



Universitat de Lleida

EMI classes' diagnosis and creation of a protocol for the implementation of a more CLIL-ised methodology in the Primary Education Bilingual Degree of the University of Lleida

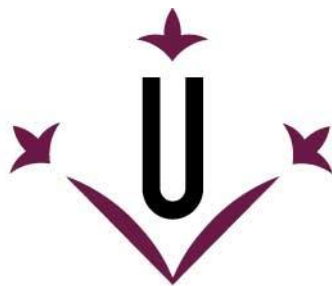
Gemma Saladrigues Roselló

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Universitat de Lleida

TESI DOCTORAL

**EMI classes' diagnosis and creation of a protocol for the
implementation of a more CLIL-ised methodology in the
Primary Education Bilingual Degree of the University of Lleida.**

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Memòria presentada per optar al grau de Doctor per la Universitat de
Lleida

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2022

ACKNOWLEDGEMENTS

First and foremost, I would like to express my most profound gratitude to my supervisors Àngels Llanes Baró and Montserrat Casanovas Català. It has been a pleasure to be their doctoral student. Àngels, you have believed in me since the very beginning, and encouraged me to carry out this research during all these years. You have shown me the secrets of statistical analysis, and together with your valuable linguistic advice, I have been capable of developing my research on the students' English language learning. Montse, you introduced me to the Primary Education Bilingual Degree, and you have accompanied me to discover the pedagogical characteristics of this programme and have given me your support to look for improvements, always looking far ahead. I have learned a lot from both of you, and I thank you both immensely for motivating me, your patience, constructive feedback and encouragement to finish this project.

I would like to thank all the research participants of the study. On the one hand, to all the students that accepted to participate in the investigation and that carried out all the tests and surveys administered over that academic year. They were open and kind, and their willingness to participate was essential to develop the project. On the other hand, to the EMI lecturers of the Primary Education Bilingual Degree of the University of Lleida, who kindly accepted to be part of this investigation, and opened the doors of their classes to me whenever I needed their help. Without all of them, the project would not exist. I warmly thank them.

A special thanks also goes to Professor Maricel Oró Piqueras, the Primary Education Bilingual Degree coordinator. She answered all my questions related to the programme, offered me support when contacting the EMI lecturers, and motivated me to carry on with the research. Moreover, the data collection process would not have been possible without the help of Olivia Nechita, a doctoral degree colleague who kindly supported me recording the EMI sessions and administering the language tests to the students. I will always remember her generosity and efficiency in developing any task.

I would also like to express my gratitude to all the expert professors on second language teaching and learning methodologies that voluntarily validated the surveys created for the EMI observations of the present research. Their advice contributed to improving one of the main instruments for the investigation.

On a personal level, I would like to show my immense gratitude to my husband Victor, one of the most important people in my life. He has accompanied me during the whole process of the study, giving me unconditional support, motivating me when I most needed it, giving me space to develop the project, and believing in me from the beginning. Perseverance, effort, and self-improvement guide most of our projects. Thank you for always being there.

My most sincere thanks to my parents and brother, for their unfailing encouragement when I most needed it, and for their patience, love and understanding. They have taught me the value of hard-work. To my grandparents, especially to my grandmother Ramona, who gave me strength to carry on and who always said that learning is one of the most precious things a person can do. She was right. I will love her forever.

I would like to thank my friends, those who have been there, interested in the development of my project, encouraging me to finish my research, and for being so understanding on those days I could not meet with them. I cannot wait to toast with them after the defence! Gràcies!

I am also grateful to my colleague Judit, the headmistress of the school where I work. It has been so challenging to combine my job with the different stages of my research. I have been fortunate to have her there. She has smoothed the path for me when developing the study, and she has given me support whenever I have needed it. Molt agraïda!

I also owe my gratitude to Iolanda Ribes, the linguistic corrector, who has been so professional with her advice and she has helped me brighten the lines of this dissertation.

Finally, I would like to show gratitude to those people whose names do not appear here but who have been part of this six-year journey. You have contributed one way or another to keep me going. Thank you all for being part of this journey.

ABSTRACT

Over the last few decades, the process of globalisation has led to the activation of different economic, social, cultural and linguistic driving forces, and in particular, it has directly affected the educational sector (Hu, 2019). Higher education institutions are tackling this challenge mostly by adding English Medium Instruction (EMI) programmes to their undergraduate degrees, as a way of fostering the students' English language learning, preparing them for labour markets and opening their doors to international students (Coleman, 2006; Doiz et al., 2011; Pérez-Encinas et al., 2017).

The present study seeks to evidence the impact that the EMI methodology in a bilingual degree had on its students' English language learning, and to offer practical guidelines to enhance these programmes. To achieve these objectives, the English language communicative competence of a group of students attending EMI classes was assessed, together with the analysis of the teaching methods used with those class groups. From the findings obtained, two improvement protocols were created to provide a more CLIL-ised methodological usage in the tertiary education context. For that purpose, the study focused on a group of 35 students enrolled in their first year of the Primary Education Bilingual Degree at the University of Lleida. The data collection was conducted during the 2015-2016 academic year, and the students participated in a pre- and post- test design. To collect information about the teaching methods used, eight EMI classes were recorded and analysed using six different surveys. Moreover, two surveys were administered to both the students and teachers. The results were transcribed and analysed statistically using the CHILDES and SPSS programmes.

The findings obtained confirm that the EMI methodology used in the bilingual degree had a positive impact on the students' English language communicative competence over an academic year (although improvement was not across the board), mostly on their writing skills and on their general English proficiency level. The analysis done of the EMI class observations and the information obtained from surveys by both the students and teachers allowed us to justify these

results. Among the reasons described, we could stand out the presence of writing tasks in most of the sessions, the L2 usage by the teacher most of the time, the work on different language skills, the L2 extra-material offered, the constant feedback given by the lecturers, etc. However, the weak results obtained on some of the measures, mostly the oral ones, could be improved with a higher promotion of oral tasks in class, the L2 oral interaction between students and teachers and the presence of more vocabulary tasks in the different sessions. Not only did the teaching methods analysed justify the reason for some of the English language improvements, but they also led to a list of pedagogical and organizational proposals to improve the teaching and learning methodology in the tertiary education. Thus, two decalogues were designed, which included practical and relevant proposals that would foster the implementation of a more CLIL-ised methodology.

In conclusion, the present investigation has contributed to the research field of second language teaching and learning, and the promotion of bilingual programmes in tertiary fields, by evidencing the positive impact that these programmes can have on the students' English language development, and by providing an integral plan that promotes the shift towards a CLIL methodology.

Key words: English Medium Instruction (EMI), Content and Language Integrated Learning (CLIL), second language teaching and learning, bilingual programmes in tertiary fields.

RESUM

Al llarg de les últimes dècades, la globalització ha potenciat l'activació de diferents elements de canvi, tant a nivell econòmic, social, cultural com lingüístic, i en concret, ha afectat directament al sector educatiu (Hu, 2019). Les institucions d'educació superior afronten aquest repte, majoritàriament, afegint als seus graus programes que inclouen assignatures de contingut en llengua anglesa (EMI, acrònim en anglès), com una manera de potenciar l'aprenentatge de llengua anglesa dels estudiants, preparar-los pel mercat laboral i d'obrir portes als estudiants estrangers (Coleman, 2006; Doiz et al., 2011; Pérez-Encinas et al., 2017).

Aquest estudi pretén evidenciar l'impacte que la metodologia *EMI* (en anglès) d'un grau bilingüe d'educació superior té en l'aprenentatge de llengua anglesa dels estudiants i també oferir una guia pràctica per millorar aquests programes. Per tal d'aconseguir aquests objectius, es va examinar el desenvolupament de la competència comunicativa de la llengua anglesa d'un grup d'alumnes participants en classes EMI i es van analitzar els mètodes d'ensenyament en les mateixes classes. A partir dels resultats obtinguts, es van crear dos protocols per tal de proporcionar estratègies cap a un canvi en la metodologia AICLE (Aprenentatge Integrat de Continguts en Llengües Estrangeres). Amb aquest propòsit, l'estudi es va centrar en un grup de 35 alumnes matriculats al primer any del pla bilingüe del grau d'educació primària de la Universitat de Lleida. Es van recollir dades durant el curs escolar 2015-2016 i els estudiants van participar en un pre- i post- estudi. La informació recollida dels mètodes d'ensenyament a les classes EMI es va fer a través de la gravació de dos sessions de les quatre assignatures analitzades, utilitzant sis qüestionaris dissenyats amb aquesta finalitat. A més a més, es van administrar dos enquestes als estudiants i professors participants. Els resultats es van transcriure i analitzar estadísticament, utilitzant els programes CHILDES i SPSS.

Els resultats obtinguts confirmen que la metodologia EMI utilitzada en el grau bilingüe ha tingut un impacte positiu, encara que no de forma globalitzada a totes les mesures, en el desenvolupament de la competència comunicativa en llengua anglesa dels estudiants,

majoritàriament en les habilitats de producció escrita i referent al nivell general de llengua anglesa. L'anàlisi de les observacions de les classes EMI, juntament amb la informació que han aportat les enquestes dels alumnes i professors, ha permès justificar algunes d'aquestes millores obtingudes en llengua. Algunes de les justificacions que cal destacar en l'estudi son la presència d'activitats de producció escrita en la majoria de sessions, l'ús majoritari de la llengua anglesa per part del professors, el treball de les diferents habilitats de la llengua, l'oferta de material en llengua anglesa, el feedback constant dels professors, etc. Tot i així, els resultats que no van presentar millores, com son la majoria de les mesures de producció oral, podrien millorar amb el suport de més activitats orals a l'aula, l'augment d'interaccions orals entre els alumnes i professors i el treball del vocabulari en més sessions, entre d'altres aspectes. Els mètodes d'ensenyament utilitzats en el pla justificaven algunes de les millores en llengua anglesa, però també van ajudar a crear un llistat de propostes pedagògiques i organitzatives per tal de millorar les metodologies d'ensenyament i aprenentatge en l'àmbit universitari. Així, es van dissenyar dos decàlegs, els quals incloïen propostes pràctiques i rellevants que pretenien fomentar la implantació d'un ensenyament encarat a la metodologia AICLE.

En conclusió, l'estudi ha contribuït al camp de la investigació relacionat amb l'ensenyament i aprenentatge de la segona llengua estrangera i en el de la promoció dels programes bilingües en l'àmbit universitari a partir de l'anàlisi de les evidències aportades sobre l'impacte positiu que aquests programes tenen en el desenvolupament de la llengua anglesa dels estudiants i proporcionant un pla integrat que promou un canvi cap a una metodologia AICLE.

Paraules clau: assignatures de contingut en anglès (EMI), aprenentatge integrat de contingut i llengua estrangera (AICLE), ensenyament i aprenentatge de la segona llengua estrangera, programes bilingües en l'àmbit d'educació superior.

RESUMEN

A lo largo de las últimas décadas, la globalización ha potenciado la activación de diferentes elementos de cambio, tanto a nivel económico, social, cultural como lingüístico, y en concreto, ha afectado directamente al sector educativo (Hu, 2019). Las instituciones de educación superior afrontan este reto, mayoritariamente, añadiendo a sus grados programas que incluyen asignaturas de contenido en lengua inglesa (EMI, acrónimo en inglés), como una manera de potenciar el aprendizaje de lengua inglesa de los estudiantes, prepararlos para el mercado laboral y para abrir las puertas a los estudiantes extranjeros (Coleman, 2006; Doiz et al., 2001; Pérez-Encinas et al., 2017).

Este estudio pretende evidenciar el impacto que la metodología EMI (en inglés) de un grado bilingüe de educación superior tiene en el aprendizaje de la lengua inglesa de los estudiantes y también ofrecer una guía práctica para mejorar estos programas. Con el fin de conseguir estos objetivos, se examinó el desarrollo de la competencia comunicativa de la lengua inglesa de un grupo de alumnos participantes en clases EMI y se analizaron los métodos de enseñanza en las mismas clases. A partir de los resultados obtenidos, se crearon dos protocolos con el fin de proporcionar estrategias hacia un cambio a la metodología AICLE (Aprendizaje Integrado de Contenidos en Lenguas Extranjeras). Con este propósito, el estudio se centró en un grupo de 35 alumnos matriculados al primer año del plan bilingüe del grado de educación primaria de la Universitat de Lleida. Se recogieron datos durante el curso escolar 2015-2016 y los estudiantes participaron en un pre- y post- estudio. La información recogida de los métodos de enseñanza a las clases EMI se hizo a través de la grabación de dos sesiones de las cuatro asignaturas analizadas, utilizando seis cuestionarios diseñados con esta finalidad. Además, se administró dos encuestas a los estudiantes y profesores participantes. Los resultados se transcribieron y analizaron estadísticamente, utilizando los programas CHILDES y SPSS.

Los resultados obtenidos confirman que la metodología EMI utilizada en el grado bilingüe ha tenido un impacto positivo, aunque no de forma globalizada a todas las medidas, en el desarrollo

de la competencia comunicativa en lengua inglesa de los estudiantes, mayoritariamente en las habilidades de producción escrita y referente al nivel general de lengua inglesa. El análisis de las observaciones de las clases EMI, juntamente con la información que han aportado las encuestas de los alumnos y profesores, ha permitido justificar algunas de estas mejoras obtenidas en lengua. Algunas de las justificaciones que cabe destacar en el estudio son la presencia de actividades de producción escrita en la mayoría de las sesiones, el uso mayoritario de la lengua inglesa por parte del profesorado, el trabajo de diferentes habilidades de la lengua, la oferta de material en lengua inglesa, el feedback constante de los profesores, etc. Aún así, los resultados que no presentaron mejoras, como son la mayoría de las medidas de producción oral, podrían mejorar con el soporte de más actividades orales en el aula, el aumento de interacciones orales entre los alumnos y los profesores y el trabajo del vocabulario en más sesiones, entre otros aspectos. Los métodos de enseñanza utilizados en el plan justificaron algunas de las mejoras en lengua inglesa, pero también ayudaron a crear un listado de propuestas pedagógicas y organizativas con el fin de mejorar las metodologías de enseñanza y aprendizaje en el ámbito universitario. Así, se diseñaron dos decálogos, los cuales incluyeron propuestas prácticas y relevantes con el fin de fomentar la implantación de una enseñanza encarada a la metodología AICLE.

En conclusión, el estudio ha contribuido al campo de la investigación relacionado con la enseñanza y el aprendizaje de la segunda lengua extranjera y en el de la promoción de los programas bilingües en el ámbito universitario a partir del análisis de las evidencias aportadas sobre el impacto positivo que estos programas tienen en el desarrollo de la lengua inglesa de los estudiantes y proporcionando un plan integrado que promueve un cambio hacia una metodología AICLE.

Palabras clave: asignaturas de contenido en inglés (EMI), aprendizaje integrado de contenido y lengua extranjera (AICLE), enseñanza y aprendizaje de la segunda lengua extranjera, programas bilingües en el ámbito de la educación superior.

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LIST OF ABBREVIATIONS

AI	Adjunct Instruction
BICS	Basic Interpersonal Communication System
CALP	Cognitive Academic Language Proficiency
CBI	Content-based Instruction
CEFR	Common European Framework of References for Languages
CIFALC	Catalan Interuniversity Commission for Language Training and Certification
CLIL	Content Language Integrated Learning
CLUC	Certificat de Llengües de les Universitats Catalanes
CM	Chinese group
EAP	English for Academic Purposes
ECTS	European Credit Transfer System
EFL	English Foreign Language
EHEA	European Higher Education Area
ELF	English Lingua Franca
ELTDP	English Language Taught Degree Programmes
EM	English group
EMEMUS	English-Medium Education in Multilingual University Settings
EMI	English Medium Instruction
ESP	English for Specific Purposes
ETP	English-Taught Programmes
EU	European Union
FI	French Immersion
FL	Foreign Language
HE	Higher Education
HL	Heritage Language

ICHLHE	Integrating Content and Language in Higher Education
ICT	Information and Communication Technology
IM	Full immersion in English
L1	Catalan and Spanish language (mother tongue)
L2	English Language
L3	Third Foreign language
OPT	Oxford Quick Placement Test
OPUC	Observatori per al plurilingüisme a les Universitats Catalanes
PEBD	Primary Education Bilingual Degree
SEPIE	Spanish Services for the Internationalisation of Education
SIM	Semi-immersion in English
SLA	Second Language Acquisition
SLT	Second Language Teaching
SMI	Spanish Medium Instruction
SPSS	Statistical Package for Social Sciences
TOEPAS	Test of Oral English Proficiency for Academic Staff
UdG	Universitat de Girona
UdL	Universitat de Lleida
UNIRI	University of Rijeka

INTRODUCTION

Globalization has raised the necessity for economic and social internationalisation to countries all over the world, and this has affected people's life considerably, concretely within the linguistic field. This change is not new, so it has been present worldwide for some years (Coyle et al. 2010). Europe is affected by this globalization, and the desire for cohesion by all the European countries and its maintenance is very relevant nowadays. Therefore, this situation is responsible for this big necessity to communicate and exchange information, which as a result implies a linguistic change in different aspects of society, such as the necessity for new second language teaching methodologies. To resolve this situation, it is necessary to foster a plurilingual education that helps European citizens to advance personally and professionally in the Europe of the 21st century. As a way to achieve this, it is essential to know and analyse how education should be implemented in order to search for new linguistic class models, which at the same time tackle the present social situation (Mehisto et al., 2008).

Tertiary education is also affected by this global, social, and economic change, and the European university context has bet for the internationalisation of its programmes. Dafouz et al. (2007) confirm that universities are facing two important challenges: becoming international superior quality educational institutions of which teachers and students from all over the world can be part, and preparing students for a multilingual and multicultural society. For these reasons, these institutions are being forced to revise their linguistic policies to adapt them to the new social context, in which students have the necessity to face this plurilingual situation (Cots et al., 2012). One of the approaches that have been used to face this linguistic necessity in higher educational settings is the *English Medium Instruction* (EMI) methodology, and on less frequent occasions, the *Content and Language Integrated Learning* (CLIL) methodology. Research on the EMI approach in tertiary contexts (Dafouz et al., 2014; Dafouz & Camacho-Miñano, 2016; Joe & Lee, 2013; Roquet et al., 2019; Salaberri Ramiro & Sánchez Pérez, 2015) has shown positive results on students' language and content learning. Similarly, the CLIL methodology has also

shown positive results in achieving both content and language objectives (Aguilar & Muñoz, 2014; Chostelidou & Griva, 2014; Loranc-Paszylk, 2009; Yang, 2014), even though this methodology is much more explored and developed in primary and secondary contexts, where the results have shown to be significant. As explained before, the research done in the university context is more focused on analysing students' content and language learning, overseeing the impact that the class pedagogical methodologies and even the organizational aspects of the programmes could have on the teaching and students' learning. There is still a lack of investigations in the tertiary level on the usage of the class programmes and on the students' language learning academic contexts. In order to contribute to analyse this context, the present study aims at examining the teaching content and learning methodology of a second language in a bilingual degree within the tertiary field.

The purpose and interest for the present investigation comes from both my personal and professional experience. On the one hand, I am a language lover and I have always been interested in successful second language teaching methods. I have been teaching English and French in a secondary school for several years now, and I have also been involved in many innovative European projects with children and teachers. On the other hand, I have also taught specific educational content through the English language in a tertiary level degree at the University of Lleida. These two professional contexts made me realise about two relevant and current facts: the importance the English language has in education nowadays, as the key element to internationalise our programmes and share worldwide experiences, and the impact that a good methodological implementation can have to promote English language learning, both in secondary and tertiary education levels. Besides, the differences between the secondary and tertiary context in terms of language teaching and learning methods also caught my attention. I wondered why in the secondary context, the CLIL methodology was widely used and implemented among the community of teachers, whereas the university context barely used it in its programmes and moved to a more EMI approach. I wondered why this happened, and

what reasons lied behind this choice of methodologies. I could not understand why what happens to successfully work in the secondary context, was hardly applied in the tertiary level. I asked myself if it was because of the students, the teachers, or the context itself. These two different educational perspectives and the differences that lie behind them may have been the starting points of the present investigation.

In light of all what has been mentioned above, the present study aims at analysing the EMI methodology used in some of the subjects taught in the Primary Education Bilingual Degree (PEBD) at the University of Lleida (UdL) and then, present an improvement proposal for a more CLIL-ised usage in this degree. The current investigation has been approached from three different perspectives, which correspond to the three research questions of the study.

RQ1. What is the **linguistic impact** that the implementation of the EMI methodology has on the English language communicative competence development of the students from the Primary Education Bilingual Degree of the University of Lleida?

RQ2. What are the **types of teaching methods** used in the Primary Education Bilingual EMI classes of this pilot degree?

RQ3. What are the lines to follow for **the implementation of a more CLIL-ised methodology** in a university degree context?

The study is divided into two main parts which are made up of six chapters in total. The first part (Chapter 1) provides a review of the theoretical background of the study. The second part (Chapters 2, 3, 4, 5 and 6) presents the empirical study itself, and includes the methodology employed, the results, the discussion of the findings, the proposal of two decalogues and the conclusions. In what follows, a summary of each chapter is going to be presented.

Chapter 1 corresponds to the theoretical background of the study, and it is composed of four sub-sections which try to address the setting in which the present investigation takes place. The first sub-section (1.1) describes the theoretical approaches of EMI in Higher Education (HE). A brief description of the reasons for internationalisation and the growth of English as a Lingua

Franca are included. The growth in the number of educational institutions during the last few years is also explained, emphasising in this study the Catalan educational background. There is one last part which focuses on the English Medium Instruction (EMI) methodology, and its development around Europe, Spain, and Catalonia. The second sub-section (1.2) presents a description of the English instruction approaches regarding content and language learning in higher educational settings, and which includes English for Specific Purposes (ESP), English for Academic Purposes (EAP), and the CLIL and Content Based Instruction (CBI) methodologies. The following sub-section (1.3) describes the EMI studies focusing on students' and teachers' attitudes and beliefs towards the EMI approach, and the impact that they have on content and L2 language learning, both topics applied to university contexts. Finally, the last sub-section (1.4) includes a summary of the professional development and teacher training models to better implement the EMI methods at a university level and also arguments for the incorporation of the CLIL methodology in HE contexts.

Chapter 2 includes the research objectives and the methodology used. In this part, I firstly present the research questions of the study, together with its hypothesis. Later, I present the method used, where the context and participants, design, treatment, and instruments employed are described. The last part of this section includes the measures used to analyse the data gathered for this investigation.

Chapter 3 presents the results of the analyses undertaken in the research in order to provide an answer to the three research questions formulated in chapter 2. These findings are divided into three sub-sections. The first sub-section (3.1) shows the results of the English language tests administered to the students attending the EMI classes. They are organised showing first the accuracy results, followed by the syntactic complexity ones, both for the oral and the written skills; then, the lexical complexity results, the oral comprehension ones; and finally, the grammar results are presented. The results shown correspond to both the pre-test and the post-test. The second section (3.2) provides the results extracted from the teachers' and students'

questionnaires, which give essential information to create a profile of the main stakeholders of the research. The last section (3.3) presents the findings of the specific methods used in the EMI classes. Here, the results from the six surveys designed to make this EMI class' description and analysis are exposed.

Chapter 4 addresses the discussion of the findings obtained. This chapter is organized into different sections each one dealing with the three parts described in chapter 3. Firstly, section 4.1 provides information about the results on the linguistic impact that the EMI methodology has had on the English language communicative competence developed by the students enrolled in the PEBD of the University of Lleida. As analysed, the impact the EMI approach had on the students can be considered positive overall. Secondly, section 4.2 corresponds to the analysis of the teachers' and students' questionnaires, whose results give us the possibility of creating an EMI teacher and students' profile of the educational programme under analysis. This was considered key to determine possible improvements for the bilingual programme. Finally, in section 4.3 the EMI class observations are discussed, and they are presented under the light of the different surveys administered. All in all, the relevant aspects that could help justify some of the results found in the mentioned sections are highlighted.

Chapter 5 tackles the third research question of the study, and it includes two decalogues with pedagogical and organisational improvements that could complement the EMI programme under analysis. This chapter is divided into two sections. Section 5.1 presents 10 key pedagogical principles that can be used to improve the existing programme by favouring the content and language learning of the students involved. Section 5.2 describes the 10 key principles for a better organization of the EMI programmes established. The objective of these decalogues is to propose effective guidelines that can be used for teachers or universities to move into a more CLIL-ised implementation in their programmes.

Finally, chapter 6 offers the conclusions reached after carrying out the investigation. This section will also make emphasis on the relevance of the findings obtained, and on the implications these

results can have for bilingual programmes in tertiary contexts, and for the higher education community itself. The limitations of the study are also presented here, together with several issues for further research.

To conclude, some annexes are added. They correspond to the students' consent to participate in the project, the English language tests administered to the participants, the links to the six surveys created for the analysis of the EMI class diagnosis, the links to the questionnaires for students and teachers, the comments from the piloting process done, the document including the surveys validated by the professors, the videos with the EMI sessions recorded, and the transcription symbols and vocabulary choices. A list of bibliographical references is included at the end of the project.

It is hoped that the present investigation will be able to contribute to the research fields of second language acquisition (SLA), educational methodologies, second language teaching and learning, and bilingual education. Given the relatively positive results of the EMI students' English language learning, and the pedagogical and organizational improvements described in the decalogues, it is expected that the present study is of interest to all teachers and researchers willing to enrich their educational methodologies for second language teaching and learning in higher education contexts. As we all know, believing in the power of education is trusting that something is possible.

CHAPTER 1

THEORETICAL BACKGROUND:

This dissertation presents a diagnosis of the English Medium Instruction (EMI) in a higher education degree at the University of Lleida (UdL). As such, its aims are to observe the methodological situation of the EMI classes in the degree, to analyse the linguistic impact on the students, and to propose a protocol for the implementation of a more CLIL-ised (Content Language Integrated Learning) methodology. For this reason, the theoretical framework of this project will be divided into the following chapters.

Chapter 1 addresses the setting in which the present investigation takes place: EMI in the tertiary context. The chapter is divided into three general sections which try to create a whole picture of the theoretical and research situation of the present topic.

Section 1.1 is distributed into four sub-sections, which present the theoretical approaches of EMI in Higher Education (HE). The next section of this chapter (1.2) presents a description of the different educational approaches of content and language learning, which have been used concurrently when talking about language and content learning at university. In this section there are different sub-sections which mainly present the different methods.

Then, section 1.3 sets forth the EMI studies that have examined students' attitudes towards the English Medium Instruction approach in university contexts, together with the findings regarding the L2 language and content learning impact.

Finally, section 1.4 provides a summary of the professional development and teacher training models to better implement the EMI methods in university degrees or even the incorporation of the CLIL methodology in HE contexts.

It is worth mentioning that the expressions Second Language (L2) and Foreign language (FL) will be used interchangeably as they both refer to the learning of a language different from one's mother tongue or home language.

