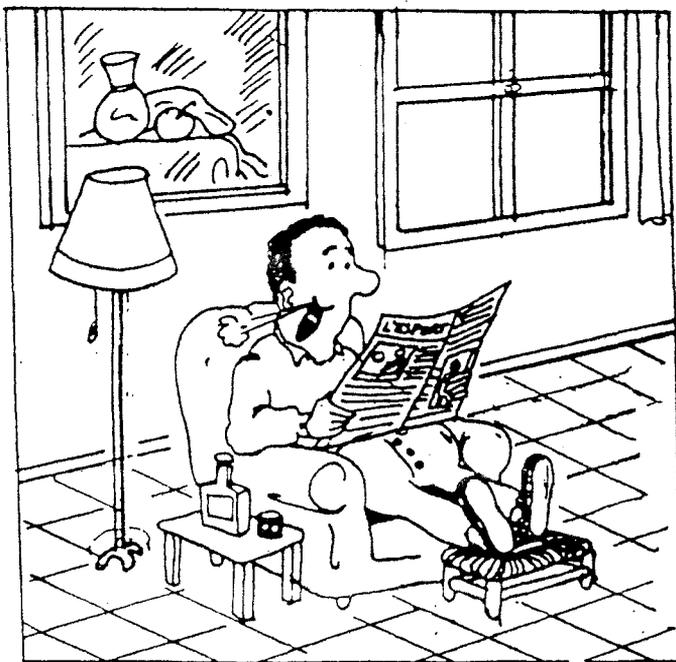
4



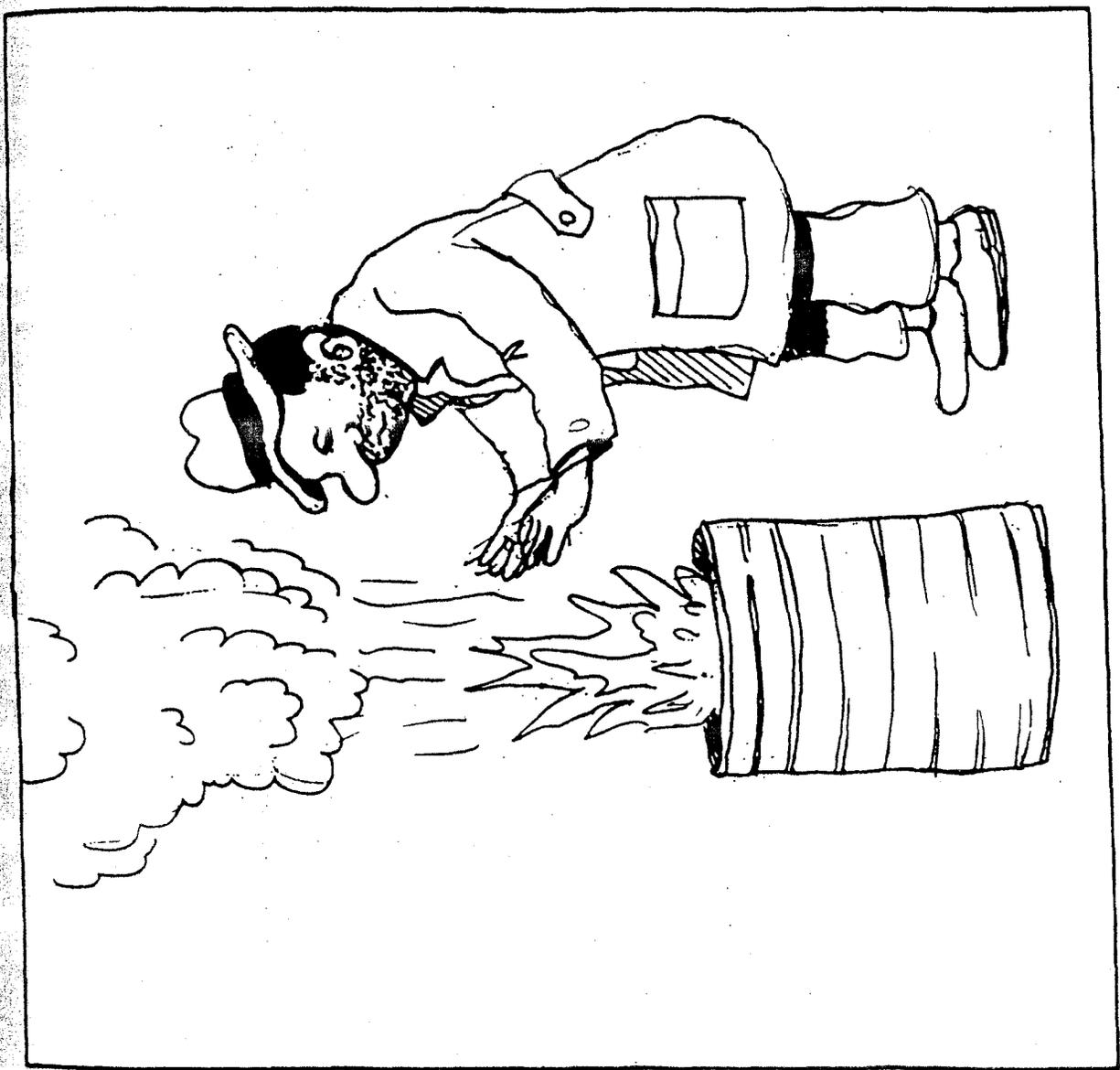
2

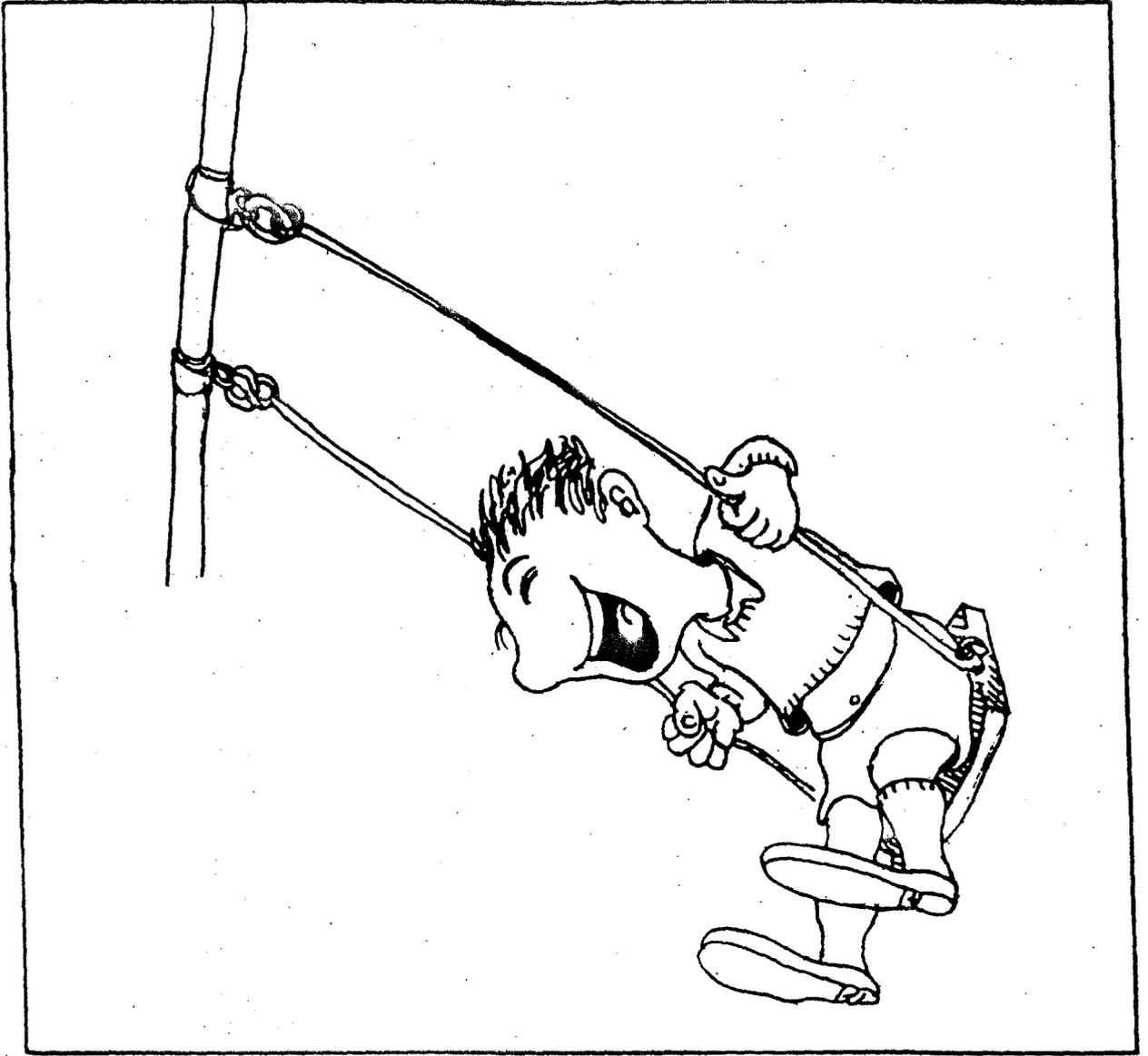


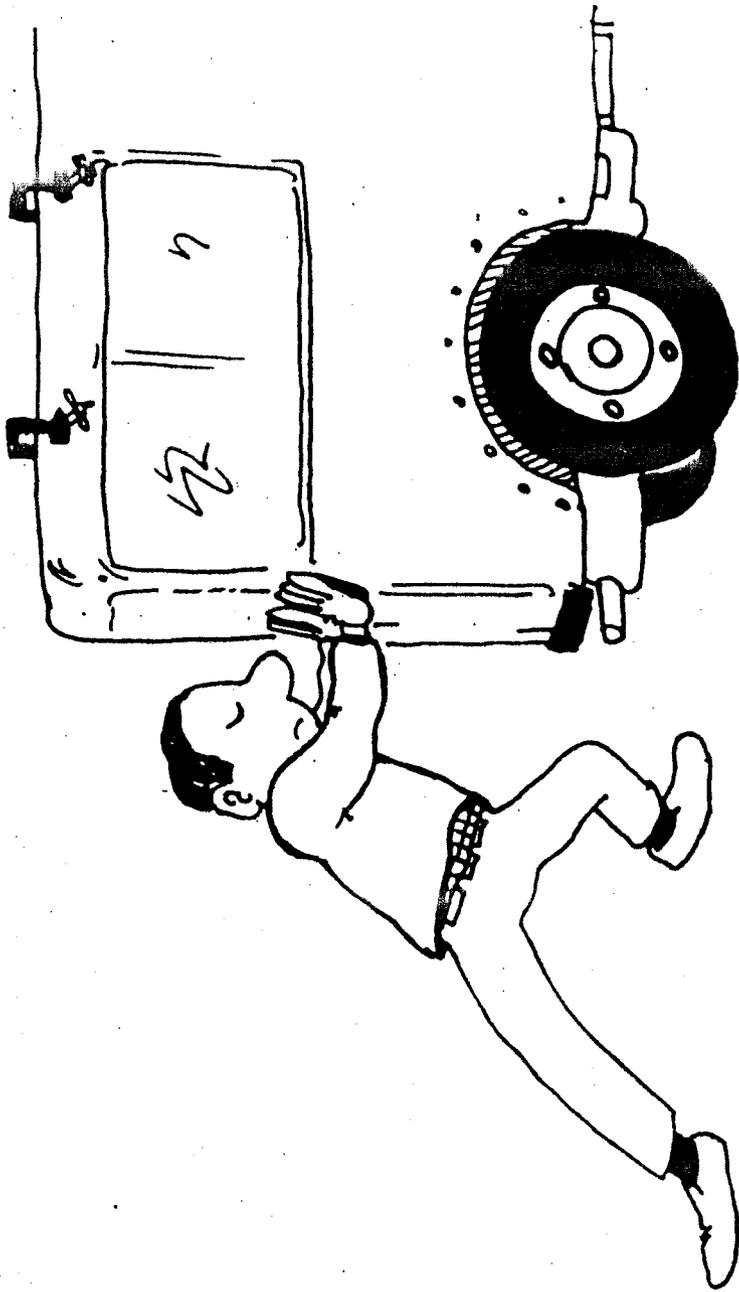
4



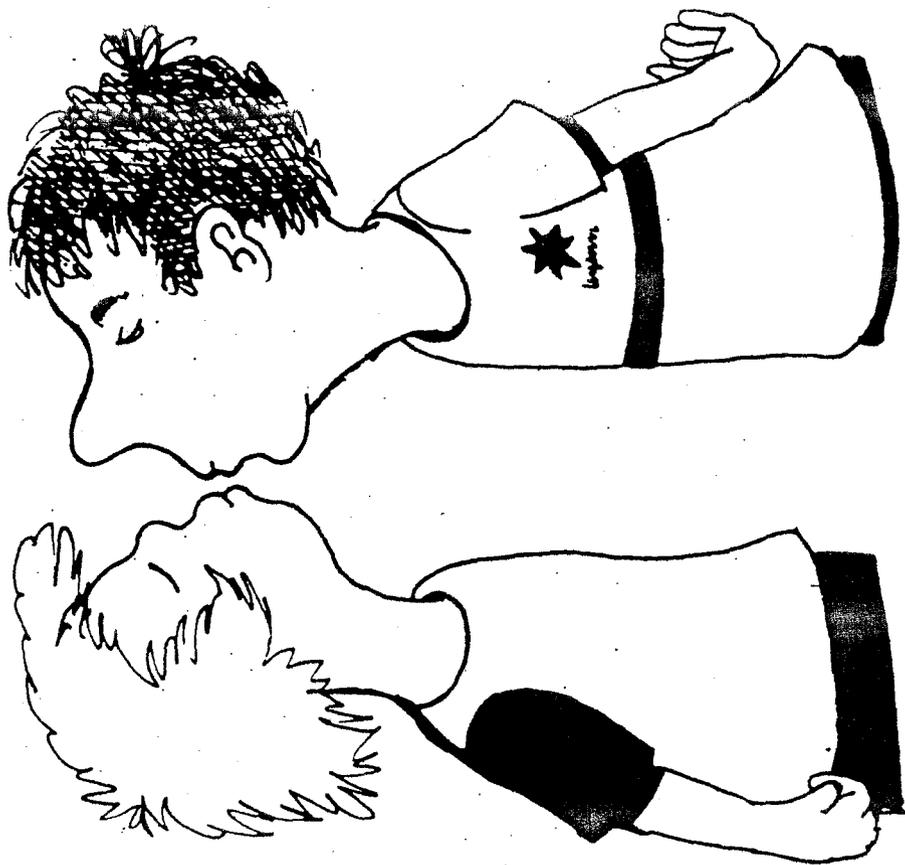
**Dibuixos de l'exercici número 18**  
**de la prova oral**  
**de llengua catalana**

