

DESCRIPTION OF THE USES OF SPANISH WITHIN A NATURAL SCIENCE CLASS IN  
ENGLISH

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## TABLE OF CONTENT

ACKNOWLEDGMENTS	2
TABLE OF CONTENT	3
ABSTRACT	7
I. Problem Statement	10
II. Objectives	12
General Objectives	12
Specific Objectives	12
III. Rationale	13
IV. Previous studies	14
V. Literature Review	18
Bilingual Education	18
Models of bilingual education	18
Bilingual education in Colombia	21
CLIL	24
CLIL in Colombia	26
The Use of Mother Tongue in a Bilingual Classroom	28
Code-switching	30
VI. Methodology	33
Description of the case	33
Procedure and data collection techniques	34
Preparation stage	35
Field work stage	37
Data processing stage	39
VII. Research findings and discussion	42
Teacher's Use of the L1	48
Students' Use of the L1	59
VIII. Conclusion	73
References	75
Appendixes	79
Appendix 1: Transcription of a class	79
Appendix 2: Survey applied to the teacher	87

	4
Appendix 3: Questions for the interview	88
Appendix 4: Example of class observation format	89

## LIST OF TABLES

Table 1: Specific goals of English language teaching in Colombia	21
Table 2: Types of bilingual schools in Colombia	22
Table 3: Continuum of Codeswitching	30
Table 4: Summary of data from class observations	43
Table 5: Occurrences of L1 in the 4th grade sessions	45
Table 6: Occurrences of L1 in the 4th grade sessions	46
Table 7: Uses of Spanish by the teacher	50
Table 8: Functions of the L1 in classes. Teacher's uses	51
Table 9: Uses of L1 by students from both courses according to categories identified	60
Table 10: Uses of Spanish by students and their frequency by category	63

## LIST OF GRAPHS

Graph 1: Uses of Spanish by participants	48
Graph 2: Total number of Spanish occurrences by the teacher and by category	49
Graph 3: Total number of Spanish occurrences by students and by category	62

## ABSTRACT

The goal of this study is to describe how a teacher and her students use Spanish in a science class taught in English in a private bilingual school in Cali, Colombia. The current study uses a qualitative method combining an ethnographic approach with a descriptive case study design. To carry out this project, a total of fourteen sessions (7 sessions in a third grade and 7 sessions in a fourth grade) were observed. Data sources included the audio recordings of the observed sessions, the researchers' field notes, audio recordings of the sessions and an interview with the science teacher. Occurrences of Spanish in the sessions were identified and categorized. Some of the identified categories in the data are consistent with categories previous authors have identified in similar studies, whilst some others emerged as the data was analyzed. The uses of Spanish by the teacher were organized in the following categories: giving instructions, answering questions, personal interactions, classroom management, content-related interactions, and feedback. On the other hand, the categories for the students are: complementing an answer, asking questions, personal interactions, classroom management, and content-related interactions. The results showed that in general terms, the students use more frequently the L1 compared to the teacher. This can occur due to the lack of vocabulary of the students, as this may impede the students using the target language during the entire session.

Keywords: Spanish, CLIL, bilingual class

## RESUMEN

El objetivo de este estudio es describir cómo una maestra y sus alumnos usan el español en una clase de ciencias que se enseña en inglés en una escuela privada bilingüe en Cali, Colombia. El presente estudio se define como un método cualitativo que utiliza un enfoque etnográfico con un diseño de estudio de caso descriptivo. Para llevar a cabo este proyecto, se observaron un total de catorce sesiones (7 sesiones en un tercer grado y 7 sesiones en un cuarto grado). Las fuentes de datos incluyeron los registros de las sesiones observadas, las notas de campo de los investigadores, las grabaciones de audio de las sesiones y una entrevista con la profesora de ciencias. Se identificaron y categorizaron las incidencias de español en las sesiones. Algunas de las categorías identificadas en los datos son consistentes con las categorías que autores anteriores identificaron en estudios similares, mientras que otras surgieron cuando se analizaron los datos. Los usos del español por parte del profesor se organizaron en las siguientes categorías: dar instrucciones, responder preguntas, interacciones personales, gestión de clases, interacciones relacionadas con el contenido y realimentación. Por otro lado, las categorías para los estudiantes son: complementar una respuesta, hacer preguntas, interacciones personales, gestión de clases e interacciones relacionadas con el contenido. Los resultados mostraron que, en términos generales, los estudiantes utilizan con mayor frecuencia la L1 en comparación con la profesora. Esto puede ocurrir debido a la falta de vocabulario de los estudiantes, ya que esto puede impedir que los estudiantes utilicen la lengua meta durante toda la sesión.

Palabras clave: español, CLIL, clase bilingüe.

## I. Introduction

The present research is a case study that attempts to describe the uses, frequency, and functions of the L1 (in this case Spanish) in a bilingual science class in a private school in Santiago de Cali. This study takes into consideration the professional profile of the teacher of the observed classes and her perceptions on the use of the L1 in the classroom as well as the students' proficiency in the target language in order to make hypothesis on the observed phenomena.

The first steps of this research date back to the *Classroom Research* I and II courses in 2017, in which some observations were done to choose a focus of interest and a small ethnographic research was written. Some of the categories presented on the data analysis come from the research previously done and some others appeared during the process of the present study.

This paper includes a review of previous national and international studies on the same topic as models to carry out the research process and to analyze what contributions to the field the present paper can provide. Additionally, this research includes a literature review of key concepts that are related to the topic. Also, the present research describes the methodology adopted to gather, process and analyze the data. This methodology contains suggestions from different authors on how to conduct a case study and how to report the findings. Lastly, the results found are analyzed, and then described and portrayed using tools such as charts, tables and graphics that help illustrating the categories and the frequency of the uses of the L1.

## II. Problem Statement

Nowadays, bilingual schools seek to develop students' communicative competence in the second/foreign language (L2) by creating an "immersive" linguistic context. This is achieved through the integration of the L2 into other subject classes such as science or mathematics, thus increasing the exposure to the target language and facilitating the acquisition process. Because of this immersion, students can learn, process, and communicate using the L2, hence giving content and language learning the same importance. This approach to bilingual education is common in English-speaking countries for immigrant children or for heritage students. In such contexts, the teacher is usually a native speaker of the target language who often does not speak the students' first language (L1). Furthermore, students in such contexts often come from different L1 backgrounds, so communication necessarily must occur in the target language which is common to most. In Colombia, on the other hand, this is not usually the case, and both students and teachers share a common L1, in this case, Spanish. In such a context, it might be difficult to keep a completely immersive environment in which the students are exposed exclusively to the L2.

For long, the use and role of the L1 in L2 classes has been a topic of debate. Many studies have researched this phenomenon from different theoretical and methodological perspectives. There are several reasons for teachers to use students' L1 in English as a Second/Foreign Language (ESL/EFL) classes, such as for teachers to convey meaning, explain grammar, and organize the class (Brooks-Lewis, 2009; Cook, 2001; Auerbach, 1993). The L1, then, is often needed to establish order in the class, maintain the discipline, give explanations, clarify concepts, engage in personal interaction or give instructions. However, most studies in the literature have been conducted either in regular EFL or ESL classes where the target language is

not only the mean of instruction, but also the object of study. In bilingual or content classes, language is the mean of instruction while a different subject matter (i.e. social sciences, math, arts, etc.) is the object of study. Considering the claims Colombian bilingual private schools make about immersive environment for the students in their setting, investigating the use of the L1 bilingual content-based classes is relevant for the field of foreign language teaching methodology and language curriculum development.

Considering the relation between the L1 and the L2 in the classroom, it is important to understand when, why and for what purpose the L1 appears in a class taught using the target language. Many private institutions (schools, language institutes, etc.) demand their teachers to use only the L2 in EFL or ESL classes but using input that the students might not understand well could not be the best method to engage them in the language acquisition process. To understand better the presence of the L1 in a bilingual classroom, our research addresses the use of Spanish in a natural science bilingual class, specifically the reasons for using the L1, the frequency with which it is used and its function in the classroom.

Our interest in this topic led us to consider the following research question:

- How often, in what situation and for what purposes is Spanish used in a natural science class in English by the teacher and students of a bilingual school in the city of Cali?

From this question, the following ones were also derived:

- For what purposes do teachers use Spanish in science classes in English?
- What is the frequency with which Spanish appears in bilingual classes?
- What functions does the use of Spanish meet in bilingual classes?

### **III. Objectives**

#### **General Objectives**

To describe the frequency, situations and functions of the use of Spanish by the teacher and students in a natural science class in English in a private bilingual school in the city of Cali.

#### **Specific Objectives**

- To establish the frequency of appearance of the L1 in these classes.
- To describe the situations in which the L1 is used in natural science classes by the teacher and students.
- Identify the functions the L1 plays in these classes.

#### **IV. Rationale**

It is important that as educators, teachers understand the inherent relation between students' L1 and L2. Determining the reasons why students resort to their L1 in a bilingual class can help the teacher build a class environment in which the content is taught in a meaningful way and, at the same time, develop students' proficiency and skills in the target language. Therefore, the present research can be useful for teachers, both new and experienced, to recognize the role that the L1 plays in classes that integrate the learning of both the target language and the subject matter and determine whether the use of the L1 represents a tool or an obstacle for the appropriate development of the classes. The importance of this research lies, then, in the possibility of improving the quality of the learning of both the L2 content and the subject matter content.

Furthermore, this research aims to complement the lack of studies that focus on content and language acquisition in a primary school context as most of the research previously done on the interactions between the L1 and the L2 are done about foreign language classes or are focused on high school or college students.

## V. Previous studies

In this section, we present five studies that are related to the problem of our investigation. The first one, by Moghadam, Samad, and Shahraki (2012), focuses on code-switching as a tool to associate the students target language with their L1, analyzing students attitude towards code-switching and the impact it has on them; the second one, by Lasagabaster (2013), is a study about the perspective teachers have on the use of L1 in classes under the approach known as Content and Language Integrated Learning (CLIL); the third work, by Añasco and Salha (2014), is an ethnographic research that studied the alternations between English and Spanish made by teachers; the fourth study, by Carrió-Pastor & Vallés (2015), is an analysis of the influence of the L1 in Language for Specific Purposes (LSP) and CLIL classes; and finally, the fifth work is an ethnographic research by Avila (2016) that described the role of the L1 in the learning of a L2.

Moghadam, Samad and Shahraki (2012) aimed at determining the possible impact code-switching (CS) has on students understanding of the target language and their attitude toward its use in a conversation class taught at a Malaysian university. In this qualitative study, the 4 students in that class, whose L1 was Persian and had low proficiency in the L2, were required to read a short story, then discuss it in pairs and finally reproduce the story to their teacher individually. Data collection methods included audio recording of classroom observation, self-report audio recording and reflective journals in the L1 of the students focused on the objective of the study. The analysis was based on the transcriptions of the conversation during the observations, considering how many times Persian was used. The analysis of the reflective journals focused on the students' own thoughts about the impact code-switching had in the learning context. The results showed that the use of the L1 (Persian) by teacher and students was

more frequent in terms of language functions such as: checking comprehension, asking for clarification, clarification/persuasion, translation and socializing.

Lasagabaster (2013) presents a study on the different perspectives teachers in CLIL contexts have about the role of the L1 in their classes. These perspectives range from tolerance and acceptance (seeing the use of the L1 as an aid to instruction) to complete rejection (considering the L1 an interference in the learning process). In this case, thirty-five CLIL teachers were asked about their beliefs regarding the use of the L1 based on their experience teaching in Colombia. All the participants had Spanish as their L1, except for two native English speakers who were proficient in Spanish. For data-collection, a workshop and a survey were given to teachers. The workshop entitled “The Coexistence of L1 and L2 in CLIL classes”, offered by the Universidad del Norte was intended to make them reflect on their experiences using L1 in CLIL contexts. The main goal was to hear their opinions. Later, a survey of three questions was also administered. The three questions focused on their beliefs towards the L1 and its role in CLIL classes. Then, their answers were classified into five main categories: to help students understanding; to make L1 and L2 comparisons; to feel comfortable in the CLIL class; to boost debate, and to deal with disciplinary issues. Results indicated that the role of L1 in CLIL classes was positive as it was perceived as a support. At the end of the article, the author proposes the use of a more structured and use of the principled L1.

Añasco and Salha (2014) conducted an ethnographic study with the aim of determining how teachers in an EFL context codeswitch between Spanish and English. To do so, the authors analyzed the situations, frequency, functions, reasons and influence of the use of the L1.

The study took place in a private school in the city of Cali, with two fifth grade classes.

Data was collected through observation (using researchers' field notes) and interviews to the coordinator of the school and the teachers of the classes. According to the authors, teachers make use of the L1 in situations in which it is necessary to ensure students' understanding and when they communicate to their students about aspects different from class content. For the authors, the use of the L1 can then be a tool that favors the development of skills in the L2.

Carrió-Pastor & Vallés (2015) sought to relate L2 learning motivation and L1 language use under two different language teaching methodologies: CLIL and LSP. Fifty students enrolled in technical degrees at Universitat Politècnica de València, participated in the study. They were divided into two groups, group A (twenty-five students) completed a math class under a CLIL approach; group B was in turn divided into two; twelve students taking an LSP subject in English and thirteen students taking an LSP subject in French. The data consisted of samples of writing students produced in their class assignments considering the role of the L1. The assignments were analyzed manually. Then, a questionnaire of integrative motivation was administered to both groups. The data collected from the analysis of the assignments and the questionnaire were analyzed using qualitative and quantitative methods. The results showed that students in CLIL classes were more demotivated and more attached to their L1 because they expressed not being conscious of improving their language proficiency in CLIL sessions, while students in LPS classes showed confidence using both languages, the L1 was not interfering with the acquisition of the L2 but rather played a supportive role.