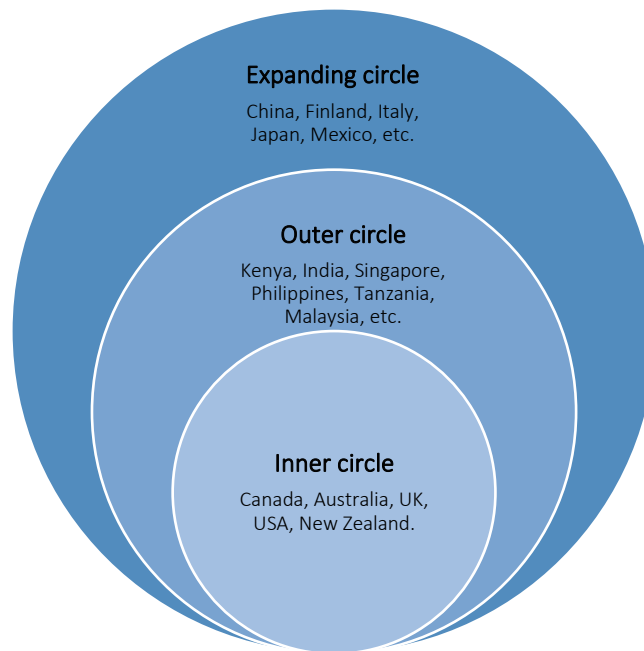
1.1. Theoretical approaches of the EMI in HE

1.1.1. Internationalisation and English as a Lingua Franca

During the last two decades, globalisation, led by economic, cultural, identity, technology and political changes, has gained ground and has now become one of the main drives in today's world (Coleman, 2006). This worldwide spread is directly linked to the English language, which has become the "lingua franca" in all the spheres of society and the language of communication, information and relations among the non-English speaking countries (Crystal, 2003). At this point, the term "English as lingua franca" (ELF) generates a bit of controversy, because of the different names given to its usage, contexts, and functions. In 1986, Braj B. Kachru's (Peterson, 2020), one of the most well-known linguists who focused on the study of English, established a famous model of three concentric circles of English in order to explain the linguistic differences between countries and its users. As described and shown in figure 1, the inner circle contains the countries where English is the native language, and speakers use it in day-to-day settings, such as in Canada, the United Kingdom, the United States, or Australia. The number of English speakers in this circle varies according to the natural growth and movement of people, but not on the learning of it. The outer circle represents the countries where English is institutionalised as an additional language, and it is also the second language. Countries like India, Singapore, Kenya, Nigeria, etc. belong to this circle, which is characterized by being former colonies of Britain or belonging to the British Commonwealth. People in these regions are bilingual and the generational growth maintains the numbers of speakers in these locations. The last circle is the expanding circle, which comprises the countries where English is a FL. This happens in countries like China, Finland, Mexico, Germany, Italy, Spain, etc.

Figure 1

Three concentric circles of English.



Note. Based on Kachru, 1982

According to this model, the countries found in the expanding circle are the ones turning English into an international language. As Coleman, 2006:

[...] shift principally happens from expanding to outer: English ceases to be a foreign language as it acquires a social and sometimes official role across more and more communities. (p.2)

In the era of internationalisation, the role of the English language in the countries of the expanding circles are changing and becoming more and more present in institutions and multilingual settings. The English language has gained ground in academic life, such as in international journals, conferences, and different academic fields. As suggested by Llorca et al. (2013):

One could simply say that in non-English speaking countries, the internationalisation of higher education has come hand in hand with the Englishisation of academic life. (p. 4)

According to Moncada-Comas and Block (2019), the term Englishisation could be defined as “the use of English in contexts where previously local languages were used” (page 2). Thus, the term internationalisation also means Englishisation in some ways.

Crystal (2003) stated that in 2003 one quarter of the world was fluent or competent in English. As a consequence, the term “native speaker” of English started to change at that moment, and now, it is changing and adopting a new concept. As Elizabeth Peterson (2020) states in her book:

[...] the model suppresses the fact that a “native speaker” of English can be from any of the locations of any of the circles, a situation which is an increasing reality along with increased mobility and the exponential growth of English. The meaning of “native speaker” has been further blurred by the sheer level of aptitude in English that is now nothing short of commonplace worldwide. (p. 23)

Therefore, as a simple definition, a Lingua Franca is considered the intermediary language of communication in business, academic and social contexts, and English, thanks to its historical background and the political and military power since 1945 is the language used nowadays within this exchange (Crystal, 2003). As House (2003) describes it, ELF characterises as being flexible, open to other norms, and variable. Speakers not only need to have a basic command of the English language to communicate, but also a series of competences which they will need to work out when maintaining a linguistic exchange. For this reason, the present role of “the native English speakers”, found in the inner and outer circles of Kachru’s diagram, according to the attribution that it has been given to the English language, shows that native English speakers are not owners of the language anymore. More and more people are using English in their daily life situations, and this now does not belong exclusively to any country. The original nature of “native English” has vanished with this phenomenon. What is correct English? Are all the different varieties good enough when talking about ELF? Peterson (2020) says in her book that there should be no problem when a French person speaks English with a French accent, or when a Japanese does so too, for example. Jenkins (2002) (cited in Peterson, 2020) stated:

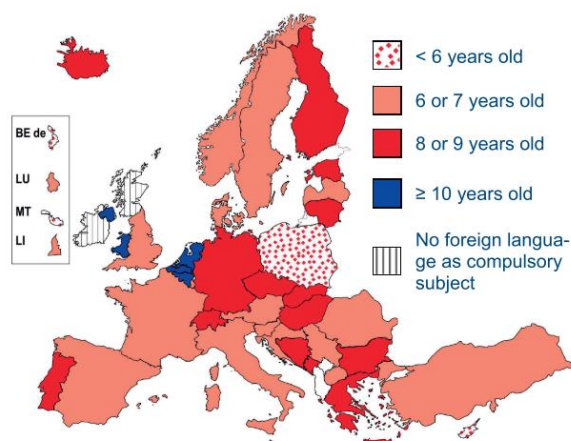
The so-called “native speaker model” of English, which adheres to the expectation that people who learn English should strive to sound either British or American, is outdated and irrelevant when it comes to English as it is used around the world. (p.132)

The term “native speaker” is getting new considerations in today’s world, and a broader conceptualisation should be taken into account when considering native speakers of English, so they can come from any region of the world and without having been born in the inner circles. To sum up, globalization has created the necessity to establish a common Lingua Franca in all the spheres of the society, and the English language is being used for communication between non-English speaking countries.

1.1.2. Growth in the Educational institutions

This rapid linguistic change has also affected education at all levels, Primary, Secondary and Tertiary education.

Figure 2



Country specific notes: See the full report (European Commission/ EACEA/Eurydice, 2017, p. 30).

Source: Eurydice.

In Europe, since approximately the year 2000, the European Commission’s main aim for all citizens was to promote multilingualism and cultural diversity within its member countries and to improve the language teaching in schools.

Primarily, it was established that students would be taught at least two foreign

Starting age of the 1st Foreign Language as a compulsory subject. 2015/2016

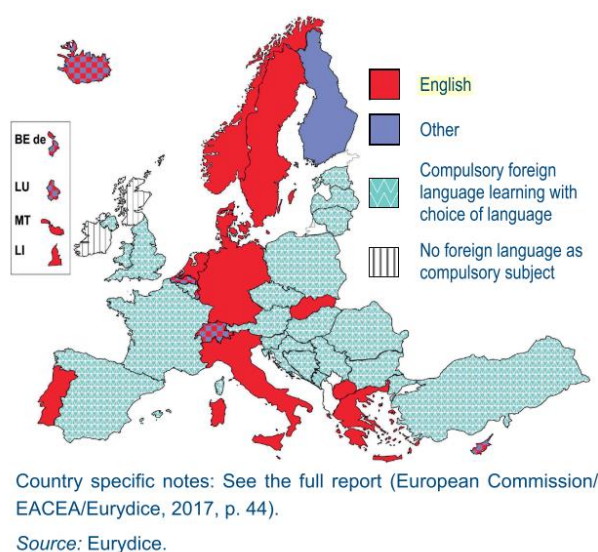
languages from an early age (see figure 2). The document *Key Data on Teaching*

Languages at School in Europe (European Commission, 2017), in which updated data on the linguistic European aims from the different countries appear, showed that whereas in 2000

students used to start studying their first foreign language when being between nine and eleven years old, nowadays, they start before the age of eight in most of the countries. The European indications and recommendations are being fruitful, as the results show.

The European Commission did not specify which foreign languages to learn, but the most recent updates show that, in 2015/2016, English had become mandatory in 18 different countries around Europe (European Commission, 2017).

Figure 3



The different countries and therefore, their schools and high schools, have been adopting measures and reforms since then to adjust their curriculums and educational projects to the new European statements and recommendations (see figure 3).

Mandatory foreign languages during compulsory education, 2015/2016

The presence of the English language in these educational systems also affected the HE institutions (except the ones located in the inner circles), which established protocols and common features to broaden their boundaries and make their institutions international (Doiz et al., 2011). HE institutions did not want to fall behind, and strategic protocols were developed to foster the internationalisation of their programmes. Until very recently, most of the universities had national or local students who did not have the need to study abroad, as job offers were located relatively close to their home. However, the context has suffered changes and students have now a wider variety of academic offers. HE institutions have rocketed their offer of both undergraduate and postgraduate programmes through the medium of English. According to

Macaro et al. (2018) the cause for this accelerated growth could be: a) to become representative of more prestigious institutions, b) to attract students from other countries due to the reduction of local students, c) to consider economical aspects in HE, d) and to conform to the new status of English. At a more institutional level, and according to Dafouz and Smit (2020), there is a need to prepare students and staff to study and work abroad:

This has also had a noticeable impact on the types of teacher professional development programmes demanded by HEIs, which not only include English language proficiency but are now starting to address pedagogical issues and disciplinary language differences. (p. 29)

Dafouz and Smit described similar reasons for implementing EMI in the tertiary context following a top-down approach (from more global reasons to the classroom). Similarly, Pavón and Gaustad (2013) listed a series of motives for such educational measures in the HE contexts, which complemented the ones previously mentioned. They referred to:

- The adoption of educational policies and regulations emanating from supranational agencies and institutions.
- The ability to attract national and international students.
- The position of the university in the national and international arena.
- The enhancement of the attractiveness of the university in the global context.
- The opening up of new opportunities for students in the labour market. It is conceived as a measure of significant importance in improving the employability of future graduates.
- An important parameter and indicator for determining university funding.
- The development of educational, economic, and cultural partnerships with other countries through the signing of specific agreements between governments.
- The creation of future collaborative networks among universities in academic, professional and research fields, and the improvement of existing ones.

- The enhancement of the international and intercultural skills and competences of the students and faculty involved. (p. 84)

Concurrently, the European Commission, following the rapid growth and expansion of borders, presented the Bologna Declaration in 1999, which offered a set of opportunities to accomplish these above-mentioned goals, which were:

- Enrolment in programmes which facilitate this internationalisation (for example, Erasmus programmes).
- Free mobility of students and teachers.
- Introduction of the ECTS system and Diploma supplement
- Introduction of three-year-long undergraduate degrees.
- Common European Framework of References for Languages (CEFR)

All these actions aimed to promote HE. These strategies were in line, for instance, with the main reasons why Italian universities decided to incorporate EMI programmes (Costa & Coleman, 2013). It is also believed that this process was just a way to remodel HE in Europe to make it more appealing to the European society, or as Coleman (2006) expresses, “it was the marketization of the HE” (p.3).

Ten years later, after the Bologna Declaration (in 1999), the European Higher Education Area (EHEA) was created and comprised 48 countries whose main goal was to standardise HE (González, 2013). The countries that belonged to this EHEA group shared some common objectives, some of which came from the Bologna process (the introduction of the ECTS system, three levels of HE qualifications.)

All in all, the HE education system has suffered changes over the past years which have helped, most of them, to foster this expansion in the world. Delgado (in Pérez-Encinas et al., 2017) provides a clear description of the Spanish strategy for the internationalisation of Spanish universities, a summary of which is presented here. The Ministry of Education in Spain published several documents that intended to foster their internationalisation. In 2010, the *University*

strategy 2015 Decree Law was launched. Then, in 2012, *the Mobility Strategy 2020 Decree Law* was passed, and in 2015, the *Strategy for the External Dimension of the EHEA of 2007* was revised, and the Spanish Service for the Internationalisation of Education (the Spanish acronym used is SEPIE) was created. This independent body has a key role in the development of the Spanish strategies described, as it promotes opportunities to study and carry out research at foreign universities, facilitates the admission of foreign students and professors in Spain, and it helps accomplish the EHEA objectives, as well as offering the opportunity of participating in Erasmus+ programmes, among other actions.

Concurrently, in 2013, the European Union (EU) approved the internationalisation of the HE plan. At that moment, the participating state members were defining the strategies and objectives with specific measures. At the same time, the General Secretariat of Universities set up a Task Force for the Internationalisation of Universities, to promote this worldwide expansion.

The Spanish government published the document “Estrategia para la Internacionalización de las Universidades Españolas 2015-2020” in 2014 (MECD, 2014), with four principal objectives; 1) to consolidate the university system, open it worldwide for students and promote staff mobility; 2) to portray our national universities as attractive settings for students to develop the studies; 3) to promote international competitiveness; and 4) to foster cooperation among the higher educational contexts around the world. A clearer definition of the intentions of this document is stated by Delgado (2017):

It also takes into account aspects such as the internationalisation of university curricula, brain circulation, the internationalisation of research, international joint qualifications, internationalisation at home, transnational campuses, quality assurance, accreditation and evaluation systems, competition to attract the best students, university rankings, international alumni associations, employability and entrepreneurship, interest in Spanish-language higher education, etc. (p. 18)

Within these main aims, it was established that the number of bilingual programmes in English or other languages should be increased by 2020. After two years this document was implemented, a study was done to track the objectives (Delgado, L. (2017), and according to Delgado, the author of the study, the results were positive, and some strategies were running well. The following lines provide a summary of the actions taken two years after the strategy was launched (Delgado, L., (2017)):

- Internationalisation manual for study programmes.
- International mobility website.
- Simplification of visa application processes for students and professors.
- Promotion and recommendations for the development of international joint programmes in line with the European Approach for Quality Assurance of Joint Programmes.
- Good practice guidelines for universities participating in global rankings.
- Implementation of the EHEA's instruments and tools.
- Integration of the international mobility measure into the Integrated University Information System using new indicators.
- Action plan for the internationalisation of university-business partnerships -Marketing plan for Spanish universities abroad. (p. 20)

So far, the Spanish government has put a lot of effort into accomplishing the objectives to internationalise the HE system. However, more time is needed to establish all the strategies described in the reports launched over these last few years. The Spanish higher educational system needs to continue working on this line.

1.1.3. Catalan educational background

This dissertation takes place in the region of Catalonia, in Spain. Here is a brief description of its historical process regarding the growth of languages in its educational contexts, and concretely and more precisely, in the linguistic development of the University of Lleida, the setting of this study.

Catalonia is a region where two languages, Spanish and Catalan, coexist at the same time in the social, educational, professional, and political spheres. This linguistic situation has not always been smooth, as Spain was immersed in a dictatorship (1939-1975), which, apart from other social and political restrictions, affected the local and minority languages of some regions of the country, especially the Catalan language located in Catalonia, Valencia and the Balearic Islands. During this dictatorship, the Catalan language was prohibited in the educational and public domains (Llurda et al., 2013). This period ended with the Spanish Constitution Act in 1978, which established Spanish to be the official language of the State, and it let other co-official languages exist in the autonomous regions. Several changes were made regarding the use of languages in the different autonomous regions. In Catalonia, the first Statute of Autonomy was passed in 1979 (and reformed in 2006), and it established the co-official status of the Catalan language, together with the Spanish one (Ploettner, 2013). From this moment on, the Catalan region had the power to create its own linguistic plan, and this way, foster multilingualism and language immersion programmes. The principal aim, according to Llurda, Cots and Armengol (2013) was:

To place Catalan alongside Spanish, guaranteeing through education the complete command of both languages by all children completing their education in Catalonia. To achieve such an ambitious goal, educational authorities have implemented a linguistic immersion programme, inspired by the Canadian model. (p. 2)

Thus, the Catalan language was promoted and used in Primary and Secondary Education as the main language of instruction. The Spanish language was also present, so it was compulsorily

taught and part of all the Primary and Secondary institutions' curriculum as a subject itself, together with another foreign language (Ploettner, 2013; Vila, 2011; Vila 1998; Vila, 2004).

Regarding the tertiary level, both the Catalan and the Spanish language were considered official in all the instructional levels of all the Catalan universities from 1980 on. The teachers can indistinctively choose Catalan or Spanish to teach their class, as students were considered to be competent in both official languages (Llurda et al., 2013). The Catalan HE institutions also followed the European trends and so did the Spanish HEIs, which expanded their borders and promoted multilingualism. Consequently, their linguistic policies were affected by this worldwide change.

In particular, the University of Lleida (UdL), on which this study is focused, started to work towards this worldwide common objective. In 2008, it approved a linguistic policy whose main aim was to promote multilingualism, and which established the use of Catalan, Spanish and English as the main languages of the institution (University of Lleida, 2008). In 2010, another law was passed, which determined that the graduating students should attain a B1 level of a third language (English, French, German, Italian) in order to complete their degree. The internationalisation plan of the University of Lleida was not presented until 2012, and it described clear objectives on how to internationalise the teaching and research of the institution. Within these strategies, it is worth mentioning the increase of English-medium instruction in the degree programmes, and more international programmes, as well as an increase in the mobility of students (University of Lleida, 2012). In 2013, the first multilingual policy from 2008 was revised, and new objectives were established, which were: to promote the use of the official languages of Catalonia within the different fields of the university context; to foster the multilingualism and plurilingualism of the HE community; to guarantee the users' linguistic rights regarding the official and second languages; to improve the linguistic quality of academic productions; and to raise awareness of its linguistic policy among all the university

community (University of Lleida, 2013). These objectives were implemented over a period of 5 years, and different action strategies were created to accomplish them.

This change of linguistic paradigm in the institution, and after a period implementing the multilingual plans previously presented, justify the following numbers concerning the use of language teaching, the language used in the number of theses presented, and the number of EMI programmes of the University of Lleida. Starting with the use of language teaching and considering the period between the academic years 2008-2009 and 2016-2017 (University of Lleida, 2018), when these plans were established, the percentage of classes taught in English increased from 4,0% in the academic year 2008-2009 to 6,1% in 2016-2017. The Catalan language, though, remained strong and it continued being the dominant language in this Catalan tertiary institution, with a rise that went from 67,3% in 2008 to 83,1% in 2016. This could be reasoned by the fact that the Catalan language was considered a minority language to preserve in the public institutions around the region. The other official language, Spanish, was affected by this new policy, with a drop that went from 27,9% in 2008 to 10% in 2016.

A similar rise happened concerning the number of theses presented during the same period (University of Lleida, 2018). In 2008, 26,4% of these had been written in English, whereas in 2016 the percentage was 37,1%. The dissertations presented in the Catalan language decreased from 22,6% in 2008 to 18,5% in 2016, as well as the Spanish ones, which went from 49,1% in 2008 to 44,4% in 2016.

Among the established strategies in the linguistic policy of 2008 and the new one of 2013, an increment of the English language as the vehicular language in the Degrees and Master programmes of the university was agreed. According to the "Observatori per al plurilingüisme a les Universitats Catalanes" (OPUC, 2015), the presence of EMI/CLIL programmes in the academic year of 2012 was analysed, and the results showed that there was a total of 49 EMI/CLIL programmes in the UdL. This observatory does not present comparative results with other academic years, but the number is thought to have increased in the following years.

What is more, some data could be obtained to see the results related to the objectives that intended to internationalise the university (University of Lleida, 2021). The data gathered corresponded to the period of the academic years 2014-2015 and 2018-2019. The data offered by the University of Lleida Internationalisation Department shows that in 2014 the institution welcomed 510 international students, compared with 669 in 2018. The results showing departing UdL students were even more remarkable, from 190 in 2014 to 415 in 2018. Finally, the increase showed to be significant due to the international programmes offered to students to carry out their internship periods. In 2014, there were a total of 27 students compared with 46 students in 2018.

To conclude this subsection, as it has been exemplified by the data shown, the plans approved over the last 20 years in the European context, and in particular in the Spanish and Catalan region, together with the specific strategic actions established in them, have shown to be effective to foster multilingualism and plurilingualism in the institution, the internationalisation of its programmes, and a wide-open door to the world. More time is needed to see further and conclusive results.

1.1.4. Roots of EMI in HE

The need for internationalising our universities, backed by the objectives of the European Commission, favoured the incorporation of bilingual programmes in HE, especially the English Medium Instruction (EMI) approach in the different university degrees and master's programmes. Several researchers (Costa & Coleman, 2013; Doiz et al., 2011; Llorca et al., 2013; Munteanu, 2014) affirm that this was a strategic tip to compete against other non-English speaking countries, which saw the need to follow this academic strategy to gain students for their university campuses. As mentioned above, thanks to the Bologna Declaration process and the free mobility of students between European-member states, most European universities were willing to recruit these free-paying students. Other benefits were considered when

adopting EMI in Higher Education, which are related to the positive results obtained from the CLIL programmes in Primary and Secondary schools: the teaching and research materials which are now more concurrent through English, the graduate employability thanks to the students' command of English, and the market in international students (Coleman, 2006).

EMI dates from the mid-1960s, when the Canadian Model was the starting point of the immersion bilingual programmes and bilingual teaching in the educational spheres. These programmes were exported to other parts of the world, and consequently, different versions were adopted. The term **English Medium Instruction** generally refers to situations where English is the language of instruction in countries where English is the FL. In HE contexts, EMI occurs when a non-native English speaker teaches a subject using an L2 (English language) to a group of non-native English students, who learn the contents through their FL. There are diverse settings where this "content learning" process happens, but the term EMI is widely used in HE. However, it can be applied to other contexts or educational settings. This definition could be considered "inconsistent and problematic (p.46) by some researchers (Macaro et al., 2018). In the study that Macaro et al. carried out (2018), they observed that the terminology was not common among the studies used for their research, and that it took different names, such as "English content-based instruction", "English as a Lingua Franca", "English-taught programmes", etc. This disagreement may occur because of various aspects, such as the context where EMI is carried out, the type of organisation within the EMI programmes, the type of English used, etc. (Macaro et al., 2018; Ploettner, 2013).

In EMI programmes, lecturers are specifically using language strategies to foster their English language proficiency levels. However, they are mostly focusing on content rather than on form. In the present study, the term EMI will be used to refer to all situations as it has been previously described.

Dafouz and Smit (2020) created a more specific acronym to refer to the university programmes taught through the medium of the English language. They called this approach *English-Medium*

Education in Multilingual University Settings (EMEMUS). According to them, Dafouz and Smit (2020), the term EMEMUS was wider because:

It is inclusive of diverse research agendas, pedagogical approaches and of different types of education, comprising, for instance, online programmes and teacher pedagogical development. Furthermore, the concept is more transparent because it refers to 'education', thus embracing both 'instruction' and 'learning' instead of prioritising one over the other. Additionally, it explicitly describes the sociolinguistic setting in question, which is understood as 'multilingual' in the widest sense, be it as a reflection of top-down regulations or bottom-up practices. (p. 3)

What is clear is that the implementation of this approach is not just the mere change of the language of instruction, but a series of aspects that need to be considered in this new framework. In order to analyse the real nature of this new approach, the authors proposed a ROAD-MAPPING framework, which presents the EMI approach as a structured division of dimensions, with the main aim of considering its different characteristics when it is implemented in the HE context. This approach identified six intersecting dimensions that affect the EMI settings, and which are "Roles of English (in relation to other languages), Academic Disciplines, (language) Management, Agents, Practices and Processes, and Internationalization and Glocalization" (Dafouz & Smit, 2020, p.3). This framework intends to analyse the dynamic nature of the EMENUS programme.

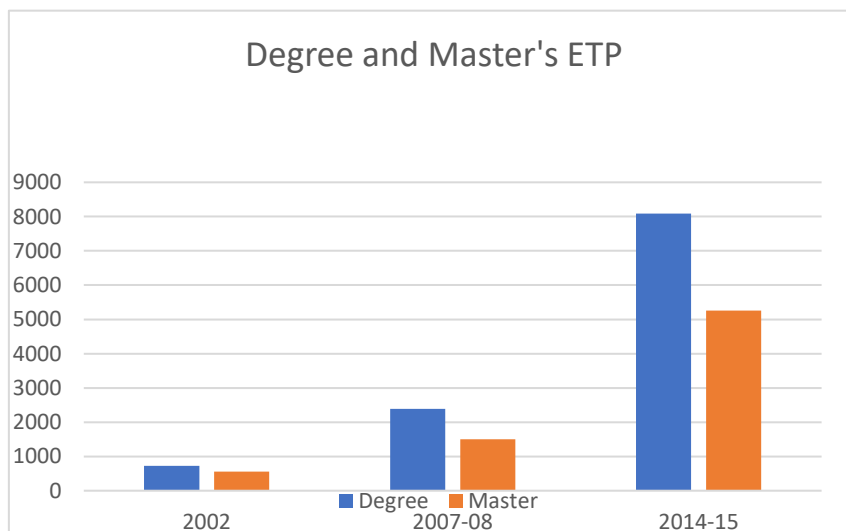
In the next paragraphs, there is a brief description of the EMI presence in Europe, Spain, and other parts of the world, which would show the impact of its growth.

1.1.4.1 EMI in Europe

Considering the historical background of EMI and its rapid growth of its use in HE, we will provide an overview of its development in Europe¹. As Macaro et al. (2018) described in their article, Europe has experienced a fast increase in what they call English-taught programmes (ETP), known in this research as EMI programmes. Starting with numbers and as it is presented in both versions of the book “English-Language-Taught Degree Programmes in European Higher Education (Wächter & Maiworm, 2002; Wächter & Maiworm, 2014), the number of ETP in Europe increased by 229% from 2002 (with 725 programmes) to 2007 (with 2,389 programmes). In the last study published by the same authors in 2014, the ETP programmes in Europe increased to 8,089. This growth also happened to the Master’s programmes entirely taught in English (Brenn-White & Faether, 2013; Brenn-White & Van Rest, 2012), which rose from 560 in 2002 to 1,500 in 2008. Some years later, this trend was still growing, up to 3,701 in 2011 and even more in 2013, with 5,258 ETP at the Master’s level throughout Europe, being Netherlands, Germany, Sweden, France, and Denmark the leading countries. Figure 4 shows a graphical representation of the rise of the ETP programmes in Europe.

Figure 4

Rise of ETP programmes in Europe



¹ For detailed information about the role of EMI beyond Europe see Coleman (2006); Hamid et al. (2013); and Macaro et al. (2018); Guangwei (2019).

The top three subject areas belonged to the Engineering and Technology, Business and Management, and Social studies Degrees. Regarding the students' profile, the study found that 65% of EMI students were foreigners in their countries of study (Tsou & Kao, 2017).

The expansion of EMI programmes in Europe was not uniform in all countries. A brief summary of each country's evolution to EMI programmes is presented, which tries to conceptualise the spread of this phenomenon (Coleman, 2006). Starting with the two EMI-user novice countries in Europe, the Netherlands and Sweden started using the English language as a medium of instruction in the early 1950s. Some other countries followed them by the 1980s. These were Finland, Hungary and Norway. However, the real launch of the EMI programmes began in the 1990, when the majority of universities started to introduce EMI programmes. The University of Maastricht, in Copenhagen, is the institution that has been leading EMI programmes in Europe since 1987, and as Coleman (2006) affirms, their faculty of Economy is teaching entirely in English. In Hungary, the presence of English in educational contexts dates back to 1989, when the need of integration into the global market made students learn English. The northern countries (Norway, Sweden and Finland) were also part of this novice EMI spread in HE. They have been incorporating English to different degrees for many years. However, these countries have been recently worried about the reduction in the use of their mother-tongue language in diverse domains, and in consequence, ETPs are now being reduced (Coleman, 2006).

Cyprus also included English in most of their private and public educational institutional courses, together with Germany and France, which after some internal reticence by their foreign policy makers for fear of losing their national language, finally included English as their language of instruction in their undergraduate and postgraduate degrees. The Baltic republics, following the line of the previously mentioned countries, finally included the English teaching in their HE policies.