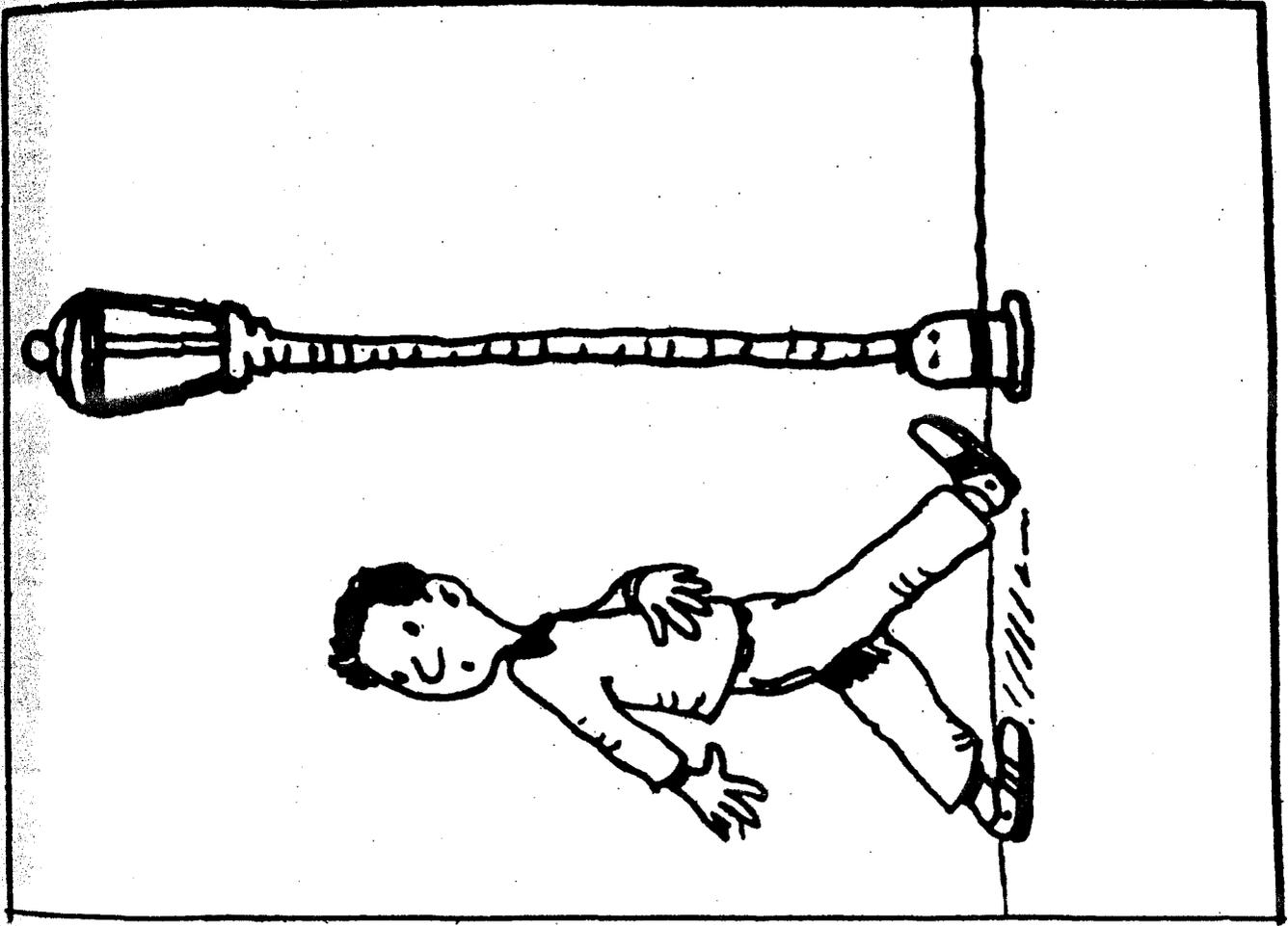


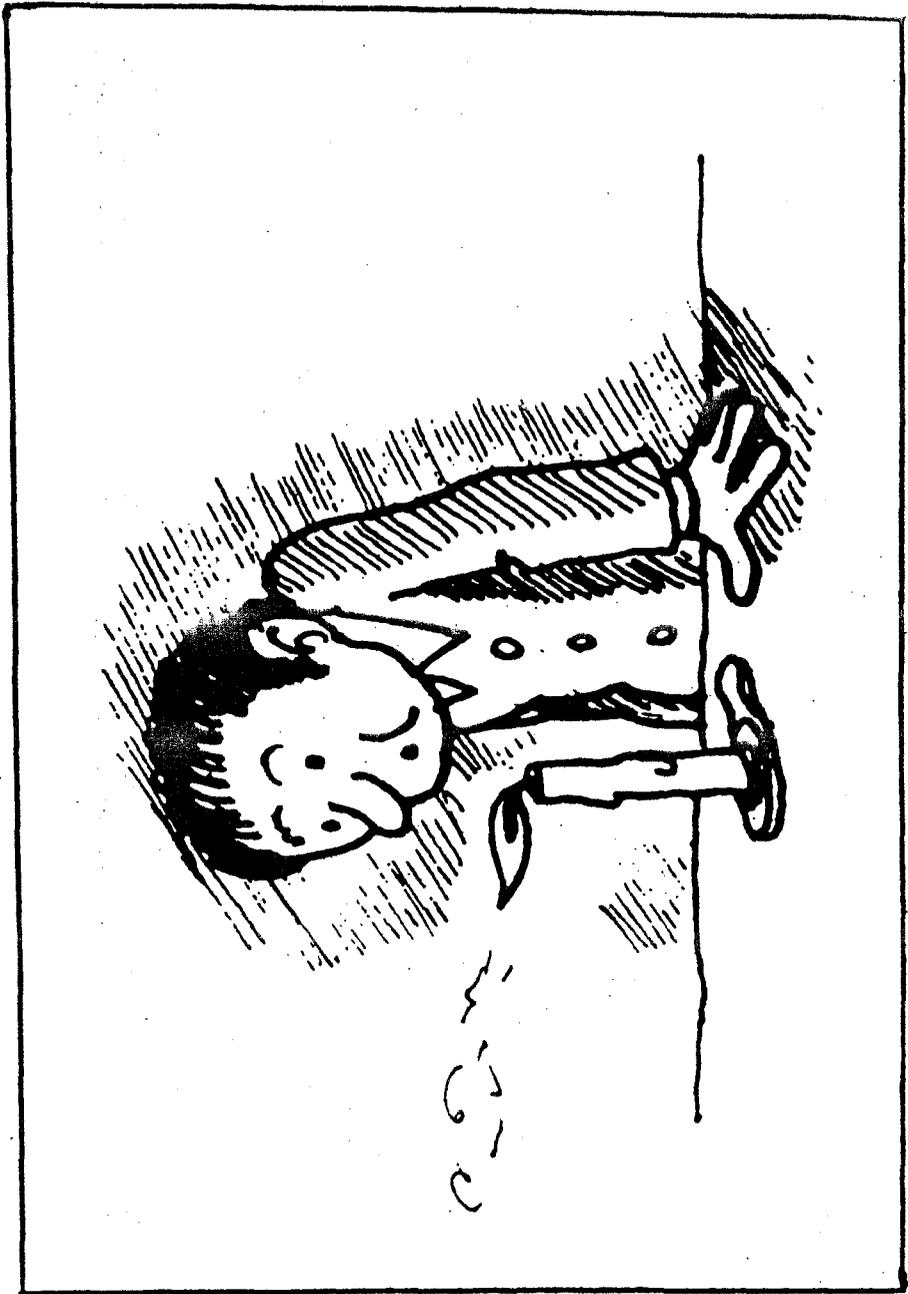


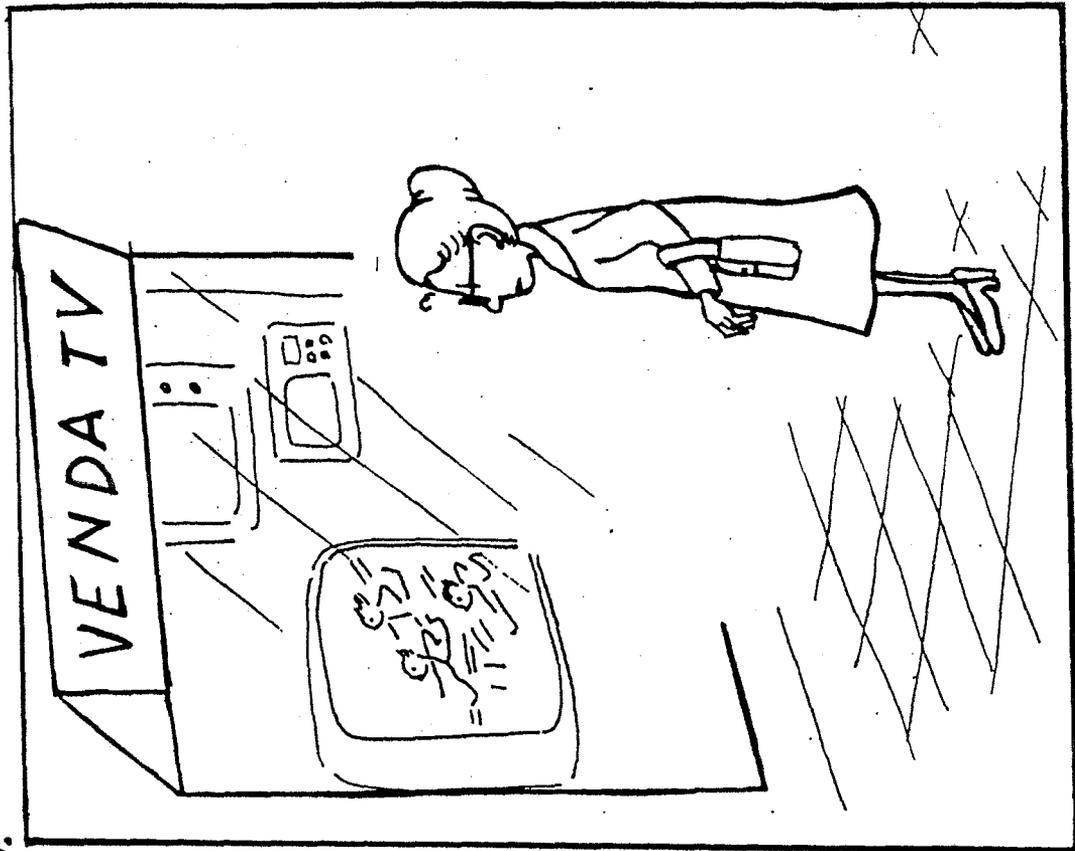




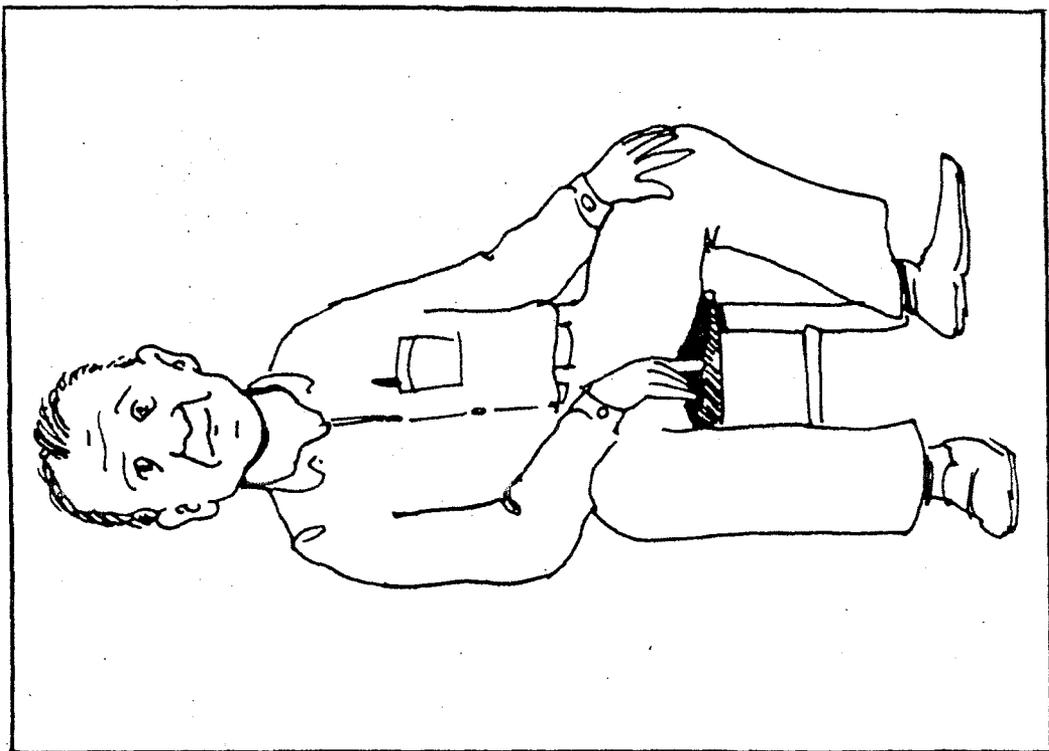




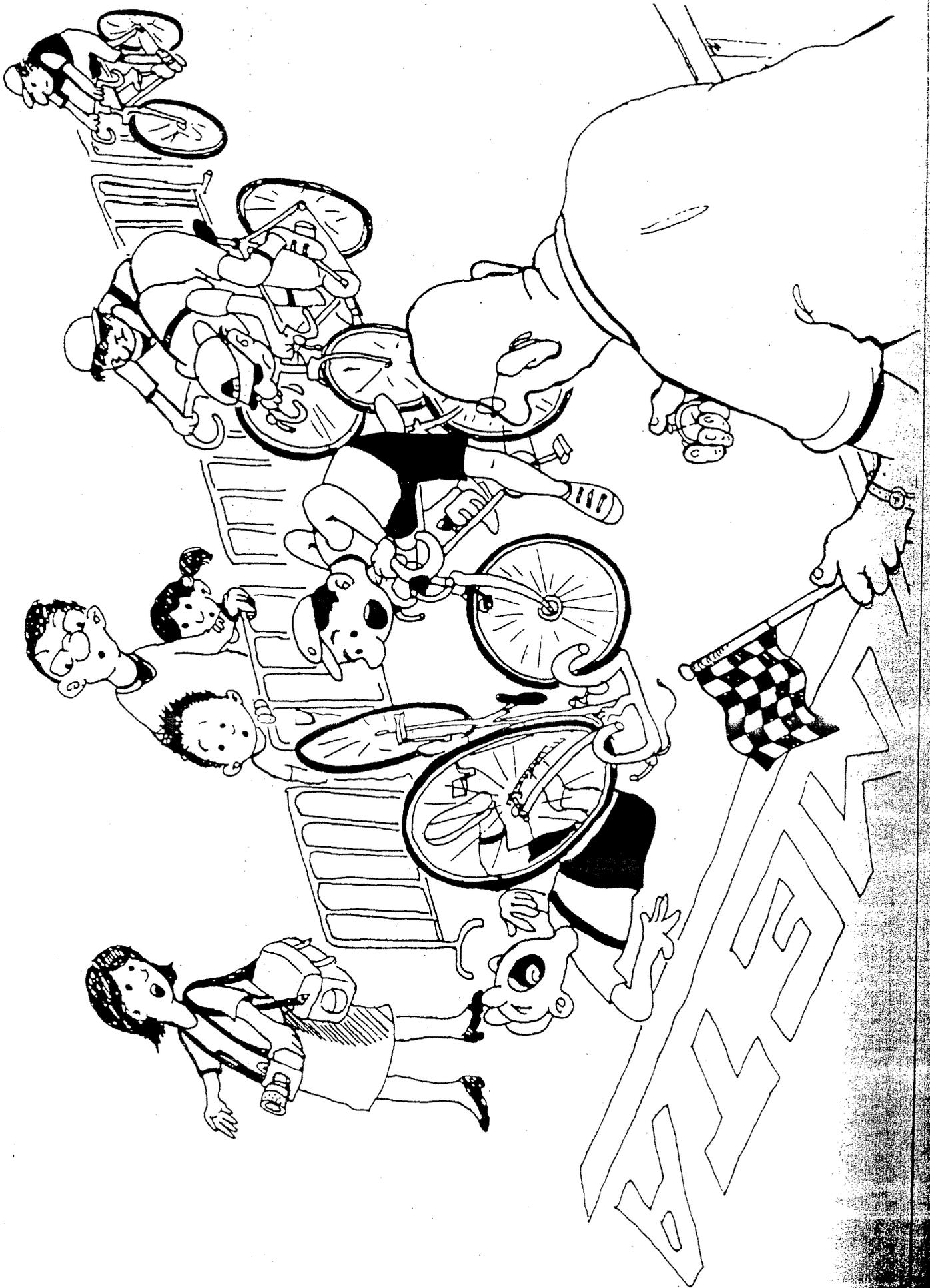




9.



8



**Annex 12.3.2 CATALAN WRITTEN**

**PROVA DE LLENGUA CATALANA**

CS

Escola \_\_\_\_\_

Nom i cognoms \_\_\_\_\_

Núm. \_\_\_\_\_

## EXERCICI 16 PRODUCCIÓ D'UN TEXT

Escriu un text sobre una de les opcions següents:

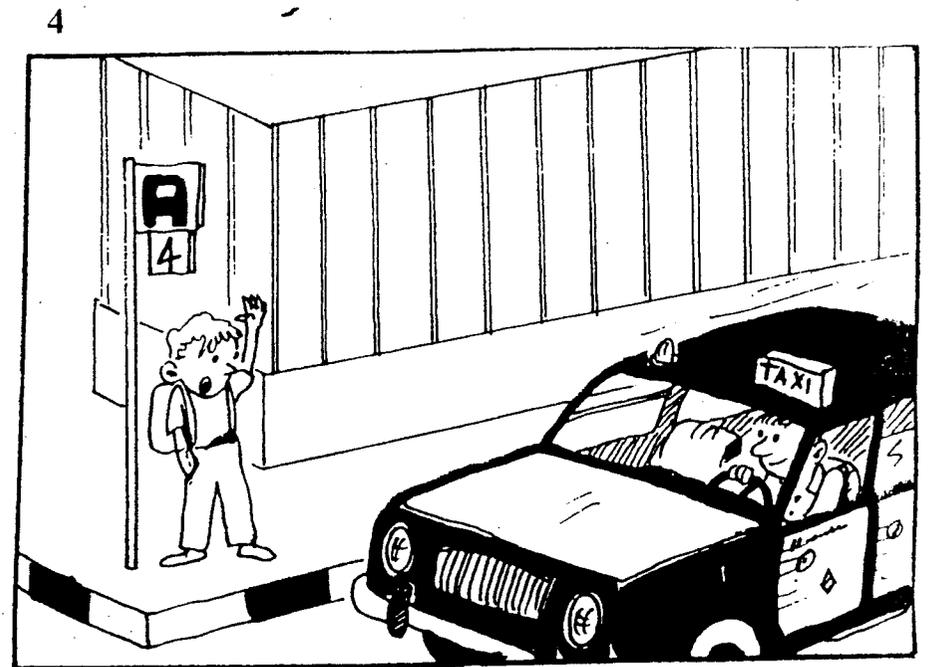
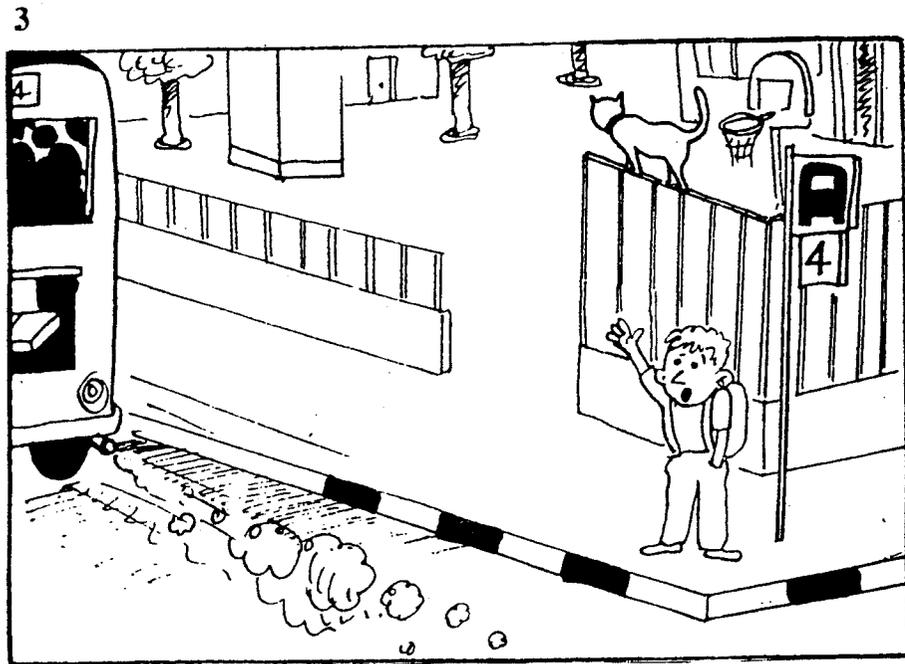
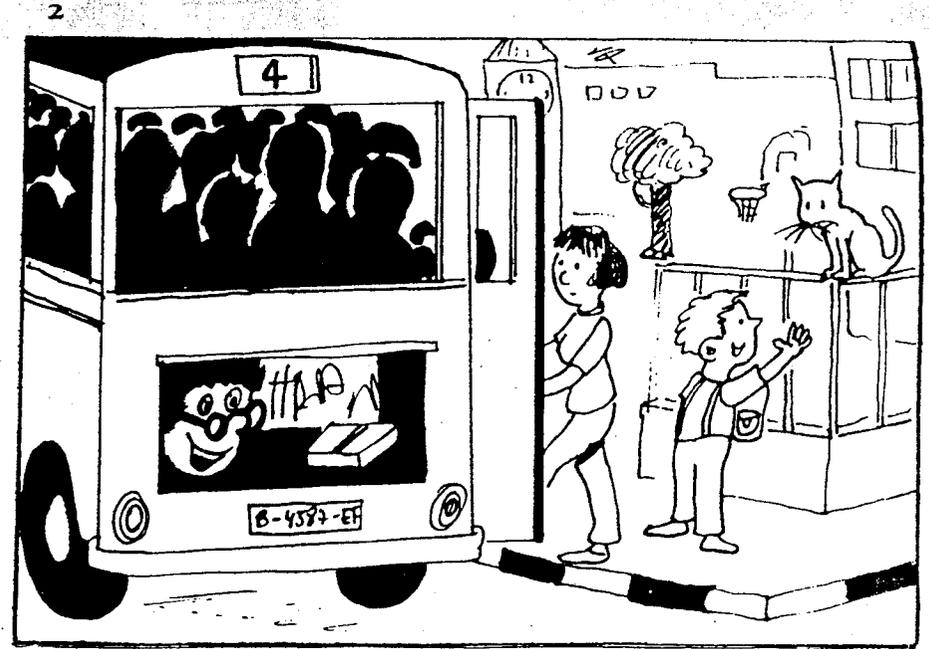