In an ethnographic study, Ávila (2015) described the role of the L1 in the learning of an L2 by first graders from a private school in Cali. To this aim, fourteen classes were observed.

The author herself was the teacher of these classes. The results showed that the L1 was used to fulfill the following functions:

Clarification of instructions

Control of discipline

Personal dialogue with students

Explanation of contents

Motivation

According to Ávila, these uses of the L1 are mainly due to the need to help students better understand instructions, that is, to assure that they correctly carry out the activities.

According to the author, when speaking in the L2 there is a dilemma: students are either afraid or incapable of expressing themselves or simply not understand very well. Therefore, the use of Spanish does not only improve students' understanding, but also help them express themselves freely.

In this last chapter, different studies were reviewed in order to illustrate how the presence of the L1 in the classroom has been approached by researchers. Collectively, these studies show that the L1 is usually present in L2 classes in different contexts and in classes of students of different background and age. While some methods and methodologists have argued against L1 use, these studies show that both teachers and students resort to the L1 to maintain communication in the classroom. The L1 is commonly used for classroom management purposes and for assuring that content and instructions are clear. Let us now explore the theoretical basis underlying the current study.

## **VI. Literature Review**

In this section, the most relevant concepts that lend support to our research are reviewed. It starts by defining the concept of bilingual education and what is its role in the Colombian educational system. We also discuss the importance of CLIL in bilingual education and the phenomenon of code-switching in terms of functions of the language.

### **Bilingual Education**

The term bilingual education has gained popularity due to the increasing demand for bilingualism and multilingualism in a globalized world. Bilingual education refers to educational contexts and situations in which two languages are used as medium of instruction (Lotherington, 2004, McGroarty, 2001). These educational programs are oriented to learning a minority language, or an international language, being the last one the most popular reason of these programs (Lotherington, 2004). This type of education has been present since ancient educations, but the contemporary bilingual education has its origins in experimental classrooms of 50's and 60's and its main goal is to not abandon the L1 and native culture for learning the L2 without disregarding curricular content in any way (Lotherington, 2004).

### **Models of bilingual education**

There are several models of bilingual education with different characteristics and intentions. Lotherington (2004) characterizes models of bilingual education as strong and weak, been additive bilingualism (a bilingualism type in which the L1 and the target language coexist) and subtractive bilingualism (a type of bilingualism in which the idea is to use the target language exclusively) the outcomes of each type. Also, she identified some aims that bilingual education programs may have. Such as enrichment education for majority language speakers,

compensatory education for minorities, maintenance education for bilingual speakers, and revitalization education in an endangered language (Lotherington, 2004).

Strong bilingual education programs are those where content-based learning is used as an approach to teach. The best-known form of this approach is the bilingual immersion programs, in which the L2 is the medium of instruction in 50% percent or more of courses that made up the curriculum. There are other forms of this option such as total immersion programs (100% of instruction is via the L2 initially with a gradual introduction of the L1 later on), partial immersion programs (50% of instruction in each language), two-way immersion programs (providing equal emphasis to both languages and including multiculturalism), and maintenance programs (The L1 is formally studied as a course, but it is not used as a medium of instruction).

These types of immersion programs have their roots in the 60's in Canada, where the curricular content was taught in English and French. Later, thanks to the success of the program, the pedagogical model spread globally.

The other model of bilingual education is the weak second language programs, in which the basic principles of immersion are not followed, and the outcome is not additive bilingualism. In this case the programs are called submersion. These programs may take different forms such as: transitional programs which begin with the introduction of basic literacy in the L1 and major introduction of the L2 aiming at its use as medium of instruction later in the higher grades; language object programs are the ones in which the L2 is not use as a medium of instruction for content learning but mostly as a course dedicated to formal language study.

On the other hand, McGroarty (2001) classifies models of bilingual education according to languages involved, motives for the teaching of those languages, teacher, students and

methods used for teaching, claiming that the classification depends on the goals of education. Based on that, McGroarty divides the models of programs by the educational level they are intended for:

Elementary- level program model: These include programs addressed to teaching young children. These can be further classified into: Early-exit or transitional bilingual programs (two languages, the children's native language and the dominant societal language, are used for classroom instruction only until the children can make the transition to receiving all instruction in the dominant language, McGroarty, 2001, p. 317), late-exit or maintenance bilingual programs (are meant to use and develop two languages to the point of age-appropriate academic literacy skills, McGroarty, 2001, p. 317), and immersion approaches (which initially emphasize the L2 to almost 100% of instruction and gradually balance the amount of exposure to 50% of instruction in each language, McGroarty, 2001 and Lotherington, 2004).

Secondary bilingual approaches: According to McGroarty (2001), most bilingual approaches for secondary education are merely variations of the late-exit or transitional bilingual programs, in which the L2 is favored and the L1 is used transitionally until the students reach the desired level of competence in the L2.

Postsecondary bilingual approaches: These refer to programs targeting adults or students beyond secondary education age and might include vocational training, ESL intensive courses for overseas college students, Language for Specific Purposes and Content Based Instruction in universities and heritage language courses (maintenance programs for speakers of minority language).

Based on the review of these two authors (McGroarty, 2001 and Lotherington, 2004) we can see that models of bilingual education can vary according to its purposes, audience and intentions. In Canada and the USA, programs are usually targeted for minority language speakers (usually immigrants descendants or indigenous populations) but some aim at integration of these minorities into mainstream education (fostering subtractive bilingualism), others aim at maintenance of the heritage/identity of these communities (fostering additive bilingualism) and yet others aim at developing biliteracy and biculturalism (fostering a balance bilingualism). In other parts of the world, bilingual education has been associated with the promotion of a prestige language (often English) in societies where that target language is usually foreign, such is the case in Colombia (Truscott de Mejía, 2012). In the next section, we briefly review bilingual education in the Colombian context.

### **Bilingual education in Colombia**

Colombia, as many other countries in Latin America, has been struggling to enter the competitive global market and improve its economy and social conditions of its population. Therefore, recent governments in Colombia have included the ability to communicate in English in its educational agendas. Due to this, the Colombian government has redirected the teaching of English as a foreign language in the last 18 years through a series of programs created by the National Ministry of Education (MEN by its acronym in Spanish). Four programs have been released since 2004: The National Program of Bilingualism 2004-2019; the Program for Strengthening the Development of Competences in Foreign Languages; the National English Program: Colombia Very Well 2015-2025; and the latest Bilingual Colombia 2014-2018 (Correa & González, 2016).

The principal objective of its latest program is:

To respond to the national needs related to the English language, it aims at the education of teachers and students in all educational levels that are capable of functioning in a new bilingual environment... as for English proficiency, the goal is achieving that the participants of the educational system develop communicative competence in the levels considered as intermediate and sufficient in the international context<sup>1</sup>. (MEN, 2005, p.1)

Accordingly, the MEN has established the following levels of competence for the specific population:

<b>Population</b>	<b>CEFR Levels</b>
English teachers in schools	B2
Teachers of other subjects in primary and elementary education	A2
High-school graduates	B1
Language B. A and B. Ed graduates	B2-C1
Higher education graduates	B2

**Table 1: Specific goals of English language teaching in Colombia (MEN, 2005).**

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<sup>1</sup> Original in Spanish: Responder a las necesidades nacionales con respecto al inglés, aspira a formar docentes y estudiantes de educación Básica, Media y Superior capaces de responder a un nuevo entorno bilingüe... Con respecto al dominio del inglés, el objetivo es lograr que los actores del sistema educativo desarrollen competencias comunicativas en estos niveles, catalogados como intermedios y suficientes en el contexto internacional. Our own translation.

This year, the program sought to increase the number of teachers evaluated with a level B2 or superior, the number of teachers trained in teaching methodologies and teaching English, and the percentage of students in public schools who reach a level B1 or above in *Saber 11* (the standardized State test administered to all senior high-school students in the country) .

As a result of the educational and linguistic policy launched by the MEN, the educational landscape of private schools in Colombia began to change. While public schools struggled to achieve the goals established by the MEN, traditional private bilingual schools strengthened, new bilingual schools opened, and many private schools turned from being monolingual to being bilingual. Considering the previous information presented about bilingualism, its educational models and its presence in Colombia, Rodriguez (2011) identifies three types of bilingual schools in the Colombian context:

<b>International Bilingual Schools (colegios bilingües internacionales)</b>	<b>National Bilingual Schools (Colegios Bilingües nacionales)</b>	<b>Intensive English Schools (Colegios ingles intensivo)</b>
Schools belong to international organizations, e.g., SACS (Southern Association of Colleges and Schools) or IBO (International Baccalaureate Organization)	Students take international exams when they graduate. E.g. TOELF, IELTS.	Students take language proficiency exams during the school years.
Students have short stays abroad and most of their further studies are abroad	Most of the students' further studies are in Colombia	Most of the students' further studies are in Colombia
More than 50% of the curriculum is taught in a foreign language	More than 50% of the curriculum is in a foreign language	Students take 10 – 12 hours of English, not necessarily including a code area like Science or Math
Many of the teachers are foreigners	Most of the teachers are bilingual Colombians	Most of the teachers are monolingual, except the foreign languages ones
Schools were founded by foreigners	Schools were founded by Colombians	Schools were founded by Colombians

**Table 2: Types of bilingual schools in Colombia (Taken from Rodríguez, 2011, p 82)**

In this case, it is shown that bilingual education in Colombia is associated to the types of schools that claim to be bilingual. Rodríguez (2011) considers as main characteristics presence or use of international standardized tests, students' further studies, presence of two languages in the curriculum, teachers' nationality or background and founders of the school. Based on these characteristics, bilingual education in Colombia is mostly present in private schools, and a distinction is made between International and national bilingual schools and intensive English schools. The latter refer to those schools that have a traditional monolingual curriculum, the difference being that more hours are allocated to English classes (usually between 10 to 12 hours), but English remains a subject of itself in which the language is both the means of instruction and the object of study.

### **CLIL**

The term CLIL (Content and Language Integrated Learning) was coined in 1994 in Europe, mainly employed in bilingual education or border areas (Mehisto, Frigols & Marsh, 2008). CLIL is a dual-focused educational approach that aims to teach both content and language (content defined as subject area content). This approach differs from other approaches, such as content-based learning, as this is the only one that gives the language the same importance as the subject content.

Attempting to define CLIL can be a treacherous task as it has several modalities of implementation. This is the reason why some authors in language education (Rodríguez, 2011, for example) see CLIL as an “umbrella term” that covers a wide variety of language teaching

approaches that equally emphasize L2 instruction and subject-matter content. Depending on the context where CLIL is applied, different characteristics from the approach are adopted and put into action. In addition to this, CLIL has received several definitions by different authors through the decades.

CLIL has earned a place in most European schools as it is considered an effective tool in the promotion of multilingualism and, at the same time, offers the opportunity for students to develop different skills such as intercultural knowledge and understanding, and intercultural communication skills (Ioannou-Georgiou & Pavlou, 2011).

Despite having different models and definition, Rodríguez (2011) mentions four core elements common to all CLIL varieties. These elements are shared among the different definitions and applications of CLIL regardless of the contexts or educational needs as they aim to maintain the main premise of CLIL; allocate equal importance to language learning and subject content. These core elements are:

- Provide the student with opportunities to study content through different perspectives, which can help them achieve a deeper understanding of the content.
- Using language to learn while learning language and placing emphasis on communication and interaction.
- Developing thinking skills, which can lead to the formation of abstract and concrete concepts, language and understanding.
- Build intercultural knowledge, awareness and understanding.

These principles help define CLIL and its characteristics and should be part of any CLIL program (Rodríguez, 2011).

Marsh (2002) defines the situations where CLIL is used as contexts in which subjects are taught in a foreign language with the aim of learning content, and at the same time, learning the language of instruction. According to Ioannou-Georgiou and Pavlou (2011), due to the nature of CLIL, it is not an approach that belongs to the category of language teaching nor to the category of subject teaching. It is a unique and approach that involves the convergence of these two. Because of its special characteristics and its flexible applicability, the popularity of CLIL is increasing as well as its implementation in a variety of contexts around the world. However, each context where CLIL is implemented is different and has its own issues. Therefore, educational policies and educational institutions need to address the possible issues emerging from the adoption of CLIL. That is the reason why several types of CLIL exist under a major premise, because is difficult to use one definition that works with each context.

### **CLIL in Colombia**

According to Kaufman & Crandall (2005), the unprecedented spread of English language throughout the world in recent years has placed English in a prestigious position in several aspects of society such as politics, culture and education. In the Colombian context, bilingual education is associated with “privileged” and “high quality” education. Most of the time, parents seek to provide their children with better education and to create opportunities for them to study or work abroad (McDougald, 2009). Overall, English is becoming more of a core skill (very much like ICT skills) rather than a foreign language, as it transforms and repositions a curriculum (Graddol, 2005).

MEN has tried several strategies to achieve better levels of English communicative competence among Colombian students and a more complete bilingual education overall. Since

the establishment of the National Bilingualism Program (Programa Nacional de Bilingüismo) English is now part of the State Curriculum. The curriculum adopted the Common European Framework of Reference for Languages (Council of Europe, 2001) as the model to describe the levels of competence expected from students. The framework, the MEN claimed, provided transparency and consistency in English language teaching through the nation. In private schools and in bilingual schools, aiming at complying with official regulations, content and language integration is becoming the established language teaching method (McDougald, 2009).

Regarding how each school merge together content and language, there are different approaches that each school adopts based on their concept of “bilingualism”. McDougald (2009) notes that while being faithful to the core premise of CLIL as a dual-emphasis approach, some schools prioritize content learning over language acquisition. Additionally, he argues that teachers may strive to teach the English language, thereby overlooking the teaching of content. On the other hand, Jarvinen (2006) mentions that some other teachers may even perceive English as a burden or an extra obstacle since many teachers who are required to comply with a dual curriculum are seldom language teachers, but subject matter teachers who might, in turn, overemphasize the teaching of content and overlook the teaching of the language.