All in all, English as a medium of instruction has been present in Europe since the 1950s, and due to the need for a global language and the internationalisation of all society domains, its presence

in HE will be increasing over the years. Crystal (2003) provided a conclusion to this historical process:

Since the 1960s, English has become the normal medium of instruction in higher education for many countries – and is increasingly used in several where the language has no official status. (p.112)

In contrast, the official status that the English language is gaining in the HE spheres is being noticed by the foreign policy country departments, and it is generating debates among researchers. The alarm to lose the linguistic diversity and the plurality of its people in some regions are two reasons that are not being addressed by the Bologna process established in the European Union, which is favouring the accreditation of studies based on ECTS and the Diploma Supplement. International mobility and exchanges are not appealing to native English speakers anymore, who cannot find a wide offer of FL degrees. This phenomenon is also thought to be threatening the minority languages around the world (Coleman, 2006). Crystal (2003) proposes some reasonable arguments to face up to English as a global language and evaporate all the fears previously mentioned. The first one is related to “linguistic power” (p.16), and it refers to the power (social and professional) that some English speakers may have over non-English speakers. This argument vanishes, as Crystal (2003) states, when the language is taught at an early age to the community, in order to avoid these differences. Another established argument is “linguistic complacency” (p.17), concerning the English speakers (Kachru’s inner circle) who travel around the world thinking that English is the only language needed to be learnt, that they will not be needing any FL, neither in their professional space nor their social one, hence their demotivation to study a FL. Crystal (2003) supports his opinion saying that these monolingual preconceptions should disappear so in a globalised world, even though English as a Lingua Franca is established, international business still value the language diversity and cultural knowledge. The third and the last argument discussed is “linguistic death” (p.20) when referring to the death of minority languages, which is the real fear of some academics. Crystal (2003) is

clear when saying that language loss is not only linked to the spread of a global language, but other factors play important roles in this process too. One of these is the cultural identity and language identity that accompanies the regional or national languages. Economic policies should reinforce the presence of these language in the countries' domains and decisions. He affirms that mutual intelligibility between both global and national languages is necessary in today's world, as a choice between two languages is not required. They can be complementary and oriented to specific needs each of them. Crystal values the fact that the global language will help the minority language to be recognized worldwide and to have a voice in the high economic and society spheres. Crystal (2003) arguments to this argument as stated:

These other factors, which include the recognition of global interdependence, the desire to have a voice in world affairs, and the value of multilingualism in attracting trade markets, all support the adoption of a functionalist account of English, where the language is seen as a valuable instrument enabling people to achieve particular goals. Local languages continue to perform an important set of functions (chiefly, the expression of local identity) and English is seen as the primary means of achieving a global presence. (p.24)

English as a Global language faces lots of obstacles aimed at preventing it from becoming a worldwide language.

1.1.4.2. EMI in Spain and Catalonia

In Spain and other southern European countries like Italy or Greece, the rise of EMI programmes in HE was not as strong as in the northern countries (Netherlands, Finland, Norway, Sweden, or Germany), as their sociolinguistic features are very different (Doiz et al., 2011). For instance, in the northern countries, the presence of English can be found in social media or in people's daily life. On the contrary, in the southern regions, the English language is more limited, and mostly

constricted to educational institutions. This subsection explores the growth of EMI programmes in Spain, and in the region of Catalonia, the context of the study.

A relevant study that described the rise of the EMI programmes in HE was the one by Wächter and Maiworm (2002), which presented a description of the scale as well as the nature of the English-Language-Taught-Degree Programmes (ELTDPs) in European Higher Education. The study was contextualized in the academic year 2000/2001 and it was addressed to 1,558 HE institutions from the European Commission (19 European countries). In order to qualify for an ELTDP, there were two requirements: the program needed to have a minimum duration of three years (undergraduate programmes) and one year at the master's level; and that the tuition in English accounted for at least 25 percent in any year (it also refers to courses that were partially taught in English). As the results indicated, from the institutions responding in 2000/2001, there was just one that offered ELTDPs in Spain (Wächter & Maiworm, 2002). In 2007, the same authors ran a second survey to cover the same objectives (Wächter & Maiworm, 2008). The Spanish results rose a bit from the first analyses, and there were seven institutions offering English-taught-programmes (ETP). Finally, the third study was conducted by the same authors in 2014 (Wächter & Maiworm, 2014). Surprisingly, the findings were more encouraging in 2014, so the number rose to 36 institutions offering ETP. As illustrated, the presence of EMI programmes in HE rocketed from 2008 to 2014 in Spain. From that moment on, more objectives were established in the territory to continue encouraging this growth and reach the worldwide objectives.

In Catalonia, the rise of the EMI programmes was also launched by the European Commission, the EHEA, which promoted common strategies and objectives, and also by the Spanish government and the Catalan institutions. The "Observatori per al plurilingüisme a les Universitats Catalanes" (OPUC, 2015) analysed the presence of the English language in the subjects of the different degrees of the seven public Catalan universities during the academic year 2011-2012. They took into account the use of English as the vehicular language, the

language of the learning resources, and the subjects which mentioned the use of a FL but without specifying the percentage of usage. The results indicated that nearly all the universities had EMI classes during the school year 2011-2012. The one with the highest number of EMI or CLIL subjects was the Universitat de Girona (UdG), with a total number of 384 subjects using the English language (to some degree). In contrast, the University of Lleida only offered 49 EMI or CLIL subjects.

1.2. Overview of English instruction approaches in HE

There are different educational contexts in which content is taught through a language which is not the mother tongue or the official language of the country itself, and these contexts go from Pre-school to Tertiary educational levels. In this respect, the Content and Bilingual Language Programmes are nothing new, so they date back to the Immersion Bilingual Programmes in Canada around the 1960s, when the government presented policies that supported the official bilingualism of French and English, and which established French Immersion (FI) programmes in Elementary and Secondary schools in the country (Dicks & Genesee, 2017). In 1985, the Canadian Government passed another law which supported multiculturalism in the country, strengthening the official languages of French and English, and favouring the use of minority languages by introducing Heritage Language (HL) programmes. After two decades of research, the findings showed that the FI (French Immersion) programmes were effective (Dicks & Genesee, 2017); the students achieved a functional proficiency level in French compared with their peers in non-FI programmes; there were not negative effects on the English language level achieved; and the students of the FI programmes showed the same content learning results.

The Canadian programmes were the spark that ignited the Content and Language Bilingual Programmes in other parts of the world. However, it is worth mentioning that these immersion programmes established in Canada differ from other programmes born in Europe, for example,

EMI, CLIL, or ESP among others, as the immersion programmes in Canada used French, the second official language of the country, while the other approaches involve a FL (Vega & Moscoso, 2019).

Moving from Elementary and Secondary contexts to the HE spheres, which is the focus of this study, content and language bilingual programmes have also been present in tertiary education with programmes or methodologies such as EMI, ESP (English for Specific Purposes), EAP (English for Academic Purposes), CLIL (ICLHE), or CBI (Content Based Instruction), among others, which have been used to reach, in particular, the worldwide demand for internationalisation over the past 30 years. This section is divided into different parts and it is going to provide a description of the different English instruction approaches being used in different educational contexts. EMI, the central topic of this thesis, was described in section 1.1.3.

1.2.1. English for Specific Purposes (ESP) and English for Academic Purposes (EAP) programmes

Traditionally, English learning in university contexts has always been associated with the typical English language discipline programmes, where the teacher was the specialist of the language and the teaching and learning was centred in sharing communicative and language skills only. These programmes are called **English for Specific Purposes (ESP)** and **English for Academic Purposes (EAP)**. The former emerged in 1960, and they are characterized by focusing on discipline-specific language, with the objective of teaching specific language and communicative skills of a particular job or areas of study. According to Schmidt-Unterberger (2018, p. 529) “ESP aims to prepare students for their professional careers by aiding them in understanding and decoding the language of their discipline”. For instance, in an ESP course in Business studies, the English teacher would focus on terminology related to markets, finance, accounts, etc. These students would need to satisfactorily understand and use these concepts. Moreover, one key aspect of ESP courses is that they try to introduce students to the general conventions of the

topic in particular (Vega & Moscoso, 2019). Schmidt-Unterberger (2018, p. 530) provides a good definition of this method:

ESP teachers try to activate and expand their students' existing terminology knowledge and help them identify patterns and structures in relevant professional genres.

These ESP programmes are considered to be another resource to offer more English exposure opportunities to university students. Given the positive benefits of ESP programmes, they could still be considered to go hand in hand with EMI programmes.

The latter, EAP programmes, refer to the teaching and learning of basic academic communicative and study English skills students need to acquire for specific academic discourses in tertiary contexts. To exemplify it, a Business Studies student, as mentioned before, would use this type of course to learn about communicative skills in oral presentations, when writing reports, reading, and writing academic papers and reports. However, these courses are not designed for all types of degrees and faculties (Schmidt-Unterberger, 2018), so, depending on each degree programme the needs are varied. What is more, this implies a strong coordination between the language teachers and the coordinators of the degree programmes, who would need to discuss the best options of EAP courses.

Despite the pros and cons analysed, the use of these EMI programmes in the university degree programmes is favourable for students, and following Schmidt-Unterberger's (2018) proposal of the "English-Medium Paradigm", they present relevant opportunities and implications for language learning, and they are complementary towards future goals in tertiary education.

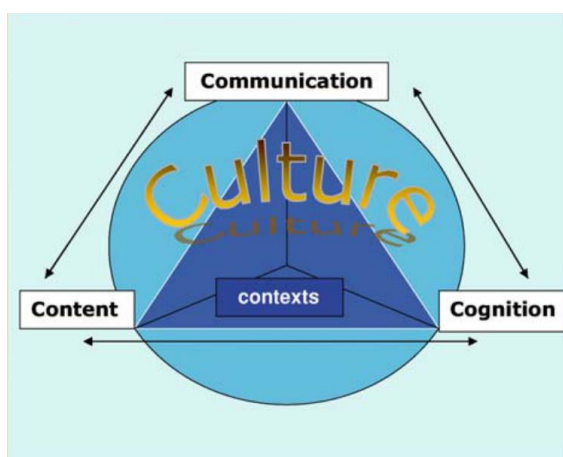
1.2.2. Content and Language Integrated (CLIL) methodology

Another methodology used in some tertiary contexts is the **Content and Language Integrated Learning methodology (CLIL)**. This is a dually focussed method whose main aims are to learn content and simultaneously learn a FL. Just bear in mind, the FL used in this methodology is one that is just used and heard in the classroom, and which is a Lingua Franca (LF) or a FL for the

students, not a second language for them or an official language of their country. In university contexts, this method is mostly known as **ICLHE (Integrated Content and Language in Higher Education)** (Ament & Pérez-Vidal, 2015; Costa & Costa, 2009; Schmidt-Unterberger, 2018). This methodology is considered an “umbrella term” as it covers different educational approaches (immersion programmes, language showers, CLIL camps, partial or total immersion, etc). This methodology is characterized by being flexible as it can provide different ways of applying the students’ knowledge (Mehisto et al., 2008).

Figure 5

The 4Cs framework for CLIL



Note. Image from Coyle, 2008.

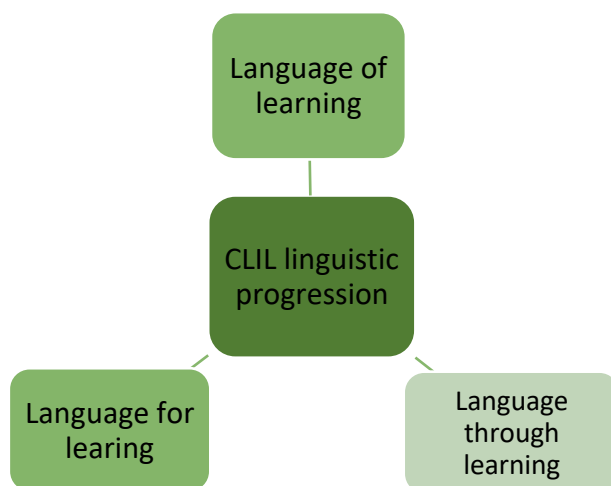
This dual-focussed aim approach gives equal importance to content and language, and as Coyle (2008) established, the potential of this methodology takes into account the 4 Cs framework (see figure 5), which are content, communication, cognition and culture. As Coyle described it:

The 4Cs Framework holds that it is through progression in knowledge, skills and understanding of the subject matter, engagement in associated cognitive processing, interaction in a communicative context, developing appropriate language knowledge and skills as well as acquiring a deepening intercultural awareness through the positioning of self and ‘otherness’, that effective CLIL takes place whatever the model. (p. 104)

CLIL is defined as being a dual methodology, both involving the learning of content and language. The learning of the language needs to be put into value and revised in this method, so the learning of the content will be easily acquired using proper linguistic structures. Do Coyle (2010) suggested *The Language Triptych* to deal with this linguistic perspective. In this theory, she described the linguistic demands and provided tools for analysing the CLIL language from three interrelated perspectives. As stated by Do Coyle (2010, p. 36), the triptych “provides the means to analyse language needs across different CLIL contexts and transparently differentiates between types of linguistic demand which impact on CLIL”. In figure 6, a representation of the Language Triptych is presented.

Figure 6

The Language Triptych



Note. Adapted from Do Coyle (2010).

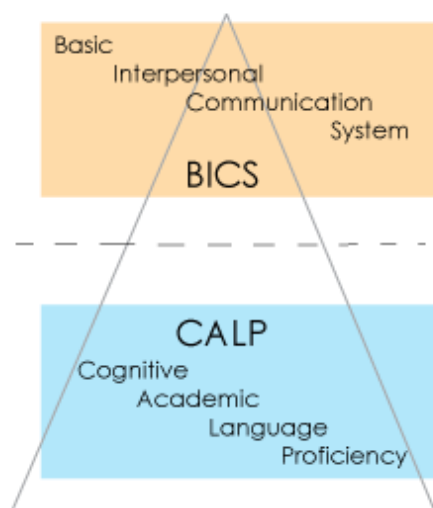
Coyle referred to *Language of learning* as the language used to access basic concepts and skills on a particular topic. In other words, it referred to the subject lexis of a particular content. CLIL learners will need this specific language with a functional perspective. *Language for learning* focuses on the language needed to successfully operate in a CLIL setting. It includes meta-cognitive skills, grammatical skills, and strategies that enable students to use the language. Some of these skills imply (Coyle, 2010, p.37) “pair work, cooperative group work, asking questions, debating, chatting, enquiring, thinking, memorising and so on”. Finally, *Language through*

learning happens when there is interaction and thinking. The moment the learners articulate their understanding, then, a deeper level takes place. As Coyle (2010, p.38) stated that Language through learning “is to do with capturing language as it is needed by individual learners during the learning process”.

However, there is a third element that is equally important in the CLIL methodology, and as Mehisto et al. (2008) expressed, it refers to the learning skills, which will support student’s content and language goals. These learning skills refer to cognitive and thinking skills, which are key to this methodology (Coyle, 2008). The triad content, language and cognition go hand in hand, and its good implementation will offer excellent benefits. Indeed, as Cummins introduced in his study in 1979 (Cummins, 2008), in order to successfully learn a second language, the students need BICS (Basic Interpersonal Communication Skills) and CALP (Cognitive Academic Language Proficiency).

Figure 7

Triad of BICS and CALP concepts.



Note. Adapted from Cummins’ work (1984) and obtained from Bilash (2011): <https://bestofbilash.ualberta.ca/bics%20calp.html>

On the one hand, BICS refers to the level of language proficiency a person has when communicating in their daily life or class situations, and this language is normally used

informally. On the other hand, CALP refers to the students' ability to understand and express ideas or concepts (orally and in written form) in the school about the subject matter at hand. To illustrate Cummins' work, Figure 7 represents the relation between both concepts.

To exemplify these concepts in a more real context, we would take a CLIL science class in a Primary school; BICS would refer to when students have a good control of their basic language skills, in this case, English. Students would express themselves in class with their peers and understand the teacher's instructions correctly. CALP plays a different role, so it refers to the students' ability to acquire the academic concepts and technical and specific vocabulary, and at the same time the ability to develop the higher order thinking skills of analysing, evaluating, and creating. (González, 2013). Teachers need to offer a series of cognitive skills so students can develop these abilities.

Moreover, Cummins elaborated a framework to better represent the interdependence of language and cognitive processes needed to develop the linguistic competence, which included both BICS and CALP skills. As stated by Cummins (Cummins, 1984):

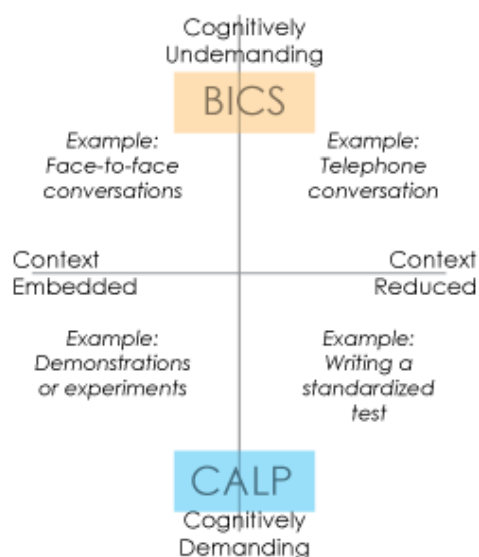
The framework also provides the basis for a task-analysis of measures of "language proficiency" which would allow the relationships between language measures and academic performance to be predicted for any particular group of which would allow the relationships between language measures and academic performance to be predicted for any particular group of individuals. In general, the more context-reduced and cognitively- demanding the language task, the more it will be related to achievement (p.15).

This framework has proved to be useful for teachers when planning for bilingual tasks. As represented in Figure 8, the horizontal extremes of this axis describe "context-embedded" versus the "context-reduced" communication. The former includes the situations where learners can negotiate meaning thanks to external clues and information (facial gestures, real objects, etc.). The latter relies on explicit linguistic cues and knowledge about language to get

the meaning. In a school context, this would refer to situations like when participating in a discussion or when writing a letter to a friend.

Figure 8

BICS and CALP concepts.



Note. Adapted from Cummins' work (1984) and obtained from Bilash (2001):
<https://bestofbilash.ualberta.ca/bics%20calp.html>

The vertical extremes of the axis refer to “the degree of active and cognitive involvement in the task or activity” (Cummins, 1984, p.32). As a result, tasks would vary from not demanding (at the top) because the skills required have been already automatised by the learners, to challenging tasks (at the bottom) which require active cognitive involvement and need to be practised by the learners.

Accordingly, CLIL and EMI are educational contexts where BICS and CALP can be developed due to their methodological characteristics and the opportunities they offer. In particular, CLIL offers real and meaningful interactions (Context embedded) and the content tasks are cognitively demanding compared to the language ones. Thus, the quality of the CLIL methodology lies on the appropriate interconnection of all its items, and in particular the language one, which will be the key to effectively learn the content. This methodology has, though, pedagogical implications in the class preparation and in the teachers' methodological knowledge.

This approach is clearly offering a FL context to students and enabling them to boost their proficiency level. The premises of this methodology take into account the use of real content situations to learn a FL. According to Krashen (1982), learning a second language occurs in contexts where there is “comprehensible input” with meaningful and rich information, where communication is successful and where the structures of the language are a “little beyond” the current level of competence ($i+1$). In more formal words, the theory determined that the i represented the student’s current ability and $i+1$ the next step of proficiency skill, which is a little beyond the current competence. Regarding his theory, students would move to the next level ($i+1$) if there is “comprehensible input” that focuses on content rather than on form (grammatical structures). As Krashen (1982) stated, learning would happen when “the acquirer is focussed on the meaning and not on the form of the message” (p. 21). Moreover, this acquisition would be possible thanks to the context where the acquirer applies, his or her knowledge of the world, and also all the extra-linguistic information attached to the message. Both CLIL and ESP methodologies have been considered to offer Krashen’s comprehensible input ($i+1$) to the students. The learning of a second language is also shared by both methods, but the approach is different in each of the methods. The aim of ESP is language driven, so the learning of the language objectives is the most important thing in the methodology, whereas in CLIL, both language and content aims are equally important on the process, providing context-embedded and cognitively demanding tasks, and the focus of instruction is on meaning rather than on form. The CLIL methodology resembles the learning of the L1 more, and the main focus of the learning is on communication. They both foster students’ academic and communicative skills using content of non-linguistic subjects. Despite their linguistic objectives, they differ in their learning outcomes too. As mentioned before, another difference is in the teachers. CLIL teachers are subject specialists with good language proficiency, but ESP teachers are language teachers, who do not deal with content topics at all (González, 2013).

As some researchers claim, CLIL presents some difficulties in HE settings, where the lecturers consider the teaching of content more important than the language itself. Content teachers are sometimes not familiar with the characteristics of the language teaching, and the coordination between both content and language becomes a challenge. Moreover, some of the CLIL or ESP teachers at university say that more resources would be needed to face this methodology (Dafouz et al., 2007). This topic will be discussed deeply in another chapter.

1.2.3. Content Based Instruction (CBI) approach

Content Based Instruction (CBI) emerged in mid-to-late 1980s in the United States Primary, Secondary and Tertiary institutions, and initially came from the immersion programmes in Canada (Brown & Bradford, 2016; Cenoz, 2015) and the bilingual initiatives that were present worldwide at that moment. At the beginning, its main aim was to offer immersion programmes and support to foreign students from immigrant communities to integrate them into mainstream subject-matter education. As defined by Stoller (2008):

Content-based instruction (CBI) is an umbrella term referring to instructional approaches that make a dual, though not necessarily equal, commitment to language and content-learning objectives. (p. 59)

This approach has been used in different educational contexts, Primary, Secondary, Tertiary, and adult education. This approach emphasizes linguistic, cognitive, and metacognitive skills of the students. CBI accentuates the learning of content and the learning of language at the same time. Despite the basic definition given, the approach has adopted different degrees on how it focuses on content and language, so depending on the educational level or the curriculum organisation, the emphasis either on content or language can vary (Ploettner, 2013; Stoller, 2008). What is more, this method promotes CALP, as it helps students to succeed in second language-learning contexts (Stoller, 2008).

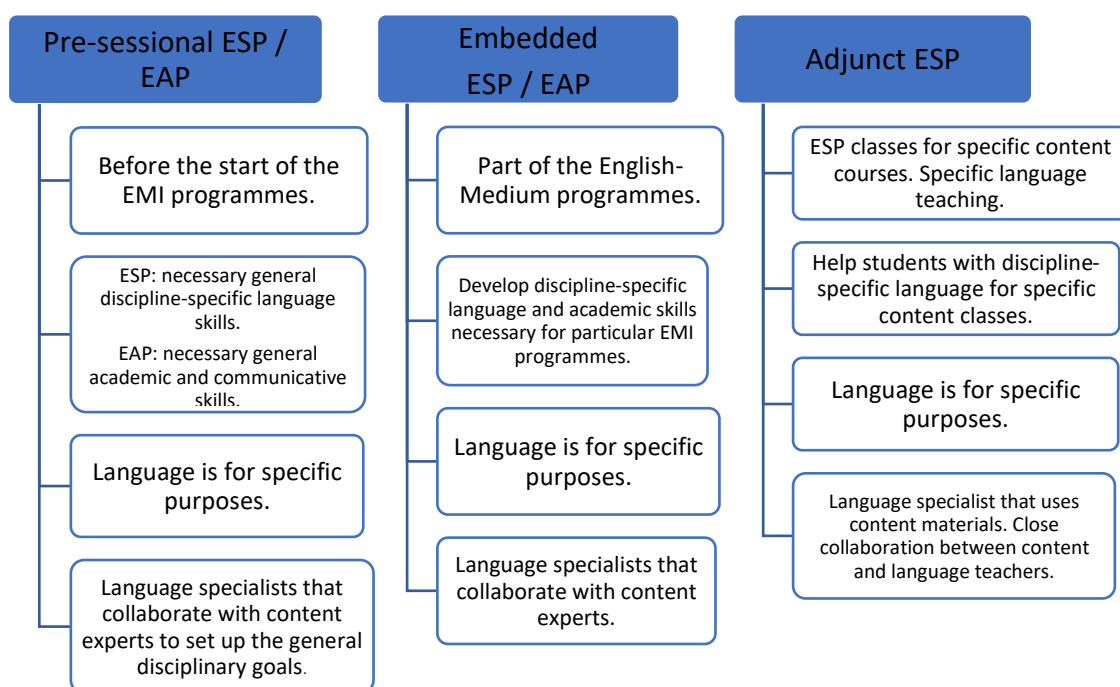
Comparing both CBI and CLIL methods, it could be claimed that they share the same basic and essential characteristics. However, they mainly differ in the context where the programmes take place, CBI in the USA and CLIL in Europe (Cenoz, 2015).

1.2.4. Types of English Medium Instruction in HE

By way of concluding the different approaches and methodologies described in this section, Schmidt-Unterberger's (2018) "English-Medium Paradigm", proposed five different categories on how English Medium Instruction could be applied in HE. She named the categories as: **Pre-sessional ESP / EAP, Embedded ESP / EAP, Adjunct ESP, EMI and ICLHE**. Their distinct characteristics varied according to some parameters, such as the programme design, the teaching staff, or the content or language learning aims, being the main factor. As stated by Schmidt-Unterberger (2018, p.531): "The main distinguishing factor is the question as to whether or not language learning aims are actively pursued in the English-taught courses". The figures 9 and 10 describe each category in detail.

Figure 9

Possible EMI applications in HE settings



Note. Adapted from Schmidt-Unterberger (2018) and Vega and Moscoso (2019)

Firstly, Pre-sessional ESP/ EAP courses are designed to cover the students' linguistic differences before their start in the university EMI programmes. These courses offer the essential content-based language and / or academic communication and study skills so students can be better prepared in their EMI courses. These could be considered preparatory courses and they directly involve both, content and language teachers, for the coordination of the course-implementation plans. As suggested by Airey (2012) (in Schmidt-Unterberger, (2018), one drawback of these pre-sessional ESP/EAP courses is that they make the separation between these specific courses and the general programme evident, and that these courses do not belong to the programme itself. To illustrate this kind of course, and taking a Business Degree as the example, a pre-sessional ESP/EAP course would help students to learn the specific language of the course (ESP), and the general academic communicative skills (EAP). For example, general vocabulary topics on finance, exportation, commerce, business, etc. (ESP), as well as skills on how to make a presentation in English or how to read or write a research paper on the topic (EAP). The first column of Figure 9 shows a short description of this programme.

Secondly, embedded ESP/EAP programmes are quite similar to the pre-sessional ESP/EAP ones, so they are mainly created for specific programmes and their main aim is to cover their linguistic demands. In this sense, content and language teachers need to cooperate to design the course, and they are part of the EMI curriculum programme. Using the same Business Degree programme as an example, an embedded ESP/EAP programme would occur when students attend a subject/module called "English and Business" (ESP), where they are going to learn the basic vocabulary concepts and linguistic structures to be used in business in general, or when the students' purpose is to learn how to write a financial report (EAP).

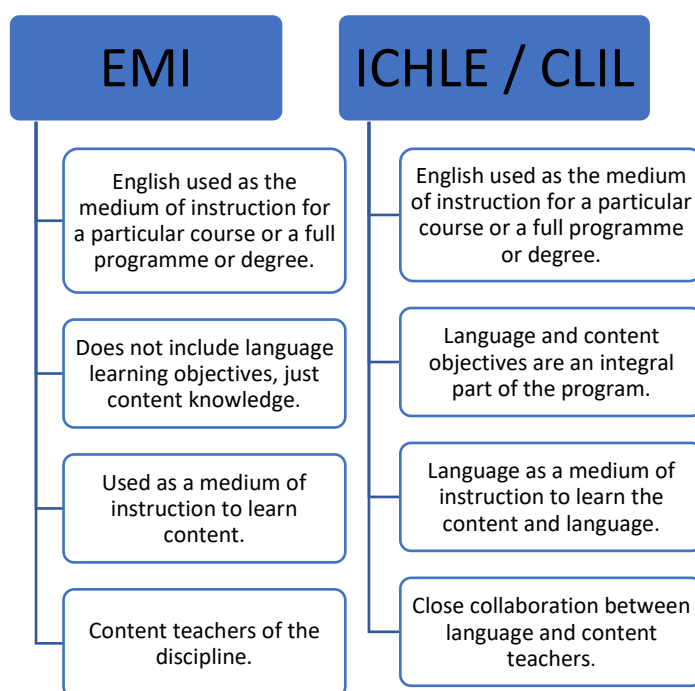
Finally, the adjunct ESP programmes differ from the embedded ESP/EAP programmes in that they are linked to a specific content of the course. These adjunct programmes are important support courses, and they help students successfully perform in the content class. As an

example, from the same Business Degree, an adjunct ESP course could be “Language of global finance”, which at the same time, would be linked to the content course “Global finance”.

EMI and ICHLE/CLIL are the last two categories of the English-medium teaching in HE shown by Barbara Schmidt-Unterberger’s paradigm (2018).