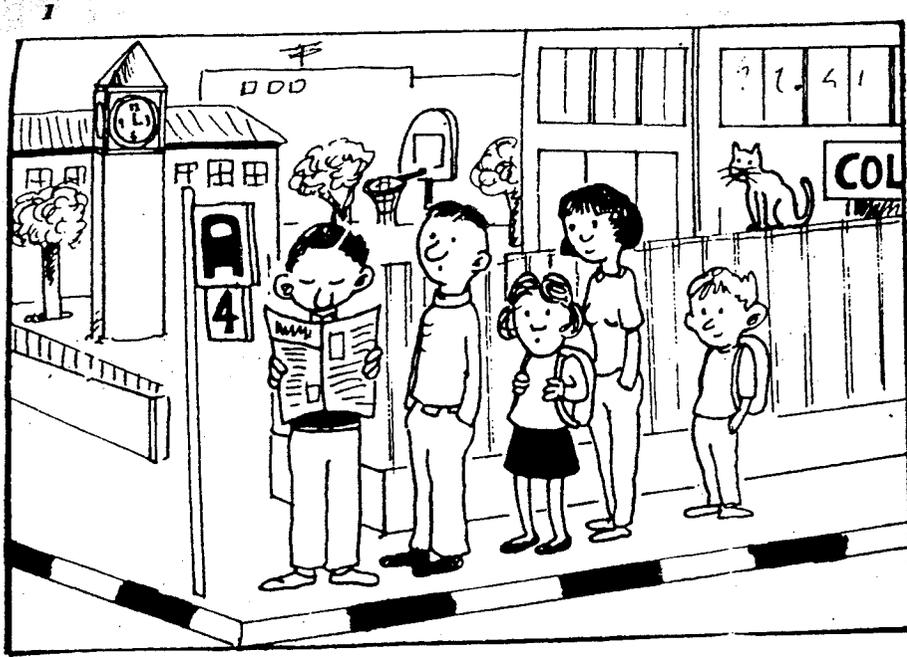
1. Hem visitat una granja escola; em toca fer la carta d'agraïment als monitors i els recordaré tot allò que ens ha agradat més.
2. A la classe hem llegit un llibre de ciència-ficció; em toca escriure una carta a l'autor per explicar-li quins són els capítols que ens han agradat més i convidar-lo.
3. A l'entrada de l'escola hi ha problemes de trànsit; em toca escriure una carta al regidor de transports de l'Ajuntament per exposar-li el nostre problema i suggerir-li solucions per resoldre'l.