Colombia is adapting its educational system to embrace the globalized needs of a cross-cultural and multilingual society. Both teachers and lawmakers are making efforts to overcome the issues that may arise with the implementation of CLIL and improve the overall quality of the education. More schools and universities are teaching English as a core component in their curriculum rather than just a subject. According to McDougal (2009), despite the variety of approaches and the issues present in the Colombian context, CLIL has proven to be an

achievable standard in education in Colombia and it can be implemented in the current educational programs.

### **The Use of Mother Tongue in a Bilingual Classroom**

Moore (2002) claims that the use of two languages in educational contexts have been addressed in recent years focusing in the use of L1 in the L2 acquisition process. According to her, the L1 has been given a negative stigma in the development and use of interlanguage through the years. Even recently, it is a common perception among L2 teachers that the inclusion of the L1 in the L2 classrooms does not represent a benefit to the students' language acquisition process, thus not allowing the mix of the two languages. Yet, Moore considers that codeswitching and other types of L1 and L2 alternation are a naturally occurring phenomenon in bilingual classrooms. In her own words: "inter and intra sentential switching do occur in the classroom, especially with young children at early learning stages (Moore, 2002, p. 280)." While the dominant position towards L1 use in L2 classes has traditionally been negative, Schweers (1999) notes that by the end of the 20<sup>th</sup> century there appeared to be an increasing number of education professionals who considered that the L1 has a necessary and facilitating role in the L2 classrooms arguing that the L1 represents a pedagogical and emotional support for students.

About the same issue, Harmer (2007) argues that teachers can use the L1 as a tool to guide students in creating connections between the L1 and the L2. He proposes several strategies that transform the unavoidable translation process that beginner students engage with into active processes that help their language acquisition. However, he also notes that despite these possibilities to use the L1 as a tool, teachers should not forget that the main goal of the class is to

learn and to practice the English language, thereby maintaining an environment where the target language is heard and used as much as possible.

Firstly, Harmer (2007) argues that in the early stages of English learning, the L1 is present because it is inevitable that students make translations to the L1, so the best that teachers can do is to convert this translation process into an active process with strategies that allow students to establish the similarities and differences between both languages. According to Harmer, the analysis of this translation process can even help the teacher to understand the difficulties present in the group of students. In his own words:

From time to time, using the students' L1 may help them to see connections and differences between the L1 and the L2, and that, occasionally, the teacher's use of the L1 may help them to understand things that they are finding difficult to grasp. (Harmer, 2007, p.38-39)

Secondly, Myśliwiec (2017) describes the use of the L1 in the Dutch EFL classroom. This research showed that although many teachers consider that the target language should be the predominant language of communication between the teacher and the students, 69.2% of teachers use the L1 to clarify instructions, teach new topics that may be complex, assign homework, manage the class and give feedback.

Language alternation reinforces metalinguistic awareness through the conscious use of the two languages, this allows the L1 to be used but without losing the focus on the target language. Moore (2002) expresses how the coexistence of languages develops congruous philosophies about bilingualism and the subsequent role of L1 in bilingual development, which is a common characteristic in bilingualism.

## **Code-switching**

The term code-switching refers to a phenomenon that usually occurs in a communicative exchange in a context where two languages coexist (social bilingualism) and speakers, often unconsciously, move from one to the other. Speakers, and particularly students, have different reasons to resort to this alternation. One of the most common reasons is to fill a gap in their vocabulary by expressing words, sentences or expressions in one of the languages of the conversation (Moghadam-Samad-Shahraki, 2012). Cook (2006) describes it as the process of “going from one language to the other in mid-speech when both speakers know the same languages” (p.83). Shifting from one language to another language during a speech is known as codeswitching while mixing two or more languages in a sentence is identified as code-mixing. The interaction created in the communicative exchange is usually manifested in words, a complete sentence or an expression, borrowed from another language. Codeswitching can be often seen as a common linguistic behavior among bilingual speakers, in which they switch single words, phrases and clauses (Samad, 2012).

The functions and role of L1 in the L2 classroom have been studied by several authors through the years such as: Moore (2002), Cook (2001), Aguirre (1988). All those studies have shown how switching to the L1 could represent an important function in the learning process (Moore, 2002), and the potential it has by raising linguistic awareness through links to acquire the L2.

On this, Moore (2002) says that code-switching is part of the process of learning a second language, it is part of adapting to it. Code-switching does not represent an obstacle but a necessary element in the learning of an L2 that can be supported by the alternation with the L1.

According to Moore (2002), codeswitching can be avoided in advanced levels, but in low-level classes, it can represent an aid. About this issue, Hughes et al. (2006) make a distinction in some characteristics between students that have a low level in the L2 and students that have a high level in the L2, these characteristics are shown in detail in the following chart:

### **Continuum of Code Switching**

Low Second Language Ability	High Second Language Ability
Mixes because of lack of vocabulary between the first language (L1) and the second language (L2).	Able to alternate between the first language (L1) and the second language (L2) with ease.
Difficulty switching between L1 and L2. Long pauses indicate word searching and retrieval difficulties. Students displays false starts.	The student may freely choose between speaking in their L1, L2, or by a combination of the two.
A strong preference for and use of one language.	The student can freely alternate between the two languages.
The student is consciously aware of which language is being spoken.	No conscious awareness of speaking in either language is noted.

**Table 3: Continuum of Codeswitching (Taken from Hughes et al., 2006, p 10)**

Through the years, codeswitching has been seen negatively in the educational system and in society (Hughes et al., 2006; Moore, 2002). It was believed that codeswitching could lead to fossilization. In early accounts of L2 acquisition, codeswitching is often seen as a compensatory strategy L2 learners use due to a lack of competence in language or because of their gaps in their interlanguage development (Moore, 2002).

According to Phillips (1975), teachers switch between the L1 and the L2 mostly for “disciplinary and manipulative” purposes. By manipulative, the authors mean that teachers in the

1970 codeswitch to the students L1 to highlight the benefits of assimilation of the L1 and to resist the efforts of students to express through the L1. Several authors such as Moore (2000) and Brice & Brice (2000) have identified different aspects of code switching in terms of its purposes, identifying types of code-switching episodes depending on the functions it accomplishes:

**Borrowing:** Use of a word from a language different to the primary language.

**Calque:** The literal translation of an expression from another language without paying attention to its syntax.

**Intersentential:** The alternation of languages in an entire sentence or a phrase. This can be further classified in intersentential codeswitching and intersentential codemixing.

Tariq (2013) classifies the types of code switching in bilingual classrooms from the point of view of teachers. From this stance, teachers and students might code-switch for starting a new topic, because of lack of vocabulary, to place emphasis on an aspect of content, clarification, translation, for creating a friendly environment, repetition (giving instructions in the L2 and then repeating them in the L1), to explain grammar and for managing the class.

Code-switching leads to different reactive processes, some of these processes might refer to the need to fulfil communication processes. Depending on when and how the discourse and its interactive treatment develops, the purpose of the switch can vary, although the communication effectiveness is still the main goal (Moore, 2002).

## **VII. Methodology**

The current study is described as a qualitative research with a descriptive case study design (Duff, 2008; Edmonds & Kennedy 2012). The method is qualitative because, although we do resource to frequencies and percentages in the description of the results, our emphasis is to describe the phenomenon and we do not aspire to make hypothesis or generalizations, nor to rely on statistical and numerical analysis of the relationships found. We selected decided to use a case study design because this allows the researcher to “describe and analyze the social life and culture of a particular social system, based on detailed observations of what people actually do” (Edmonds & Kennedy, 2012, p. 144). In our study, the selected class for observation is seen as a social system and we decided to observe, describe and analyze its actual classroom dynamics. In other words, case study design is characterized by the bounded, singular nature of the case, the importance of context, the availability of multiple sources of information or perspectives on observations, and the in-depth nature of analysis (Duff, 2008, p. 22) in which the case is, in turn, seen as a single entity, phenomenon, or social unit (Merriam, 1988 as cited in Duff, 2008, p.22) that by its nature cannot be isolated from its context (Edmonson & Kelly, 2013).

### **Description of the case**

This research was carried out in a private school located in the Caney neighborhood in District 17 of Santiago de Cali. The school has four floors, each floor has between 8 to 10 classrooms and a bathroom. These floors have classrooms for students from preschool to high school. In addition, the school has a cafeteria, a green area, an infirmary, a library, a shop for school supplies and a dance hall.

The pedagogical approach that the school adopts is integrative. Through this approach the school seeks to develop in the students all their formative and competent capacities. The school is in the process of becoming a fully bilingual institution, since the year 2011, they began to implement classes with a CLIL approach such as science and social studies.

The observations were made in two different courses, a 3<sup>rd</sup> and a 4<sup>th</sup> grade. However, sessions observed were on the same subject: science. We had a first meeting with the coordinator of the school to explain the goal and scope of our study. Based on the information we provided, she suggested we could observe the courses we already mentioned. In other words, we did not choose these courses specifically. Given the difficulty of getting permission to access to a classroom with children, we accepted the courses the coordinator suggested. Both courses counted with around 25 students in total; 14 girls and 12 boys in 4th grade with ages ranging between 8 and 9 years old and 12 girls and 11 boys in 3rd grade aged 7 to 8 years old. As for their level of English, both courses were beginners.

Regarding the teacher of the course, she is a science teacher with more than five years of experience. She accepted to be observed during her classes and told us that she would do her best to avoid changing her methodology or attitude throughout the sessions<sup>2</sup>. Her language proficiency in English was enough to explain some concepts, but it was difficult for her to speak the whole class using the L2.

### **Procedure and data collection techniques**

As for the development of the present study, it adopted the procedures suggested by Duff (2008) and Duff and Anderson (2015) on how to conduct case studies. This study involved three

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<sup>2</sup> It must be acknowledged, though, that our mere presence observing the session represents an alteration to the regularity and naturalness of the classroom environment. Yet, we tried to conduct non-participant observation and did not intentionally introduce changes to the way the teacher taught or the classes were conducted.

main stages: the preparation stage, the field work stage and the data processing stage. In the following section these stages are described.

### **Preparation stage**

The first phase of this research started with three observations of different classes in a bilingual private school in the context of the course Classroom Research I. For this purpose, Universidad del Valle gave us a letter asking for permission from the institution and describing our research interests. The institution allowed us to observe the classes, but we could not record in video the faces of the students nor observe high school classes, only elementary school ones. We observed classes to find a focus of interest and to identify the problem to be studied. The school provided the opportunity to do all three observations. Two different classes were observed: a regular EFL class and a class of natural sciences that was taught in English, both classes of primary school. The first observation was in the EFL class in 3<sup>rd</sup> grade, and the other two were in the class of sciences with a different group in 4<sup>th</sup> grade. The EFL class was taught by an English teacher, and the science class was taught by a Science teacher. Once the three observations were done with the two grades, we merged the information from the field notes in our researcher journal. The information was merged through a single format for each observation in which we combined the information from our separate observations and notes. This format consisted of three columns: one where the time in which the actions occurred was registered, another where these actions were described and a last one where the comments, questions and interpretations of what was observed in the classroom were included. Later, we analyzed the final registers and defined a specific focus in the functions of the L1 in a natural science class.

The process continued in the context of the course Classroom Research II, in which three more observations were done in a class of science taught in English for 4th grade. These sessions were taught by the same Science teacher as the previous observations. The group of students was the same, they moved from 3<sup>rd</sup> to 4<sup>th</sup> grade during this process. These observations were focused on the functions that the L1 accomplished in this class. Once again, we merged together the information using the same procedure described above and identified the aspects that had to do with the focus of interest. Then, starting from the focus of interest and considering what we identified in the three observations, we established the research question that we wanted to answer. These questions helped us narrow down the scope of the study and to delineate a special case that called our attention and we would like to address more in depth. Based on the research questions, the objectives were formulated and the process of reviewing previous works and literature on the specific field of the functions of L1 in CLIL classes started. All the information consulted was put together as an outline, in which we created a basic sketch of the preliminary functions we found in the three observations. After creating the basic sketch, we decided to resume our work from Classroom Research I and II in the Research Seminar class and started to do a draft of our proposal.

In addition to the observations, we decided to interview the teacher in order to collect information about her perceptions on the focus of interest of the study. According to Murillo & Martínez (2010), the interview is a communicative act between researcher and interviewee; it aims to obtain information about attitudes, values, and experiences in an oral and personalized way. This interview was done with the intention of knowing if the teacher used Spanish in a conscious or unconscious way, and if she thought that using the students' L1 in a bilingual class

could represent an obstacle for their second language acquisition. In order to carry out the interview, we designed a set of questions (see appendix 3) for the interviewee. This was a semi structured interview, as this provides researchers with organization and flexibility at the same time.

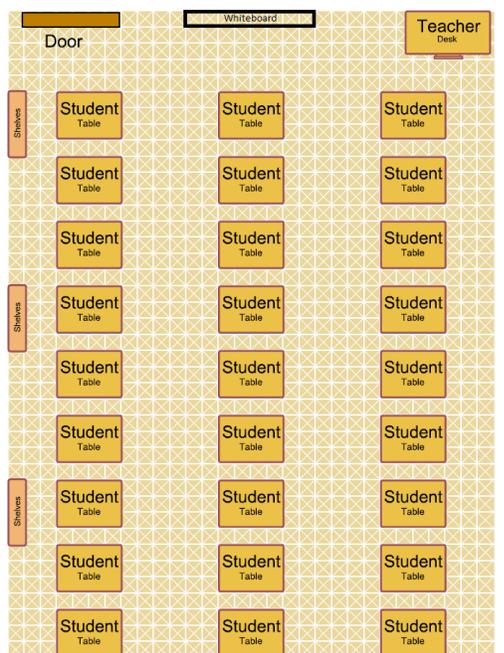
### **Field work stage**

During this stage we collected all the necessary data for the present study. As stated above, at this point we had already done a total of six observations (three to decide our focus of interest and three aimed at predefining categories of analysis). On this stage, then, we decided that observations would be our primary tool to collect the pertinent data.