Figure 10

Possible EMI applications in HE settings



Note. Adapted from (Schmidt-Unterberger, 2018; Vega & Moscoso, 2019)

To complement the previous sections, the principal characteristic that distinguishes them is that EMI does not contemplate language learning outcomes, whereas the ICHLE/CLIL programmes have language objectives as a key element of their methodology. EMI does not focus on language but on the content, and therefore, teachers do not pay attention to the linguistic features. Schmidt-Unterberger (2018) points out that “this lack of explicit language learning aims could be counterbalanced by linking EMI courses to the adjunct ESP classes and adding pre-sessional ESP / EAP instruction to the curricula” (p. 534), which then would be one solution to cover the linguistic deficits of students. On the contrary, the ICHLE/CLIL programmes include this dual focus aim (content and language objectives), and thus, both the content and language

professors need to work together to design the course programmes. Designing these ICHLE/CLIL programmes is not an easy task for the instructors, who find difficulties and challenges in higher educational settings most of the time. In this sense, and as an example to illustrate these methods, the content experts in the Business Degree would need to work together with the language teachers to cover both the content and language demands of the different courses (ICHLE/CLIL), whereas if we take the EMI method into account, the content teachers will just need a good command of the language in order to be able to do the class in English.

The different programmes presented above provide a general view for a language-conscious implementation of English-medium teaching in HE. All of them contain specific features, but after having analysed all the programmes in depth, the ICHLE/CLIL methodology is the one which presents a more challenging implementation. It involves coordination between teachers, it requires material and resources, and consequently, the creation of a specific university budget would be needed (Schmidt-Unterberger, 2018). What the author proposes in the same article is “a combination of EMI courses and explicit ESP and EAP instruction” (p. 535) for HE institutions. This proposal requires the coordination of both, content and language experts, together with more “incentives for team teaching, collaborative curriculum planning and EMI teacher training” (p. 536).

In summary, section 1.2. has presented an overview of different content and language bilingual programmes used in HE over the last few years and since the worldwide expansion of the English language. All the information has been included to reason the growth of international programmes in educational settings, particularly in the tertiary level. Thus, the methodologies and approaches previously described contribute to the subject of the present study.

As the present research focuses on the diagnosis of the EMI approach in Tertiary education and the L2 development of a group of students, the next sections’ main aims are to analyse the theoretical literature on the impact of EMI on students’ experiences, their language and content

learning with this approach, and the EMI teachers' professional development regarding its implementation and training.

1.3. EMI studies on content and language learning and stakeholders' experiences

As it has been introduced in the previous section, over recent years, EMI has been established in higher education institutions all over the world, and it is here to stay for a long time. Thus, the need for empirical research on different aspects of this program has risen considerably. The body of this research is principally located in Europe, but it is not the only continent analysing its implementation and practices. In this section, different studies will be presented in order to portray an overview of the EMI research situation in HE. This section is divided into different sub-sections, which try to present a general picture of the EMI theoretical framework focusing on the following topics. Sub-section 1.3.1 describes students' and teachers' attitudes and beliefs towards EMI. Studies from all over the world, but especially the ones located in Europe, the context of this study, will be presented. Sub-section 1.3.2. is devoted to presenting the studies on language learning outcomes of the EMI settings. Again, Europe is the central context of the study, but other studies are presented. Finally, sub-section 1.3.3. is focused on the research regarding content learning on the EMI contexts.

1.3.1. Students and teachers' attitudes and beliefs towards EMI

The incorporation of English to undergraduate and postgraduate programmes was a challenging phenomenon for tertiary contexts around the world. This situation affected all university spheres, from administrative staff members to professors, and students themselves, and not all the contexts experienced it similarly when these strategies to internationalise were approved. The possibilities that the EMI programmes offered were seen as positive by some, but they also

implied negative effects to others. In this sub-section, students and teachers' attitudes and beliefs regarding English Medium Instruction and other plurilingual contexts in the tertiary levels are analysed.

1.3.1.1. Students' attitudes and beliefs

Concerning students' attitudes and beliefs to the implementation of EMI in HE contexts, contradictory studies were found on the topic, which will be discussed in the following paragraphs.

Starting by analysing the tertiary context globally, in a private university context in Bangladesh, students' ideologies and beliefs concerning the use of EMI in tertiary programmes is thought to be useful and necessary for their future (Hamid et al., 2013). As stated by an undergraduate student:

Before taking EMI courses, I had no confidence in talking to/communicating with another person. But after taking EMI courses my English proficiency has improved.
(p.153)

Or another student said:

No, I think our course in English is better than in Bangla [...] higher education [is] better in English. (p. 155)

The English language is the vehicular language for academic issues in this private university, and according to its linguistic policy, all communication needs to be done using this L2, as the main strategy to develop students' English language proficiency. Together with the teachers' beliefs, the students affirm that the English language is considered the language of the future to communicate around the world, and that it helps to find job opportunities.

In three different institutions from Bangkok, Thailand, students' attitudes towards the use of EMI are also considered positive in the university context, but this acceptance is due to some motivational requirements, which are "the importance of the English language classroom

learning environment, social support, and mastery and integrated goal orientations” (p. 42). (Hengsadeekul et al., 2014) These factors should not be underestimated if the students’ attitude to EMI environments wants to be preserved. The fear of anxiety in EMI programmes is one of the key factors when preferring one type or programme or another, and as the study indicates, it affects the female participants more. The interest for foreign affairs, international colleagues, globalised jobs, is what makes students pro EMI programmes, and this is what HE policies need to cover in their programmes so as to support students’ desires and encourage their choice.

A study carried out with second-year students in a university in Japan explored the correlation between the learners’ self-beliefs and their success in an EMI course (Thompson et al., 2019). These students were taking a course named International Business, which was part of their bilingual degree, and which belonged to the Department of Business Management. Concurrently, the students took an ESP course that prepared them for the International Business class they were taking. The results showed that EMI success was very much linked to self-efficiency (Thompson et al., 2019). Those students with a stronger self-efficacy perception (the individual’s beliefs about their capacity to reach or carry out actions) saw that there were opportunities to develop the language, they were more open to put in the extra effort. The quality of their tasks and participation in class was higher. On the contrary, those students with a low efficacy perception felt weak to interact with their classmates in their EMI classes as they were perceiving linguistic problems with English. Therefore, students’ self-beliefs are key factors to determine the positive attitude and development in EMI courses.

Still in the Asian continent, EMI programmes started to be established in the public and private Vietnamese universities in 2008. Within this context, Yen H. Phuong and Thong T. Nguyen (2019) carried out a study to analyse the students’ perceptions on the benefits and drawbacks of EMI, concretely, in an EMI university programme of International Business and Information Technology. The results of this study are in line with the ones previously described, as the Vietnamese students considered EMI programmes help them to: find resources of information

and materials in English, to give opportunities to foster their language skills, and to improve their future career prospects and job opportunities. Regarding their students' perceptions on the drawbacks of EMI, they stated that these programmes present challenges in understanding new vocabulary or terminology items, especially the ones related to their field of study, and the use of L2 textbooks and course materials becomes a problem, especially when reading. Issues related to taking tests and exams, and the lack of English language command, are also presented as inconvenient aspects according to the Vietnamese students' beliefs.

Moving to the European context, Tatzl (2011) conducted a study in the University of Applied Science, in Graz, Austria, with the purpose of analysing the teachers and students' attitudes towards the EMI master's programme in International Management, Advanced Electronic Engineering and Advance Security Engineering (Tatzl, 2011). Several issues were analysed through a questionnaire and interviews. Focusing on the students' attitudes, the study concludes the following:

- Students emphasise the importance of EMI courses because they develop their language skills, in this case, in English, as well as their chances of global employability.
- The greatest source of satisfaction and success of EMI programmes is related to the projects and practical parts done.
- Time management and workload are the two challenges that students find within these programmes, followed by vocabulary and terminology issues and the lecturers' language skills.
- One major challenge for EMI students was understanding the exam questions.
- Linguistic matters when choosing their words in spoken or written interaction, or when doing projects or exams, can cause a problem for the students.
- More English language instruction measures should be given. Tutorials and study assistants among other measures.

The implementation of the EMI in master's programmes are seen to be effective, and the students' attitudes are seen to be positive. However, the mentioned considerations should be taken into account when implementing these courses.

Still in the Austrian context, a group of researchers (Dalton-Puffer et al., 2009) analysed the effects the CLIL method had on the future students of Austrian upper secondary colleges of engineering crafts and arts. It is worth mentioning that the CLIL approach is highly used (65%) in the Austrian upper secondary colleges of engineering, and as stated, 80% of the colleges without CLIL programmes want to incorporate them. The data was obtained from online questionnaires and interviews addressed to their students to know about their perception as participants in CLIL programmes and how they evaluated them in hindsight. The findings suggested that more than 50% of the respondents thought that the L2 was frequently needed in their studies, even though just 11% of students reported to have enjoyed the CLIL sessions during their education. Regarding the participants' self-evaluation of their language skills by the same study, the students rated their English competence in all skills higher than non-CLIL students. One student said, "I have less fear of speaking the foreign language" (p. 21). Moreover, 70% of students also reported to have developed a higher motivation for the FL through CLIL. Turning to the effects on subject knowledge, CLIL students have different opinions; approximately the same proportion of students agreed or disagreed with the statement "I learned less subject matter because it was taught in English" (p. 21). Nevertheless, 20% of them strongly disagreed with it. The students' interviews helped to grasp relevant aspects related to the organisation and general structure of this CLIL programme, and which can be used for improvements in these plans. As described, these students' opinions referred to the importance of focusing on grammatical and stylistic fine-tuning, the practice of communicative skills, the better planning of the CLIL sessions, a greater active role in fostering English language in class by the teachers, and on the teachers' language proficiency levels, which let them communicate effectively in

class. All in all, the students' perceptions towards the CLIL programmes are relevant factors which are key to assess and improve such practices in HE contexts.

Concerning the Spanish context, research has been done regarding students' attitudes and beliefs towards EMI programmes. In particular, Toledo et al. (2012) presented an article that analysed the beliefs, the academic performance, and the students' attitudes of university undergraduates in a plurilingual programme. This study was carried out in the University of Huelva, concretely in the Education Faculty, which started a bilingual programme in 2010/2011. Students had the opportunity to choose the bilingual degree. The study was characterised for being developed in a CLIL context, and this was done through questionnaires and interviews. This study included 39 students, 82% of whom chose the bilingual degree of their own accord, but 18% left were part of this group because there were no more vacancies left in the traditional monolingual degree. The majority of students felt that their L2 level was good enough for the degree, and therefore, their level of satisfaction was also high. There was a group of students that were not pleased with the choice they had made. However, not all of them were unhappy, so a group of them expressed that the experience had been positive. Regarding the perception of the students' academic performance, most of the students, both the high-level and the low-level ones, expressed that they had acquired the contents of the subjects. This was compared with the non-bilingual group of students, and the results did not differ much. Regarding the content and language outcomes and the effort made, the results showed that more than half of the students expressed having learned more in this plurilingual programme, concretely 92,3% believed to have learned the specific vocabulary and just 10,25% of students revealed having had difficulties in class. Likewise, most of the participants expressed having improved their oral and written comprehension. 61,5% of students expressed that they had spent more time on this programme, meaning that their effort was worthwhile. In line with other studies mentioned, students' beliefs and attitudes towards plurilingual programmes are considered to be positive for students.

Similarly, a study carried out with 85 Spanish undergraduate university students who were enrolled in an ESP course in two public universities in Madrid showed parallel results with the previous studies. As Dafouz et al. (2007) presented, the students' CLIL learning experience was considered positive and the participants obtained good results in vocabulary, pronunciation and listening skills. What is more, the findings remarked that the students' motivation in a class given through a FL was high, and that it fostered their participation. However, the students considered that implementing the CLIL methodology should vary depending on the subject chosen and the teachers and students' language competence.

In the same way, Arnó and Mancho (2015) carried out a study in the University of Lleida with the aim of analysing CLIL courses in the degrees of Agronomy Engineering, Business, and Law. The focus of this study was on the students' perceptions of CLIL, concretely, in the implementation of CLIL, the relationship between content and language, general views of CLIL, and the relationship between CLIL and ESP. The findings indicated that students were motivated to take CLIL courses because it could help them improve their English proficiency. Specifically, they expressed benefits in specific vocabulary, development of fluency and loss of fear when speaking in public. In fact, they remarked that CLIL lecturers were expected to have a high proficiency level to teach CLIL. Similarly, they noted that students' low proficiency level could cause problems to understand the language and the content. Concerning the role of content and language in the classes, students expressed their concern about the strategies necessary to overcome language problems. They admitted that their classes were not very communicative and that a better atmosphere could be created. When comparing the CLIL and ESP courses, students declared that CLIL courses would foster their language communication further rather than ESP courses, which they considered grammar courses. In general, the students' answers were positive towards the CLIL methodology. As stated by one of the students that were interviewed (Arnó & Mancho, 2015):

It's positive for students as this is the language required in today's labour market, so it's important to learn it and it's good to have classes in English so that students can improve their knowledge of English and in the technical aspects of their discipline. (p. 70).

These findings add more evidence to previous research, and supports the idea that adopting bilingual programmes in the tertiary contexts is favourable for the students' English language learning (Arnó & Mancho, 2015; Phuong & Nguyen, 2019; Tatzl, 2011b; Toledo et al., 2012), and that a more structured methodology is necessary to offer adequate courses that cover all the linguistic and pedagogical students' needs (Arnó & Mancho, 2015; Tatzl, 2011)

In contrast, some studies on students' attitudes and beliefs do not show results as positive as the ones mentioned in the previous paragraphs. One example is given by Dong Wan Cho (2012) about the Korean university context with a group of 439 undergraduate students and 403 graduate students. The study intended to investigate students' perceptions of the EMI implementation at a science and engineering university degree, since the EMI policy was being applied since 2010. These students answered a questionnaire and some of them were interviewed. As the author described, both graduate and undergraduate students had negative beliefs regarding the effectiveness of EMI classes. The participants explained that participation had dropped and that they did not find EMI classes interesting. At the same time, the English classes did not improve the L2 proficiency or confidence of these students.

When analysing the interviews conducted, the results showed that these EMI classes were not easy to understand and that they presented problems for the students. The participants affirmed that the level of proficiency of students and teachers was limited. As stated in Wan Cho (2012);

Professors in their fifties aren't usually fluent enough to deliver their lectures in English effectively. Their English sounds like Korean-style English, I mean, with a very strong Korean accent and limited use of vocabulary and sentences. In contrast, younger professors who have recently obtained their degrees are good enough. (p. 156)

The lack of class participation and the professors' reticence towards the English language were thought to be key factors for the students. These negative results on the students' attitudes towards EMI programmes could be justified by the fact that most of the Korean university context imposed the EMI policy in order to climb up the university rankings and face the globalised world. This imposition was not initially accepted by university personnel or students as the results have shown. Deep research on the implementation of these bilingual programmes should be done to foresee possible effects.

Similarly, another study in Korea by Kim et al. (2014) presents the attitudes regarding EMI programmes in the tertiary level of Korean and international students. A group of 249 Koreans and 61 international students coming from non-English-speaking countries (outer circles, according to Kachru's (1986)) answered a questionnaire, and some of them were interviewed. The study concluded saying that the Korean participants needed the Korean language for successful learning in EMI courses. As Kim et al. (2014) expressed, these local participants understood English as a FL rather than as a lingua franca. On the contrary, the international students did not seem to have this perception, so their English language command and attitude was higher compared to the Korean students'. Moreover, the Korean students were not confident enough doing the EMI tasks and interaction in class was scarce. Their fear of making mistakes did not give them enough determination to interact with their international counterparts in class. By contrast, the international students were more persistent in the class interaction. To illustrate these results, one Korean student expressed his opinion regarding the linguistic aspects of English (Kim et al., 2014):

I'm not confident in using English. I feel so terrible when I realize that my English is full of nonsense, like grammatical mistakes. I know the rules, but somehow they are not properly working when I have to talk about my opinions. My professors are Korean, so it's difficult to understand their English too. Their accents in addition to the contents

make it hard to understand anything. I need to make twice the effort to understand.

These days, I record all the lectures and listen to them in my dorm room. (p. 448)

Again, the negative effects of the students' experience in EMI programmes are repeated. Policy makers should revise these programmes, and academic support should be given to overcome these unfavourable situations.

A study carried out in the Arabian Peninsula, concretely in Oman, shows contradictory results regarding students' attitudes towards the use of English medium instruction in the university context (Al-Mashikhi et al., 2014). On the one hand, students maintained that English was an important language, so it was the language of science and technology and it would be necessary for them to continue their studies in foreign contexts. What is more, the participants believed that their English language level had improved after the EMI period. Regarding motivation, the majority of the students affirmed that studying English would help them have more friends abroad. On the other hand, the participants expressed their worries when they had to express themselves in the classroom or when interacting in discussions due to their low level of L2 proficiency and fear of making mistakes. What is more, these students claimed that they had difficulties in understanding the scientific content of the class; and that EMI classes were more time consuming than classes in Arabic. These results are in line with the previous studies described in this section.

Surely, much more research has analysed students' attitudes and beliefs towards EMI in the tertiary context. The studies presented above represent a brief literature overview on the topic, and after analysing them in depth, two distinctive results could be described from the main ideas of the studies above presented. On the one hand, the students' positive experience concerning EMI in the university context determine that EMI/CLIL courses favour their future and job opportunities and global employability, their intercultural contacts, and they foster students' linguistic skills (Al-Mashikhi et al., 2014; Arnó & Mancho, 2015; Hamid et al., 2013; Hengsadeeikul et al., 2014; Phuong & Nguyen, 2019), in particular, vocabulary acquisition, the oral and written

comprehension ones (Arnó & Mancho, 2015; Dafouz et al., 2007; Toledo et al., 2012). Moreover, they remarked that the success of these bilingual programmes was linked to their own self-beliefs, considered to be key factors that determine the development of the EMI courses (Thompson et al., 2019). Thus, students' positive experience when being able to choose these courses freely, and the linguistic challenges presented, time management and workload would make them choose and obtain good results in the EMI courses (Toledo et al., 2012). Obstacles can be overcome by the positive attitude of the students (Tatzl, 2011). It was also pointed out, that the success of the EMI/CLIL courses would very much depend on the nature of course and the teacher, a key factor to bear in mind of the educational managers of the tertiary contexts (Dafouz et al., 2007; Dalton-Puffer et al., 2009).

On the other hand, some students expressed negative effects towards EMI programmes. They basically referred to difficulties in language learning and understanding content, concretely vocabulary and specific terminology (Phuong & Nguyen, 2019; Tatzl, 2011); fear of anxiety and making mistakes in the L2 in front of their colleagues or lecturers (Al-Mashikhi et al., 2014; Hengsadeeikul et al., 2014; Kim et al., 2014; Tatzl, 2011); and some troubles in using textbooks and materials in English (Kim et al., 2014; Phuong & Nguyen, 2019) or even in understanding the exam questions and the classes themselves (Al-Mashikhi et al., 2014; Tatzl, 2011). What is more, students also expressed a bit of concern regarding their English proficiency level, so it limited their participation in class and their language and content outcomes (Arnó & Mancho, 2015; Wan Cho, 2012). But overall, they were also concerned about the teachers' L2 proficiency, as they believed that teachers should foster their pronunciation and speaking skills. Regarding their time management and workload, the students interviewed remarked that EMI/CLIL courses involved an extra effort in preparing classes. (Al-Mashikhi et al., 2014; Tatzl, 2011; Toledo et al., 2012). As pointed out in one of the studies, university policy managers should discuss all the presented issues, as the implementation of EMI courses was imposed rather than initiated gradually (Wan Cho, 2012).

All in all, students' attitudes and beliefs need to be taken into account for the good implementation of EMI programmes. Policy makers and lecturers in universities should learn from their students to adapt these programmes and make them more attractive and practical for them, as well as offer more pedagogical and linguistic support is required from the university (Arnó & Mancho, 2015).

1.3.1.2. Teachers' attitudes and beliefs

As previously mentioned, university teachers around the world have been immersed in structural, political, and linguistic changes over the last few years. These transformations come from different factors related to the internationalisation of university programmes, which have affected HE institutions because of the rapid growth of English as a Lingua Franca, the increasing use of English in research, and the rise of EMI courses in their programmes. Some research has been done regarding teachers' attitudes and beliefs concerning these changes. In the following paragraphs, a brief illustration of studies in the European context (Denmark, the Scandinavian regions, Italy, Austria, and Spain), together with an overview of studies in Korea, Turkey and China are presented.

Within the European territory, Jensen and Thøgersen conducted a study (Jensen & Thøgersen, 2011) in the University of Copenhagen in order to measure the attitudes of the teachers at their university. A questionnaire was distributed amongst teachers and 1,131 answers were obtained. The results happened to be antagonistic; on the one hand, most of the teachers expressed that not all of them were prepared to teach through EMI, and they considered that students learned best in Danish. It was also concluded that the technical language in English was more developed than in Danish (which would be a sign of "domain loss"). On the other hand, lecturers agreed that it was necessary to increase the number of EMI courses to attract international students and researchers to make the university context an international one. It is worth mentioning that the youngest respondents of the questionnaires and those teachers with a high teaching load

showed more positive attitudes towards the use of EMI at university, compared to older lecturers. All in all, and as stated by the authors:

The change will come from two sides: more English-positive generations will replace more sceptical generations, and the general increase in the number of courses conducted in English will make teachers more comfortable using English, which again will lead to a more positive attitude. (p. 30)

A similar study was conducted in the Scandinavian regions. Pecorari et al. (2011) wanted to explore teachers' perspectives of parallel-language environments (settings in which the local language was used together with the English language), in which 3,526 lecturers participated from all the Swedish universities. The findings of this study indicated that a great number of teachers surveyed expressed that "incidental acquisition of English" (p.71) was considered an objective of EMI classes, and that these English skills would be key for professional development (in line with (Tatzl, 2011)). The same teachers revealed the importance of the English language, especially in the acquisition of vocabulary. Moreover, the participants gave high importance to reading, as they believed English language textbooks were thought to offer more subject-specific terminology than the general English vocabulary offered by teachers. This can be compared to the study done by Dietmar Tatzl (2011), which described the lecturers' perception that students' English language learning experiences a greater impact on their lexical development. However, the lecturers believed that the spoken interaction was the most important skill in these EMI contexts. Pecorari et al. (2011) also focused on incidental English language learning, and the results did not show reasons that indicated that the lecturers planned for this exposure. At the same time, there was a bit of scepticism about the equipment and support given to the lecturers of EMI courses. Likewise, there was great concern about the domain loss of the Swedish language. The English language is here to stay, and the lecturers are afraid of its role. Finally, the authors proposed a close collaboration between the subject content teachers and the language

teachers to achieve better results (in line with (Drljača Margić & Vodopija-Krstanović, 2018; Wan Cho, 2012)).

In the same context, but focusing on four distinct Swedish universities, Airey (2012) intended to compare the lecturers' attitudes to the development of disciplinary language skills in two languages, English and Swedish. The findings showed that lecturers did not care much about the language of instruction, but they preferred English rather than Swedish in early undergraduate levels. The lecturers also stated that working in English would be more beneficial for students. In line with the study presented by Jensen and Thøgersen (2011), the Swedish lecturers interviewed remarked that good physics books in Swedish are hard to find, and that sometimes, the terminology in their L1 is inexistent. One lecturer expressed:

As a lecturer in physics, it's sometimes difficult to know how to express it in Swedish because English is really the professional language for physicists. (p. 74)

Thus, the English language was preferred in class, as well as for the search of publications. What is more, the teachers believed that teaching the English language was not their job, but they did think that it was their duty to teach the "language of mathematics". As suggested by Airey (2012), the teachers just gave importance to content, and form was not even considered, and he proposed a close coordination between content and language teachers in order to bridge the gap.

In another more pedagogical study, Airey (2011) focused on the analysis of the thoughts and experiences expressed by the lecturers when changing the language of instruction to English. In this study, the author presented nine themes that could be used for revising EMI/CLIL programmes in HE. The participants in the study were 18 teaching staff members at two Swedish universities, who at the same time were also part of a staff teaching training course in English language. During the twelve-week course, the participants attended some interviews after teaching in short lectures in both their L1 and in English. The findings of the study could be categorised in nine different themes, which will be briefly described to provide a general vision

of the teachers' attitudes and opinions, and which could later be used as possible future implications for EMI programmes in HE. The first issue described the lecturers' concerns last-minute decisions when teaching in English in EMI programmes, which as expressed by the participants, could lead to negative consequences that may affect the courses (Dearden & Macaro, 2016; Wan Cho, 2012). Moreover, and in line with other similar studies (Arnó & Mancho, 2015; Jensen & Thøgersen, 2011; Jiang et al., 2019; Wan Cho, 2012) the second topic involved the lack of lecturer training on this kind of courses, as well as the extra time required to prepare these lectures. The third topic related to the fact that lecturers had to be less precise in content because of their linguistic constraints, which also led them to have less flexibility with language and pedagogical strategies (in line with Doiz et al., 2019). In a practical situation, they referred to using fewer examples, jokes, etc. Moreover, the lecturers stated that they also presented fluency limitations in class, and which "(...) could be seen in a higher instance of hesitations, false starts and the use of filler phrases in their English lectures" (p. 45). Another theme was related to correcting students' English, as they stated that they were not comfortable doing it in class. Finally, the last two topics the lecturers described gave a more positive vision of the classes analysed, as they expressed that the difference between the English and Swedish course was so little content-wise and that the training course done was key to gain their confidence. This statement is in consonance with other research by Arnó and Mancho, 2015, who also showed that motivation, in their case for language learning, was necessary in these programmes. All the same, this study has presented some topics that can be supported and evidenced by other research elsewhere.

In another study comprising three different European countries (Italy, Austria, and Poland), Dearden and Macaro (2016) interviewed 25 teachers from different contexts in order to investigate the attitudes towards teaching EMI courses. The results presented here were quite complete, and they covered different topics related to the implementation of EMI in HE, and they were also in line with some of the statements done in the previous studies mentioned.

Regarding the first question (HE teachers' beliefs and attitudes with regard to the introduction of EMI in HE contexts), the participants believed that EMI could give opportunities to study abroad and to open their job horizons. What is more, the lecturers also believed that studying EMI would be beneficial for English language learning. Because English is the language of textbooks, articles, and research, the participants considered that EMI was a good option (in line with (Tatzl, 2011)). The objective of internationalisation was present in this study too, and EMI was believed to be attractive for international students. Likewise, Jensen and Thøgersen (2011), younger teachers were more eager to participate and face EMI contexts, whereas the older ones were more concerned about preserving the local language. Interesting to mention is the lecturers' opinions about the language policies and university managers of their institutions, who are thought to have designed EMI courses just for financial reasons, imposing them on the faculty (also stated in Wan Cho, 2012). In line with this idea, the majority of the interviewed participants in this study questioned the university strategy of EMI courses. The teachers' concerns were varied, such as:

This was reflected not only in the lack of a clear policy in universities, but also in the lack of administrative support, the random choice of subjects taught through EMI, and the criteria used for choosing teachers to teach content subjects in English. (p. 469)

Thus, across the three institutions, more resources should be given to the EMI pedagogy. The second question in Dearden and Macaro's study focused on how the levels of English proficiency influenced teachers' perceived success of EMI programmes. Regarding the teachers' level of English, all the lecturers interviewed found it difficult to answer this question. They did not know their level of proficiency since no standardized levels were required. This presented a challenge for them. This idea is also reported in the study described in Dietmar Tatzl's article (2011). However, some of them expressed that a sufficiently high level of L2 should be required. In the same way, it was troublesome for these teachers to know about their students' English level. The common idea among them is that it was students who were responsible for their own

English level when studying through EMI. Thus, many teachers expressed that teaching English was not their job, and they did not feel responsible for their improvement.