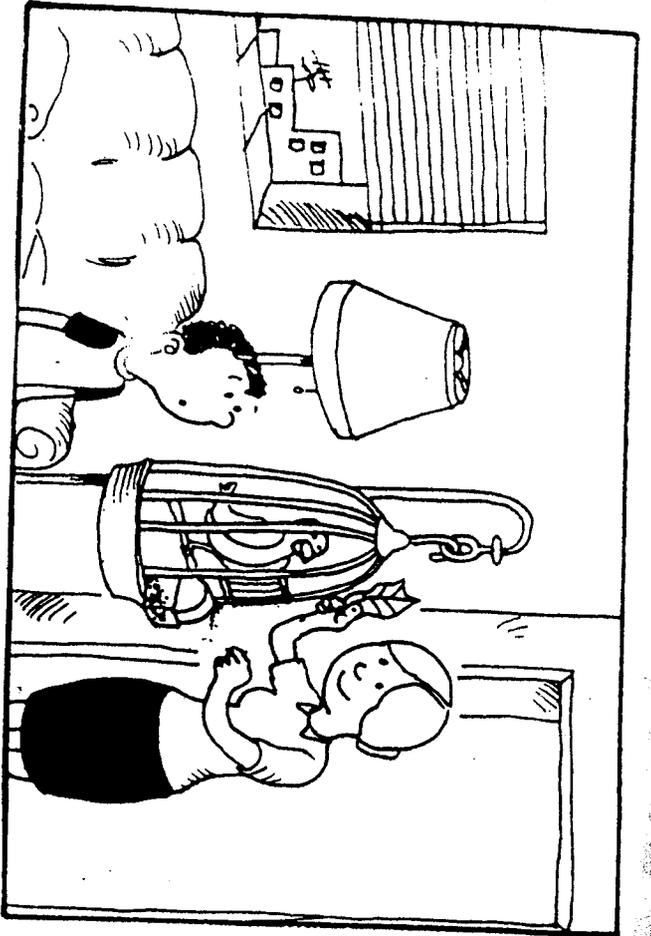
Quina opció has triat? \_\_\_\_\_

Abans d'escriure pots organitzar les idees del que escriuràs en aquesta pàgina.

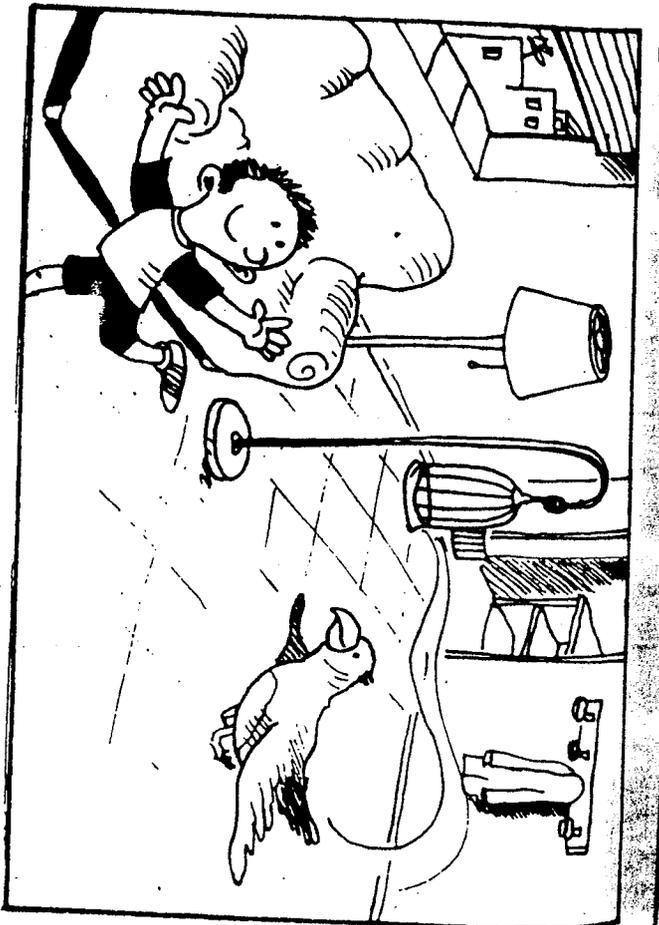
Escriu el text a la pàgina següent.

Ara revisa el que has escrit i si penses que l'has d'esmenar, fes-ho.