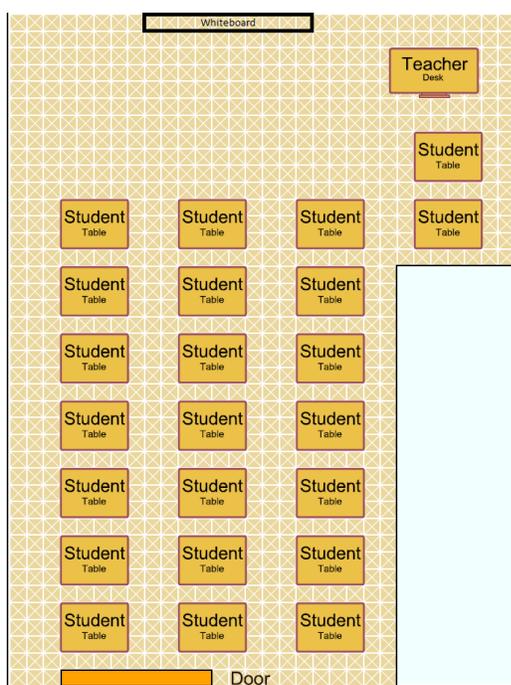
We asked the teacher to fill-in a survey (see appendix 2) in order to know her professional profile and background. We also arranged the observation schedules with the coordinator from the school. The teacher was accessible to us and did not mind sharing her insights on the topic of the study nor did she hesitate about sharing her professional information. We could observe classes once a week, but as many classes as we needed. We had some difficulties during the process of collecting the data because the school often held cultural activities and celebrations. In such dates, there was no class. This affected the schedule and calendar that we had planned for the observations. Something important to note is that we observed two different courses during this stage. Both courses were Science classes with the same teacher, one was a 4<sup>th</sup> grade and the other was a 3<sup>rd</sup> grade. We did a total of fourteen observations in this stage of the process, seven observations from the 4<sup>th</sup> grade and other seven observations from the 3<sup>th</sup> grade for a total of fourteen hours of observation. Each session was one hour long, so we observed a total of fourteen hours of classes. In each observation, both of us

were present and both sat in the back of the classroom as it would be difficult for the students to see the board and the teacher otherwise.

The following diagrams shows the map of the classrooms where the observations took place.



This was the classroom of the 4<sup>th</sup> grade. We seated in the right corner of the last row during the observations.



This is the map of the classroom of the 3<sup>rd</sup> grade. We seated next to the door during the observations. There was a wall (represented with the white space) that gave the classroom a weird structure and did not allow the students next to it to see the teacher when she was at her desk.

The procedures used to gather the information in each observation were: audio recording and our researcher field journals. We set the audio recorder as soon as we entered the class, so sometimes we gathered some interactions non strictly related to the class but that revealed the nature of the classroom or the relationship between students and teacher. Regarding the researcher field journals, each of us wrote down what the topic of the class was, the number of students, and the activities proposed by the teacher. It was difficult writing down all the occurrences, so for that end we used the recordings.

We employed non-participant observation as we did not take part of the class activities nor communicated with the students or the teacher in a meaningful way. The students were aware of our presence and sometimes would ask us things and tell us stories, but we did not participate in the classes.

### **Data processing stage**

Lastly, in the data-processing stage, we organized all the data we collected (the notes on the observations, the voice recordings of the observations, a survey administered to the teacher and the interview to the teacher) and put it all together in folders. As a methodological and procedural frame of reference, we used Duff and Anderson (2015) guidelines for the data analysis stage.

First, we analyzed the survey administered to the teacher in order to sketch her professional profile. Then, with the profile of the teacher in mind, the next step was to know the teacher's perceptions on the use of the L1 in a bilingual class. To this end, we analyzed the interview to the teacher. After listening to the voice recording of the interview, we then had the insights of the teacher about the use of the students' L1 in the classroom.

Regarding the notes taken in the researcher field journals during the observations, we gathered together and compared the entries in order to have as much information to analyze as possible. One by one, we analyzed and discussed each session, we observed in order to achieve consensus about the events that happened in the class. This can be considered as an unstructured triangulation as we did not combine the information collected in both field journals in a single format, we did this, however, with the first observations that aimed to help us find the focus of interest.

The next step was to analyze the sessions voice recordings. To this end, we transcribed all the recordings and counted the occurrences of Spanish made by the teacher and the students. Regarding the procedure followed to analyze the recordings, we did a couple of first listening to have an idea of the possible categories to classify the occurrences in L1. Then, we analyzed the alternation of languages in class made by the teacher and students. From that analysis, we defined the functions that each alternation fulfilled, and we created categories for each of those uses. Next, we divided the interventions in the teacher's uses of the L1 and the students' uses of the L1. This was done in order to adapt the categories by the role the participants played in the classroom and to have more precise data about who uses more the L1 and with what purposes. Lastly, we listened carefully to every single audio recording, contrasted it with the transcripts and counted all the interventions made by the students and the teacher. With this information, we proceeded to organize the data once again in charts and graphics to have a better picture of the uses of the L1 by students and the teacher. This classification was made in two different charts; one chart for the students' interventions and a second chart for the teacher's interventions. Then, we classified the interventions in several categories according to the situational context in which

the occurrences of Spanish happen (at the beginning of the class, during a quiz, in a classroom discussion), the relationship of the participants (teacher-student, student-student), the purpose of the interaction and the linguistic context in which it occurred. We started to classify the interventions in some categories created based on our perception as observers, but as we studied the data, some other categories emerged, and some others were modified. It is important to note that while most of the categories are the same for the students and the teacher, some of them vary depending on the role each of the participants has in the classroom. To illustrate this, a clear variation from the function 'giving instructions' from the teacher transformed into the function 'asking questions' from the students.

### **VIII. Research findings and discussion**

In the following section, the report of the data collected through the different instruments and techniques used and its analysis will be presented in detail. In addition, diagrams and charts will be used to illustrate the results found.

Let us start by describing the teacher's profile according to the results from the survey. The teacher is a young woman who is building a career as a science teacher in a private school. She teaches science in English to 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> graders in the school where we did the observations. She graduated from a public high school and did a bachelor's degree in sciences and environmental education in a public university in Colombia. To be able to teach in English, the teacher took English classes while she was doing her degree and obtained a certification from a private institute after finishing college. She has taught sciences for more than five years and has taught Sciences in English in the institution for around four years. While she has studied English, she does not have a background on language teaching methodology or didactics. This situation is common in bilingual schools in Colombia as reported by Jarvinen (2006).

Now, we will report on what the teacher said in the interview regarding her point of view on the use of Spanish in classes taught in English in a bilingual school. For the teacher, it exists a supreme need to be understood by students, in other words, finding ways to help the students to understand you as a teacher, even if it means using the L1. According to the teacher, the use of the L1 can be beneficial during the first stages of second language acquisition. However, the teacher notes that there's a risk that the students get too used to resort to the L1 and never go beyond the translation stage. Furthermore, the teacher suggests that in most cases, the use of the L1 diminishes when the students acquire a better proficiency level in the L2.

Now, we will report on the findings from class observation, which we consider the most important source of information for the current study. Table 4 shows the information related to all the fourteen observations: the number of the observation, the date, the course, the number of students present in the class, the total number of uses of Spanish by the students and by the teacher and the class topic.

Observation	Date	Course	Number of students	Use of Spanish by teacher	Use of Spanish by students	Class topic
1	01/02/18	4th	22	55	80	Quiz: food chain
2	15/02/18	4th	23	56	105	Animals movements
3	01/03/18	4th	24	72	82	Quiz: ecosystems
4	05/03/18	3rd	21	43	63	Types of plants
5	12/03/18	3rd	26	65	114	Workshop: plants
6	15/03/18	4th	26	67	110	Interactions
7	22/03/18	4th	24	107	131	Interactions
8	05/04/18	4th	26	79	99	Unit review

Observation	Date	Course	Number of students	Use of Spanish teacher	Use of Spanish students	Class topic
9	30/04/18	3rd	18	48	87	The matter
10	17/05/18	4th	23	38	107	Types of lights
11	21/05/18	3rd	21	50	78	Quiz: mixtures
12	28/05/18	3rd	24	28	75	Types of energies
13	06/06/18	3rd	23	72	82	Workshop: the matter
14	13/06/18	3rd	24	54	92	Unit review

**Table 4: Summary of data from class observations**

As shown in table 4, in all the classes the students used more the L1 than the teacher. In some classes the difference is big. Let's take class #10 as an example. On this class, the difference is considerably large (a total of 69 more uses by the students than by the teacher). However, if it is considered that there were 23 students in that class, there is an average of 4 instances of use of Spanish per student. Having in mind that there's only one teacher and more than 20 students, it diminishes the perception that students use their L1 more often than the teacher. Clearly it is not an exact measure, as students' speech might be affected by several factors such as personality of the student or mood during the session (Harmer, 2007).

Regarding the differences between the two courses, the students from the 4th grade use more the L1 with a total of 714 occurrences compared to 591 occurrences by the students from the 3rd grade. We also noticed that the teacher spent more time speaking English with the 3rd graders than with the 4<sup>th</sup> graders. One might think that 4<sup>th</sup> graders would be more advanced in their mastery of the language, since they have probably been taking science and other subject classes in English for longer. Thus, it would be expected to see less use of Spanish in 4<sup>th</sup> grade. Data contradicts this intuitive belief and shows the opposite. 3<sup>rd</sup> graders use more English and show fewer instances of Spanish (both students and teacher). This might suggest an advantage for younger ages as suggested by some researchers in the field of second language acquisition.

Also, table 4 shows that when students have quizzes, they use less the L1. The nature of a test demands the students to remain quiet, but we also believe that because the questions of the quizzes are written in English, the students engage more using the L2 to answer and to discuss.

The lesson with the highest number occurrences in L1 by both the students and the teacher is #7, with a total of 131 uses of Spanish by the students and 107 by the teacher. In this session, the teacher told the students that she needed to teach the contents from three different classes merged up in one. This class was about interactions among animal communities and one concept from the previous class was pending. Therefore, the teacher had to finish the concepts from the previous session and teach the class she prepared for the day. The class discussed concepts such as ‘predation’ and ‘mutualism’ and did a classroom activity on that. It appears to be the case that the use of Spanish was a way to facilitate and speed up teaching and learning given the need to include more content in a limited amount of time.

To help better understand the proportion of use of the L1 between the teacher and the students, table 5 and table 6 present the difference between participants of the class. Each table corresponds to the observations of the 3<sup>rd</sup> and the 4<sup>th</sup> grade.

Observation	Course	Number of students	Use of Spanish teacher	Use of Spanish students	Total uses of Spanish per session	Difference between the uses of Spanish
1	4th	22	55	80	135	25
2	4th	23	56	105	161	49
3	4th	24	72	82	154	10
6	4th	26	67	110	177	43
7	4th	24	107	131	238	24
8	4th	26	79	99	178	20
10	4th	23	38	107	145	69
Total uses of Spanish			474	714	1188	240

**Table 5: Occurrences of L1 in the 4th grade sessions**

Observation	Course	Number of students	Use of Spanish teacher	Use of Spanish students	Total uses of Spanish per session	Difference between the uses of Spanish
4	3rd	21	43	63	106	20
5	3rd	26	65	114	179	49
9	3rd	18	48	87	135	39
11	3rd	21	50	78	128	28
12	3rd	24	28	75	103	47
13	3rd	23	72	82	154	10
14	3rd	24	54	92	146	38
Total uses of Spanish			360	591	951	231

**Table 6: Occurrences of L1 in the 4th grade sessions**

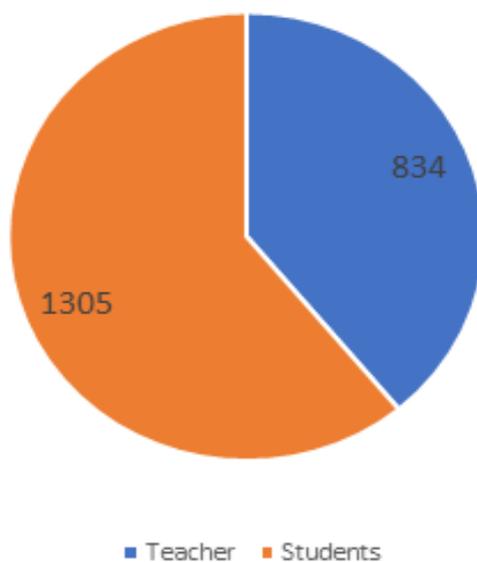
The information on tables 5 and 6 shows that the difference between the uses of Spanish by the teacher and the students range from 10 to 69 with an average of 33 per session.

Furthermore, the tables show some differences in the occurrences of Spanish as used by the teacher and the students. To illustrate this, we can see that the teacher used Spanish 474 in the 4th grade sessions compared to 360 times in the 3rd grade. Even though it is not a big difference, this could mean that the students from the 3<sup>rd</sup> grade were more proficient in the L2 compared to the students from the 4th grade and this allowed the teacher to explain more content in the L2.

Other possible interpretation is that students from the 3<sup>rd</sup> grade have less opportunities to interact

amongst themselves, therefore speak less Spanish. The figures from the students' occurrences in the L1 also support this. Students from the 4th grade had a total of 714 occurrences of the L1 compared to 591 occurrences by the students from the 3rd grade. In other words, the fact that the 4th grade students had been one year more in the school, does not necessarily mean that they are more proficient in the L2.

The following pie chart shows a visual comparison of the total amount of uses of Spanish by the teacher and by the students during the fourteen observations. If we were to consider the number of occurrences in Spanish in percentages, 61% were produced by the students while 39% were produced by the teacher. In the next section, we will take a more detailed look at how often and why the teacher resort to using the L1.