In the previous sections, a study by Dafouz et al. (2007) was presented in order to observe students' attitudes in the EMI university context. In the same article, there were the teachers' reactions analysed as well, which will be described in this paragraph. The study was contextualized in two universities in Madrid, and a total of 70 Spanish teachers, belonging to the Chemistry, Health Sciences and Aeronautical Engineering departments answered a questionnaire, which was divided into three sections: Communicative Competence in FL, Classroom Dynamics, and Attitude towards the implementation of CLIL. About the teachers' self-reported communicative competence in the FL, they graded themselves high in their global command, reporting their receptive skills to be higher than their productive ones. As for their classroom dynamics, most of the teachers questioned the combination of theoretical lecture-based sessions with practical ones. According to the lecturers, 89.05% of participation in class was by the teachers, and not by students. In terms of linguistic improvements, lecturers affirmed that they should improve their speaking skills and pronunciation. The teachers also considered "that they would need to make three main types of didactic adjustments: adapt their teaching materials, slow down their teaching pace, and reduce content slightly" (p. 6). Finally, regarding their attitude towards the CLIL implementation, 64% of the teachers surveyed answered positively concerning the CLIL methodology. However, the teachers' degree of willingness to implement CLIL varied depending on various opinions, but they referred mostly to the lack of administrative support (financial, academic and training absence).

A recent study was carried out in two Spanish universities (University of the Basque Country and the University of Córdoba (Doiz et al., 2019)). Both institutions were running EMI programmes, and the main aim of the authors was to collect information about the main problems EMI lecturers encountered and find out their opinions on team-teaching. The lecturers participating were 13 (from both institutions), and two focus groups were made to debate about the above

two main topics and the subsequent sub-topics. The results helped to add further information to the topic. Regarding the lecturers' opinions on teaching in a FL, they expressed that their vocabulary was significantly reduced when using the L2 because, as they said, they had limited resources in the L2 compared to their L1 (also stated in Pecorari et al., 2011). Indeed, EMI conditioned "the degree of 'detail' in the explanations provided by the lecturers" (p. 158). Moreover, most of the lecturers remarked that their communicative strategies were affected, and they would have problems when paraphrasing one idea in English. All in all, their linguistic repertoire in the L2 was thought to be more limited, and as a consequence, this was believed to affect their confidence in class or their feedback to their students. To exemplify this last idea, a lecturer from the Education Department expressed:

In Spanish I could say it in five different ways in order to make them understand, or to give them examples. When I am speaking in English, however, this ability is very 'limited'. I just say it in one way. (p. 158)

As for the second question of the study, which referred to the impact of English on the development of their classes, the lecturers noted that the students' participation was lower in their L2, even though they tried to encourage and create a relaxed atmosphere. However, they affirmed that the students' English language proficiency played a key role when it was required they were active in class. As described, the teachers tried to help their students during the EMI lessons. A teacher from the Veterinary Department said:

I am explaining a topic, a procedure or it could be anything and then I look at their faces, the faces tell a lot. Then I explain the same thing again, and in addition, I ask for their constant 'feedback', because it is a constant 'feedback' of "did you get this?", "is this clear?", "do you understand this?" And I repeat the explanation and repeat it as many times as necessary (p. 160)

Concerning the third topic of the study, the students' language skills, the participants agreed that their students were better in the receptive skills (reading and listening) rather than the

productive ones. Similarly, in the study by Dafouz et al. (2007), the students' linguistic competences were observed to be better in vocabulary, pronunciation and listening. In the second part of this study (Doiz et al., 2019), the lecturers' opinion regarding collaboration between content and language teachers was examined. The findings revealed they gave little importance to the language aspects (form) in class. As expressed by a teacher of History:

I am not a 'language lecturer'. At the beginning of the course, I tell them that "the main objective is not to learn English, although you will. That is to say, I want to be able to 'understand' what you write". (p. 163)

This, at the same time, showed that these lecturers were not trained to teach languages, so as presented in the article, they were described as more EMI than CLIL teachers. Nevertheless, the participants did show a positive attitude when discussing the collaboration between content and language teachers (in line with Pecorari et al (2011). They believed that it would be beneficial for students, and of course, themselves. For instance, two ideas were brought by the participants; for example, the possibility of counting on an assistant language lecturer with knowledge of the content or a language lecturer to offer just linguistic support. Finally, the last statement worth mentioning and which all lecturers agreed on was pronunciation, one of the main difficulties for them (in line with Dafouz et al. (2007)).

Another study within the Spanish context and which adds further evidence to the statements given about teachers' beliefs, is the one by Aguilar (2017). The study was carried out with 41 lecturers teaching in English at a Faculty of Engineering in Barcelona. Its main aim was to analyse the teachers' goals when implementing the class in English, making a distinction between EMI and CLIL in order to see which one they were following. The findings indicated that EMI was the method the teachers who participated in the study followed in class, and it was considered to be the best choice for them. Their reasons were varied, but the most repeated ones indicated that they refused to teach English, and they felt their English language proficiency was not good enough. Moreover, they said that EMI courses could also foster students' competences in

English. Regarding the teachers' English language proficiency, they mostly agree on that a C1 level should be required for teachers, and a B2.2 for students, even so, they did not know about their own students' English level. Another relevant finding is that lecturers believed that students could benefit from EMI classes, and thus, they would also be better prepared for the future. Concerning teacher training, they remarked that specific training on CLIL, and also on EMI, would be needed (Aguilar, 2017).

A similar study was carried out in the University of Lleida within the Spanish context (Arnó & Mancho, 2015). CLIL courses in the degrees of Agronomy Engineering, Business, and Law were analysed in terms of language in CLIL, together with the implications that could derive from ESP and EAP courses, both, for a possible teachers' collaboration and for adapting the ESP/EAP courses. The results presented in this section are related to the lecturers' perceptions of CLIL, which were obtained from focus group discussions. On the one hand, regarding the benefits and challenges of CLIL, lecturers expressed their need and motivation to learn English, thus, they were positive regarding the implementation of CLIL. However, they did express some requirements if getting involved into the CLIL methodology, these being the recognition of these teaching hours, training, and support to design new teaching materials in the conditions given, aspects which are also in agreement with the Dearden and Macaro (2016) and Dafouz et al. (2007) studies. Lecturers believed that their language proficiency was one of the main challenges in CLIL. They expressed their concerns regarding their "fear of English" and their language support needs. On the other hand, concerning CLIL versus ESP, teachers mentioned that the CLIL courses were favourable for learning and practising the English language. In fact, as Arnó and Mancho said:

The presence of ESP in the curriculum (rather than CLIL) is justified by the lack of resources for implementing generalized CLIL programmes, which would be a more desirable scenario. (p. 68).

Thus, a more structured and organized CLIL methodology should be prepared so as to avoid these weaknesses, which are now the responsibility of the content lecturers and those motivated students that feel capable of enrolling a CLIL course rather than an ESP one.

Moving to the Asian context, Wan Cho's (2012) study presented on the previous section with students' attitudes and beliefs, also considered teachers' attitudes towards the implementation of EMI at a university in Korea. In line with the negative findings in the students' reactions, the teachers' beliefs did not show to be different from them. In terms of motivation for teaching in English, lecturers showed that they did it just to meet the EMI policy requirement of the faculty, and more than half of the professors would not continue using it if it were not mandatory. Regarding the time spent preparing classes, more than half of the lecturers spent more time preparing the English ones rather than the Korean ones (in line with (Tatzl, 2011)). When asked about their satisfaction with classes given in English, the majority of the teachers were not happy with their English proficiency level or the students' ones. Thus, and in accordance with other studies (Dafouz et al., 2007; Drljača Margić & Vodopija-Krstanović, 2018), there is a strong need to offer resources that help solve this problem; for example, the coordination between the content and language teacher.

A recent study conducted in China, namely with a medical university, adds further evidence on the teachers' attitudes towards EMI instruction (Jiang et al., 2019). This medical degree was pioneer because it had been offering EMI and ESP courses for a long time. A total of 200 students and three teachers participated in this study, and the data was collected from audio-recorded class observations, interviews, and questionnaires. Despite the low number of teachers, the results add new views into the topics, and they corroborate the previous ideas mentioned. The poor English proficiency of both teachers and students is considered to be one of the main causes for discrepancy between the policy and the implementation practices. In this sense, the EMI teachers interviewed preferred to focus on content rather on form (language) because of time or language level constraints. Nevertheless, the findings remarked that these EMI teachers

were mostly capable of using the L2 to teach their content classes. However, they were aware of their grammatical and phonological mistakes, as well as in their efficiency and fluidity of the instruction process. They also expressed that they came up with pragmatic strategies to overcome their previously mentioned concerns. For example, they stated that code-switching to their L1 was one of the strategies used, together with repetition, prosodic features, and rephrasing. These strategies helped them achieve effective communication with the students in class. Regarding the focus on form (language), the teachers questioned did not spend time teaching language due to their low proficiency level. This finding bears close resemblance to those by Arnó and Mancho (2015), Doiz et al. (2019) and Jensen and Thøgersen (2011). All in all, Jiang et al. expressed that “the EMI programme, as the institution’s strategic move to promote its educational internationalisation, is far from a full-fledged practice” (p. 116), and therefore, EMI teachers should be given pedagogical training, together with the linguistic skills, to be successful EMI appliers.

In Turkey, Kiliçkaya carried out a study (Kiliçkaya, 2006) to find out the attitudes of instructors of non-language subjects towards the use of EMI in some universities in Ankara. One hundred instructors participated in this research, and the results were not positive towards the EMI methodology. In general, Turkish instructors preferred the Turkish language over English as they stated that the latter increased the students’ learning so they could learn the contents faster (in line with Dafouz et al., 2007; Drljača Margić & Vodopija-Krstanović, 2018; Wan Cho, 2012). Moreover, considering the students’ English language proficiency, the lecturers favoured their mother tongue when teaching as they were not sure about the students’ language level. However, most of them agreed that a mixture of both Turkish and English would be beneficial while lecturing, such as in written assignments. What is more, the instructors required a wide range of teaching resources for both languages.

In 2014, a similar study was carried out in the same context of Turkey (Başibek et al., 2014) at two state universities, where partial EMI was applied. 63 lecturers from the Engineering Faculty

Departments answered a questionnaire on the use of English and Turkish as medium of instruction. The results of the study appeared to be complementary to the previously mentioned ones (Kiliçkaya, 2006). The findings showed that most of the teachers surveyed believed that partial EMI was more positive than adopting just English medium instruction. However, they did agree that EMI was beneficial for learners in their academic, social, and professional spheres, and that EMI would be positive for the students so they could access all the academic resources in English. On the contrary, the teachers expressed that learners were not proficient enough to learn the subject in English, and therefore, this would cause problems understanding the content of the lesson. Yet, they did accept that EMI would favour their English language proficiency.

Taking the English language proficiency as one of the principal aspects of the teachers' fears and disadvantages when implementing and participating in the EMI/CLIL programmes, a study carried out in Croatia (Drljača Margić & Vodopija-Krstanović, 2018) analysed teachers' reactions and experiences of the language development programme created for EMI programmes. The study focused on the University of Rijeka (UNIRI), which offered two fully English-taught programmes in 2017. There was a necessity to increase the EMI programmes in the educational context of the country, and since the EMI teachers were relevant variables in the equation, the authors of the study designed a language development programme for them. The findings show interesting results that can give an answer to the linguistic teachers' issues when in EMI courses, as was the case in previous studies (Arnó & Mancho, 2015; Dearden & Macaro, 2016; Doiz et al., 2019; Jiang et al., 2019; Wan Cho, 2012). The authors confirmed that the teachers' linguistic proficiency is essential for quality teaching in the EMI context, and the participants thought that the academic English involved was adequate for teaching purposes of the programme created, as it proposed practical and authentic situations, and they were able to revise their pedagogical knowledge and competences. Furthermore, the programme also encouraged teachers to "critically reflect on their practice, explore and problematise their teaching, identify their

strengths and weaknesses and examine their teaching skills for EMI, which provided groundwork for future action.” (p. 23) Working on their teaching strategies was a positive aspect that fostered the teachers’ motivation, autonomy, and learning, and consequently, this would impact on their EMI classroom. As conclusive evidence, the study carried out in UNIRI was key to realise which the EMI teachers’ needs were, especially the linguistic ones. The teachers participating in the study became aware of some basic needs, and they were then willing to participate in more professional training and cooperate with content or language teachers, to improve their skills.

To sum up, the teachers’ perceptions and experiences towards the implementation of EMI courses in the HE levels present several important implications for the establishment of bilingual programmes in the tertiary context, so they give specific ideas that could be used in order to improve these programmes. As briefly described in the previous section, there are distinctive opinions on the implementation of the EMI programmes, which will now be summarized. On the one hand, the incorporation of EMI programmes in universities has been a strategy introduced to most HE policies, considering them a good approach to internationalise the university, and consequently, attract worldwide students, who would affect the institutions’ economy positively, and at the same time, offer more professional opportunities to students (Aguilar, 2017; Airey, 2012; Dearden & Macaro, 2016; Jensen & Thøgersen, 2011). Among the positive benefits of this approach, teachers considered that EMI helped improve the English language proficiency levels of both the students, and teachers themselves (Aguilar, 2017; Arnó & Mancho, 2015; Dearden & Macaro, 2016; Doiz et al., 2019; Pecorari et al., 2011). In fact, they considered that their vocabulary, listening and pronunciation skills were reinforced by the EMI courses, over their productive ones (Doiz et al., 2019). Other benefits the teachers surveyed remarked referred to the facility to have access to plenty of content resources, especially in English, which in most of the degrees and master’s fields, is the default language used (Airey, 2012; Başibek et al., 2014; Jensen & Thøgersen, 2011). Regarding teachers’ choice for these

programmes, they commented that their motivation to learn and improve their English was linked to their choice to implement a bilingual programme (Arnó & Mancho, 2015), and that despite their lack of linguistic and pedagogical strategies, they overcame these problems by just code-switching to L1, paragraphing, repeating, and other similar strategies (Jiang et al., 2019). Nevertheless, teachers affirmed that these structural linguistic and pedagogic concerns could be improved with better coordination between content and language teachers, or some kind of support by the institutions themselves (Airey, 2012; Doiz et al., 2019; Drljača Margić & Vodopija-Krstanović, 2018; Pecorari et al., 2011).

On the other hand, teachers' perceptions were not all positive towards the implementation of the EMI programmes, and several "fears" appear to be relevant. One of the teachers' concerns about these bilingual programmes is that they considered themselves not ready linguistically (Aguilar, 2017; Airey, 2011; Dearden & Macaro, 2016; Jensen & Thøgersen, 2011; Jiang et al., 2019; Wan Cho, 2012). They expressed they had limited linguistic resources in the L2 and that their communicative strategies were affected in EMI classes, so their vocabulary was reduced and their explanations were less complex (Doiz et al., 2019). Moreover, another problem the teachers faced was the fear of losing their vernacular language (domain loss) (Jensen & Thøgersen, 2011; Pecorari et al., 2011), and according to them, EMI courses could result in poor understanding of content because it is more difficult to understand content in an L2 (Başibek et al., 2014; Jensen & Thøgersen, 2011; Kiliçkaya, 2006). Regarding the teachers' attitudes towards teaching form, they expressed that they did not know about the students' language level, and they did not feel responsible for their language learning (Aguilar, 2017; Airey, 2012; Dearden & Macaro, 2016; Wan Cho, 2012). As a consequence, there is a lack of teachers' guidance on linguistic skills, and as some teachers stated, this may result in little participation of students in class (Doiz et al., 2019). Concerning pedagogical aspects, the lecturers questioned mentioned that EMI courses implied more time management, and that they had to revise materials, and reduce contents to make them more understandable. (Airey, 2011 ; Dafouz et al., 2007; Doiz et

al., 2019; Wan Cho, 2012). Finally, what most of the studies analysed agreed on is that more equipment and support should be given to the teachers in charge of bilingual programmes, and that they need to be reorganised to adjust them to reality (Aguilar, 2017; Airey, 2011, 2012; Arnó & Mancho, 2015; Dearden and Macaro, 2016; Pecorari et al., 2011; Wan Cho, 2012). By way of this whole section's summary it could be said that, both, students' and the teacher's attitudes and beliefs are relevant aspects when analysing bilingual programmes in HE contexts, and as one of this research's objectives is closely related, their perspectives will surely add essential information to the discussion part of the present study.

1.3.2. The impact of EMI on language learning

The L2 development of the students participating in EMI degrees or postgraduate programmes is crucial when analysing and contextualizing the EMI approach, because CLIL is a method that offers the opportunity to students to use the L2 while learning specific content, and therefore, it might improve their competences in the L2. Analysing impact of EMI on the students' L2 learning is a relatively new topic of interest. One of the main objectives of the present study is to analyse the linguistic impact of a group of EMI students enrolled in a bilingual degree programme. This subsection is going to provide a description of different studies that examined student language learning results within EMI programmes in HE in the European and worldwide context in general, and in particular, in the Spanish and Catalan context. Within this section, the CLIL method is also present, as some of the findings refer to CLIL programmes in HE.

Research on the L2 acquisition and the linguistic benefits can be found in the Primary and Secondary educational contexts. Some of these studies have shown the positive effects of CLIL programmes in vocabulary acquisition (Canga Alonso, 2013; Saladrigues & Llanes, 2014; Várkuti, 2010), in oral production skills (Bret et al., 2011), in L2 morphosyntax (Hüttner & Rieder-Bünemann, 2007), in written proficiency (Ackerl, 2007) and in L2 global proficiency (Admiraal et al., 2006; Alonso et al., 2008; Navés & Victori, 2010). Therefore, it could be expected that tertiary

students acquire similar linguistic skills if enrolled in EMI or CLIL programmes. In this section, we will focus on the tertiary context.

Starting in the Catalan region, Roquet, Vraciu and Nicolás-Conesa (2019) carried out a study in which they compared the results in morphosyntactic knowledge of two different groups of participants (one group was the IM one, referring to full immersion in English, and the other group was the SIM, standing for semi-immersion in English). The participants were 79 students who belonged to the Economics Department of a Catalan public university, and they were in their 2nd and 3rd year. The IM group amounted to 1,500h teaching hours in English by the end of the 3rd year, whereas the SIM group received 187,5 teaching hours in English at the end of the same period. None of the participants were taking additional courses in English outside their university degrees. The participants filled in a sociolinguistic questionnaire, and they took two language tests. The results showed that the type of immersion programme had a significant impact on the syntax scores of the students of the IM group, whereas there were no significant differences between both groups regarding morphology. This means that the acquisition of syntax seemed to be easier than morphology in full immersion programmes because, as the authors said “basic L2 syntactic knowledge develops before accurate production and comprehension of functional morphology” (Roquet et al., 2019, p.86). This study emphasised the importance of the number of contact hours in English in immersion programmes, and that the L2 input and producing L2 output is extremely important for the development of the students’ syntactic knowledge. The authors also highlighted the idea that there is a need to establish how the integration of content and language should be done in EMI contexts, so more emphasis could be given to specific language needs, and a more appropriate focus could be given to deal with linguistic aspects.

Another relevant study located in Catalonia is the one by Aguilar and Muñoz (2014). The authors examined a group of 63 students attending a CLIL programme at a Catalan engineering university. The main aim was to explore the benefits of a CLIL experience on the language

outcomes of this group of students. In particular, the focus was on the role of students' proficiency level in English, and on how proficiency may influence the language gains obtained when attending a CLIL course. A pre- and a post- test were administered, and the results presented small improvements in test performance in the listening and grammar test, but just the listening skills showed statistically significant results. Thus, the CLIL course benefited these students' linguistic skills. Regarding the effects of students' proficiency on the students' language gains, the study proved that less proficient students experienced higher gains over the more advantageous ones. For instance, the advanced participants got worse in grammar scores on the post-test administered. On the contrary, the weaker students improved in both listening and grammar skills. The limited proficiency in English of the lecturers and the weaknesses and limitations that the CLIL course programme offered could explain the fact that the advanced students did not obtain better results.

A study in another Catalan university, concretely in the Faculty of Economics, showed positive results on the language learning of students enrolled in EMI programmes (Ament & Pérez-Vidal, 2015). The study examined the linguistic gains measured through oral comprehension, written production, lexico-grammatical abilities and grammar. There were two groups: the immersion (IM) group was formed by seven participants, who had 100% exposure to English in their courses, and the semi-immersion group (SIM), which consisted of nine participants, who received between 18 and 41% of their instruction in English. Students were asked about their language background, English abilities, past English studies and extra exposure outside the university. The findings indicated that the IM group experienced average gains in lexico-grammatical tasks and in writing tasks, but there were no improvements in the listening task. In general, the IM group did not experience statistically significant gains. Considering the SIM group, the results indicated that they had improved in all tasks except in the listening. Therefore, this group did experience significant linguistic gains in both the lexico-grammatical tasks and the lexical complexity of the writing task. This was not predicted in the study, as the semi-immersion

group received few EMI hours. Ament and Pérez-Vidal reasoned this situation by the fact that the participants' level of English was sufficient to follow the class and they did not need to put a lot of effort in it. Moreover, the researchers stated that students tended to interact less and ask fewer questions in class, as the EMI teacher had everything planned. According to Kim et al. (2014), Airey (2012), and Tatzl (2011), students and lecturers behave differently in EMI classes, which can be an obstacle to the acquisition of linguistic gains in EMI programmes.

Considering L2 written production, Salaberri and Sánchez (2015) analysed a group of 67 students at a Spanish university who were following the EMI method. The course under analysis was a 6 ECTS Chemistry course taught in English. Participants were asked to produce a written report. The rating scale used in this study consisted of four parameters: fulfilment of the task, organisation, grammar and vocabulary. The results indicated differences in the performance in certain areas of the written language competence. Students got acceptable results in grammar and vocabulary issues and significant weaknesses in aspects related to the text format, register, structure and discourse issues. As expressed in the article, there was a relationship between the students' academic performance (content achievement) and their linguistic awareness of the text genre produced in the L2, since the higher scores in the written production corresponded to the best linguistic performances. Thus, the authors (Salaberri Ramiro & Sánchez Pérez, 2015) suggested that new methodologies should be added to the EMI classes to help students deal with different aspects of their writing competence within the same content course in the second language.

Regarding reading comprehension skills, the study of Chostelidou and Griva (2014) intended to measure and evaluate the effectiveness of the CLIL approach in students' reading skills development. The study was carried out in a Greek tertiary institution with a group of 270 students (139 in the experimental group and 131 in the control group). It is not acknowledged whether extracurricular exposure was taken into account. The results indicated that there was a significant difference between both groups in terms of reading skills and content. At the same

time, it is worth mentioning that the experimental group revealed a positive attitude towards English, which grew significantly upon the completion of the programme (Chostelidou & Griva, 2014).

Similarly, Loranc-Paszylk (2009) ran a study at the Academy of Technology and Humanities in Poland that intended to explore the potential of integrated reading and writing tasks in the CLIL classroom. The author presented a comparative study of two groups of students: the experimental group of 17 second-year undergraduate students of International Relations who received a total of 90 minutes of English classes per week, and a control group of 35 students in the same academic year, degree, and number of hours of the subjects. It is important to mention that the CLIL group worked with a variety of course materials, and the class organization was characterised by providing collaborative tasks and individual tasks. On the contrary, the control group students did not attend the CLIL class, but they were following an obligatory FL course (ESP or English as a Foreign Language (EFL)) with the same amount of L2 hours as the CLIL group. It is not acknowledged whether extracurricular lessons were being taken by students. The results indicated that the experimental group (CLIL) had made significant progress in the case of the academic reading test (21%), the academic writing (24%) and the use of English test (18%). The control group showed minimal progress on the aspects analysed, even though their L2 exposure was the same and the writing production demands as well. As described in the article, the author explained that the control group's systematic writing was not text- responsible (writings in which the writers demonstrate an understanding of the source text) nor thematically coherent. As a conclusion, the author suggested:

(...) that incorporating systematic text-responsible writing practice into the CLIL programme may enhance the effectiveness of this innovative approach with regard to development of such linguistic skills as reading and writing, as well as the development of grammatical competence in the target language. (p. 52)

To sum up, the CLIL approach provides a more appropriate context where the reading, the writing skills and the grammatical competence can be successfully developed thanks to the natural and more meaningful context provided.

Regarding the Asian context, Yang (2014) gave evidence of learners' achievement in CLIL education with the study carried out in a CLIL international tourism programme with a group of 29 students in Taiwan. A pre- and a post-English proficiency test was administered to control the language achievement of the CLIL students, and both the receptive and the productive skills were measured. Other instruments were used to measure the students' perceptions on the CLIL courses. The results indicated that, as in previously reported cases (Loranc-Paszyk, 2009), the CLIL learners showed significant improvement in their linguistic skills (receptive and productive) in the post tests, even better than the non-CLIL university students taking the same language test. Moreover, the findings also revealed that learners had better productive linguistic competence compared to other university students, even though they did not show any significant differences with the non-CLIL groups and with the English proficiency test takers. The author (Yang, 2014) argued this saying that:

The courses are lecture-based, teachers do not pay attention to or are not trained to develop learners' productive language competence, and students are not provided with opportunities to employ productive skills in the CLIL classrooms or even after class.

(p. 9)

Yang proposed two possible implications for CLIL practices in HE; one referred to dealing with contextual differences to develop the students' intercultural competence, and the second to providing more practical support for lower language achievers, such as supplementary language courses, periodic communication, continuous encouragement, etc. To foster CLIL programmes in HE in Taiwan, and to make these programmes more adaptable, heterogeneous CLIL classes with mixed abilities would be necessary rather than similar groups based on an entry level of proficiency.

Contrary to the positive results on the students' L2 acquisition and language competences described in the previous paragraphs, Lei and Hu (2014) showed that the EMI group of students did not show positive results compared to the non-EMI group. The study consisted of a group of 136 Chinese undergraduate students in year 2 and year 3, enrolled in a Business Administration programme, who were divided in two groups: the EM group (students enrolled in EMI classes), and the CM group (students attending classes in Chinese). Both groups took a College English course in their first year in university. In the second year, the CM group took an extended College English course (2h/week) each semester. Unlike the latter group, the EM group did not take the College English course in the second year, but they were enrolled in two English subjects. During the second and third year, the EM groups received EMI classes, the material was in English and the exams as well. In the CM program, the classes were in Chinese and the textbooks and so was the material used. The main aim of this study was to investigate the effects of EMI on students' English proficiency and effect in English learning and use. The measures used were the national standardised College English Test Band 6. The results of this study revealed that the EMI students did not outperform their CM counterparts after receiving EMI for one year. This indicates that the EM programme was not effective in improving the students' L2 proficiency levels. As suggested by the authors, the findings may be explained by the lack of positive attitude and perceptions by the students, and their dissatisfaction with the EMI programme, due to weak programme goals, students' inadequate command of English, poor pedagogical strategies, etc. This is in line with studies previously mentioned (Al-Mashikhi et al., 2014; Phuong & Nguyen, 2019; Tatzl, 2011; Wan Cho, 2012). Moreover, the authors also proposed that the proficiency test used to check the L2 learning of the students was not suitable enough to capture the gains in the EMI groups. Contrary to these negative results, the study indicated that the Global English course taken during the first year was effective for the EMI group of students. These findings show that the EMI programme does not translate into the expected L2 benefits on students, and that the students' attitude and perception of the programme is key to obtaining positive results.

To sum up, research concerning linguistic gains at the university context is scarce and little empirical evidence supports the positive effect of EMI programmes in HE levels. The previous studies presented show little investigation on the topic, and the present study intends to throw some light on the impact of EMI courses on L2 development. Despite the scarcity of studies examining the impact of EMI courses on L2 development, previous studies tend to suggest that taking an EMI or a CLIL course has a positive impact on syntax (Roquet et al., 2019), on listening skills (Aguilar & Muñoz, 2014), on grammar abilities (Ament & Pérez-Vidal, 2015), in reading skills and the writing competence (Chostelidou & Griva, 2014; Loranc-Paszylk, 2009; Salaberri Ramiro & Sánchez Pérez, 2015) or in both receptive and productive skills in general (Yang, 2014). However, the students' attitude and perceptions can be key to obtaining linguistic benefits (Lei & Hu, 2014), and that the EMI programmes should be restructured if positive results are to be expected. The results previously presented are mostly in accordance with Dalton-Puffers' (2008) classification of language outcomes, which was proposed in order to evidence the positive impact of the CLIL approach, and it shows that "under CLIL conditions certain aspects of language competence are developed more than others" (p.5). Table 1 shows the language classification outcomes where, on the first column, the language gains are classified as favourably affected by the CLIL methodology, but the second column includes the language gains which remain unaffected or which have not been studied systematically yet. It should be noted that not all the previous results can be compared to Dalton-Puffers' chart, as other aspects may have conditioned the language competences acquired.