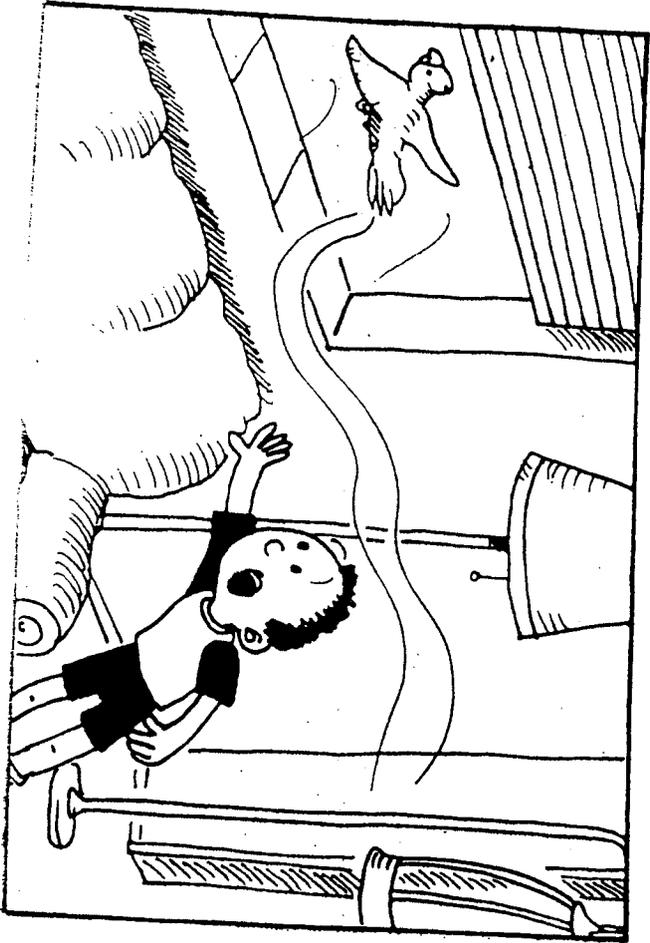




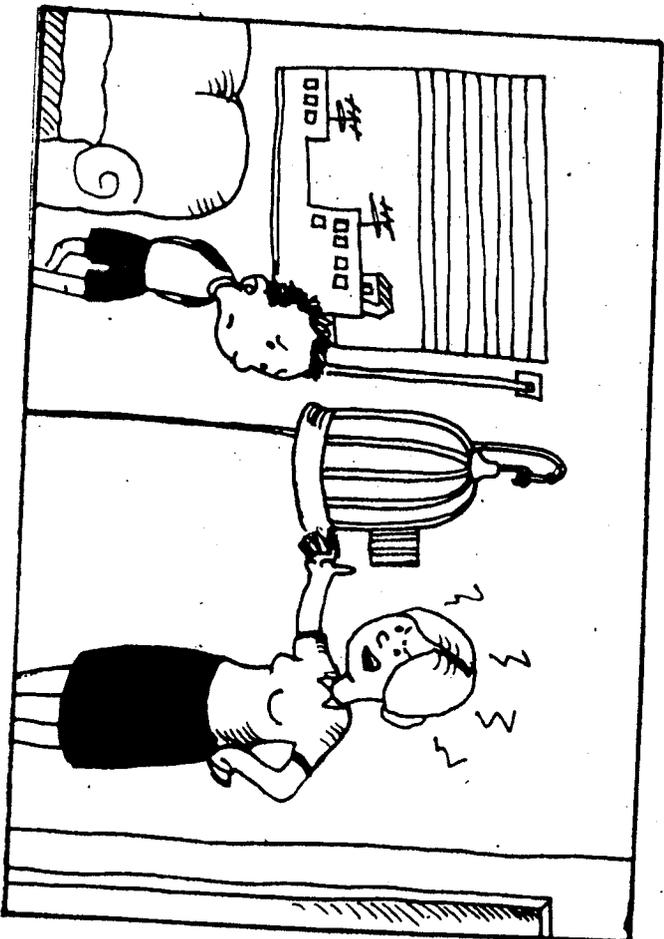
1



2

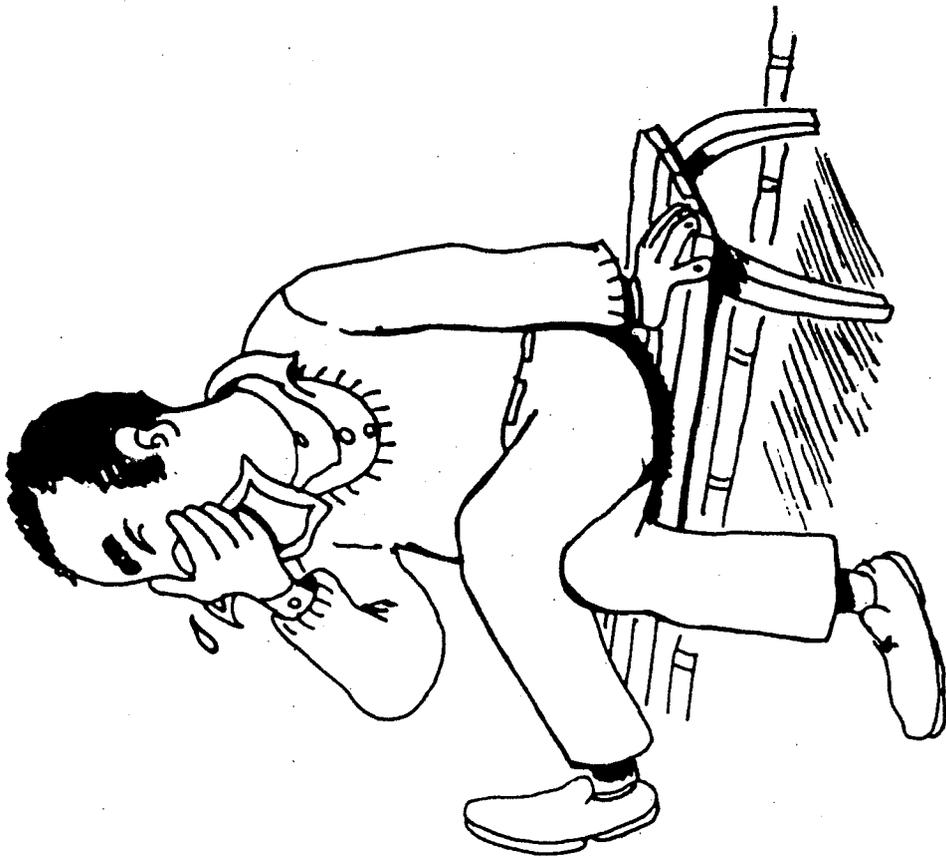


3



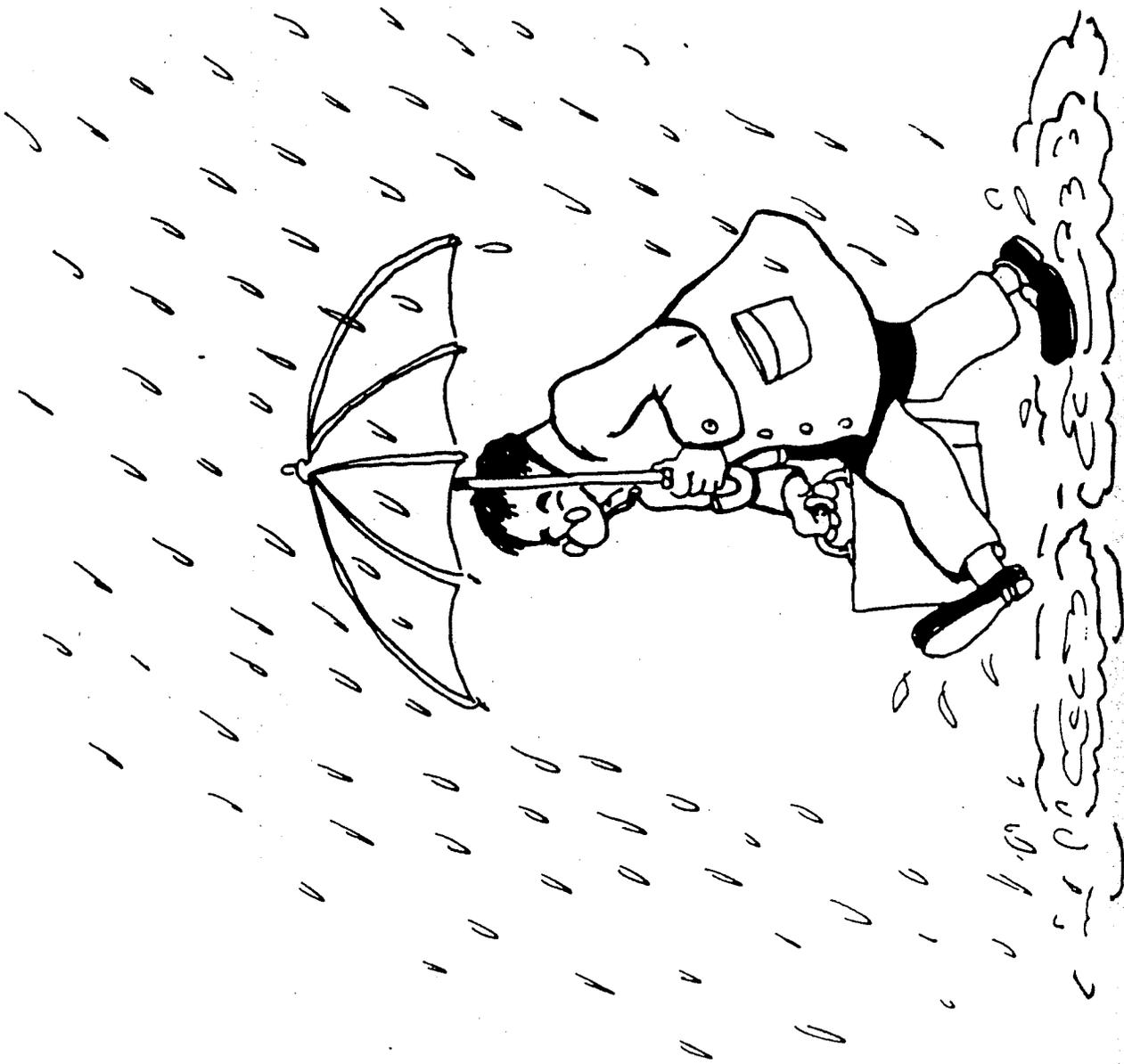
4

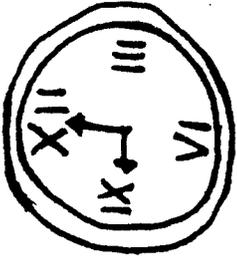
**Dibuixos de l'exercici número 17**  
de la prova oral  
de llengua castellana

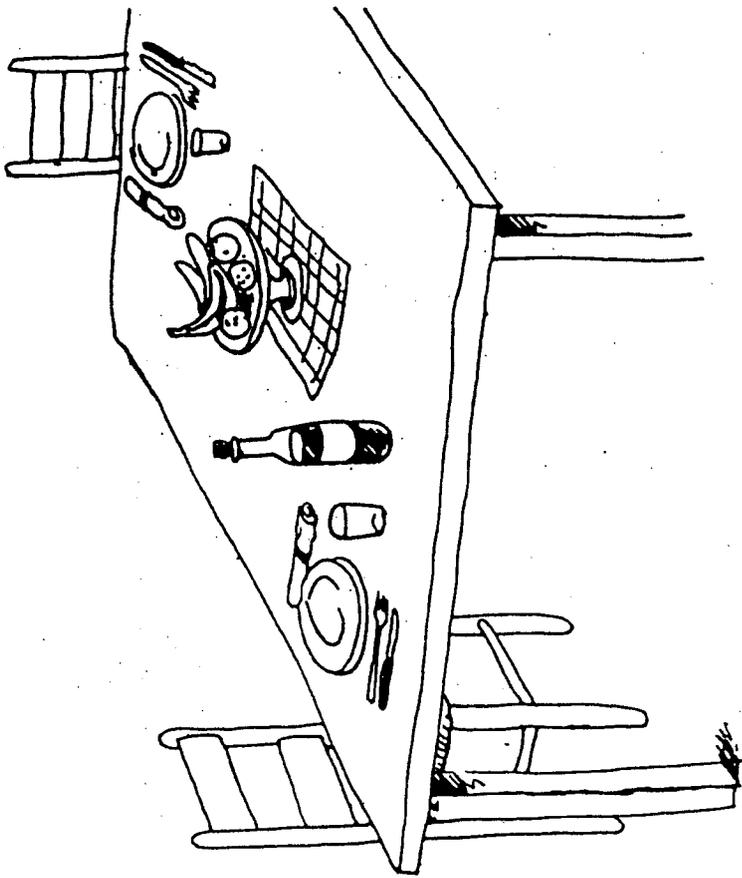


1.

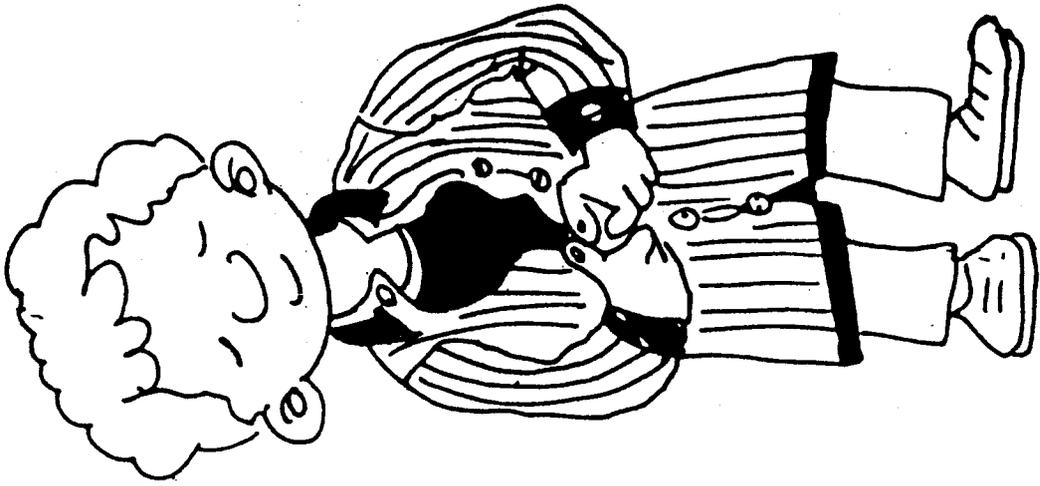
2.



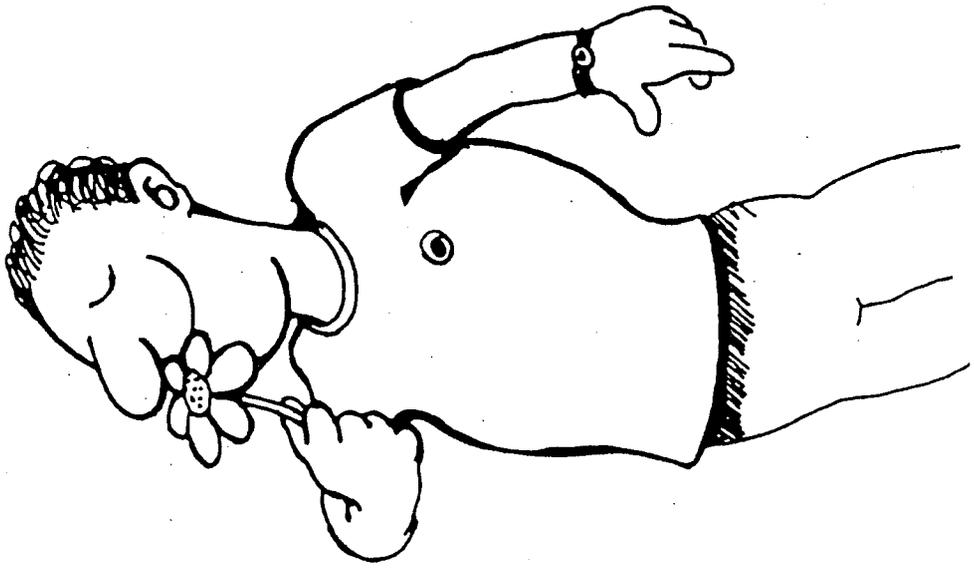




4.

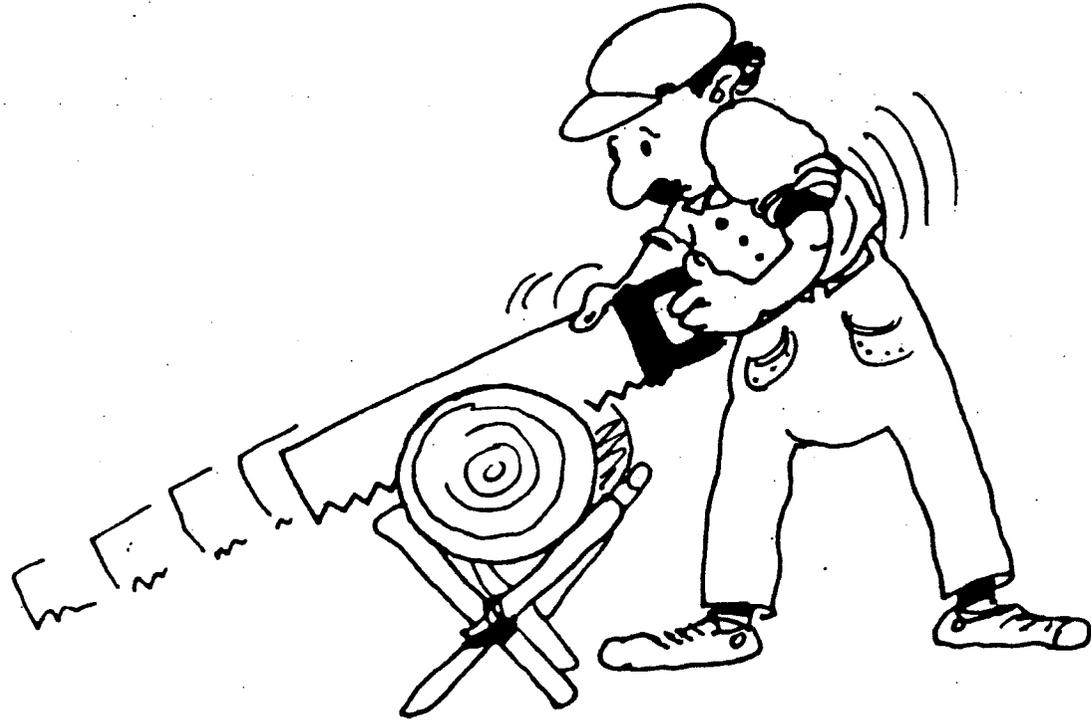


5.