**Graph 1: Uses of Spanish by participants**

### **Teacher's Use of the L1**

After analyzing all the data gathered from the audio recording and our researcher field journal, the categories identified regarding the teacher's use of Spanish were the following:

giving instructions, answering questions, personal interactions, classroom management, content-related interactions and giving feedback. These categories are consistent with the teachers' comments in the interview: she is moved to use Spanish mostly to guarantee students comprehension and understanding. A brief description of each category will be presented when providing the examples found in the classes. Table 7 presents the occurrences of Spanish produced by the teacher according to the categories identified.

For the teacher, the most frequent use of the L1 is content-related interactions, with a total of 206 occurrences across the fourteen sessions, followed closely by classroom management with a total of 192 occurrences. As a side note, during the observations we noticed that a considerable number of students are very active and talkative. Sometimes, they even interrupt the teacher's speech to chat in Spanish with another student. Most of the occurrences that fit into the classroom management category are interactions in which the teacher asks her students to remain silent or to pay attention.



**Graph 2: Total number of Spanish occurrences by the teacher and by category**

Observation	Giving instructions	Answering questions	Personal interactions	Classroom management	Content related interactions	Giving Feedback	Totals per class both courses
1	10	8	7	17	12	1	55
2	12	5	10	14	14	1	56
3	11	9	19	19	10	4	72
4	5	6	15	14	3	0	43
5	5	7	21	10	21	1	65
6	6	12	10	20	17	2	67
7	18	23	15	11	31	9	107
8	11	19	7	11	26	5	79
9	6	11	7	6	18	0	48
10	4	8	2	13	8	3	38
11	13	6	4	14	12	1	50
12	5	3	4	7	7	2	28
13	8	15	14	16	18	1	72
14	6	11	8	20	9	0	54
Total	120	143	143	192	206	30	834

**Table 7: Uses of Spanish by the teacher**

The pie chart above shows the differences between the number of occurrences of L1 by the teacher. There's a remarkable difference between most of the categories that range between 206 and 120 compared to 30 occurrences from feedback. This is by far the least frequent use of Spanish by the teacher. On the other hand, there is consistency between some categories and what the teacher said in the survey and the interview: content-related interactions and to give instructions. The teacher noted that it is vital to make students understand the content of the class, we think that is the reason why she decides to use the L1 when necessary regarding aspects related to content and class activities. It is more important for her that students understand the content than trying to use the target language all the time.

Table 8 presents the total number of occurrences of the L1 made by the teacher and their corresponding percentages based on the total number of occurrences during the fourteen sessions.

	Frequency	%
Content related interactions	206	24,7
Classroom management	192	23
Answering questions	143	17,1
Personal interactions	143	17,1
Giving instructions	120	14,4
Feedback	30	3,6
Totals	834	100

**Table 8: Functions of the L1 in classes. Teacher's uses**

In contrast with the students who have a huge gap between the different uses of the L1, the teacher's occurrences are more balanced. There is not a huge gap between the following categories. To illustrate this, the most used categories 'content related interactions' and 'classroom management' can be used as an example. With a total of 206 occurrences the former and with a total of 192 occurrences the latest. The difference between these two categories is only 14 occurrences. The same is observed for the rest of the uses. The only notable difference is with the category feedback, which only has 30 occurrences.

In the following section, we describe, explain and illustrate each category with a greater level of detail.

**Content related interactions:** Words, phrases, complete explanations that relate to the content of the class are the most frequent category by the teacher, with a total of 206 occurrences that represent 24,7% of the total uses of the L1 by the teacher during the sessions. This is one of the categories that both the teacher and the students share. From the teacher's role, this category refers to the interactions that she has with students that are related to the topic of the class. Normally, this category includes explanation of content, comments and questions that do not aim to acquire knowledge. This category emerged from the analysis of the data. It is possible that some authors define a category that fulfils the same purpose on the students' speech but with another name. These two are examples of occurrences of Spanish within this category.

March 01, 4th grade - "Yo mandé por la plataforma un video de factores bióticos y abióticos, y de los diferentes ecosistemas.

March 12, 3rd grade - ¿Quién me intenta decir qué dice la primera?

**Classroom Management:** This category was the second in frequency with a total of 192 occurrences during the fourteen sessions, corresponding to a 23% of the total occurrences of Spanish by the teacher. L2 teachers sometimes switch to the L1 when discussing about the classroom organization and when they attempt to manage some situations in class such as dealing with disruptive behavior, reminding students of their responsibilities or establishing rules for the classroom. This category is present in previous studies. For Harmer (2007) and Mysliwiec (2017), it is inevitable to use the L1 in beginning levels when it comes to classroom management.

March 01, 4th grade - “Díaz [hand gesture and long pause] gracias”

The teacher was explaining what for her was an important point in the content of the class, when the student started talking with a classmate and interrupted her speech. She indirectly scolded him by calling out loud his last name, making a hand gesture followed by a long pause, and then continued with her explanation.

March 05, 3rd grade - “Cristian, ¿cuál es la falta de respeto con su compañero? Hágame el favor. Usted respeta a su compañero para que su compañero lo respete a usted. Que sea la última vez me hace el favor. Pídale una disculpa a su compañero”

This was a severe scolding to a student who hit another student. The situation was not extreme, but we could appreciate that for the teacher respect among the students is truly important. At the end of the class, the teacher also wrote a note for the student’s parents about the situation.

March 12, 3rd grade - “Se desconcentraron y les quedan diez minutos”



In this case, the interaction was from the teacher to the whole class. One of the students raise her hand to ask if the jellyfish came from plants using the L1. The teacher answered in the same language. This extract from the class illustrates the general concept of answering questions. This question was related to the content of the class, but other answers to questions that are not strictly related to content can fit in this category too if they provide the student with the knowledge he desires to acquire.

April 30, 3rd grade - “Si usted se cambia de apellido, eso significa que usted va a cambiar de papá o va a cambiar de mamá”

The students were working in teams in an assignment. In one of the groups, a conversation emerged regarding changing their last names. Some of them said it was possible, others said that it was not. When a student asked the teacher about it, she answered in a mocking tone. This extract illustrates that the teacher not only uses the L1 when answering questions about the class or the content, but also about topic unrelated to the class.

**Personal interactions:** From the 834 occurrences of L1 in the teacher’s speech, this category appeared in 143 of them, representing 17,1% of the sample. This category has also been identified in previous studies such as Cook (2001) and Tariq (2013). According to the authors, this category refers to spontaneous interactions teachers have with students about personal matters or aspects that are not related to the topics of the class. In this function, the role as teacher is put aside to create a more friendly environment to get a positive result from students. Some examples of this category are listed in the following extracts from the recordings:

April 30, 3rd grade - “Who is matter? Who is? Who is?”  
 - Cuando hay quiz jajajaja

- “Estoy diciendo que qué es la materia, no que cuando hay quiz jajajaja”

The teacher was asking “Who is the matter?” [sic]. In fact, we suppose that her intention was to ask *what is matter?* The students, probably due to the teacher’s accent and pronunciation, understood the word “quiz”. Therefore, they answered jokingly talking about quizzes. This made the teacher laugh and everyone started making jokes about it.

The previous extract shows how a discussion about content can become in an interaction to create a more amusing class environment.

- April 30, 3rd grade
- “Profe, ¿está muy tarde para tomarse la pasta?”
  - “No, hoy no me la tomé”
  - “Ella ya había dicho que no se la había tomado”
  - “Cierto? Ya habían dicho que no me había tomado la pasta hoy.
  - “Profe, solo es por molestar”

Apparently, the teacher sometimes has episodes of forgetfulness or get distracted. The students have a saying about these episodes and joke about the teacher not having taken “the pill”, a made-up medication to treat her “condition”. For what we deduced, it is a joke for when the teacher makes several mistakes or call a student by a wrong name. When the students make this joke, the teacher plays along with them. Students then ask her if she took her pill. It also shows that there are certain social routines or a shared sense of humor between the teacher and her students. These interactions take place in the L1.

**Giving instructions:** This category corresponds to a 23% of the total occurrences of Spanish by the teacher, with 120 occurrences during the sessions. In order to ensure a complete

understanding by the students about what they must do and how to do it, teachers often use the L1 to give instructions or directions. This might happen when the instructions for an activity are complex or when students' reaction (or lack thereof) shows there is not a full understanding of the instructions. In such cases, the teachers might resort to the L1. Atkinson (1987) and Harbord (1992) refer to this category as the instructions teachers give to students to carry out class activities, exercises, quizzes or tasks. This category differs from content-related interactions because even though both categories are somehow related to the topics of the class, content related-interactions are exclusively reserved to circumstances in which the teacher and the students talk about the knowledge (content) of the class, not the activities being carried out.

March 01, 4th grade - "El quiz consta de cinco preguntas no más, pueden utilizar el cuaderno. Si yo veo a un estudiante copiándole a su compañero, simplemente quito la ventaja del cuaderno y lo vuelvo examen. Las preguntas están en inglés. Doy un tiempo prudente para que todo mundo termine de copiar. Cuando yo considere que ya es tiempo de que todo el mundo haya terminado de copiar, traduzco las preguntas"

This was a session dedicated to a quiz. Before writing the questions on the board, the teacher gave these instructions. This example illustrates how the teacher is not only providing information about the length of the activity (that the quiz has five questions), but also letting the students know that they can use their notebooks. She also warns the students about the rules of the quiz and what might happen if these rules are not followed.

This example further illustrates how the teacher sets the rules for an activity using the L1 to make sure that everybody understands what they are supposed to do and how.

May 21, 3rd grade - "Paso poniendo sellitos"

The teacher has a variety of seals that she uses to check that students are copying the information on their notebooks. This time, however, she had seals with food designs, and she went desk by desk putting them in the students' notebooks.

- "Escribe al lado de cada sello que tipo de mezcla es. A partir de este momento, todo el mundo está en silencio."

The main objective of this class was to review the concept of mixtures, so the teacher decided to give a quiz. She put seals in the students' notebooks, and they had to write whether the drawing was a homogeneous or a heterogeneous mixture. Some examples of the designs were cakes, milkshakes, fruit salads, coffee and, cereals and milk. We think that in this case, the instructions were given in the L1 because this activity was going to be assessed, hence the teacher wanted to prevent any misunderstanding or any wrong performance (such as writing the name of the object instead) due to not understanding the instructions.

**Feedback:** This is the last category identified in the teacher's talk. Instances of feedback delivered in the L1 occurred only 30 times, that is 3.6% of the total occurrences of the L1. This category entails L1 occurrences that are directly related to classroom activities and class content practice. It might take the form of overt correction of a mistaken answer or response by the students or acknowledgement or praise to a correct response or answer by the students. This category was also present in Cook's (2001) categories of L1 use in L2 classes.

February 01, 4th grade - "I'm not sure. No estaría tan segura"

In this case, a student gave an incorrect answer to a question proposed by the teacher and she switched from the L2 to the L1. This might be because she thought that the expression "I'm not

sure” was unknown for the students, so she wanted to clarify that the student’s answer was not entirely correct.

February 15, 4th grade - “Muy bien. Good, very good”

In this example, the teacher used the L1 as well as the L2 to compliment one student because she had written everything that was on the board on her notebook. She congratulates the students in both languages. In short, interactions such as these, the teacher usually uses both languages during the whole class. On the other hand, the teacher starts using more and more the L1 as the class progresses to longer and more complex interactions such as giving instructions and answering questions.

### **Students’ Use of the L1**

In this study, students were not interviewed nor were they given a survey. Yet, in the teachers’ interview, she commented on the reasons why students switch to Spanish during lessons. According to her, the students use the L1 more than the L2 and that the main reason is because they need to clarify instructions, fill vocabulary gaps, undertake personal interactions, make complains and ask for permissions.

Considering the categories, the teacher herself had identified, we proceed to analyze the data collected in the audios and researcher field journal to see if those were the only uses of the L1 or if some others were to emerge. After analyzing all the data, the categories identified regarding the students’ use of Spanish were complementing an answer, asking questions, personal interactions, classroom management, and content related interactions.

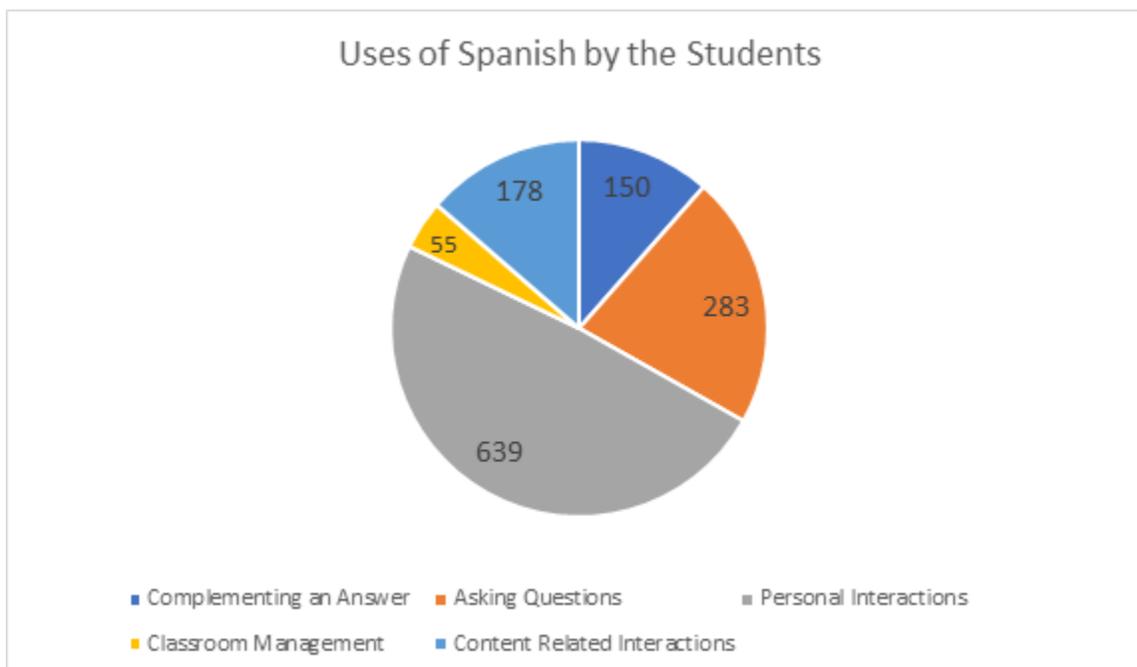
Observation	Complementing an answer	Asking questions	Personal interactions	Classroom management	Content related interactions	Total
1	6	22	30	7	15	80
2	6	29	55	6	9	105
3	4	27	37	4	10	82
4	4	7	45	3	4	63
5	25	10	62	4	13	114
6	15	22	59	4	10	110
7	18	32	56	1	24	131
8	3	29	38	3	26	99
9	4	22	40	7	14	87
10	17	23	52	3	12	107
11	11	14	39	3	11	78
12	11	11	42	4	7	75
13	9	19	38	2	14	82
14	17	16	46	4	9	92
Total	150	283	639	55	178	1305

**Table 9: Uses of L1 by students from both courses according to categories identified**

The data collected revealed that the students switch to the L1 mainly to talk about their personal affairs, categorized as personal interactions in table 9. There is a remarkable difference between this category, with a total of 639 occurrences, and the second most frequent category, which is asking questions with a total of 283 occurrences, during the fourteen sessions.