Table 1

Language competences favourably affected or unaffected by CLIL

Favourably affected	Unaffected or Indefinite
Receptive skills	Syntax
Vocabulary	Writing
Morphology	Informal/non-technical language
	Pronunciation

Creativity, risk-taking, fluency, quantity	Pragmatics
Emotive/affective outcomes	

Note. Adapted from Dalton-Puffer, 2008.

What learners learn or do not learn in CLIL classes is directly linked to the conditions of the language in the class and the content teacher. Therefore, more focus should be put on the teachers' classroom discourse.

1.3.3. The impact of EMI on content learning

The incorporation of the EMI approach in HE programmes is a new phenomenon that comes accompanied with many advantages for the students' language proficiency and content acquisition, but at the same time, it brings on some fears to some lecturers/teachers' beliefs. One of the reasons these cautious teachers have given is the fear that their students will not fully understand the content of the subject, which would lead to a poor learning environment (Jensen & Thøgersen, 2011; Kiliçkaya, 2006). Moreover, these teachers claim that there is a lack of materials, resources and teacher support, as well as their own perception of their language level as low. Despite these constraints and the limited research on this topic, there are studies that prove that the EMI approach is favourable for the learning of content by students. This section is going to present some research that shows that the EMI approach is not detrimental for content learning. However, this section also includes some studies that present some concerns on the impact on content learning by EMI students, and which justifies the little research done on the topic.

The impact of EMI does not seem to have a negative effect in content learning in the study done by Dafouz et al. (2014). These researchers analysed a group of first year university students in the School of Economics and Business Administration at the Complutense University of Madrid. They compared two groups of students: an EMI group and a non-EMI group. The total number of participants was distributed into the different subjects, which were 106 in Accounting, 115 in

Finance and 95 in History. The study analysed the students' final grades, which consisted of two components: the coursework (40% plus their active participation, interim exams and seminars) and the final exam results (60% which were all in written format). After comparing the data gathered, the results showed that both groups obtained very similar results in the three subjects mentioned. In fact, the results obtained by the EMI group were higher than the non-EMI group, but with no statistically significant differences were found between them. Moreover, it was also concluded that the general tendency of the students was to obtain better results in the coursework part rather than in the final exam. Therefore, according to Dafouz et al. (2014), the language of instruction (English) does not have a negative effect on the students' academic performance.

Likewise, Dafouz and Camacho (2016) also presented a study which investigated the academic achievement in EMI and non-EMI settings at a Spanish university. Three research questions aimed at finding out the impact of the language of instruction on students' final academic results; the use of different assessment formats on the students' academic results, and the distribution in the EMI and non-EMI groups regarding the students' academic performance. The study comprised 383 first-year-students in the subject of Financial Accounting I from the Business Administration Degree across four academic years. The EMI students were asked to have a B2 level of English as a prerequisite or take an entry test, and both groups had the same teacher. The students' final grades were measured on a 10-point scale, and the different grades were obtained from the active participation in class, a mid-term exam, attendance to seminars, and a final exam. Regarding the first research question, the results indicated that the results following the standardized 10-point grading scale were higher in the EMI groups than in the non-EMI groups. Thus, the language of instruction did not have an impact on students' final grades for Financial Accounting I. As described, the EMI students performed slightly better in three of the four academic years, but the difference was not statistically significant (Dafouz & Camacho-Miñano, 2016). Concerning the academic results by assessment tools, the findings indicated that

the grades were higher for EMI groups in mid-term exams, seminars, and final exams, but not in the active participation in class. Therefore, this addressed that the use of different assessment tools did not have a negative impact on the students' performance. With regard to the last research question, the distribution of students by level of performance was similar in EMI and non-EMI groups. This suggests that low, medium and high achievers behaved similarly, irrespective of the language of instruction used (L1 or L2) in class. All in all, this study revealed that the EMI group had achieved the same results as the non-EMI group, and consequently, it supported the belief that the EMI/non-EMI factor is not decisive for student academic achievement.

More evidence supporting that the English language does not primarily affect content learning negatively is found in Austria (Tatzl & Messnarz, 2013). These researchers conducted a study with a group of 96 tertiary engineering students (from freshman to senior). A test was designed in two languages (English and German), and it consisted of 12 physics problems that were representative of engineering science examinations. The results showed no significant differences between the German and the English groups, so all the year groups could solve the problems presented. This is in line with previous studies that have validated that a FL does not constitute a linguistic barrier in the comprehension of content subjects. Nevertheless, these results should be taken with caution given the limitations of the study, such as the time limit of 20 minutes to do the test, the fact that the students took the test without prior preparation nor having been warned beforehand and finally, the ESP module in this degree programme. As proposed by the authors (Tatzl & Messnarz, 2013), this study could be useful for designing and revising tertiary EMI programmes in that universities "should base their pedagogical concepts and methodologies on inquiries into the learning realities of their students" (p. 628), considering that "certain examinations administered in engineering education are less language-dependent than others" (p. 628). Regarding L2 training, what it is proposed is that:

Foreign-language training in engineering education should be aligned with the content discipline's needs and target skills, in view of future professional tasks for graduates. Such an alignment should rest on the close collaboration between content and language instructors. (p. 628)

Finally, the authors also suggested that more repetition and variation of the engineering contents' principles could help students acquire the necessary skills throughout the whole educational period. Even so, HE institutions should incorporate diagnostic programmes and orientation tests to identify the students' capacities and their deficiencies in solving problems. All in all, these statements could contribute to improving EMI programmes.

Set in a Korean context, Joe and Lee (2013) carried out a study also providing evidence for the effectiveness of the EMI approach compared to a non-EMI context regarding students' academic achievement. Sixty-one Korean students were enrolled in a compulsory medical course by the Department of Medicine, in Seoul. Two tests were administered, a pre- and a post- test, which consisted of true or false questions. The participants enrolled in the study had quite a high level of English. As the results indicated, the students showed great improvement in the post-test. It was concluded that the medium of instruction did not affect the students' lecture comprehension, and the students' language proficiency was not a sign that defined the students' understanding of the class or that could affect their final grades.

The same study asked about the students' opinion on the EMI approach, and unexpectedly, the students disliked EMI lectures and they thought they were more difficult. These negative opinions were hard to contrast given the students' positive performance in the test.

Contrary to the previous studies, Ole Hellekjaer (2010) carried out a study examining lecture comprehension in EMI courses. The participants were a group of 346 undergraduate and graduate-level students from different Norwegian universities. These students answered a questionnaire at the end of the lectures to measure lecture comprehension. The items were identical for the L1 and for the English-instructed groups. The findings indicated that many

students experienced lecture comprehension difficulties in EMI lectures, which should be revised when designing a course or at the moment of lecturing (Ole Hellekjaer, 2010). It is worth mentioning that the problems were common to the L1 lectures. Moreover, regarding the lecture comprehension issues analysed, this may be due to unclear pronunciation or word segmentation problems by the lecturers, and as the author suggested, this may affect the students' listening proficiency. Other problems associated and mentioned in the results' section are related to unfamiliar vocabulary, problems following the lecturers' line of thought and the difficulty in taking notes. Hellekjaer also considered the students' attitudes towards the EMI lecturers, and 63% of the participants found EMI classes more laborious than in the L1, being these, the same students who had the lowest English scores. As the author suggested, low L1 and L2 index scores could be a sign of poor skills on the part of the students, which would lead to the need to control the students' language proficiency levels in EMI instructions, and the incorporation of lecture delivery strategies to improve lecture comprehension in EMI and L1 lectures.

To sum up, the study concluded that Norwegian students experienced lecture comprehension difficulties in EMI classes, and therefore, many pedagogical strategies need to be put in place by the lecturers and the course designers to improve the effectiveness of this approach.

Similar results had appeared some years before in Vinke (1995), who compared the content learning of EMI students versus non-EMI students. The study comprised an experimental group (Dutch engineering students who attended EMI classes presented by a Dutch teacher using the L2) and a control group (Dutch engineering students who attended the same lecture presented by the same lecturer but using the L1). Both groups completed the same content statement questions, and the student perception questionnaire. The results indicated that the English group performed worse than the Dutch group of students. Concretely, the EMI group had a lower average in their physics grades compared to the Dutch one. Thus, the language of instruction had affected students' learning in one subject. As the author proposed (Vinke, 1995), this loss could be caused by many factors, such as, the reliability of the test, the lecturer's slower

speech rate in the English class, the lecturer's oral English proficiency, and the use of teaching strategies. Remarkably, regarding the students' perceptions of the lecturers and the lectures, the results indicated that the students had a favourable overall perception of the lecturers, as well as on the lecture contents, which appeared to be very similar.

This section has presented a brief overview on the impact of L2 instruction and content learning on students in HE contexts. Despite the popularity of bilingual programmes in the university contexts in Europe and other parts of the world, there is a lack of research in this aspect. From the studies presented, most of them have shown that the EMI programme does not affect students' content learning of subject matters negatively. Most of these studies have presented positive findings on this topic, and therefore, the approach did not have detrimental effects but positive ones for the EMI groups (Dafouz et al., 2014; Dafouz & Camacho-Miñano, 2016; Joe & Lee, 2013; Tatzl & Messnarz, 2013). However, some studies showed to be negative on content learning (Ole Hellekjaer, 2010; Vinke, 1995), indicating that the students enrolled in EMI programmes presented difficulties in understanding their teachers' pronunciation and the class contents. At the same time, these students' opinions were associated with a not very positive attitude. In all cases, these findings provide evidence that the EMI context needs further research that explores the impact on the content learning of students enrolled in EMI programmes.

1.4. Strategies and key factors for implementing EMI/CLIL in HE

Incorporating the EMI approach as part of any Degree or Master's programme in the university context is not something straightforward. As mentioned above, there are changes regarding university policies and the different Degree programmes, as well as with the pedagogical implications teachers need to face regarding the EMI approach, which imply important modifications that both, lecturers and students, need to overcome. After having analysed

students' and teachers' attitudes towards EMI programmes, and the effects it can have on the students' language and content learning on different tertiary contexts, section 1.4 is dedicated to present a summary of different strategies and necessities that may be key for EMI teachers' professional development, and at the same time, for EMI students. Moreover, actions regarding the good implementation of the EMI approach in the tertiary context will be described. Concurrently, the focus will also be given to the CLIL methodology, which is also presented as a successful approach in HE spheres.

Thus, this section is going to focus on different aspects which aim to describe the main necessities lecturers encounter in the English-taught programmes in HE, and that are key to ensure quality and the possibility of climbing up the university league context. The section is divided into the following topics: English language proficiency, teacher training programmes for EMI tertiary lecturers, and designing bilingual programmes to better implement the EMI approach / the CLIL methodology.

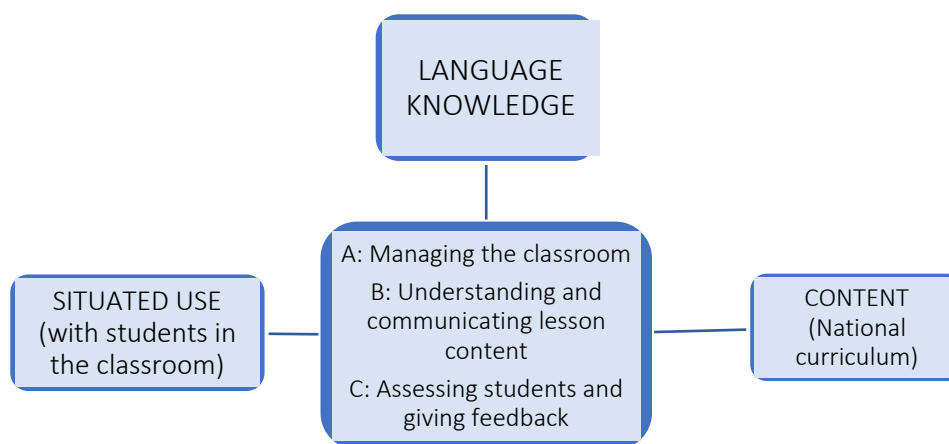
1.4.1. English language proficiency

With the rapid growth of English Medium Instruction programmes in tertiary institutions all over Europe and the rest of the world, a linguistic and pedagogical necessity has arisen in this context, and many EMI lecturers have expressed the need to improve their teaching tools in their classes, especially their linguistic skills (Aguilar, 2017; Airey, 2011; Dearden & Macaro, 2016; Doiz et al., 2019; Jensen & Thøgersen, 2011; Wan Cho, 2012). Teaching English in a context where English is a second language has always been considered a challenge for non-native English teachers, concretely, for those teachers in tertiary spheres, where the language has never been considered the main aspect when teaching lessons. Previous empirical work has described the teachers' and students' concerns on this linguistic aspect, so the extent to determine the teachers' ability to teach in a foreign language effectively presents some challenges. In general terms, it is complex because it implies using the language to produce comprehensible input, to

draw learners’ attention, to rephrase, to answer back, to give examples, etc. As stated by Freeman et al. (2015), “It requires connecting teachers’ general language proficiency with their familiarity and knowledge of classroom practices” (p. 130). These researchers provided an alternative construct called *English-for-Teaching*, which refers to a language-for-specific-purposes approach, which is linked to the specific command of English that is required in teaching a lesson. This construct is an alternative strategy that can reshape the design of teacher education and the professional development courses offered. In short, it focuses on the specific English skills that teachers would need for the work in the classroom. Figure 11 represents the functional areas of classroom language use:

Figure 11

Functional areas of classroom language use.



Note. Adapted from Freeman et al., 2015. P.135

This approach could be used for teacher training programmes in HE contexts, as it enables teachers to focus on specific skills for their English classes, and at the same time, it addresses students’ language learning (Freeman et al., 2015).

Within this paradigm, Klaassen (2008) stated that improving the language proficiency was one of the main objectives of the Deft University of Technology lecturers participating in her research. She focused on three essential aspects of EMI in the course offered to the EMI

lecturers: pedagogical quality for EMI, intercultural communication, and English Language proficiency. What she intended in her investigation was that lecturers obtained more tools, which would be useful for improving their own individual language skills and that, at the same time, would help the students' understanding of the content materials.

She hoped to improve teachers' proficiency L2 level by giving them tools which would help them improve and at the same time, develop their students' linguistic skills. Some factors that were relevant included "explaining new terminology, explaining things in various ways, using clear examples, as well as liveliness, effective gestures, and maintaining eye contact" (p. 35). As stated, these elements were considered key to any teachers training for EMI programmes. The results of this study received different interpretations. On the one hand, the lecturers felt that using signposting, summary words, intonation patterns, phrases and specific sentence structures and thinking how to stimulate interaction in class were valuable and easily applicable strategies in EMI classes. On the other hand, the lecturers analysed the difficulties their students may have with their teaching strategies and language proficiency in EMI courses. Giving feedback, using signposts, and asking and dealing with questions were considered among the most important actions to be used. Finally, the author also surveyed the same participants two years after having taken the course. What most participants agreed on was having gained more self-confidence when teaching in English. The feedback provided by the participants of this study could be used to reinforce the necessity of offering a content and language integrated teacher training course to EMI lecturers. As Klasseen (2008) confirmed; "awareness and understanding of the complexity of the pedagogical situation is essential for improving English-medium instruction" (p. 41).

As regards the lecturers' English proficiency level, there is a bit of concern when referring to the level and qualifications required to teach a subject through an FL. There is not an established consensus on this topic in Europe and, even though universities require qualifications from EMI teachers, there is not a clear agreement on which level to ask (Macaro et al., 2019). Using a

foreign language to teach a specific content is not an easy task for lecturers. This implies using different linguistic skills and competences that need to be known, practised, and controlled. Macaro et al. (2019, p.115) stated in their study that “EMI teachers in Spain would like to become more student-centred and are aware that teaching students is different from presenting at a conference, where they can assume a high level of not only English proficiency in the audience, but also of subject knowledge”. They believe that more research should be put on creating a common language certificate that could give lecturers the competence to teach these EMI programmes. A research study conducted by O’Dowd (2018) exemplified this previous statement when he examined 70 European universities surveys in the academic year 2014-2015. He intended to analyse the current practices regarding the training and accreditation of university EMI teachers in Europe. The author focused on three main aspects: the level of importance of EMI at their universities, the structure and content of EMI training courses, and the qualifications required to teach through English. When analysing the results related to the teachers’ qualifications needed, the results appeared to be surprisingly inconsistent and lacking agreement among the different institutions. As exemplified and based on the Common European Framework of Reference, 43% of the institutions said that a B2 level in English was required, while 44% asked for a C1 level, and 13% a C2 (O’Dowd, 2018). More research should focus on this lack of consensus, and a clear agreement by universities and the whole European HE area is suggested. In Catalonia, there exists the Catalan Interuniversity Commission for Language Training and Certification (CIFALC), formed by the language service departments of all the Catalan universities. Their aim is promoting and guaranteeing the access to language training and certification for university staff and students. This institution coordinates language teaching projects; promotes the cooperation among the different university languages services and organises their own university examinations to obtain the certificates, all of which are validated by the Catalan universities. Moreover, some Catalan universities also offer the possibility of obtaining the CLUC-EMI certificate, whose main objective is to certify the level of language

competence required to teach in higher education contexts. This certificate is addressed to tertiary lecturers who teach EMI classes. What is clear is that the teachers' linguistic proficiency is key to quality teaching in EMI. This is also corroborated by Tatzl (2011) when reported that the students participating in his research said that the teachers' English language proficiency is important for them, concretely when one of the strongest suggestions they made referred to the need to improve their lecturers' English language skills.

In a similar vein, the study carried out over three years by Escobar and Sánchez (2017) in the Autonomous University of Barcelona also revealed that the students participating in their research also demanded that all lecturers had the C1 English language level. The students even asked for a native lecturer to teach classes, and they expressed their concerns regarding their success learning the subject contents.

Another possible resource to deal with teachers' English proficiency language level and their teaching in HE programmes would be to enrol to the tests offered by Cambridge (University of Cambridge ESOL Examinations, 2019). They offer different modules, such as language learning and teaching, lesson planning and use of resources for their teaching, and also CLIL and Young learners' modules. A specific module found in the handbook is called "TKT: CLIL". The mentioned module prepares teachers on how to plan lessons, knowledge of tasks and resources to support the CLIL methodology. These kinds of modules should be considered as part of the EMI lecturers requirements when they are involved in bilingual programmes in HE institutions.

As it has been exemplified, requiring common English language proficiency levels for EMI professors is thought to be a must when designing bilingual programmes, as well as the extra linguistic support courses that accompany this statement. However, not only do EMI lecturers need assistance, so do the students enrolled in EMI programmes as they also face these language disadvantages. One of the weak aspects of the EMI programmes established in the universities is knowing to what extent the language proficiency of the students can affect their success in the programme. This was one of the questions posed in the study by Rose et al. (2019),

when they realised that lower proficiency students were at a disadvantage compared to their higher proficiency classmates. The authors indicated that “one way to increase students’ chances of success in English taught programmes is to support growth in students’ general English language proficiency” (p. 12). Therefore, what these authors suggested is the need to offer specific classes which deal with vocabulary, language and academic needs associated with the areas of study.

Knowing the appropriate English Language proficiency level of a student to succeed in an EMI class is a challenging aspect, and different features need to be considered to know how to deal with this issue. The students’ language proficiency level varies across countries, and it depends on many aspects, such as culture, education and society. As suggested by Doiz, Lasagabaster and Sierra (2012), the context plays a key role in this decision, as for example, the Northern countries have a greater presence of the English language in their context, compared to the Southern countries, such as Italy or Spain, where the English proficiency language levels are lower. Despite the added linguistic advantage students may have thanks to their geographical location, these researchers (Doiz et al., 2012) also stated that this would not ensure high English language levels. They reasoned this by saying that some students with a good command of BICS were not good at CALP, and that would play against them in EMI classes. One of the authors’ proposals was screen students, using language test to determine which students would be part of these programmes. However, they also stated that more research should be done on the topic to find clear ideas on how to face the student’s CALP situation.

University institutions should ensure an optimal context in which students could have the opportunity to enrol in EMI or CLIL programmes without this linguistic obstacle. At this point, and according to what Schmidt-Unterberger (2018) proposed, it might be necessary to consider the incorporation of ESP or EAP courses in EMI or CLIL programmes and offer them to those students interested. As she stated: “(...) a combination of EMI courses and explicit ESP and EAP instruction is the more realistic model for the implementation of English-medium programmes

at most higher education institutions” (p. 534). This could be seen as a pedagogical implication to consider when designing EMI or CLIL programmes.

The incorporation of the EMI approach in HE contexts was mostly justified in its beginnings by the internationalisation of their programmes, and the attraction of foreign students. However, the incorporation of EMI is increasingly more frequently justified as a great opportunity for developing the English language proficiency of both students and lecturers (Arnó & Mancho, 2015; Block & Moncada-Comas, 2019). Moreover, some studies related to the teacher and students’ beliefs towards the incorporation of EMI programmes have placed value on the English language skills both can develop thanks to the programme (Aguilar, 2017; Arnó & Mancho, 2015; Dimova, 2020; Macaro et al., 2018; Tatzl, 2011).

For this reason and as it has been exemplified, the EMI approach needs to be empowered with a series of language strategies for this kind of programme. On the one hand, there should be a consensus on the language level EMI lecturers are required, and a common decision should be made among European universities (EHEA association), and if possible, around the world, to establish their minimum proficiency level. Several authors, based on some students’ opinions, revealed that this should be a must in these programmes (Escobar & Sánchez, 2017; O’Dowd, 2018; Tatzl, 2011; Klaassen, 2008). On the other hand, it is also important to give special attention to the type of language lecturers are considered to know. As it has been described by some authors (Freeman et al., 2015; Klaassen, 2008), EMI lecturers should focus on specific language constructs that enable them to put emphasis on the language skills to be used in class, and which should be best for the students’ learning. Specific language strategies and techniques are considered essential to be part of EMI lecturers’ courses. Moreover, much more emphasis should be given to the English language proficiency level of the students enrolled in EMI programmes. As previously described (Doiz et al., 2012; Rose et al., 2019), these students need to be acquainted with the necessary English BICS and CALPS to be involved in an EMI

programme, and maybe, some kind of extra language courses need to be offered to help them succeed.

By giving such relevance to language learning in the EMI approach, this may lead to a change of paradigm, becoming one of the objectives of EMI dealing with the participants' language learning development. Block and Moncada-Comas (2019) stated that this "(...) shift to the inclusion of language learning as an aim of EMI means that EMI becomes CLILised" (p. 3). In fact, it does if there is a "dual-focus" aim as the main objective of the programme. In their study (Block & Moncada-Comas, 2019), the authors showed evidence of this mismatch between what lecturers' beliefs of their EMI role was within the HE context, and their real EMI class development. The results indicated that lecturers considered themselves EMI teachers who were not teaching any grammar or language at all, and that this was not their objective. However, when their EMI classes were analysed, the usage of some pedagogical strategies associated with English Language learning were found, such as the usage of the L1 in order to clarify, translating concepts and also, the creation of glossaries to work on the vocabulary.

A clearer and updated policy for the implementation of the EMI programmes needs to be determined in HE the context to establish common guidelines that could make the most of these programmes.

1.4.2. Teacher training programmes for EMI tertiary lecturers

Not only does the language level imply the teachers' success in an EMI or bilingual programme, apart from coming into an agreement on the teachers' language level required in HE, another requirement refers to the training programmes that should be offered to EMI teachers. The article by O'Dowd (2018) evidenced that 30% of the institutions participating in the study did not consider it important to offer this kind of course to EMI teachers, and that 30% did not offer any type of course. This information is contradictory with the teachers' attitudes about EMI programmes, as some researchers demonstrated that this lack of teaching training programmes

was a weakness, and that teachers were asking for more assistance and support, more pedagogical orientation on EMI and CLIL, more support on teaching in English, and their language level (Aguilar, 2017; Arnó & Mancho, 2015; Dearden & Macaro, 2016; Jensen & Thøgersen, 2011; Jiang et al., 2019; Pecorari et al., 2011). Greater attention is required to what the training courses offered should include. As stated by Drljača Margić and Vodopija Krstanović (2018) in their study:

It is likewise vital for a higher education institution to realise that the development of a language training programme for staff is a key prerequisite for maintaining standards and assuring the quality of EMI. (p. 24)

These authors carried out a study with 60 university content researchers of different disciplines from the University of Rijeka (Croatia). The participants took part in a language development programme for EMI, whose main objective was to develop English for teaching purposes and teachers' academic discourse. The participants' satisfaction with the programme, their learning and the effectiveness of the programmes were analysed. The results of this study showed that teachers expressed having improved not only their language skills but also their pedagogical knowledge (Drljača Margić & Vodopija-Krstanović, 2018). The teachers reported having improved this pedagogical knowledge by "(...) being learners, observing others teach, making sense of their own teaching and reflecting on these experiences" (p. 21). Moreover, the participants also appreciated "(...) the oral and written self-reflections, the oral and written peer review and the course instructors' oral reflective feedback" (p. 21). Their teaching strategies were enhanced, and they were open to enrol in more teacher training programmes. The lecturers participating in the study showed a positive attitude towards academic English for specific purposes. However, the lecturers also expressed some improvements should be made, as more funding should be needed to allow for smaller groups of teachers, which would give more linguistic and teaching opportunities to participants; more contact hours and more advanced follow-up programmes were also required, so they would help lecturers improve their

teaching practices more confidently. Peer-support groups were proposed by the participants to ensure continuous development and to foster the EMI teachers' autonomy with face-to-face meetings between content and language specialists.

In a similar vein, Costa and Coleman (2013) presented the situation of tertiary level English-medium teaching in Italy, with the participation of 38 universities. Among all the questions analysed, the one related to teachers and teaching styles described that 77% of the universities claim that no teacher training was provided. A total of 15% said that the universities had provided a language course and just 8% had offered methodological training. Given these results, there is a lack of pedagogical and linguistic support for EMI teachers.

Another study that analysed the lecturers' previous experience with EMI programmes, and which was carried out at the University of Padova (Guarda & Helm, 2017), also confirmed the need to incorporate a teacher training course for EMI teachers in order to ensure the quality of the English-taught programmes. The study was divided into two phases. The first stage focused on the strengths and weaknesses of the teachers' use of English, together with their concerns about teaching through the English language. 115 lecturers from different faculties participated in this first stage. The second stage was carried out after the lecturers had participated in the Language centres support activities, and the impact they perceived was analysed. Among all the aspects analysed, it is worth mentioning that 90% of the teachers expressed serious concerns related to their teaching methodology. They mentioned "a lack of training in teaching through a foreign language" (p. 11), together with a weak command of oral skills, vocabulary, fluency, and inadequate knowledge of grammar. Contrary to these results, these teachers' expectations were shown to be positive, in the sense that they wanted to learn more about teaching methodology and practices. For instance, some teachers expressed that "It would be very important for me to receive guidance on how to organise my lectures" (p. 13), or they wanted to improve their "English in social situations and in interaction with students" (p. 14). Regarding the results after teachers had attended the language courses, it can be said that most of the lecturers were

positive, in the sense that the courses offered had promoted their self-confidence and communication skills, thanks to “hand-on activities (short presentation) (...) as well as by the personalized feedback that the participants received from their trainers” (p. 15) (Guarda & Helm, 2017). Moreover, the teachers’ self-confidence and communicative skills were stimulated because of the new strategies learned. Analysing their comments, the authors showed that “teachers had gained from collaborating together, building relationships, and learning from each other” (p. 17). As stated in Guarda and Helm (2017), this relationship among the teachers created a community with similar interests and concerns related to their teaching practice, and most of the teachers proposed continuing participating in these professional courses together. Another gain that was observed was the increase of students’ participation in class and their approach to the course. This was thanks to the teachers’ promotion of students’ active participation in class by asking them questions or making them collaborate with the contents. Increasing the use of technology as a strategy to foster participation and group work was also positively commented by the participants of the study. All the feedback received from the EMI lecturers is key to deal with the many issues regarding the professional development of teachers enrolled in EMI courses.