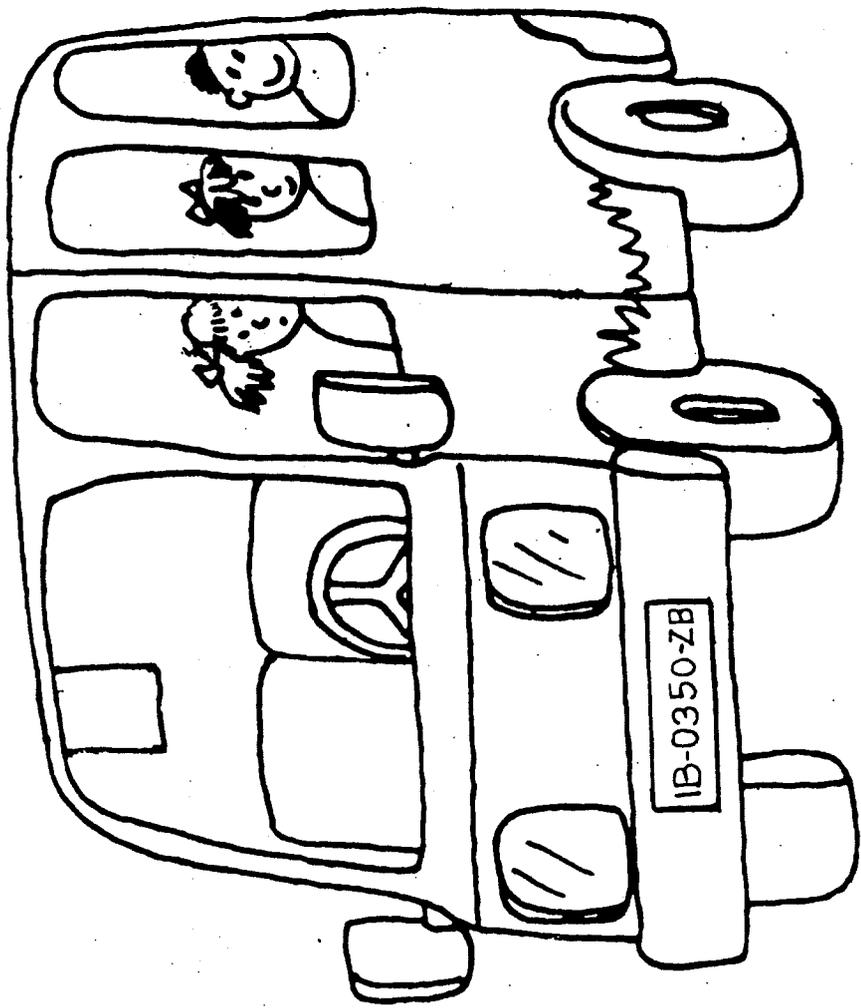
6.

7.





8.



6



Annex 12.3.4 SPANISH WRITTEN

**PROVA DE LLENGUA CASTELLANA**

CS

Escola \_\_\_\_\_

Nom i cognoms \_\_\_\_\_

Núm. \_\_\_\_\_

## EJERCICIO 15

Escribe un texto sobre una de las opciones siguientes:

1. Una niña de Sevilla se ha matriculado en tu escuela para estudiar con vosotros el próximo curso. Escríbele y dale información sobre vosotros y tu escuela.
2. Has recibido información del camping "Los olmos" cerca del río Tajo. Escribe una carta al director del camping manifestándole tu interés en pasar unos días y pide información sobre algunas actividades concretas.
3. Una familia de Murcia vendrá a vivir a tu barrio, escríbeles dándole información sobre tu barrio y explícale los medios de transporte que hay.

¿Qué opción has escogido? \_\_\_\_\_

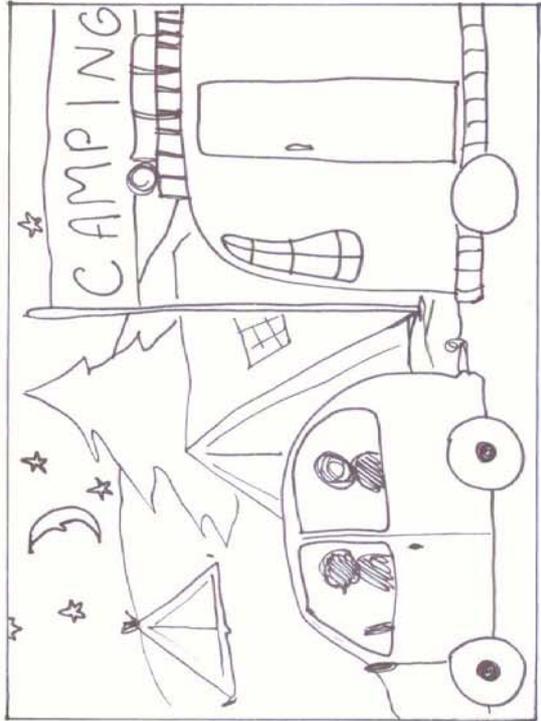
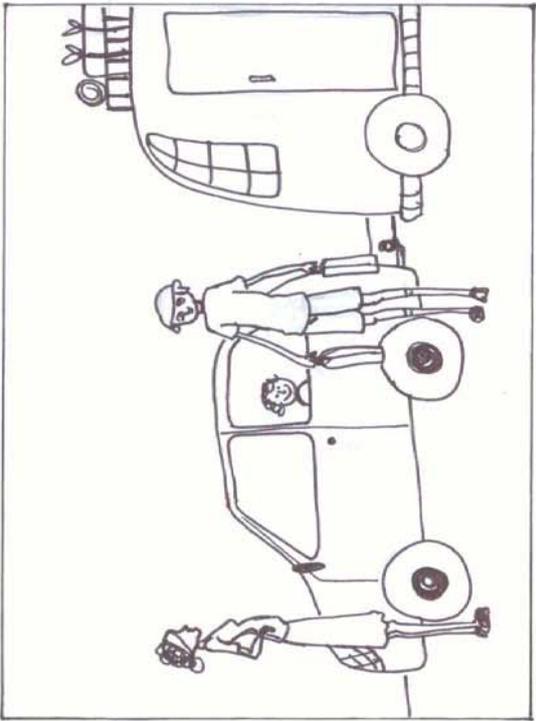
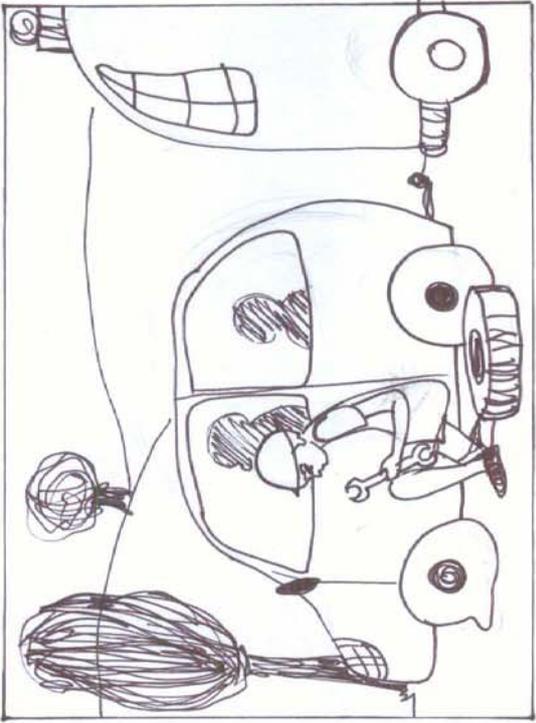
Antes de escribir puedes organizar las ideas de lo que escribirás en esta página.

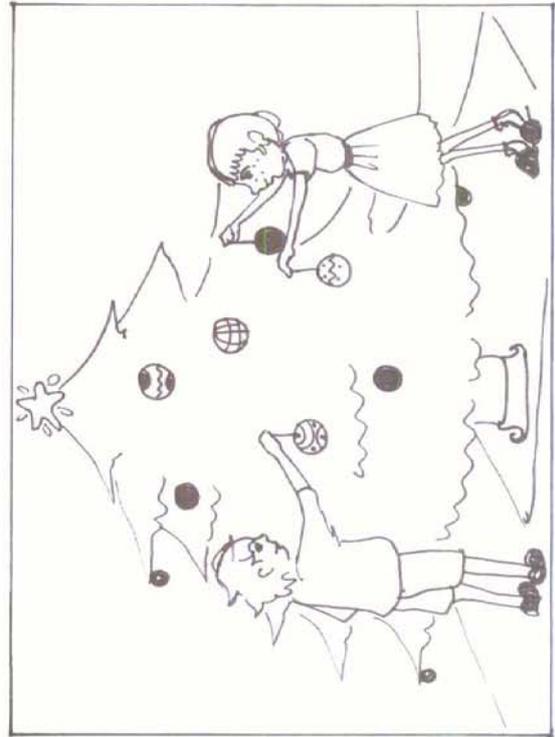
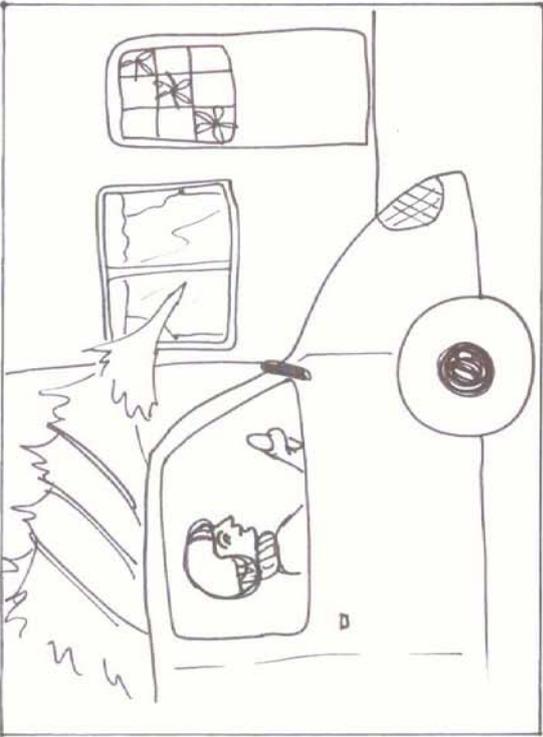
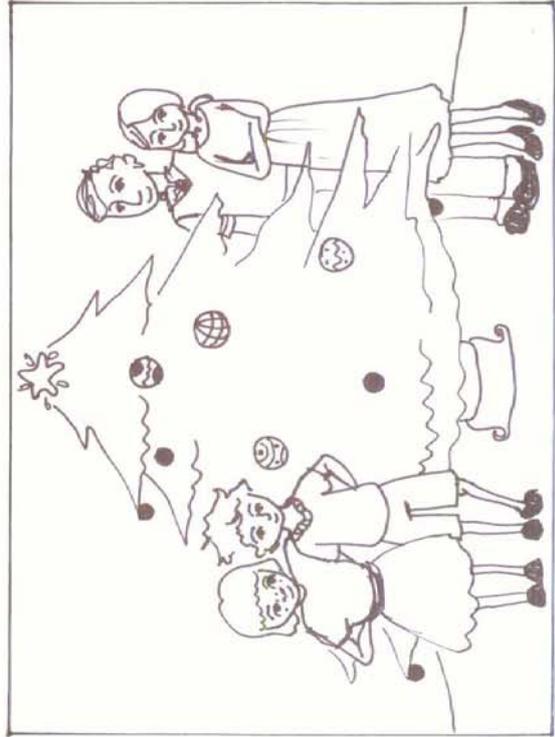
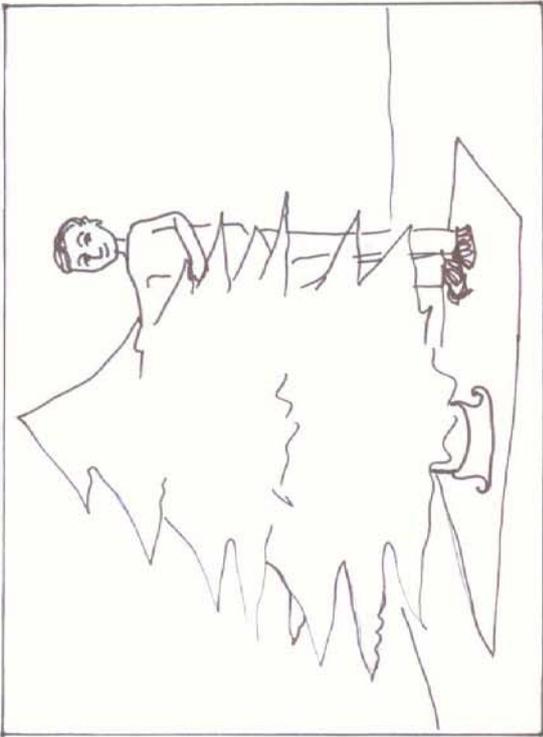
Escribe el texto en la página siguiente.