The table above shows the total occurrences of L1 produced by the students organized per session and by category, as well as the total amount of occurrences during the fourteen sessions. As mentioned before, the most common use for the L1 among the students are the personal interactions, followed by asking questions. The rest of the categories did not have more than 200 occurrences during the fourteen sessions. The students from the 4th grade used Spanish 714 times during the sessions. On the other hand, students from the 3rd grade used Spanish 591 time. During the observations, we noticed that both courses have young and talkative kids, so the smaller figures from the 3<sup>rd</sup> grade students does not mean that they are quieter or shier, it is just that they use the L2 more frequently. These students do not have an elaborated speech on the L2, but they do manage to communicate in English more often than their peers from 4th grade.

The continuous presence of the L1 in the sessions makes us feel that the class does not meet the requirements for being considered a bilingual class. We think that in some spaces, the teacher could have made a bigger effort to use the L2 instead of the L1. This said, we do not aim to discredit the teacher's efforts. However, as we see it, the class is a normal science class with a small emphasis in vocabulary in English.



**Graph 3: Total number of Spanish occurrences by students and by category**

The graph above shows the differences between the amount of uses of Spanish by the students, the category with more uses was personal interactions, followed by asking questions and complementing an answer. Finally, the least frequent use of Spanish by the students is content-related interactions and classroom management. The results show the importance of socialization processes for the students in the classroom and how these processes are associated with the L1 rather than the L2. Naturally, a key element might be their level of competence in English. Since they are beginners, they cannot express themselves as freely in the L2 as they do in their L1. The target language is more instrumental for them, it is a requirement of the class. Socializing (off-content conversations, jokes, social routines, etc.) takes place in the L1. We also found similarities between our categories and the ones the teacher identified as the main uses of

Spanish by the students. Although the name of the categories is not the same as the ones the teacher mentioned, we included them as part of some categories.

Table 10 presents the total number of the occurrences of the L1 produced by the students and their corresponding percentages based on the total number of occurrences during the fourteen sessions.

	Frequency	%
Personal interactions	639	48,9
Asking questions	283	21,6
Content related interactions	178	13,6
Complementing an answer	150	11,4
Classroom management	55	4,2
Total	1305	100

**Table 10: Uses of Spanish by students and their frequency by category**

The data collected from class observations reveals that nearly half of their speech in Spanish during the sessions is related to personal interactions. These students like to talk about their previous experiences and what they think of topics of general interest with their classmates and even with their teacher. There is a difference of 356 occurrences between personal interactions and asking questions, the second most frequent category which represents a 21,6% of the total occurrences of Spanish. They ask a lot of questions about the topics of the class, but also formulate questions for asking for permissions or approval from the teacher, and about asking their peers for stationery such as pencils and pens.

As done in the descriptions of the teacher's uses of the L1, we will provide a brief description of the categories, whether they appear in others' authors research or emerged during the analysis of the data and give some examples to illustrate the interactions during the sessions.

**Personal interactions:** Instances of this category occurred 639 times among students and represent a 48.9% of the uses of Spanish in the observed classes. This category corresponds to one reported in a study by Samad (2012); and it refers to interactions among students in which they switch to their L1 to express their feelings, joking and talking about personal experiences and other interactions that are unrelated to class content. Student-student interaction takes place in Spanish, showing that the L1 is the actual medium of communication among peers.

March 01, 4th grade - "Ah, menos mal que aquí tenemos a los que saben"

As mentioned before, in this class students had a quiz. One student said this out loud before the quiz started pointing at us who were observing the class. The comment was meant as a joke for the whole class and it hinted at the possibility of cheating on the quiz, that they could "resort" to us for help. The joke generated laughs among the students and the teacher.

March 05, 3rd grade - "Uy no, deje de ser tan chismoso"

- "Saray, que paso?"

- "Profe es que él me estaba mirando todo lo que estoy escribiendo y me está copiando"

A student was writing something on her notebook while another student was staring. The student with the notebook got angry and told him to leave her alone. This was considered as a personal interaction because it showed emotions and possible issues that might arise inside the classroom that are not strictly related to the content.

March 12, 3rd grade S1- “Profe, ¿yo puedo hacer un cuadrito para encerrarlos ahí?”

S2- “Aaahh, como usted quierra”

S1- “¿Quierra? jajajaja”

S3- “Bravo por ese vocabulario, bravo jajajaja”

The student originally addressed the teacher to ask for confirmation if what she was doing was right. Another student hopped into the conversation and mispronounced the /r/ sound in Spanish. Others made fun of him. Although not entirely separated from the content and its interactions, this was a joke that fit the descriptions provided by Samad (2012) for this category.

**Asking questions:** This is the second most frequent category in the data with 283 occurrences (21.7%). This category refers to questions students may ask to their teacher or classmates. The questions, in turn, might belong to different functions and might be related to class content or to other kind of classroom dynamics or interactions. Among class-content related questions we have asking for clarifications, asking to learn, asking for help in a task or class activity and asking for information, while other questions that do not relate to class content include asking for permission and asking for help. Depending on the pragmatic functions of the questions, there might be some overlap with other categories. However, we have decided to group all questions into this category regardless of the nature of the questions. In other words, even if the questions are related to content or to behavior, they have been placed in this category because, as suggested by Deal and Sterling (1997), the cognitive process of asking questions involves reflection and desire to acquire new knowledge or to validate already acquired knowledge. To illustrate this, let’s consider the question “can you please be quiet?”. At the locutionary level it is a question, but at the illocutionary level is a command and it would exemplify students enacting classroom

management. Therefore, even though the interaction is structured as a question, it does not meet the requirements of involving reflection and desire to acquire new knowledge to be considered into this category. Let us turn to the examples of occurrences of Spanish that were included in this category.

February 01, 4th grade - “Teacher, ¿cómo es que se dice cabra en inglés?”

In this case, the student asked the teacher for the translation of a word. The student wanted to participate in the class and answer a question from the teacher using the L2. However, while structuring her answer, she noticed the specific word for *cabra* was not available for her. Hence the need to know the translation. This example fits into the type of questions used to learn. The reiteration “...¿cómo es que se dice...” indicates that the class had already studied the word, so the student knew it, but probably did not remember it at the moment.

February 15, 4th grade - “¿Copiamos, teacher?”

This question was made by a student who was not sure if the teacher had told them to copy what was on the board on their notebooks. This is an example of a question that asks for clarification from the teacher.

March 01, 4th grade - “Eh, teacher... ¿Este periodo vamos a hacer exámenes finales?”

In this example, a student asks the teacher for information related to the course, but not related to the content or topic of the class. This example illustrates how the students use the L1 to ask for information from the teacher.

March 05, 3rd grade - “Profe, ¿las medusas vienen de las plantas?”

is an example that can fit into two categories: it is a question that asks for clarification, as the student believes that jellyfish come from plants, and it also asks to learn, as the student wants to acquire new knowledge concerning a doubt he has.

April 30, 3rd grade - “Profe, ¿cierto que uno se puede cambiar de apellido?”

This is one more example of asking for clarification to the teacher. The expression “...¿*cierto que...*” shows that the student is looking for reassurance of his knowledge from the teacher.

Even if this interaction had nothing to do with the topic of the class, it was considered within the category of asking questions because it answered to the matter of asking a question to acquire new knowledge or to learn something.

**Content-related interactions:** Interactions in Spanish related to content occurred 178 times in the data (13.6%). This category refers to the interactions that students have with their peers and with the teacher that focus on the topic (content) of the class. Normally, students would make comments on their previous knowledge, what part of the content they do not understand and what they have accomplished in the class. This category emerged from the analysis of the data. It is possible that some authors define a category that fulfils the same purpose on the students’ speech but with another name.

February 15, 4th grade - “Teacher, pero... Nos quedó faltando el *air* y el *water*”

- “Yes, but the other class”

The students were writing on their notebooks the information that the teacher had on the board, it was about how animals move. Due to time constraints, the class only discussed animals that move on the ground (animals that walk, jump and crawl). Then, the student made the comment that they were missing the animals that move through the air and the water. This example shows

the interest that students have for the topic and the concern of leaving a topic incomplete. It is interesting also how code-switching at the level of words happen within the same clause.

However, the words air and water were written in the board in English. The student lent them instead of translating them

March 01, 4th grade - “Yo mandé por la plataforma un video de factores bióticos y abióticos, y de los diferentes ecosistemas. La invitación era que repasaran porque iba a haber una actividad, decía: miren el video y las palabras que desconozcan o lo que no entiendan lo escriben en el cuaderno para poder hacer el quiz.”

- “Teacher, yo aquí copie las palabras desconocidas”

In this interaction the student is communicating what he or she has accomplished related to a class assignment. The teacher told the students to copy the unknown words on their notebooks to later look for the definition in the dictionary, to what this student replied that he had already done it. He was also seeking for the approval and appraisal from the teacher.

March 12, 3rd grade - “¿Quién me intenta decir lo que dice la primera?”

- “Yo no entendí hasta... Yo entendí hasta *probably*. El resto no lo entendí. ¿Con qué estructuras de la planta hay probabilidades de yo no sé qué?”

- “¿Probabilidades de yo no sé qué? jajaja”

This is an example of a student indicating to the teacher and his peers that she did not understand the questions written on the board. Even though the interaction from the student contains a question, the general purpose of the utterance was to express lack of understanding and to try to guess the answer to a question, both situations related to the content of the class.



This is an example of a student completing another student's answer. The teacher asked a student to translate one sentence that was on the board from English to Spanish. The student answered, but not the entirety of the question. Then, the other student raised his hand and gave his opinion on what the sentence said. This example illustrates the concept of cooperation proposed by Salmad (2012) and Atkinson (1987)

April 30, 3rd grade T- "Who is matter? Who is? Who is?"

S1- "La materia es una masa... Ay, no se"

T- "The matter is..."

S1- "La materia es toda la masa que está sobre la Tierra y tiene gravedad"

Students were trying to define the concept of matter. Using the L2, the teacher asked one student who admitted not knowing the answer. Another student then tried to answer using the L1, but he was not sure of the answer. Then, the teacher was trying to guide their answer using the target language, but one student gave the answer in L1. This is an interaction in which we can see several students participating together with the teacher trying to solve a question, complementing each other's' answers. Asking students to elaborate on complex topics using the target language can frustrate them. They would rather say they do not know or do not answer at all than participate using the L1 if pushed too much to use the target language. In our opinion, the teacher does her best to include the target language in her lessons, but her top priority is the content, this being the reason why she translates the explanations, the quizzes and allows her students to speak using the L1.

**Classroom management:** This represents the least frequent category of uses of the L1 by the students. This category is typically attributed to teachers in studies that identify L1 uses in the classroom. It is evident that classroom management is part of the teacher's role and it is only natural that they resource to the students' L1 to fulfill this role. However, in our data, we found instances in which students use the L1 to reduce disruptive behavior and to redirect their classmates' attention to the topic of the class. Therefore, this category arose from the analysis of the data. In other words, in this class, students also take on the role of classroom managers. In the data, we found 55 examples (4,5%) in which students used Spanish to help the teacher in the management of the class.

March 01, 4th grade - "Rapido, tenemos quiz"

- "¿Quiz?"

- "Ah, sí, en la plataforma decía: repasen lo visto en clase"

When the teacher noted that there was a homework in the school's platform, a student made a comment seconding her statement. We decided to categorize this interaction within content related interaction because classroom management also involves planning and time management, and we can see here a student seconding the previous arrangements made by the teacher for the class activities.

March 05, 3rd grade - "Ay, hagan silencio"

This is an example of the kind of expressions the students use to ask their peers to behave. In the students' interactions report, this is the category with the lowest frequency occurring a maximum number of seven times in two occasions. This category represents only roughly a 4% of the data.

Normally, when students take on classroom management roles, they more frequently do so in English by just saying “Silence”.

April 30, 3rd grade - “Silencio, por favor”

This is another example of classroom management enacted by the students. In this case, the teacher was trying to play a video on the classroom projector. The teacher had been trying for a while, so the students were distracted drawing and talking to their classmates. Suddenly, the video started playing loudly and the students screamed and giggled. The video continued and one student asked the rest to remain quiet. Most of the class joked about the loud interruption, but it was one of the few students who was trying to pay attention to the video.