In one of the studies previously described above, concretely the one by Ole Hellekjaer (2010), the author reported that the students experienced lecturer comprehension problems due to the English language, and those specific actions should be taken to ensure the effective students’ learning. Hellekjaer (2010) proposed a series of improvements related to teaching and course design of EMI programmes. Some of these proposals are related to help lecturers improve their English proficiency, by speaking clearly and distinctly, by working on their pronunciation, stress, and word segmentation. Moreover, it is considered that more time should be spent on revising key terms and concepts before the lessons. For instance, the creation of a space where students can ask lecturers for clarification of content-related concepts would be a good option. The author also proposed that the lecturers should deal with “interactive discourse structuring” to

provide information about what they are doing in the lesson. Visual aids are also considered relevant and lecturers should use them to support their teaching and the students' understanding. Finally, another point to mention is the one related to introducing language learning goals to EMI courses. The author suggested that lecturers should consider language issues when teaching and designing their courses so as to help the development of their students' English language proficiency. Students should write papers and give presentations in English. Close cooperation between the content and the language teacher is required.

What emerges from the studies described in this section is that EMI teacher training courses should not only focus on sharing strategies on linguistic or pedagogical skills, but a wider range of aspects need to be considered and be part of this transformative situation. The incorporation of EMI programmes in HE contexts has been of great importance worldwide, and the resources provided need to match such importance. Dafouz (2018) proposed a three-fold manner to deal with EMI programmes. The first aspect to consider would be that EMI programmes should be part of the institutions continuous teacher professional development programme and teachers' needs to be covered. Then, pedagogical strategies and reflective practices need to be incorporated in these programmes, together with English language proficiency skills, specifically linked to the courses to be taught. Finally, these programmes must consider teachers' ideological forces and identity issues. As exemplified in the article (Dafouz, 2018), they are key elements that can play a vital role in EMI practices and processes that are developed in EMI classrooms.

Similarly, Pavón and Gaustad (2013) also highlighted the importance of developing quality bilingual programmes, focusing on two principal issues reported by teachers: the language and the methodology. On the one hand, these authors proposed continuous teacher training, in the form of specific courses or seminars, that would help them delve into the principles of bilingual education and CLIL, and which would focus on more innovative and participatory activities and

practices. On the other hand, specific L2 language courses for lecturers would be essential to ensure that the students acquire the subjects' content.

Escobar and Sánchez (2017) considered that continuous teacher training would be necessary for any teachers involved in bilingual programmes. An integrative approach regarding the objectives, the learning activities and the assessment criteria needs to be adequate for these types of programmes. Therefore, training regarding the CLIL methodology would be key for all lecturers involved in these programmes.

The research mentioned so far has proved that more educational and linguistic support should be given to university teachers, from language courses that raise the lecturers' language proficiency, to more pedagogical seminars that provide successful classroom strategies. Several educational actions have been listed by the previous scholars, but little emphasis has been placed on the discipline-specific academic literacies provided to students. It is not enough to write an essay on a specific discipline, but it is also relevant to know what its communicative purpose is and what technical conventions should be considered for these EMI courses. These drawbacks are thought to be associated with the time constraints of the content lecturer, who prefers to put much more emphasis on the content rather than on the language of instruction. Mancho and Arnó (2017) gave evidence of this topic in their study when analysing the academic literacy practices of EMI lecturers from the University of Lleida (UdL). Their findings showed that teachers explicitly requested more ESP-EMI collaboration and they proposed that an ESP specialist would be necessary to deal with the disciplinary language teaching issues in their EMI classes. Teachers' unwillingness to guide the students' language instruction makes it necessary to incorporate this figure. As the authors (Mancho & Arnó, 2017) proposed:

ESP instructors can collaborate with EMI lecturers in the design of genre-based EMI courses as well as training programmes that make disciplinary literacy visible. Thus, EMI students will benefit not only from EMI instructors' comments on the contents of the

texts produced, but also on how to use language to produce the desired communicative/social effects in disciplinary communication. (p. 286).

Dealing with linguistic and communicative issues of a specific discipline is considered a must in EMI classes, and given the present situation regarding EMI lecturers, the figure of the ESP specialist should be considered to complement these programmes.

To conclude, considering the shortage of EMI training universities offer to their lecturers in charge of these programmes (Costa & Coleman, 2013; O'Dowd, 2018), it is necessary to put much more emphasis on this topic, and contrast the situation with the actual lecturers' demands. Several authors (Costa & Coleman, 2013; Drljača Margić & Vodopija-Krstanović, 2018; Guarda & Helm, 2017; Ole Hellekjaer, 2010) have provided evidence of the importance of these EMI courses, by showing that both, EMI lecturers' English and pedagogical skills, have improved once participated in them. As shown in this section (Costa & Coleman, 2013; Drljača Margić & Vodopija-Krstanović, 2018; Guarda & Helm, 2017; Ole Hellekjaer, 2010), there is a strong necessity to offer more strategies to EMI lecturers on how to organize their lectures, on how to give feedback to students, on how to foster students' participation, on how to deal with more innovative and active methodologies in class, and on how to deal with communicative skills in class. For this reason, some researchers proposed that EMI courses be incorporated in the EMI programmes offered by the universities (Dafouz, 2018; Pavón & Gaustad, 2013), as well as an ESP figure who would deal with linguistic issues and complement the content teacher in class (Mancho & Arnó, 2017). Ultimately, this would ensure the continuous and necessary learning of EMI lecturers, and at the same, it would maintain a certain type of coordination within the same university.

1.4.3. Designing bilingual programmes: what to consider

The adoption of EMI programmes in HE does not strictly imply, by nature, any kind of change or adaptability in the methodology of the class, the students' practice, or the lecturers' kind of

teaching. In fact, EMI was conceived and initiated as a top-down process, with the principal aim of internationalising the university offer rather than focusing on the students' outputs (González & Barbero Andrés, 2018). However, since the dissemination and implementation of the EMI approach in the HE settings around the world, many difficulties have arisen regarding the different agents involved in it, and many researchers have deepened in its weaknesses and drawbacks in order to propose an adequate teaching and learning context or even a change of paradigm towards a more CLIL methodology. Despite the reason behind its origin, universities, nowadays, need to face up to this situation, and provide appropriate resources and techniques to confront the diverse challenges this method is presenting. Several studies have been conducted regarding the positive language results, good practices, and useful resources to foster EMI programmes in HE stages. In fact, many universities are starting to introduce the CLIL methodology in its programmes, as it provides a clearer pedagogical and educational structure. This section provides a series of studies that deal with the implementation of bilingual programmes in HE settings. Concretely, different research shows educational tips on how to successfully implement EMI or CLIL programmes, and what strategies could be used to improve them.

Pavón and Gaustad (2013) believed that successful HE bilingual programmes could contribute to changing the graduates' profile and improve their language skills. However, they also confirmed that these plans should be designed following a series of strategies that would contribute to an ideal design of bilingual programmes. The authors reported that in order to design a bilingual programme, there are four main aspects that need to be carefully considered, which are: the linguistic objectives, the academic objectives, the timeline objectives and the available human and material resources. At the same time, universities need to overcome some initial problems that, as Pavón and Gaustad (2013) said, "will determine the characteristics of the programme" (p. 86). These obstacles refer to the difficulty students may have in assimilating complex academic content through an FL, the language proficiency of the teachers; and the

methodological training of the teachers. In order to overcome all these drawbacks, the authors suggested focusing on five key aspects, that refer to: time sequencing, training; coordination; language support; and complementary measures. When referring to time sequencing, the authors emphasized that the implementation of the English language in the degree programme should be gradual to enable students to achieve the required level and improve towards the new needs. For instance, the authors (Pavón & Gaustad, 2013) wanted to “establish the percentage growth over successive years according to the language requirements and the time set to achieve the first objectives” (p. 87). Regarding the second aspect, the authors put emphasis on the creation of programmes and courses to train bilingual teachers in language and methodology. Concretely, a crucial element would be to offer “specialised courses and seminars to train teachers in the principles of bilingual education and CLIL” (p. 88). As the authors suggested (Pavón & Gaustad, 2013), these courses should deal with issues related to:

Task-based learning, class management, principles of the coexistence of the L1 and the L2, strategies for the collaborative use of the L1 and L2 (code-switching, translanguaging and co-teaching), assessment criteria and tools, collaborative learning, techniques to enhance teacher-student and student-student interaction, criteria for selecting academic content, structuring bilingual lessons, attention to heterogeneous classes, independent learning, designing activities and searching for course materials, use of multimedia and on-line resources (WebQuests, podcasts, browsing, etc.). (p. 88)

The third element to consider when designing a bilingual programme is the coordination necessary among content teachers and language specialists. It is highly important to establish an organisational structure that gives support and coordinates the different resources, actions, and decisions in this new programme. Pavón and Gaustad (2013) suggested “the role of the programme coordinator” for each degree programme. According to them, these coordinators would be in charge of identifying the language needs of the students in the different subject matters and throughout the academic years, regulating and coordinating content and language

teacher meetings, helping teachers in jointly planning their courses and learning objectives, and providing the necessary resources. In a similar vein, Doiz, Lasagabaster and Sierra (2012) proposed the same idea, of team-teaching, by emphasising the collaboration between the content and the language teacher so as to solve linguistic matters in EMI programmes.

Considering that students and teachers' linguistic skills are believed to be one of the drawbacks of the bilingual programmes, another aspect the authors (Pavón & Gaustad, 2013) considered to be essential is related to the language support. It is important to provide linguistic support to students so they can assimilate the academic content. Firstly, the authors proposed:

To coordinate the characteristics and content of the courses, that is, the courses must be of a particular type and serve as a source of specific linguistic resources for all the subjects delivered in the same degree programme. (p. 89).

Not only could this measure be implemented, but there should also be the provision of language support before or during the bilingual courses. Offering the opportunity to foster the language is key to learning the content. For instance, specific language courses like ESP or EAP could be designed for students.

An example of linguistic support in bilingual courses is presented in the recent study done by Roquet, Vraciu, Nicolás-Conesa and Pérez-Vidal (2020), who measured the impact of a 60-hour Adjunct Instruction (AI) course within an EMI group compared to an L1 group who also took the AI course. The main objective of the study was to examine the L2 language and receptive L2 skill-improvement in a 60-hour AI course in two Years of a Dentistry Degree (EMI and L1). The Adjunct Instruction course referred to a language course taught by a language specialist. It dealt with content topics and language associated with the content instruction. The study was carried out at a health science campus at a private university in Catalonia, and the students of both groups had a similar L2 proficiency level at the beginning. The results showed that the EMI+AI groups outperformed the L1+A1 in the grammatical and lexical scores obtained. However, the EMI+AI group did not show any statistical improvement across time, while the other group (L1+AI) did.

The authors explained that the Adjunct Instruction course with a planned focus on form contributed to a grammatical improvement in minimal L2 exposure contexts. The L1+AI group may have found it easier to progress. Nevertheless, the gains of the L1+AI group were not significant enough, compared to the EMI+AI group. Moreover, considering the lexical scores, the results were better than the grammar ones in both groups. Regarding listening and reading skills, the EMI+AI group outperformed the L1+AI group significantly. This may be explained by the fact that EMI instruction favours these academic skills. All in all, the authors suggested that the Adjunct Instruction is a good option to support EMI programmes in HE settings, as they bring significant L2 improvements in listening, reading and lexical skills.

Finally, Pavón and Gaustad (2013) provided a series of complementary measures that could help achieve successful results when designing bilingual programmes. They refer to: creating the figure of a supervisor or coordinator of the bilingual programmes that could control the actions and tasks done in the programmes; adapt the different bilingual programmes offered in a faculty to the context they are in and their specific characteristics and needs; choose the appropriate lecturers when designing bilingual programmes; administer a language entrance exam (validated by the CEFRL) to assure the students' level; offer incentive programmes for teachers (such as recognition of additional teaching load, official certificates, mobility programmes, courses abroad, methodological counselling, course materials) and for students (free language courses, priority when participating in mobility programmes, recognition of bilingual courses) and foster online and technology resources for teaching.

These authors have given several strategies and examples on how to build bilingual programmes in tertiary contexts. It is true that each university context is different, has specific characteristics and requires unique actions, but what could be commonly shared is that clear objectives need to be established, and the language of the stakeholders needs to be controlled to determine specific measures to be implemented in the programmes, such as the training teaching courses and the coordination with the content and language lecturers.

More strategies for the design of bilingual programmes are presented in the study of Martyn (2018), who analysed 72 students' and two teachers' opinions and perceptions of a first year Business CLIL course at Guangdong University. The author Martyn (2018) presented a series of proposals for closer integration between language and content in a CLIL programme. One of the first recommendations the author made was fostering the task-based language teaching approach. The students need comprehensible input in English and working with it in class with the teacher and their peers. More scaffolding, active learning and integration of language skills are necessary. Moreover, the author put emphasis on the wider variety of input or text types that need to be given to students. More focus should be given to recent and current articles to engage and motivate the students and she highlighted that these materials would be better given to students before the class so they could prepare them. Raising the amount of direct interaction between the teacher and the students was also considered key in the study analysed. Students wanted their doubts and questions to be answered and more time should be devoted to solving these questions in class. Finally, Martyn (2018) emphasized "the integrated nature of learning" (p. 100). CLIL programmes should contemplate both the learning objectives for language and for content. This dual focus is key when developing a CLIL programme and as it is exemplified, the assessment grades could include a small percentage for language.

Tsai and Tsou's (2015) study on the accommodation strategies used by EMI lecturers at the University of Taiwan is interesting in this section as it gives practical tools on how EMI teachers can improve their role in classes. The main objective of the authors was to investigate the types of accommodation strategies and their reasons, as well as, to find out the common language clusters used by lecturers in EMI classes. The authors Tsai and Tsou (2015) recognized six strategies (shown in table 2) as the most used ones in EMI classes.

Table 2*Types of accommodation strategies in class*

Strategies	Functions
Introducing	To begin a lecture. To introduce a new idea. To motivate background knowledge.
Defining	To describe specific meanings or concepts.
Listing	To number separate ideas. To order ideas.
Eliciting	To lead further thinking and provide help to students. To think of certain concepts.
Giving examples	To support concepts and make a connection with previous ideas.
Emphasising	To highlight relevant ideas. To capture the students' attention.

Note. Adapted from Tsai and Tsou 2015, (p.7 and 8)

The use of these six strategies by EMI lecturers was based on different circumstances that they needed to face in class. One of the first obstacles was related to content difficulty, and in this case, lecturers used the strategies of eliciting, giving examples and emphasizing. For low and high language proficiency level students, teachers used the eliciting strategy. For instance, for the low-level students, lecturers did it by repeating “(...) the easiest words and sentential structures, paraphrasing, speaking with a slow rate of speech, asking other students to response teachers’ questions, eliciting different point of views to a question and capturing key words (...)” (p. 12.). The last challenge happened when the lecturers could not find any word or sentences to communicate, and they were pushed to use the eliciting strategy to gain more time and add extra ideas or to encourage the students’ participation. All these strategies were important to maintain communication in class, and to enrich their students’ understanding of the content. These EMI lecturers did a great job in adapting their teaching, and their students valued it positively in their feedback. As stated in Moncada-Comas (2020), the research “shows that

teachers need to adapt to the diverse linguistic abilities of EMI students in order to reach intelligibility and maintain discussion.” (p.47)

Another significant topic to tackle on the EMI research is the one related to the teacher-student interactions during EMI classes, concretely, on the types of questions and answers articulated among the participants. In this sense, Hu and Duan (2018) carried out a study at a Chinese university which sought to investigate this comparison, as well as whether instructional medium and disciplinary background could influence classroom discourse. What they found, on the one hand, was that most of the questions made by teachers belonged to a low-order cognitive level (of Bloom’s taxonomy), and which referred to interpreting, explaining, illustrating, recognizing, classifying, comparing, and summarizing information. As stated in Hu and Duan (2018), “75.43% of all the teacher questions in the hard-discipline lessons were at Levels 1 and 2 of Bloom’s revised taxonomy” (p.12). The same happened with the students’ responses, which belonged to the Low Order Thinking Skills (LOTS). On the other hand, neither the discipline background nor the instructional medium influenced the frequency or cognitive and syntactic complexity of teachers’ questions. As the authors suggested, this weak influence could be reasoned by the “floor effect”, and as described “might have resulted from the dominance of traditional Chinese pedagogical practice and the teachers’ suboptimal facility with English” (p.14). It was also believed that the introductory types of EMI courses analysed did not favour the Higher Order Thinking Skills (HOTS).

In the same way, Hu and Li (2017), published similar results when the authors found that after analysing 10 EMI lessons, both the teachers’ and the students’ questions and their responses were cognitively low-order level. As an example, the most common strategies used helped to “recognize and retrieve relevant knowledge, interpret and explain information, compare and classify elements, and illustrate and summarize concepts or themes” (p.197). In addition, referring to the impact of instructional language on the types of questions posed and responses given, results showed that students tended to remain silent when English questions were asked

rather than when the Chinese language was used by the teachers. The teachers felt the need to check the students' understanding of the lesson, and they did it in Chinese, as did the students when answering them, probably because they felt more comfortable. All in all, these results did not favour the methodology used, and they cast doubts on the effectiveness of the EMI approach on the students' English language learning. However, these findings lead us to conclude that more classroom discourse strategies should be shared among EMI teachers by offering more EMI training courses for teachers in order to help them incorporate cognitive processes that regularly went from lower to higher order thinking skills, and that could support the dialogues and interactions between teachers and students leading to the production of final tasks. Moreover, as demonstrated in previous research (Yip, 2004) a coordinated team, more support training and more time for preparation would facilitate the teachers' use of more demanding cognitive strategies.

As L2 research has shown (Lightbown & Spada, 2013), one effective way of acquiring new knowledge in the second language is when the role of negotiation for meaning happens, and this occurs most of the times when classroom discourse takes place. More opportunities to interact with speakers and teachers are necessary, so they can stimulate complex cognitive strategies, which would foster the students' English level even more. Furthermore, Lightbown and Spada (2013) also remarked "the modified interaction" (p.114), or adapted conversational sequences, as a relevant mechanism for providing comprehensible language. The researchers showed some examples of these patterns which refer to "comprehension checks-efforts" (to make sure learners have understood), "clarification requests-efforts (to clarify something that has not been understood), "self-repetition or paraphrase" (to repeat the sentence), as well as the implications referring to gestures, slowing the speech rate or adding contextual information. The use of these linguistic strategies should be highly contemplated in second language classes, especially in EMI and CLIL programmes, where the explanation of content is done through an FL, and the difficulty of comprehensible input is more present.

In a similar vein, Basturkmen (2018) investigated the perspectives of lecturers when using different language discourse strategies to draw attention to language. Two experienced accounting lecturers participated in this study and 8 hours of recordings from their classes were analysed. The results show that lecturers used paraphrasing to say something in a different way; clarifying when there was a little response and repetition to emphasise words. The author concluded that the lecturers under analysis felt they had the need to help their students understand specialised vocabulary, and they did care about their language learning in their subject.

Moving to another topic, concretely the role of the Information and Communication Technology, ICT, it is worth mentioning it when talking about education and more specifically if we refer to the learning of an FL and its teaching. Nowadays, ICTs can provide strong support in class, more particularly in Tertiary education lectures where English is the medium of instruction. ICTs are useful to have access to a variety of information sources, forms and types; to a huge number of real examples and real-life situations or to many applications to solve problems (Oliver, 2002). ICTs provide a series of competences, capabilities, and opportunities to the user; to communicate effectively, to negotiate outcomes, to manage time, to collaborate and develop teamwork skills and to take responsibility for their own learning. Considering the educational and linguistic challenges that EMI programmes present to the lecturers and the students involved, Hernandez-Nanclares and Jimenez-Muñoz (2016) carried out an analysis which showed the positive impact of ICTs on EMI students' academic results. The study was done to a group of 90 participants during the academic year 2012-2013, in which an EMI group was compared to an SMI (Spanish Medium Instruction) group. Both groups sat the same exams and were assessed using the same criteria. The authors explained that the global academic results for 2010-2011 and 2011-2012 showed that the SMI students outperformed the EMI participants in all performance bands. What the lecturers decided to do was to foster student-centred learning and class participation, as well as the use of a flexible method that could compensate

for the English-language mixed abilities. Some ICTs were chosen to deal with this situation, because according to the study's researchers (Hernandez-Nanclares & Jiménez-Munoz, 2016):

The ICT (...) offer traceable materials for content, skills and language, to be chosen by each student, which allowed tracking of the particular effect of these on academic performance; similarly, students would be exposed to differentiated instructional techniques and approaches, so their efficacy were quantifiable. (p. 262).

The findings of the 2012-2013 academic year, when having implemented all the proposed changes, showed that the EMI group outperformed the SMI group. The students who used the ICT interventions proposed by the lecturers achieved higher grades. The interventions used in both courses analysed refer to online preparatory reading and preparatory tasks, twitter-based debates, one module of English online tutorials, expansion tasks and language-centred tools for the other module analysed. To conclude, this research shows that a holistic methodology is key in EMI programmes, especially a method that combines a varied pedagogy that takes into account ICT usage and the face-to-face practices.

In a similar vein, the research by González and Barbero Andrés (2018), focused on sharing the methodological and teaching strategies from Primary and Secondary CLIL teachers to a group of university lecturers in charge of bilingual programmes. The study was carried out at the University of Cantabria and it was divided into two stages. In the first stage, the researchers designed some questions related to general and specific aspects of CLIL for Primary and Secondary school teachers, and they also interviewed ten teachers. From all the teachers' answers, a methodological decalogue for university lectures in bilingual programmes was created. In the second stage, the decalogue was tested in both an 8-hour training course for EMI teachers and in the interviews made to ten university lecturers. The decalogue consisted of the following statements (González & Barbero Andrés, 2013):

1. **Communication is a must.** English should be used as much as possible, but the mother tongue can also be used in case of communication blockage.

2. **Scaffolding is essential.** Identify language demands and provide support strategies. Use visual aids and written language whenever necessary. All students, but particularly all those whose listening skills are not the best, will appreciate the use of slides summarizing the main ideas stated in class. Model and break up the tasks if appropriate.
3. **A reference lexical corpus is required for every task.** Advance work (with warm-up tasks like video comprehension, WebQuests or the like) on specific vocabulary should be done prior to the explanation of cognitively challenging content.
4. **Use ICT,** in particular software and on-line material in English.
5. **Use a student-centred approach.** Put yourself in the students' position. Provide the opportunity for as much hands-on learning as possible. Use pair work and group work.
6. **In assessment, content should be a priority over language:** linguistic competence in the FL is an added value which should be rewarded, but the lack of fluency in the FL should not be a major obstacle for a positive evaluation.
7. **Use diverse assessment instruments:** self-assessment, peer assessment, rubrics, and language and content portfolios.
8. **Repeat and consolidate.** Do not hesitate to repeat, paraphrase, and/or present information in different formats.
9. **Plan carefully in order to be flexible.**
10. **Turn problems into opportunities.** Be bold as far as methodology is concerned and take advantage of this new educational context to work on a different paradigm. Teachers are facilitators and mediators between language and content, not mere transmitters of knowledge. Assess your teaching practice (with instruments like the EPOSTL, or "The CLIL Teachers' Competences Grid"). (p. 18)

In general, the lecturers responded favourably to these statements. Concretely, they completely agreed with points 2, 3, 4, 6, 8 and 9; they partially agreed with the 1, 7 and 10 and they disagreed with statement number 5. This last one implies a greater change in methodology and

the university lecturers interviewed claimed that it is very difficult to work in groups in HE settings, or to change “lectures” for another type of methodology, and that sometimes, students themselves do not want to take the main role in class. As González and Barbero (2018) expressed, teachers “do not seem to be ready to make the deeper changes necessary to implement a CLIL methodology in Tertiary education.” (p. 62). In spite of the lecturers’ positive attitudes towards the Decalogue provided, there still exists a bit of reticence towards a complete change of paradigm in high education contexts. In line with O’Dowd (2018), Costa and Coleman (2013), Guarda and Helm (2017), Ole Hellekjaer (2010), Dafouz (2018) and many others, specific training courses are necessary to help university lecturers be open to new pedagogical approaches and to ease the bridge between the EMI and CLIL methodology. The transformation needs to be done from the bottom to the upper spheres if successful teaching and learning are to take place.

Within the process of designing and implementing a bilingual programme in a tertiary institution, in this case the implementation of the CLIL approach in the tertiary context, we must not forget the leadership figure. It is considered key to have a group of members that act as leaders and coordinators of the process. According to Soler et al. (2014), “the involvement of the members of an educational organization in transformative processes —like CLIL— should be observed as a key factor in education nowadays” (p. 3). This leadership refers to contributing to the design, implementation, and sustainability of the processes to be done in the institution. As the authors of the research suggested, this leadership needs to face the innovative processes that are involved in this new approach, referring to curricular, methodological, materials, organizational and relational innovation. Moreover, guidance also needs to address some stages that are related to the new processes and which are: the setting of the context, the planning, the implementation, the evaluation and the institutionalisation of the new method. Leadership is important to sustain the innovative processes and maintain them along their implementation. This continuous coordinator and guidance would make bilingual programmes successful. Soler

et al. (2014) also suggested that leadership should take care of some key factors, which are: teacher training, collaborative culture, structure, continuity and sustainability, methodologies, resources, and finally, coordination and involvement.

Overall, the incorporation of the bilingual programmes, them being EMI, CLIL or any other approach in HE context requires a series of actions and strategies that affect different stakeholders and that imply a huge change of paradigm in the context where this process is developed. Some universities have started adopting isolated changes towards these bilingual approaches, some examples being the addition of language courses for students or teachers, the teachers' requirement of a minimum English language level, the adaptation of the subject's materials and resources, etc, but the truth is that there are few common models or guides for the whole implementation of these programmes. Moreover, these structural, organisational and pedagogical changes vary depending on each tertiary context and its participants.

As seen in the previous paragraphs, research has been done on this topic, and researchers have shared different strategies and key ideas to be taken into account when introducing new programmes to university degrees and master's programmes. However, these ideas are mostly isolated, focusing on one specific topic of the whole programme. Even though there are few complete guides for the implementation of bilingual programmes in HE, a group of Portuguese researchers (Morgado et al., 2015) developed the *ReCLes.pt CLIL Training Guide* with the objective of sharing the main steps to incorporate the CLIL methodology into the tertiary level. The authors of the project elaborated a theoretical and practical basis for the creation of a CLIL Learning Community. These researchers organised the guide into different parts to describe the whole methodology and its steps. The first part includes the introduction to the CLIL design, with the objectives and learning outcomes of the different sessions, as well as the classroom management models. The second part provides useful materials, methodologies, suggested tasks and organisational aspects for the teachers. The third part focuses on CLIL materials and resources, including scaffolding materials, the use of electronic media and the description of the

terminology-based approach. Finally, the last part of this guide contains the essential research design, which provides a road map for other educational contexts interested in implementing a similar project.

The guide was created with the only purpose of unifying the criteria on the CLIL implementation in their country. As it is described, it covers the most important topics in the methodology. As stated by Arau Ribeiro (2015), the guide previously presented:

(...) aimed to determine the viability of a nation-wide project aimed at the coordinated implementation of local teacher training courses in CLIL which would enable these content teachers to effectively teach their respective courses using English and CLIL methodologies. (p. 21)

Arau Ribeiro (2015) described three best practices over the course of the national ReCLES.pt CLIL's implementation project in HE in Portugal. Concretely, she highlighted the L2 users' opportunities to develop their language as well as their self-confidence because of the increase of support and scaffolding, the positive results derived from the close collaboration between the communities of practice, together with a 10-hour CLIL training course and the well-planned scaffolding for the integration of 2.0 tools. Other lessons and examples are still to be assessed from the national CLIL project.