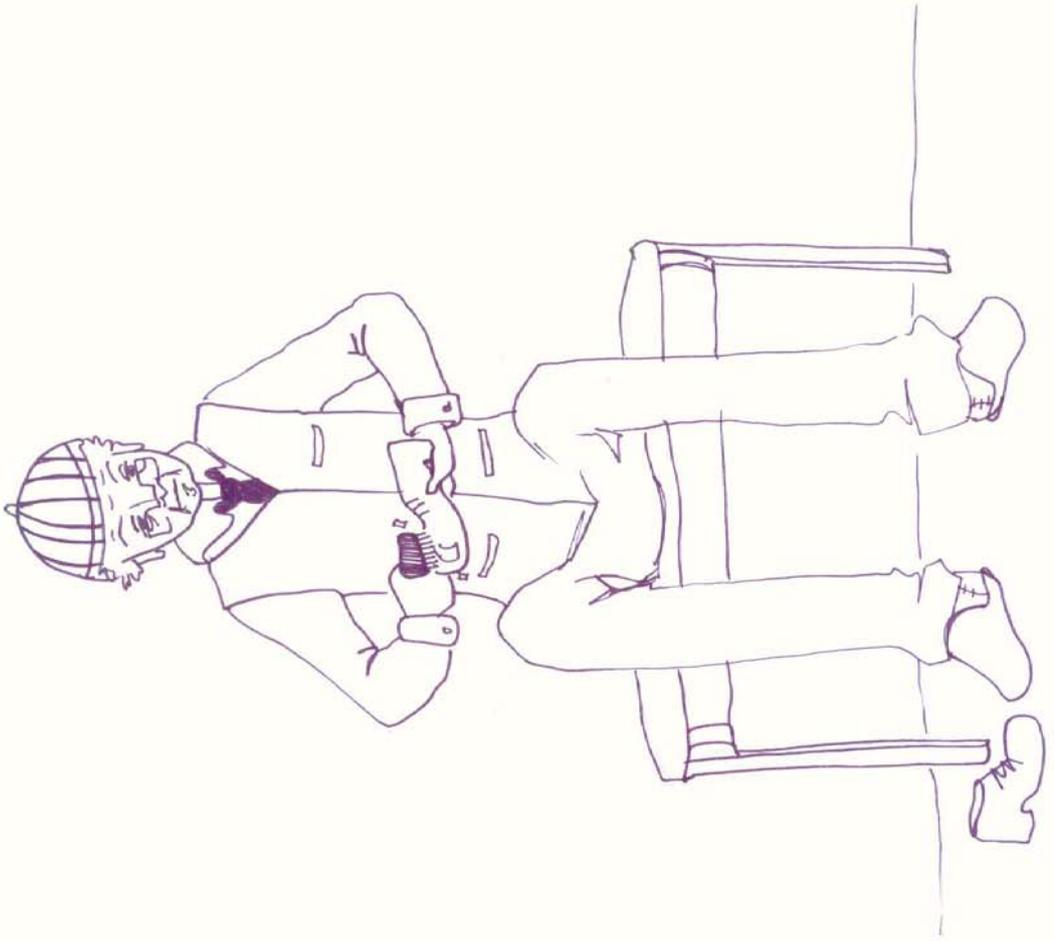


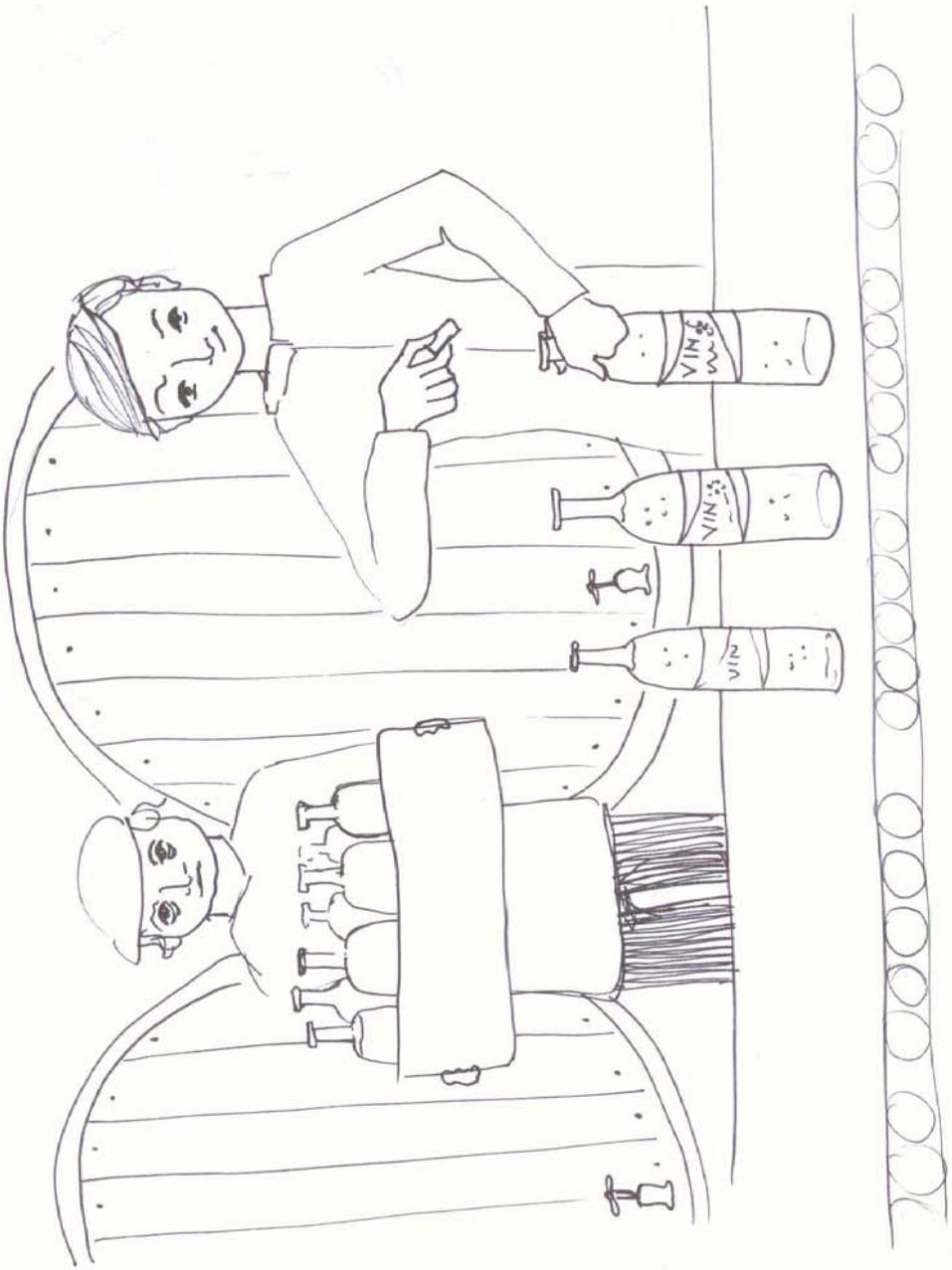
**Annex 12.3.5 ROMANIAN ORAL**

**PROBĂ INDIVIDUALĂ  
LIMBA ROMÂNĂ**

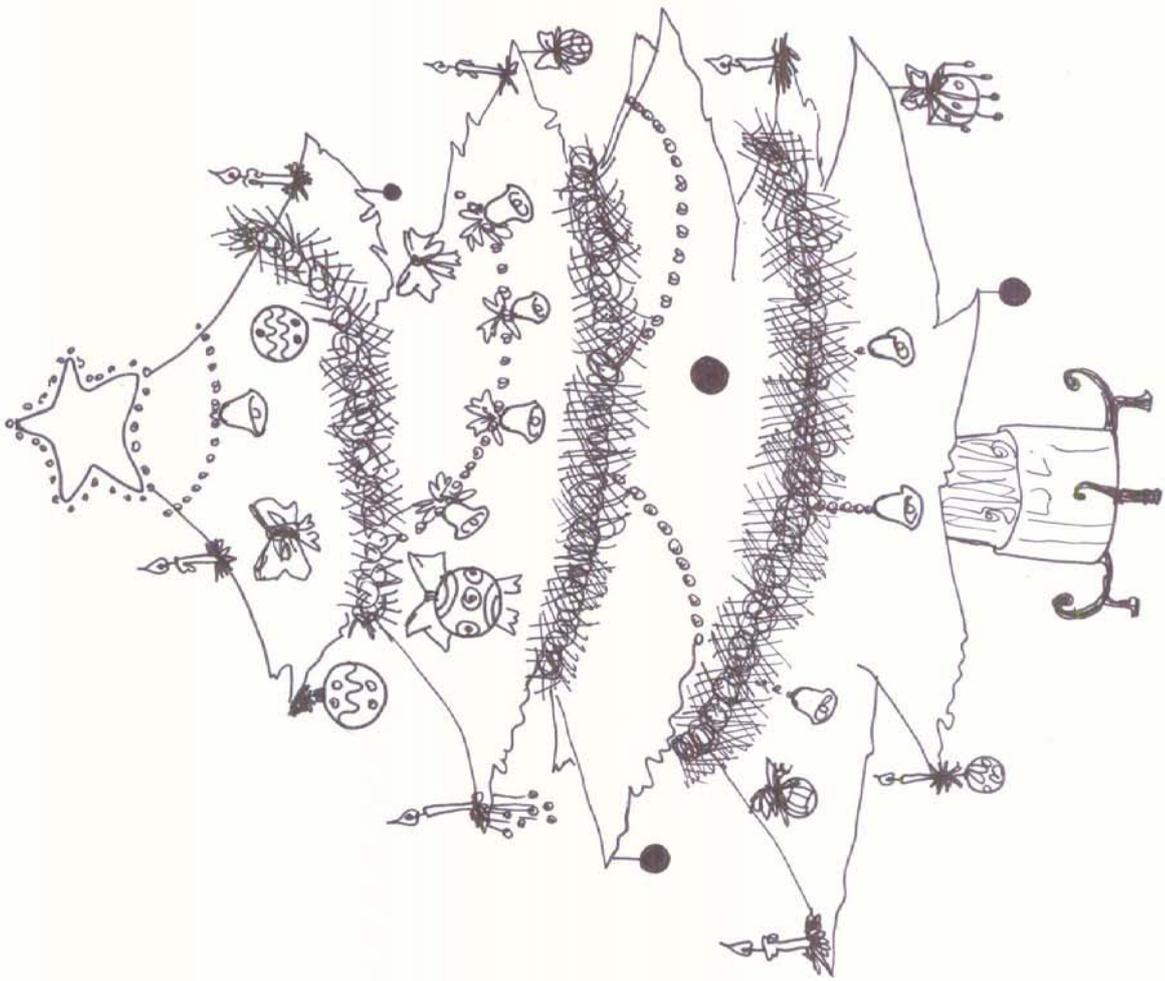


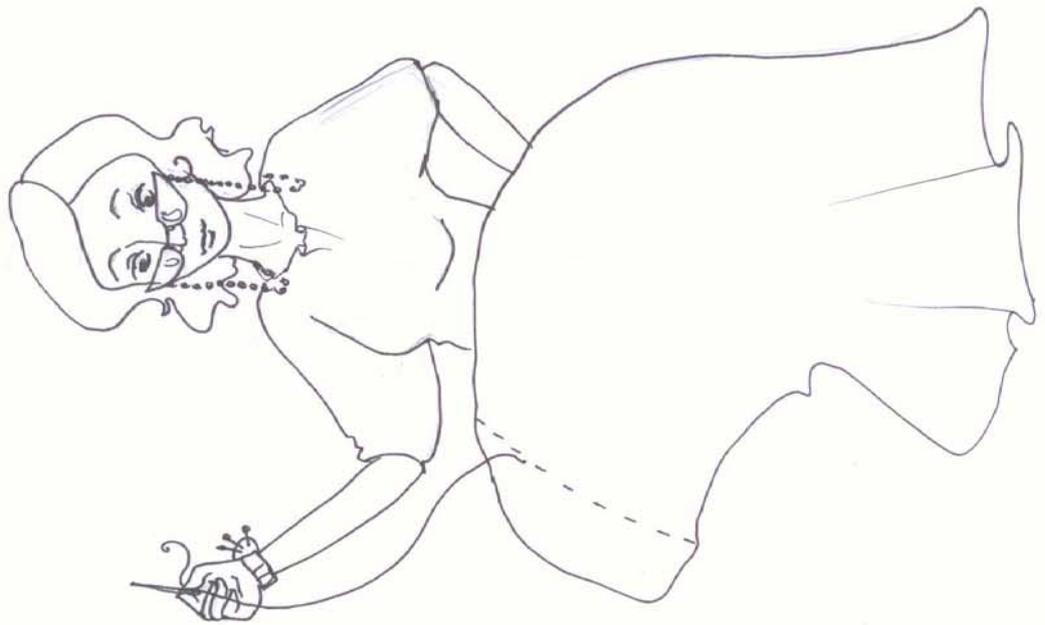




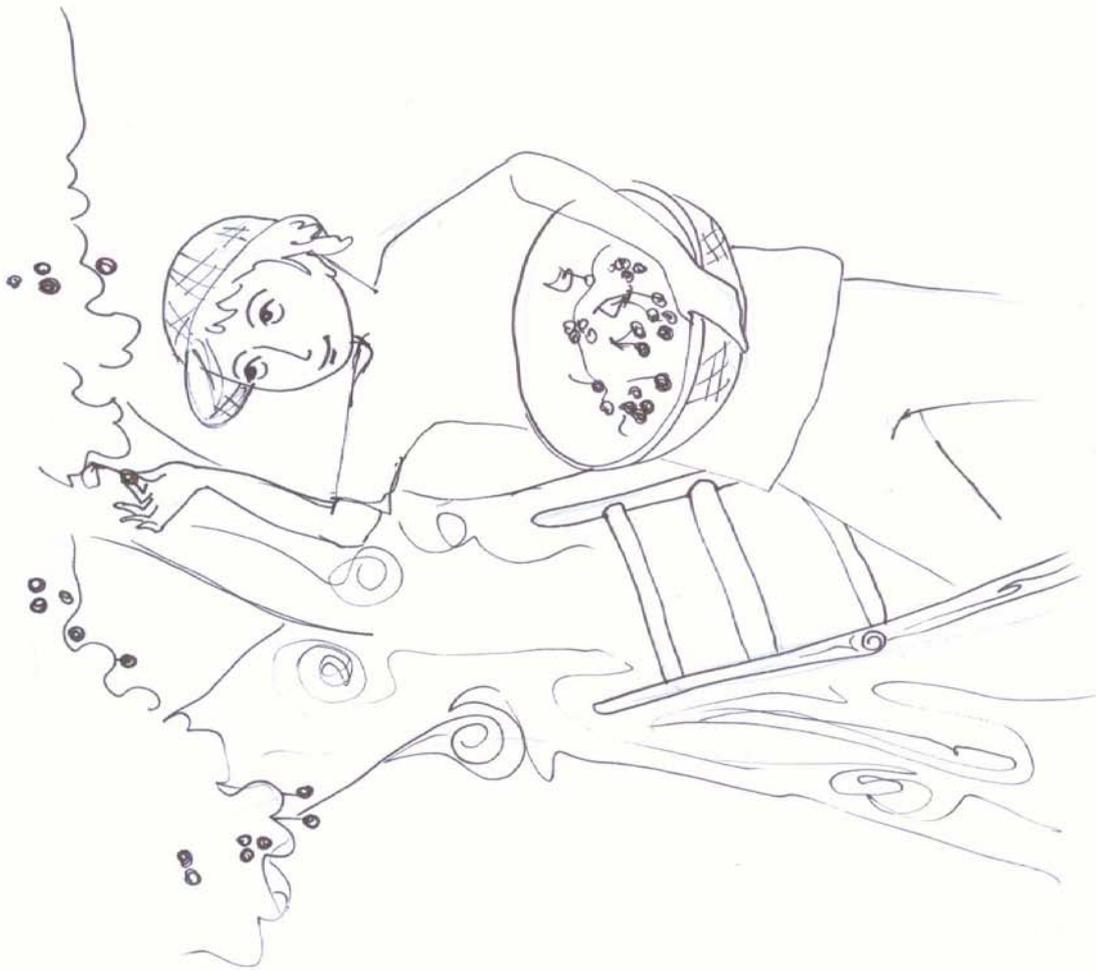




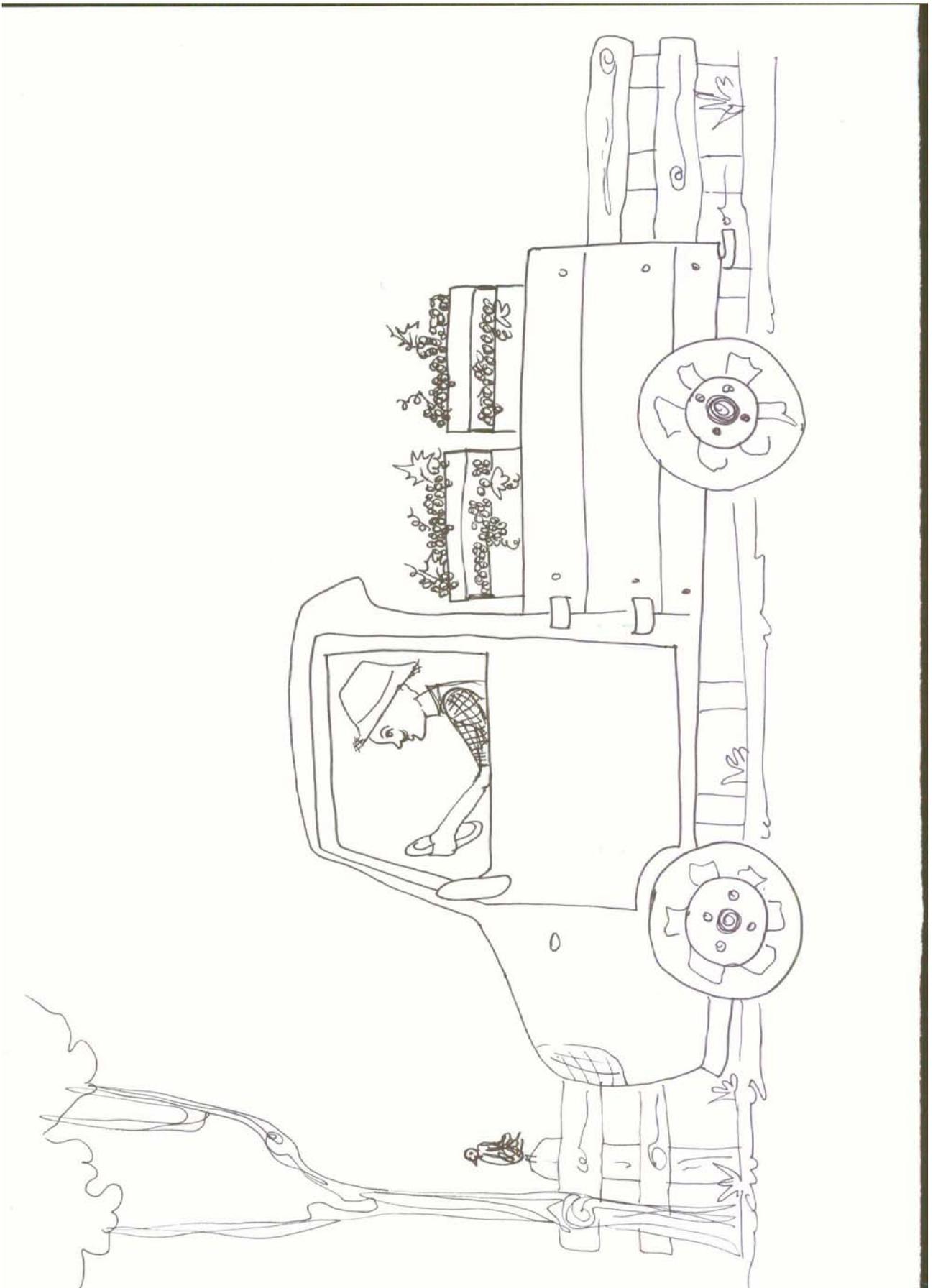


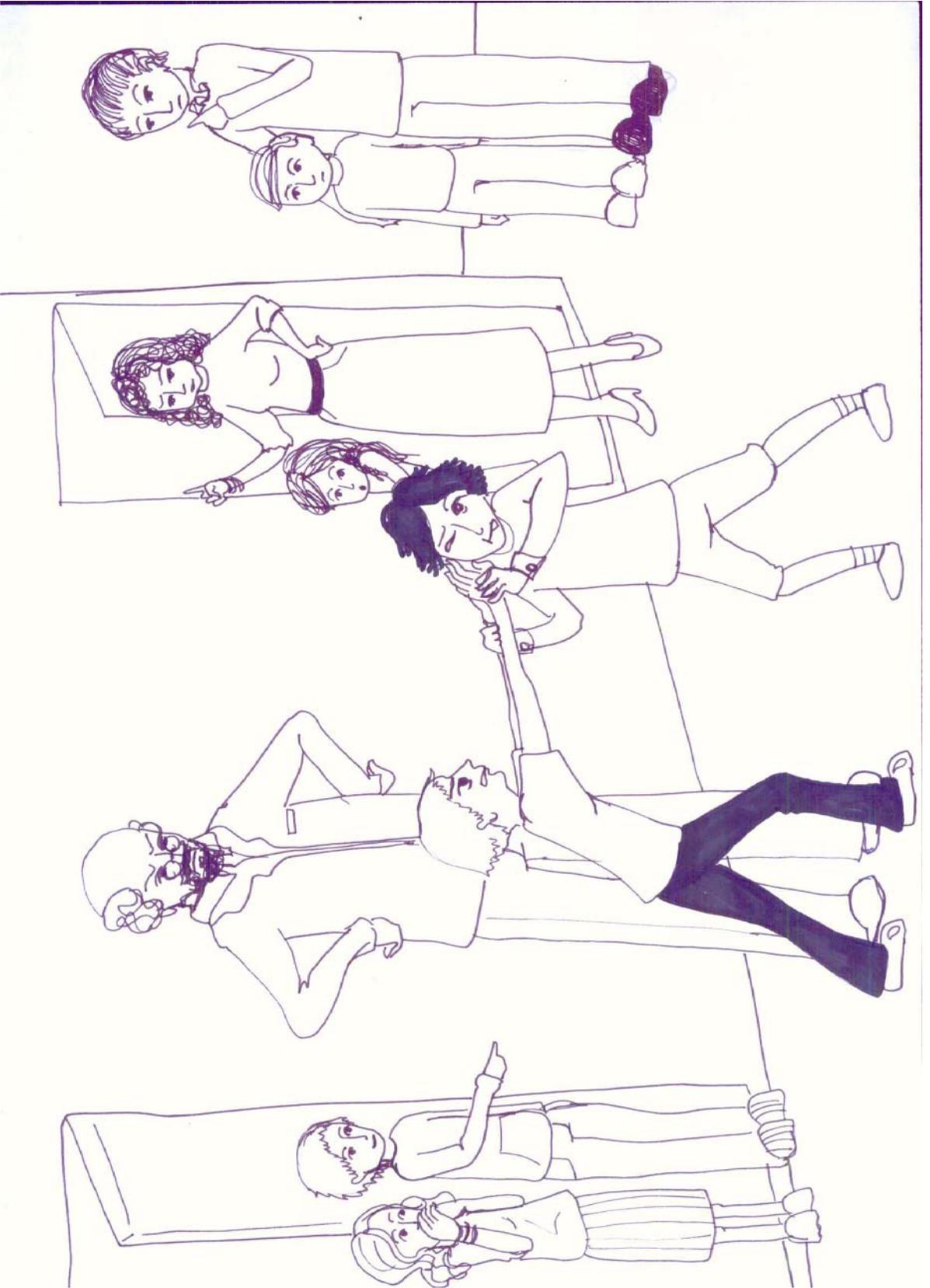












**Annex 12.3.6 ROMANIAN WRITTEN**

**PROBA DE LIMBĂ ȘI LITERATURĂ ROMÂNĂ**

Școala \_\_\_\_\_

Nume și prenume \_\_\_\_\_

Număr \_\_\_\_\_

D. Indicați opțiunea corectă pentru fiecare expresie în parte:

1. *A-și pune pielea pe saramură*, înseamnă:

- a. a lupta cu înverșunare
- b. a reuși să câștige încrederea sau simpatia cuiva
- c. a risca, a se expune unei primejdii pentru ceva
- d. a exploata pe cineva

2. *A se ascunde după deget*, înseamnă:

- a. a se asunde de primejdii
- b. a scăpa de primejdie cu îndemânare
- c. a cunoaște ceva foarte bine
- d. a căuta în zadar să-și asundă o vină

**EXERCITIUL 15** Redactarea unei scrisori.

Alegeți una din variantele de mai jos:

1. Redactați o scrisoare adresată directorului unui centru cultural de limbi străine prin care solicitați informații despre cursurile de vară care se organizează și condițiile de înscriere.
2. Redactați o scrisoare adresată unui prieten din străinătate în care să-i relațați cum ați petrecut sărbătorile de Craciun, Anul Nou și Bobotează.
3. Redactați o scrisoare în care să relațați bunicilor din România impresiile voastre despre șederea în străinătate alături de părinții stabiliți acolo.

Care este varianta pe care ați ales-o? \_\_\_\_\_

Corectează textul redactat.