The survey revealed that the teacher uses the L1 frequently and that the main uses are to clarify concepts, clarify doubts, and to give instructions. It also revealed that according to the teachers, the students use the L1 more than the L2 and that the main uses are to compensate for vocabulary gaps, clarification of instructions, personal interactions and, complains and permissions.

It is important to note that in the results obtained it was identified that the use of Spanish presented certain privileges in the classes over the use of English (see Appendix 1). The number of uses of Spanish from both parts, students and teacher, are not far from each other and demonstrates the minimum use that the L2 have in the class. This situation puts into question if in fact the class makes part of a bilingual curriculum or it is limited to learning the vocabulary related to the content of the subject.

## IX. Conclusion

The presence of the L1 in a bilingual class is a subject that has been discussed regarding its uses, functions and possible effects on the process of acquiring language and content. In the analysis of the data, the results showed that in this case the L1 plays a communicative role in which the teacher makes use of alternation between the L2 and the L1 in situations she believes it necessary. To a large extent, the teacher switches to the L1 to talk about some aspect related to the content of the class, to control and guide students' behavior, to discuss personal affairs with students and to answer questions. To a lesser extent, she switches to the L1 to give instructions and feedback. These categories and / or situations are described in previous works such as Cook (2001), Atkinson (1987), Samad (2012) and Harbor (1992), and portray the possibility of a necessity of the L1 in a context where participants have a low level on the target language, which makes it difficult to teach and acquire content through the L2.

The results also showed that students personal interactions are by far the category in which they use their L1 the most, followed by asking questions and content-related interactions. Students feel comfortable interacting in their L1 as they are in the early stages of the L2 acquisition process. Furthermore, based on the analysis of the data, it is safe to assume that one of the main reasons why students resort to the L1 is the lack of vocabulary and proficiency in the target language. Because the students are not proficient enough in the L2 to discuss all the content, they choose to express their ideas and doubts using the L1 over making the effort of using the L2.

Using the L1 in L2 classes has been often criticized. This study, along with previous studies, shows that this is a natural phenomenon and that is part of the process of meaning-making. Therefore, it should not be penalized or prohibited as is the policy in some schools.

A topic of debate in CLIL concerns the fact of whether students actually grasp the content being taught. Especially in the area of mathematics, it has been found that students taught in a language they do not fully master usually show low academic achievement (Neville-Barton & Barton, 2005; Cuevas, 1984). Although we do not have evidence on students' performance, it is our point of view that the use of the L1 as observed in this class might have contributed positively to the acquisition of the subject matter content.

As of future research, it would expand the understanding on the implications of using the L1 in CLIL classes if comparisons of L1 use were made across subject areas. Analyzing the uses of the L1 in history and science, for example, can provide information related to the context of the class. For example, students may feel more confident with the vocabulary from a class such as history than with vocabulary for science and, therefore, use more the target language in the latter. Also, the teacher and their proficiency, together with their experience on teaching CLIL classes may also affect the outcome. Further research with different grades may also provide information about the limit where L1 no longer fulfils the functions in the same way as it does with beginners for more advanced and proficient students.

In conclusion, according to the results of the present research, the L1 has an important presence in a bilingual class and it fulfills multiple functions, both on the part of the students and the teacher. The L1, then, is a supportive element in CLIL classes, as the alternation of languages in itself is a manifestation of bilingualism.

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## Appendixes

### Appendix 1: Transcription of a class

Class 10, fourth grade - May 17, 2018

T = Teacher

SS = Students

O= Observers

S: Uy no, muy salado.

T: Valentina, por favor tome asiento.

S: Ah obvio, porque el me gustaba a mí.

S: Mira estas dos personas y veras que son re parecidas.

S: ¿Usted cuántos años tiene?

O: Veintitrés

T: ¡Ay, Laura! Hágame el favor.

S: Usted me dijo que hiciera así.

S: Aish, mentirosa.

T: Ok, today speaking about the different lights. What do you understand or what do you think who is the light? Who is the light?

S: Teacher, ¿diferentes luces?

T: Ok... The different. What else?

S: Who is?

T: What else?

S: Jet Lee!

S: La luz!

T: Yes, but what do you think the other classes, the light.

S: Eeehh... La luz. ¿La luz del sol?

S: ¡La luz amarilla!

S: Teacher, ¿solar? ¿Solar? ¿Solar light?

T: Estoy preguntando... Estoy preguntando, ¿que entienden, o que saben, de la luz o de los diferentes tipos de luz?

S: ¿Que brilla?

S: Profe, vea...

T: Manos arriba. Sin manos yo no veo nada.

T: ¿El camibuso porque está afuera?

T: Isabel.

S: ¿Yo creo que hay diferentes... Colores?

T: Luz, estoy en la luz.

S: Los diferentes tipos de la luz como la luz solar, la luz... ¿Como es que se dice?

T: Good, very good.

S: La luz eléctrica.

T: Ok, what else?

S: Que está compuesta por energía.

T: La luz está compuesta por energía... ¿No será más bien que la luz es energía? Más o menos por ahí.

S: Profe, profe, como la luz solar que genera energía.

T: Ok... Good.

S: Profe, la luz de las luciérnagas

T: ¿Qué qué? Estoy preguntando los tipos de luz, no estoy pidiendo ejemplos de luz. Escuchen. María.

S: Un bombillo.

T: ¿Ese es un tipo o un ejemplo? Un ejemplo. Sara.

S: El sol.

T: ¿Qué pasa con el sol?

S: Que el sol brilla.

T: Pero ¿qué pasa con que el sol brille?

S: Profe, yo.

T: Miren: no me contesten. No contesten a la carrera ni a la ligera. Escuchen lo que yo estoy preguntando para que entiendan lo que yo estoy preguntando. Están respondiendo por responder. Samuel.

S: Profe, por lo menos... Hay luces que prenden por sí solas

T: ¿Natural y artificial?

S: ¡Eso!

S: Que es esa luz como... Como... Es que no sé cómo explicarlo. Es como el sol. O sea, que a veces uno está muy cerca y uno empieza a sentir que lo quema.

T: No están llegando a lo que he yo preguntado. Solo José David me ha respondido de acuerdo con lo que yo pregunte. Pregunte que que clase o qué tipo de luces.

S: Ah, profe, la natural y la artificial.

T: Muy bien, la natural y la artificial. Escuchen lo que dice su compañero para que no repitan. Ya la melliza me dijo eso. Aray.

S: ¿La luz nocturna?

T: ¿Y cuál es la luz nocturna?

S: La de la noche, la de la luna.

T: ¿O sea que si el salón está oscuro hay una luz nocturna?

S: No...

T: Explícalo porque no entiendo. Cálmate. ¿Como así que la luz nocturna?

S: La luz de la luna.

T: ¿Y la luz de la luna es una luz nocturna?

S: No... Es una luz...

T: ¡Ay, Aray! ¿Cuántas Aray hay? Aray, explícame. ¿Como así que la luz nocturna?

S: ...

T: Samuel.

S: Profe, ¿el fuego es natural?

S: Profe, profe.

T: En el quiz que hicimos, en el quiz que hicimos, ¿cómo aparece?

S: Teacher, aunque un tipo de luz nocturna... La luz no siempre puede darse de cosas, hay animales que también...

S: Profe, ¿el fuego es natural?

T: Ve, pero si está hablando José David, ¿por qué sos tan groseros?

S: Que no siempre tienen que ser de cosas, también por ejemplo... Por la noche, los animales, algunos animales, dan luz. Por ejemplo, los grillos.

S: Las luciérnagas.

T: Se me salieron. Se perdieron. Miren: la pregunta inicial era que tipo o qué clase de luz conocían. Ustedes se me fueron a los efectos de la luz, se me fueron a ejemplos de la luz. Yo no pregunte eso. No he preguntado eso...

S: La luz natural... La luz artificial...

T: ¡He preguntado qué tipos! ¡Clases! Muy bien, José David dijo dos; la luz solar, la luz eléctrica, ¿cuál otra?

S: ¿La luz de los grillos?

S: ¡La natural!

S: ¡Eso! La luz animal.

S: ¡Profe, la luz humana!

S: Eso suena como dar a luz.

T: Daniel, me ibas a decir algo. Después de la grosería si te atiendo. ¿Ya no? Cero y van tres. Les he dicho diez mil veces: cuando yo esté con un padre de familia se esperan hasta que termine, ¿cierto?

S: Si...

T: Ahora sí, bien. Desde su puesto.

S: Yo profe, por favor.

T: Desde allá me dice, Cardoso.

S: ¿La luz del fuego pertenece a la luz natural?

T: Si...

S: Profe, ¿y la luz de los animales?

T: ¿Cuáles son los animales que dan luz?

S: Las luciérnagas.

T: ¿Cual otro?

S: A ver... ¿Los zancudos?

S: ¡La mariposa!

T: ¿¡En serio!?

S: ¡Teacher, los grillos!

S: La oveja.

S: ¿A usted que le pasa, Laura?

T: Yo no te estoy entendiendo nada de lo que me estás diciendo...

T: Ok, the first is the light energy.

S: Teacher yo le digo otra: ¡los arboles!

T: Who is this? ¿Quién es esta?

S: La... La luz de la energía.

S: ¿Ejemplos de la luz? ¿De la energía?

T: Who is this? ¿Cuál es esta?

S: ¡La luz energética!  
S: La luz eléctrica.  
S: Artificial  
S: Teacher, la energía solar!  
T: Good, very good.  
S: Bueno, yo le digo, pero escúcheme profe. Profe... Profe... Teacher...  
S: Noo teacher...  
T: Me equivoque en una letra.  
S: Ustedes dos se parecen.  
O: ¿Nos parecemos?  
S: Si... Yo dije; ¿Trujillo y Christopher se parecen?  
O: No, yo y Stephanie.  
S: Yo creo que son hermanos.  
O: ¿Somos hermanos?  
S: Yes?  
O: ¿Se dieron cuenta? ¿Nos parecemos?  
S: No, no se parecen.  
S: Si él se corta la barba, sí.  
O: Y si ella se deja crecer la barba, ¿también?  
S: No, usted se parece al hermano mayor de Trujillo.  
S: Si, es verdad, son igualitos.  
S: En el pelo y el peinado se parecen.  
S: Teacher, veah...  
T: Tell me.  
S: Vean, no se vayan a reír. Profe, creo que un pájaro se hizo popo en mi pelo. Creo profe. Esta tieso y me huele feo. Profe, es en serio.  
S: Ay, si se le hicieron popo.  
S: Eso es buena suerte.  
S: Una araña se le hizo pis.  
T: Ya ya, no tiene nada.  
S: Teacher, la agua de la cucaracha.  
S: ¡Un chinche, una mosca!  
T: Vaya al baño.  
S: Teacher, ya hice la tarea.  
S: Teacher, yo ya finish.  
T: Jeronimo, please close the curtains.  
T: Me hacen el dibujo debajo del número.  
S: Teacher, ¿ese es el sol?  
S: Profe, la tierra si produce luz propia.  
T: No, recibe la luz del sol.  
S: Profe, eehh... ¿Dibujo?  
T: ¿Tu qué crees? ¿Qué opinas?  
S: Profe, ¿el dibujo antes del dos o después del dos?  
S: ¡Antes del dos!

S: ¿Quién me presta azul, verde y amarillo?  
 S: Azul, verde y amarillo.  
 S: Amarillo no tiene punta, verde no tiene punta, azul no tiene punta.  
 O: ¿Cuándo se les queda el cuaderno pueden arrancar hojas de aquí?  
 S: Solo cuando se nos queda el cuaderno.  
 O: ¿A ti se te ha quedado?  
 S: Solo... Pocas veces. Jerónimo, en serio, ¿qué cuadernos tienes?  
 O: ¿Siempre arranca muchas hojas?  
 S: Has copiado tres materias... Dos materias en la agenda y una en hoja. El único cuaderno que te vi fue de matemáticas. Te voy a hacer una pregunta: ¿trajiste el horario de ayer?  
 O: Que lista eres.  
 S: Christopher, diga una canción en inglés.  
 O: ¿Una canción? Eehh... Alone. También me gusta mucho That's What I like de Bruno Mars, ¿la has escuchado?  
 S: ¿Le gusta Sorry?  
 O: Sorry? Si. ¿Conoces a Marshmello? ¿Te gusta Summer?  
 S: Summer is good.  
 O: Stressed out, la has escuchado?  
 S: Si, ¿usted ha escuchado Hithens?  
 O: ¿Hithens? Aahh, Heathens, Si, que es en la cárcel.  
 S: Nosotros vamos a cantar Alone.  
 O: ¿Van a cantar Alone?  
 S: Yes.  
 O: ¿Cuando?  
 S: In... June.  
 O: ¿Cuándo salen a vacaciones?  
 S: El catorce de Julio.  
 O: ¿Catorce de Julio? En un mes.  
 S: ¿Ustedes por qué no vinieron?  
 O: Porque ustedes tenían festivales y el martes vinimos y tenían izada de bandera.  
 S: No, eso era el jueves.  
 O: ¿Y hoy que es?  
 S: El jueves era izada de bandera.  
 O: ¿Fue el jueves pasado? Aahh, claro. Si, fue el jueves pasado. ¿Y quién saco bandera? ¿Tu sacaste bandera Trujillo? Super!  
 S: ¡Dejen de armar tanto desorden!  
 S: ¿Y usted qué? ¿Y usted cuando arma qué? Aaahh.  
 S: Silence please.  
 S: Teacher, let me see.  
 S: ¿Quién me presta tijeras?  
 S: Dejen de pelear, por favor.  
 S: No estamos peleando, estamos hablando.  
 S: Pregunta, quien es mejor: ¿Los Polinecios o Quica?  
 O: ¿Los Polinecios los conocen?

S: Pues no en la vida real, pero a mí me encanta sus videos.  
 S: Yo si los conozco en la vida real.  
 O: ¿Sí? ¿Donde?  
 S: Ellos hicieron un evento aquí en Cali.  
 T: Ok, the number two is the electrical energy.  
 S: No profe, espere espere.  
 T: Usted me dice que me espere, y mientras yo fui a arreglar la dificultad en el otro salón todos se la pasaron haciendo desorden. Ya han tenido que acabar, tanto de copiar como de hacer el dibujo. ¡No hay excusa!  
 S: Profe, yo voy por la segunda porque estaba haciendo el dibujo.  
 T: Ok, the electrical energy. What do you understand for this point?  
 S: ...  
 T: Ok, repeat one more time. What do you understand for electrical energy?  
 S: Energía eléctrica.  
 T: Yes, but I explain please.  
 S: ¿Energía?  
 T: Salgado, no, is electrical.  
 S: ¿Energía tecnológica?  
 T: Electrical. Daniel?  
 S: ¿Los bombillos?  
 T: Yes, good.  
 S: Ah, las lámparas?  
 T: Maybe. Ok, what do you understand for this text? In Spanish.  
 S: Teacher, one question.  
 T: I have a question.  
 S: Teacher, I have a question. ¿Las pilas son energía eléctrica?  
 T: Yes.  
 S: ¿Usted conoce a Los Polinecios?  
 O: Porque tengo una hermana que tiene doce años y ella los conoce.  
 S: Teacher, ¿usted está diciendo que traduzcamos eso?  
 T: What do you understand for this? No, do not translate. What do you understand? No necesito que lo traduzcan.  
 S: Profe, pero no entiendo nada porque no se hablar inglés.  
 T: Ok, you do not understand for this text, but who is the electrical energy? What do you understand for electrical energy? Daniel? Eeehhh... Daniel no, Diaz. Nothing? Do not understand nothing?  
 S: ¿Energía eléctrica?  
 T: Yes...  
 S: ¿El celular? iPhone?  
 T: Yes, is possible because is necessary.  
 S: Teacher, un iPod?  
 T: Yes, an iPad.  
 S: Computador, tablet, de todo.  
 T: Hey, what happened?

S: El computador tampoco. Televisor.  
S: The cars?  
T: The cars is mechanical.  
S: T.V?  
T: Yes, T.V.  
S: Profe, ya se cual: video beam.  
T: Ok, who is this?  
S: Profe, ¿esos son esos cosas que sostienen la energía?  
T: Yes.  
S: ¿Por qué me estás moviendo eso?  
T: Hey! Lápiz no habla, ni borrador tampoco, ni color tampoco.  
S: Profe, ¿hay que dibujar eso?  
T: Si, Santiago.  
S: Ya se teacher. Usted ha visto esas pijamas que en la noche alumbran?  
S: ¿Eso acaso es electrónico?  
S: Si...  
S: Profe, ¿y los zapatos que alumbran?  
S: Son electrónicos porque tienen que recargarse.  
T: Yo apenas tengo dos oídos y hay como diez personas hablando así que se me hace imposible entenderles algo.  
S: Profe y hay veinte personas.  
T: Manos arriba. Si no, no entiendo a ninguno.  
S: Profe, ¿cómo se dice ventilador en inglés?  
S: Ventilator.  
S: Se dice fan.  
T: Fan.  
S: Teacher, ¿los cargadores son eléctricos?  
S: No ve...  
S: ¡Profe, linterna!  
S: Profe, los zapatos que alumbran, algunos si son eléctricos porque los tienen que recargar con un cargador.  
T: Ellos son con la energía del sol, la luz solar.  
S: Teacher, esta no es recochando: la linterna.  
T: ¿Qué pasa con la linterna, Salgado?  
S: ¿Jerónimo, me puedes prestar sacapunta?  
S: ¿Ay profe, la tarea de electrical?  
S: Profe, ¿los carros de control remoto?  
O: ¿Estás dibujando en tu cuaderno de matemáticas? ¿Por qué? ¿Se te quedo el de ciencias? Ah, te entendí matemáticas. Ah, que tu cuaderno tiene las tablas atrás. Yo nunca me aprendí las tablas.  
S: ¿En serio? ¿Cuánto es cuatro por ocho?  
S: ¿Cuánto es cinco por cinco?  
O: Veinticinco.  
S: Vea, una fácil: ¿cuánto es nueve por nueve?

O: ¡Ochenta y no! ¡Ja! Me corchaste con la de cuatro por ocho, ¿cuánto es?  
S: Treinta y dos.  
O ¿Treinta y dos? Ah, si...  
S: Seis por seis.  
O Treinta y seis.  
S: Ocho por seis.  
O: Cuarenta y ocho. ¿Ustedes se la saben de memoria?  
S: Yo me las se solo hasta el doce.  
O: ¿Cuál es la tabla más difícil? Para mí la del siete.  
S: Ah, ¿siete por nueve?  
O: Sesenta y tres.  
S: El sí sabe... A ver, ¿nueve por siete?  
S: Sesenta y tres.  
S: Doce por cinco.  
O: Sesenta. ¡Ja!  
S: ¿Veinte por veinte?  
O: Oh... Cuatrocientos.  
S: ¿Veinte por veinte cuatros? ¿No es doscientos?  
O: Veinte por diez es doscientos.  
S: Ah, verdad.  
S: ¿Siete por seis?  
S: Nooooo.  
O: ¿Que paso?  
S: Es que la profe dijo que la profesora de español nos iba a hacer evaluación.

Suena la campana y la clase termina.

## Appendix 2: Survey applied to the teacher

### Uso de la lengua materna en una clase bilingüe

Fecha:

Nombre de la institución:

Tipo de institución: Oficial  Privada

Jornada: Diurna  Vespertina  Ambas

Ubicación y estrato de la institución:

#### Información académica

Edad:

Cargo en la institución:

Curso en el que enseña:

Carácter del colegio donde terminó sus estudios secundarios:

Oficial  Privado  Masculino  Masculino  Mixto

Nivel de educación: Licenciatura:

Maestría  Doctorado  Normalista  En formación  Ninguna  Otra

Último título obtenido o por obtener: \_\_\_\_\_

Año de graduación de ese último título: \_\_\_\_\_

¿Qué formación ha recibido para la enseñanza del inglés? \_\_\_\_\_

Años de experiencia docente: \_\_\_\_\_

Años de experiencia en la enseñanza del inglés: \_\_\_\_\_

- ¿Utiliza usted la lengua materna en la clase bilingüe?  
Si  No
- ¿Si respondió si, con qué frecuencia?  
Siempre  Frecuentemente  Ocasionalmente
- ¿Cuáles serían los propósitos para hacer uso de la lengua materna en la clase?  
\_\_\_\_\_
- ¿Cuándo sus estudiantes se comunican con usted, usan la lengua materna?  
Si  No
- Si su respuesta a la pregunta anterior fue si, ¿con qué propósito lo hacen?  
Preguntas acerca de vocabulario desconocido   
Aclaración de instrucciones   
Interacción interpersonal   
Petición de aprobación   
Quejas y solicitudes

### **Appendix 3: Questions for the interview**

1. ¿Le parece importante la enseñanza de una lengua extranjera en el currículo de un colegio?
2. ¿Cómo ha sido su experiencia enseñando a niños en una lengua extranjera?
3. Desde su experiencia como docente, ¿por qué razones cree que aparece el español en las clases en lengua extranjera?
4. ¿Cree usted que el nivel que se tenga en la lengua extranjera influye en la utilización del español en una clase?
5. A su consideración, ¿el uso del español en una clase en lengua extranjera puede llegar a ser importante para los estudiantes? ¿Puede representar un beneficio para los estudiantes?
6. Como docente, ¿en qué momentos en específico cree que se debe hacer la alternancia entre ambos idiomas?
7. ¿Cree que el uso del español disminuye a medida que los estudiantes avanzan en el aprendizaje de una lengua extranjera?

## Appendix 4: Example of class observation format



UNIVERSIDAD DEL VALLE  
ESCUELA DE CIENCIAS DEL LENGUAJE

## REGISTRO DE OBSERVACIÓN

<b>Registro n°:</b>	# 12		
<b>Fecha:</b>	28/05/18	<b>Tiempo de observación:</b>	40 minutos
<b>Grado:</b>	Grado 3-1	<b>Actividad observada, tema:</b>	Types of energies
<b>N° de estudiantes:</b>	19 niños y niñas.	<b>Observadores:</b>	Stephanie Grajales, Christopher Camacho.

<b>Hora</b>	<b>Descripción</b>	<b>Interpretación/ Comentarios/interrogantes/análisis preliminares</b>
7:21	La clase de ciencias tiene lugar en el colegio Liceo Anglo del Valle, es importante mencionar que esta clase se dicta en inglés. El salón dispone de un tablero blanco a marcador, al lado de éste se encuentra el escritorio del docente que cuenta con un computador, también cuenta con un videobeam, un ventilador, el número exacto de pupitres que son necesarios para los niños de este grado. Cuenta con una ventana en la parte posterior del salón. En las paredes podemos encontrar afiches en inglés con varios mensajes: el horario de los niños y una figura de un payaso que sostiene algunos globos, en los cuales están sus cumpleaños. Los niños están organizados en 7 hileras de 3 a 4 estudiantes cada una.	El salón se encuentra en buen estado y cuenta con muchos implementos para realizar diferentes tipos de actividades.
7:30	Para dar comienzo a la clase, la profesora saluda a los niños en inglés y estos le responden. Acto siguiente, ella se instala en el salón y enciende el computador, y comienza la clase hablándole a los niños sobre los tipos de energías: the types of energy, examples. Los niños comienzan a dar algunos ejemplos en español.	El uso del español por parte de los estudiantes y la profesora se nota desde el principio de la clase.
7:37	La profesora copia la información sobre el nuevo tema en inglés “types of energy: electrical energy / light energy. Los niños copian en silencio la información del tablero, luego de unos minutos la profesora les dice: okay, the second type of energy is the light energy, what do	Los estudiantes comprenden parte de lo

7:40	<p>you understand of light energy?</p> <p>Después de unos segundos traduce la pregunta a los niños: ¿Qué entienden por energía lumínica? Ejemplos. Un estudiante le contesta: yo tengo un perro que tiene un panel solar y se mueve. Ella le contesta: Sí con la energía del sol. Luego comienza a explicar qué es un panel solar en español.</p>	<p>que se les pregunta, aunque puede ser que por falta de vocabulario no comprendan parte de lo que dice la profesora.</p>
7:41	<p>La profesora le dice en español: okay, terminen de copiar rápido para copiar lo demás – un niño le pasa algo a la profesora – thank you so much.</p> <p>Los estudiantes siguen copiando en silencio y algunos estudiantes le dicen a la profesora: finish profe. La profesora contesta: silent please.</p>	
7:45	<p>La profesora observa los estudiantes mientras ellos copian y se detiene en frente de una estudiante y le dice: ¿El sol es rojo desde cuándo? – Es naranja, profe – le contesta la estudiante – Okay, continue – le dice la profesora.</p>	
7:47	<p>La profesora le aclara a los estudiantes: le pasé mi cuaderno a la coordinadora entonces usaré mi teléfono – después comienza a copiar la siguiente información en el tablero “mechanical energy”. Los estudiantes interactúan en español mientras copian la información que hay en el tablero (algunas veces utilizan algunas palabras en inglés).</p> <p>La profesora les pregunta a los estudiantes: okay, what is the mechanical energy? Energía mecánica, give me an example.</p>	<p>Los estudiantes presentan un cambio de código cuando hablan entre sí. Usan el vocabulario que ya han aprendido e interiorizado.</p>
7:48	<p>Las pilas – le contestas un estudiante, y ella le contesta: other, but other. Otro estudiante contesta: el cargador - ella le dice: excellent! – el estudiante añade: es como una pila que se recarga – ella le responde: yes, perfect!</p>	<p>La profesora los felicita en inglés.</p>
7:53	<p>La profesora llama la atención de los estudiantes para que le den más ejemplos. Después les dice a los estudiantes: the teacher has a question, what type of energy has a car? Un estudiante le contesta: mechanical!</p>	<p>Vemos que la profesora hace énfasis en el uso del inglés en su clase, pero al mismo tiempo permite a los niños apoyarse en su idioma materno para entender mejor las instrucciones. Además, para aclarar y hacerse entender, opta por traducir lo que dice.</p>
7:55	<p>La profesora les pregunta de nuevo: what type of energy has a train? Un estudiante le contesta: profe, pero no mechanical, les ponen carbón. Ella le aclara al estudiante: yes, but ahora solo hay los que funcionan con electricidad – y el estudiante le responde: pero como yo los he visto en la película – la profesora le dice: oh yes, but now just mechanical energy.</p>	
7:56	<p>La profesora sigue con la clase y les dice: okay, we are going to start with the other type of energy: light eólica. Punto aparte, dicto en español, ahora dicto en español. Okay, punto aparte. La profesora comienza a dictar.</p> <p>Un estudiante comienza a bromear: hoy la teacher está borracha – ella</p>	

	<p>responde a la broma: ay Cristian, por favor.</p> <p>8:02 La profesora sigue dictando: for example – y comienza a dibujar algo en el tablero. Un estudiante le pregunta: ¿la palma, dibujamos? – ella le aclara: es una hélice. Acto siguiente, les indica a los estudiantes que deben hacer el dibujo que está en el tablero</p> <p>8:05 La profesora les dice: Hagan el dibujo y debajo del dibujo colocan: homework. Después de unos minutos la profesora les pregunta: ¿colocaron homework? Todos le contestan que sí – ella prosigue: okay, les pongo la tarea por la plataforma, ahí está.</p> <p>8:07 La clase termina con la profesora enviándole la tarea a los estudiantes.</p>	<p>Vemos que la profesora les recuerda el uso de la plataforma a los niños como un apoyo para estudiar.</p>
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