As a conclusion, this section has discussed the importance of good planning in university bilingual programmes. It has presented different studies that have shown that good organisation and coordination are key for EMI programmes to succeed. On the one hand, more emphasis should be given to the design of linguistic, academic and timeline objectives, as well as to the human and material resources. Not to mention the team teaching and collaboration between content and language teachers, ESP or adjunct instruction, which are key requisites in these programmes (Doiz et al., 2012; Pavón & Gaustad, 2013; Roquet et al., 2020). On the other hand, some authors have proposed different strategies to implement the EMI or CLIL class, which refer

to the usage of scaffolding, different strategies and patterns of classroom discourse, the integrated nature of learning or the use of ICT, among others (Basturkmen, 2018; González & Barbero Andrés, 2018; Hernandez-Nanclares & Jimenez-Munoz, 2016; Hu & Duan, 2018; Hu & Li, 2017; Lightbown & Spada, 2013; Martyn, 2018; Oliver, 2002; Yip, 2004). More tools for teachers were added by Tsai and Tsou (2015) in this section, who shared a list of accommodation strategies used in EMI classes and which have given evidence of their good results in bilingual programmes. Finally, this section has also included a brief introduction of the practical CLIL training guide created by the Portuguese Network Association of Language Centres in Higher Education, which offers a clear guideline for the creation of a learning community in its way to CLIL implementation in HE contexts (Arau Ribeiro, 2015; Morgado et al., 2015). Even though the incorporation of the EMI approach was initially conceived as a top-down process, it has now changed to a down-top process, in which many actions need to be taken to ensure these bilingual programmes succeed.

CHAPTER 2

RESEARCH QUESTIONS AND METHODOLOGY:

In this chapter, the research questions and the method used to carry out the present study are described. The organisation of this chapter is as follows: section 1 presents the objectives of the present research study; section 2 describes the research questions and hypotheses; in the last section, the method is presented, where the context and participants of the study, the design, treatment and instruments used, as well as the data collection procedure are explained in deep detail.

2.1. Objectives

The present study aims to analyse some of EMI subjects from the Primary Education Bilingual Degree of the University of Lleida (from now on called PEBD), and consequently elaborate a proposal of decalogues for the implementation of a more CLIL-ised methodology in the classes of this degree. In order to do that, several EMI classes were recorded to analyse and improve the type of method used in these classes, to finally transform them into CLIL-ised classes. Another aim of the present study was to see the linguistic impact of the EMI method on students taking the PEBD. This second objective is crucial in order to have a whole vision of EMI subjects. All in all, the study intends to add value to the little research done in Second Language Acquisition (SLA) and Second Language Teaching (SLT) field in the tertiary level, as well as to the training of future EMI teachers.

2.2. Research Questions and Hypotheses

The present dissertation will try to answer the following research questions:

RQ1. What is the linguistic impact that the implementation of the EMI methodology has on the English language communicative competence development of students taking the Primary Education Bilingual Plan Degree at the University of Lleida?

Hypothesis 1:

Given that previous research with participants taking EMI subjects shows that EMI has a positive impact on L2 development, it is expected that the students' English language communicative competence will improve at the end of the academic year. Several studies have investigated the effects of EMI and CLIL subjects on students' L2 development in the tertiary level and the results appear to be significant. Chostelidou and Griva (2014) found significant results when the experimental group (CLIL) outperformed the control group in reading skills and content. Omar and James (2014) conducted a study at a university in Malaysia where the CLIL students' language proficiency was higher after following the CLIL model. Like these two study examples, many others have shown the positive linguistic impact on students attending bilingual programmes in higher education (Aguilar & Muñoz, 2014; Ament & Pérez-Vidal, 2015; Loranc-Paszylk, 2009; Roquet et al., 2019; Salaberri Ramiro & Sánchez Pérez, 2015; Yang, 2014).

RQ2. What are the types of teaching methods used in the Primary Education Bilingual EMI classes of this pilot degree?

Hypothesis 2:

Different types of teaching methods are used in the Primary Education Bilingual classes of this pilot degree. Since it is a pilot degree, there is no fixed method on the subjects where English is the medium of instruction. Mainly, EMI is mostly used in all of them. The teachers use their own experience and methodology to transmit their knowledge, and there is a lack of concern among the teachers in this field. Teacher training courses are necessary to establish a systematic

approach that could ensure the benefits of this methodology. Several studies have analysed EMI instruction in different tertiary degrees or master's programmes. Some of them are based on the teachers' role in the EMI classes, showing that more procedures and resources could be used in these classes (Escobar, 2013); or describing the attitudes offered and challenges that EMI is offering (Tatzl, 2011). Considering the CLIL methodology, there exist programmes that favour the implementation of the CLIL methodology in the tertiary level after having done a deep analysis of the context (Herrero et al., 2012). Lasagabaster (2011) confirms that the CLIL methodology is also positive for second language learning as it generates more positive motivational responses than those in the traditional L2 classes. Thus, the methodological approach is key in language teaching and learning. More research should be done in this field.

RQ3. What are the lines to follow for the implementation of a more CLIL-ised methodology in a university context degree?

Hypothesis 3:

Two different decalogues could be established on this proposal. On the one hand, the changes related to organisational aspects. It is necessary to establish actions that could favour the implementation of these CLIL-ised programmes and that take care of the internal changes related to teaching personnel, training, resources, certificates, credit workload, etc. On the other hand, pedagogical improvements could be presented. Some guidelines, considering the different parts of the subjects, such as the analysis of classes, the type of tasks, the subjects' syllabuses, the teacher's role or the materials and resources found in the class, should be established in this Bilingual Plan Degree. Teachers need fixed guidelines and resources on this aspect in order to provide an adequate methodology for students and make their learning process easier and more successful. Arnó and Mancho (2015) affirmed that some guidelines should be established to integrate English for Specific Purposes (ESP) into the new pedagogical method of CLIL. Contero et al., (2018) identified the hurdles and the methodological needs of

the lecturers implementing CLIL classes, which enabled to broaden the scope in the tertiary level. Like them, other studies (Arau Ribeiro, 2015; González & Barbero Andrés, 2018; Morgado et al., 2015) have presented proposals for promoting the implementation of CLIL in the higher educational spheres.

2.3. Method

2.3.1. Context and Participants

The present research was conducted within the Catalan/Spanish university context, concretely, at the University of Lleida, located in the city of Lleida, in the Catalan region. The setting is considered a bilingual context, where Catalan and Spanish are both official languages in the educational field, and the use of a second language is present in some subjects and degrees of the University. The university of Lleida has nearly 14,000 students, and it was founded in 1991. Since the last law passed in 2021 (University of Lleida, 2021), undergraduate students enrolled during the academic years 2018-2019 and forward are required to reach a B2 level (according to the CEFR) in a third language (English, Italian, French and German) by the time they finish the degree. Regarding the law that regulates the accreditation of foreign languages, students have different ways in which to certify this B2 level.

The experimental group is a group of students from the Primary Education Degree, concretely, the Bilingual Degree, which is based on a progressively increasing teaching of the English language together with its didactics.

University context

One of the main objectives of the University of Lleida's linguistic legal framework is to foster multilingualism and plurilingualism among the community, a community that requires the internationalisation of the university. Several actions are listed to promote this objective at the administrative, academic and institutional level (University of Lleida, 2013).

Catalan and Spanish are the institutional languages. The law also considers the learning of a second language within the academic activities, English in this case. According to this framework, a diagnosis done in 2013 in the University of Lleida (University of Lleida, 2013) observed that the language used in the degrees was mostly Catalan (87,8%), and just 9,5% was Spanish and 2,7% English. Note that the language subjects were not considered for this analysis. However, after some years implementing the previous framework, there was another diagnosis done about the usage of languages at the UdL in 2016-2017 (University of Lleida, 2018) and the results are shown on the following table.

Table 3

Usage of languages at the University of Lleida in 2016-2017

UdL	Catalan	Spanish	Second Language	Other
Degrees	83.1%	10%	6.1%	0.6%
PhD	18.5%	44.4%	37.1%	

As it can be seen in the table, most degrees are taught in Catalan, 83.1%. The Spanish language is used in 10% of the classes, and just 6,1% are taught in English. If we compare these results to the ones registered in 2013, there has been an increase in the use of the L2 language but just of 3.4% in three years. In contrast, the results of usage of languages in PhDs are quite the opposite, the L2 language being the most used in 2016-2017 with 37.1%, followed by the Spanish (44.4%) and the Catalan language (18.5%).

No updated data is found nowadays regarding the usage of languages in the degrees in the university from 2016 on, and no language plan has been designed from that moment on either. However, nowadays the situation may be slightly different. Since then, the linguistic policy proposals have been executed. Many degrees have been launched at the University of Lleida, and most of them already consider the L2 as a main requisite in teaching. One example is the Primary Education Bilingual Degree, whose main aim is to offer the possibility to students to

learn the didactics for teaching English at the same time as they are learning the common areas of the Primary Education Degree. Other university degrees offer the possibility to students to take some subjects in the L2, as well as some Master's studies. Not only have the degrees adopted multilingual options, but also have the staff and the teachers, who have gained a better linguistic repertoire thanks to the linguistic courses offered to them, the opportunity to travel abroad, the new recruitment linguistic requirements and the recognition of the L2 at work, among others.

The Bilingual Degree is a new plan in the Degree in Primary Education at the University of Lleida. The beginning of this plan intended to cater for the internationalisation of studies at the university, which had, as its main objective, to include the L2 in its studies.

It started for the first time in 2014 with a group of 20 students. This research was done during its second school year of its implementation and organization. The students enrolled in this Bilingual Degree were recommended to have a minimum B1 English level to enrol; and it was obligatory for them to finish the degree with a B2 English level. The Bilingual Plan is structured within the syllabus of the degree, which is divided into 4 academic years and a total of 240 ECTS credits. During the first two years, students are offered subjects partially taught in English. Once they are in the third and fourth year, the subjects are only in English, as is the Internship and the Final Degree Project. In the following tables (tables 4-8), the different subjects of the Bilingual Plan are depicted, showing in bold the ones taught in English and their time weight within the Degree.

It must be highlighted that the Bilingual Degree guarantees a period **of immersion in a foreign country** where students will have to communicate using the English language. This study abroad experience takes place during the third year of their degree, and students can choose to go abroad for either a semester or a whole year to one of the universities that have an Exchange agreement with the UdL.

Table 4*1st Academic Year Subjects*

Course	Period	Credits	Credits in English
Numeration, Calculus and Measurement	Annual	8	2
Teaching and Learning of Languages I	Annual	7	4
Music and Visual Arts	Annual	9	1.5
Developmental Psychology	1 st term	6	0
Theory, history and educational contexts	1 st term	6	0
Sociology of Education	1 st term	6	6
Psychology of the education	2 nd term	6	6
Didactics and organisational processes	2 nd term	6	0
Family and school	2 nd term	6	4.5
Fostering Sociolinguistic Competence	Annual	6	6

Table 5*2nd Academic Year Subjects*

Course	Period	Credits	Credits in English
Learning and Personality Development II	Annual	9	2.5
Educative Processes and Contexts II	Annual	9	2
Space and Shape	Annual	6	0
Teaching and Language Learning II	Annual	7	0
Work Placement I	Annual	6	1
Geography and History of Catalonia	1 st term	6	0
Teaching and Learning Physical Education I	1 st term	5	3
Learning Experimental Science I	2 nd term	6	6
Society, Family and School II	2 nd term	6	4.5

Table 6*3rd Academic Year Subjects*

Course	Period	Credits	Credits in English
Learning Experimental Sciences II	Annual	9	9
Didactics of Social Sciences. General history of Europe	Annual	9	0
Processing information, statistics and probability	Annual	6	0
Teaching and Language Learning III	Annual	7	5
Didactics of art education	Annual	9	0
Work Placement II	Annual	15	15
Teaching and Learning Physical Education II	2 nd term	5	0

Table 7*4th Academic Year Subjects*

Course	Period	Credits	Credits in English
Teaching and Language Learning IV	1 st term	7	0
Didactics and curriculum development of the English Language	1 st term	9	9
Language and culture in English speaking countries	1 st term	9	9
Work Placement III	Annual	20	20
Final dissertation	Annual	9	9

Table 8*Elective Subjects in the Bilingual Plan Degree at the UdL*

Course	Period	Credits	Credits in English
Diversity in Education I	1 st term	9	0
Diversity in Education II	1 st term	9	0

Didactics and curriculum development of a foreign language	1 st term	9	0
English - French Languages and their cultures	1 st term	9	0
Physical Education curriculum I	1 st term	9	0
Physical Education curriculum II	1 st term	9	0
Musical Education I	1 st term	9	0
Musical Education II	1 st term	9	0
Religion	1 st term	6	0
Health and teacher welfare	1 st term	6	0
School and territory: rural schools	1 st term	6	0
Visual arts Projects	1 st term	6	0
Comprehension of the world through science	1 st term	6	0
Learning to teach with heritage resources and museums	1 st term	6	0
Inclusion I	Annual	6	0

Participants

35 (n= 31 females, n= 4 males) students participated in the present research project. All the participants were Catalan and Spanish bilinguals who lived in Catalonia or the Aragon region, and all of them had previously studied English as a FL at a Catalan/Spanish school.

As can be seen in Table 9, most participants were Catalan-dominant and they felt more comfortable using Catalan at home, even though there were also two Spanish speakers, one Arabic speaker and seven students that used both Catalan and Spanish at home. This will be considered their Mother Tongue (L1 from now on).

Moreover, the table shows more information about the students' linguistic repertoire. All the students consider English their Second Language (L2 from now on). However, some of them have more than one L2 or L3. Ten students have just English as their L2; nine students have Spanish and English; one student has Catalan, Spanish, English, French and German; another one has Catalan and English; one other student has English, French and German; two students have English and German; one student has English and French; three students have Spanish, English

and French; one student has Spanish, English and another unspecified language; three students have Catalan, Spanish and English; one student has Spanish, English, French and another; one more student has Spanish, English, French and German; and finally, one more student has Catalan, English and French as their L2.

Table 9

Students' linguistic repertoire

Mother tongue	Second / Third Language
25 students –Catalan	10 students- English
2 students –Spanish	9 students – Spanish and English
1 student - Arabic	1 student – Catalan, Spanish, English, French and German
7 students - Both Catalan and Spanish	1 student – Catalan and English
	1 student – English, French and German
	2 students – English and German
	1 student – English and French
	3 students – Spanish, English and French
	1 student – Spanish, English and another unspecified language
	3 students – Catalan, Spanish and English
	1 student – Spanish, English, French and another unspecified language
	1 student – Spanish, English, French and German
	1 student – Catalan, English and French

As all the students understood and spoke fluently in Catalan, this language would be considered the L1 from now on. The same happens with the English language, which is considered their L2 by all the students.

Table 10 shows the language level of these students. As mentioned above in the University context, the recommended English language level to do this Bilingual Degree was B1. Most of the students accredited their B1 or B2 level at the beginning of their first academic year.

However, there were four students who did not present any certificate, and one student with a KET level (A2 level). It was thought that these students had passed the internal B1 English language level done by the University before starting their academic year. This is a language level test that the University of Lleida offers the students that cannot accredit any certificate. This test is done in September. For this reason, they might not have had an independently assessed English certificate but did have the University one.

Table 10

Students' language level

Participants	Language level
1 student	A2
13 students	B1
16 students	B2
1 student	C1
4 students	None

An important aspect to bear in mind in this section is the number of students having extracurricular English exposure and the type of such extracurricular exposure. Table 11 shows the number of students attending extracurricular English lessons outside university and the specificity of this exposure during the first year of their studies at University.

Table 11

Amount of students attending L2 classes outside university and its specificity

Participants	Specificity of the exposure
22 students attending L2 classes outside university	English language courses in public or private language schools.
13 students not attending L2 classes outside university	

Table 12 shows the amount of L2 hours per week to which the participants of the study were exposed during the first year of their studies at University. In this part, the university English language classes were considered besides the L2 exposure outside university.

Table 12

Amount of L2 exposure per week (including L2 exposure at university)

Participants	Number of hours exposure/week
4 students	≤ 2 hours
11 students	3-5 hours
15 students	6-8 hours
5 students	≥9 hours

In this group, there were 4 students retaking the same subject for the second time. They did not reach the subject minimum required level and they needed to repeat it again. These students were not present in all the video recordings since they just needed to retake some of the subjects. However, they took the English language tests and they will be part of the analysis.

It must be pointed out that there was also an Erasmus student sharing the degree with them. Since his background and language repertoire was very different from the local participants, he was excluded from the study.

2.3.1.1. Consent form of the participants and ethic policy

In conducting this study, all the participants were informed about its purposes. The participants were given a consent form (Annex 1), which included the following information: The study's title, the participant university, the main researchers' names, and the main responsible researcher's email address, the purpose of the study, the instruments to be used to carry out the study, the explanation regarding the confidentiality of the data, the volunteer nature of their participation in the study as well as their right to withdraw from the study at any stage. Finally, the fact that

these students would have access to their language tests results and video recordings. All the participants signed this document prior to the beginning of the study.

Participants were reminded of these confidentiality issues before a test or a video recording was to be done. They also had the opportunity to ask about their questions and concerns.

2.3.2. Design

The design of this investigation responds to a longitudinal study. As described by Menard (cited in Dörnyei, 2007) “longitudinal research is a research in which a) data are collected for two or more distinct time periods; b) the subjects or cases analysed are the same or are comparable from one period to the next; c) the analysis involves some comparison of data between periods.” (Dörnyei 2007, p.79). This type of research corresponds to a study in which the participants’ information was gathered over a period of time.

The methodological approach used in this study fulfils the above-mentioned characteristics and it allows us to accomplish the objectives of the study: examine the linguistic impact of EMI classes of a cohort of college students taking a Primary Education Bilingual Degree. The linguistic impact was analysed after administering a pre-test and a post-test to the same group of participants at the beginning and the end of an academic year respectively. The type of teaching methods used in the EMI classes was also part of this longitudinal research. Some EMI class’ sessions were recorded during the same year in order to give evidence of the methodology used.

The following table summarises the design used in the present study:

Table 13

Summary of the design used during the 2015-2016 academic year

Linguistic impact	Class methodology
Pre-test _ September 2015	2 sessions of 4 different EMI subjects were recorded during the same academic year.
Post-test _ May 2016	

2.3.3. Procedure and Instruments

The data collection was done during the 2015-2016 academic year. The university students on the bilingual degree were in their first year and they all participated in the pre-/post-test designed. The instruments used to obtain the data for the present study are divided in two different parts: section 2.3.3.1. describes the procedure and instruments used to carry out the language tests, and section 2.3.3.2 focuses on the EMI class diagnosis.

The language tests schedule was sometimes adapted to the students' preferences. The time to conduct the oral test was negotiated with each participant. Otherwise, the general questionnaires were conducted at some class sessions to ensure the highest number of students participated. Students not present that day were asked to complete the questionnaires at unsupervised.

All the language test results were individually sent to the students. The students received the results from their pre-test 1 and their post-test 1. The language results the students received related to their listening skill, grammar knowledge, writing and speaking skills. The document included the following:

1. The number of correct answers from the listening and grammar test.
2. From the speaking and writing tests, some measures were analysed from their answers: number of types and tokens, number of verbs in the sentence to show linguistic complexity, number of sentences with one or more errors, number of correct sentences, and number of syntactic, morphological, vocabulary and spelling errors.

The language improvement from the pre-test to the post-test was highlighted. Some comments were added on the different tests and a final sentence summarised the development they had achieved.

2.3.3.1. Language tests

The students' linguistic tests were divided into two parts: a pre-test, which was administered in mid-September 2015, and a post- test, carried out at the end of May 2016, when the academic

year was nearly finished. The objective was to see the English communicative competence development of this group of students attending these EMI classes during a whole academic year. Two class sessions (pre- and post- tests) were used both times in order to run the linguistic tests. The speaking test was not taken during that same session, since the students needed to take it individually. For this reason, they did the speaking test in a teacher's office, following a formerly agreed timetable. Students were not informed when the written linguistic tests nor the video recordings would take place.

Learners were given one hour and twenty minutes approximately to take all the tests but the speaking, which took place in an office and lasted about 5 minutes. The order in which the tests were administered and time allotted to each test was as table 14 shows:

Table 14

Type of tests, kind of exercises and time allotted

Session 1	Type of test	Exercises	Time
	Oral Skills	Two exercises of multiple-choice answer	15 minutes
	Writing skills	One exercise of production	20 minutes
	OPT Grammar test (Quick Placement Test (UCLES, 2001)	60 gapped sentences to be completed with multiple choice options (3 or 4) and progressive in difficulty.	40 minutes
Session 2	Speaking skills	One exercise of production	5 minutes

All the instruments were previously piloted with other students of a similar EMI class and given the positive feedback, they were used in the present research. Annex 2 shows all the tests used in the research done.

Table 15 shows the instruments used to obtain the data of the linguistic tests.

Table 15

Linguistic test instruments

Production	1. Written ability 2. Speaking ability	1. Composition (a comic strip) (Tavakoli & Foster, 2011) 2. Oral description (a comic strip) (Tavakoli & Foster, 2011)
Comprehension	3. Oral ability	3. Multiple choice and filling the gaps format listening test. (<i>Cambridge English Advanced 2015</i>)
Lexico-grammatical ability	4. Grammar test	4. OPT grammar test. (<i>Quick Placement Test (OPT)</i>)

2.3.3.1.1. Grammar and Vocabulary test

The grammar tests analysed the lexico-grammatical ability of the students. An Oxford Quick Placement Test (OPT) grammar test (UCLES, 2001) was distributed to all the students. There were 60 graded level multiple choice questions. The test itself provided the results and their interpretation according to the number of correct answers.

2.3.3.1.2. Writing and Speaking tests

In order to gauge production development, a written composition was administered to students, in which they were asked to write about six different pictures forming a comic strip (Tavakoli & Foster, 2011). Twenty minutes was the time given to do this writing task.

The speaking production was elicited from a different group of six different pictures forming a comic strip (Tavakoli & Foster, 2011). The students were previously given two minutes to have a look at the images. There was no time limit to do this speaking test.

2.3.3.1.3. Listening test

In order to analyse comprehension, a listening task (multiple choice format) was administered. The listening level belonged to the C1 level, according to the Common European Framework of Reference for Languages (CEFR). Two exercises from an online Cambridge Advanced exam (revised exam from 2015) were used. The first exercise consisted in completing eight sentences with the missing gapped text. The second exercise had six questions with four possible answers each. The students listened to the audio files twice, and they were given some time to read the questions prior to starting the test and afterwards to finalise their answers.

2.3.3.2. EMI classes' diagnosis

In order to collect information about the types of teaching methods used in the PEBD EMI classes, different instruments were used in this research. These instruments refer to several EMI class recordings and the creation of specific surveys to analyse the recordings. They were used during the same academic year 2015-2016 and the same group was involved.

2.3.3.2.2. Surveys

The instruments used to analyse the video recordings were six different surveys. Concretely, these surveys were related to different parts of the EMI class methodology. The questions focused on the essential elements that define the teaching processes. The objective was to take evidence of these actions in order to analyse the Bilingual Degree. The surveys used were about the teachers, students, tasks, material, class development and syllabuses. Deep research on different CLIL methodological theories (Coyle, 2010; Mehisto et al., 2008) was done to get the main premises to create and analyse the kind of methodology used in the EMI classes recorded. This way, the surveys could help experts diagnose the current situation and the possible weaknesses of the PEBD, and therefore, enable improvement actions for a better protocol of this plan.

The six different surveys were formed by a set of questions with a variety of possible answer typologies: multiple-choice answers, yes-no answers, open answers, rating, etc. The online forms tool Typeform was used to create the surveys mentioned. Annex 3 shows the 6 different surveys created.

The following, table 16, shows the list of surveys used and their main aim.

Table 16

Summary of each survey content

Survey	Aim
Teachers	<p>The objective was to collect information about the professors' teaching method and roles in class. The questions were basically related to:</p> <ul style="list-style-type: none"> a) the teachers' language usage in class b) the linguistic opportunities given to the students to communicate c) the linguistic skills developed in the class d) the teachers' accessibility e) the teachers' language choice when solving doubts
Students	<p>The objective was to investigate the students' language usage and their kind of participation in class. Different aspects were observed:</p> <ul style="list-style-type: none"> a) language used when asking in class, when translating words or when clarifying doubts b) language used when participating in class c) when the students participated in class and how they communicated with teachers
Tasks	<p>The objective was to collect information from the tasks done when attending the EMI sessions. The aspects analysed were:</p> <ul style="list-style-type: none"> a) language used by the students and teachers in class. b) class and students' organisation b) kind of tasks done in the session c) correction of the tasks and feedback given
Materials	<p>The objective was to know which language was used in the materials provided to the students.</p>

Class development	<p>The objective was to have a clear description of the EMI class. Different aspects were considered:</p> <ul style="list-style-type: none"> a) class organisation b) when the teacher used the L1 and the L2 c) when the students used the L1 and the L2 d) the students and teachers' setting arrangement e) the teachers' role
Syllabuses	<p>The objective was to analyse the syllabus and course guides in order to know about:</p> <ul style="list-style-type: none"> a) the objectives proposed b) the evaluation processes c) the language used d) the bibliography and resources provided e) the language level required

Piloting and validation of surveys

A pilot test of these surveys was done. This pilot study took place right after the creation of the surveys in September 2015. They were tested in an EMI subject called Sustainable construction at the Polytechnic College at University of Lleida. It was a two-hour class where there were students in their fourth year of their degree. The researcher observed the class and used the surveys prepared to analyse one session. The researcher made a list of comments for each survey after piloting the test in order to improve areas that caused confusion. The changes proposed were basically centred around improving the final version of the surveys. There were different types of adjustments in the surveys: modification of the questions' meaning, adding parts of a question, correcting some grammatical structure mistakes, erasing not relevant information, clarification of words, etc. Finally, after revising all the proposals, the changes were made, and the surveys were modified in order to make them more feasible.

Here in table 17, there is a list of the most remarkable changes made to the surveys. As can be seen in the table, the examples presented refer to improving aspects related to correction,

clarification and addition of concepts or parts of sentences. Most of the ideas proposed were executed. The rest of them can be found in annex 5.

Table 17

Some of the changes made to the surveys

Survey	Examples of changes to be made
Teacher	<p>Q.14: Specify that this question is only used if students are in doubt.</p> <p>Q.17: Correct the mistakes in the question.</p> <p>Q.19: If the answer is less than 100%, a question needs to be added asking about the language used.</p> <p>Q.20: Add a question to ask “how the teacher promotes students to use their L1 or L2”. It is interesting to know this data.</p> <p>Q.22: Clarify the meaning of “create opportunities”.</p> <p>Q.24: Change “L1 and L2” for “Catalan and Spanish”.</p> <p>Q.26: Decide if this question remains in the survey.</p>
Students	<p>Q.10: Add the option “don’t speak in class”.</p> <p>Q.15: Add the option “other”.</p> <p>Q.17: Add the option “L1”.</p>
Tasks	<p>Q.10: If the answer is “yes”, a direct question asking “is the activity the continuation of another day” should be added. This can be done in class.</p> <p>Q.13: Add a question before number 11. “What is the language that the students use when addressing the teacher?”</p> <p>Q.22: Add the option “continuation”.</p> <p>Q.23: There is a mistake in the word “critiquing”.</p> <p>Q.34: Add the question “how is the vocabulary revision done?”</p> <p>Q. 38,39,40: Add the definition of concepts to clarify doubts.</p>
Material	<p>Q.9: The link to the following questions needs to be checked.</p> <p>Q.12: Add “No tasks done”.</p>
Class development	<p>Q.22: The link to specific questions does not work correctly. This needs to be checked.</p> <p>Q.25: Add the question “What do you use if for?”</p> <p>Q.26: Add the % the teacher speaks. Knowing how long the teacher listens would be useful.</p>
Syllabuses	<p>Q.11: If the answer is “None”, the student should skip question 12.</p>

Q.12: Explain what competences means.

Q.15: Explain what cognitive means.

Q.36: Change the word “units” for “planning document”

All in all, the piloting study was key, so it provided a first contact with the surveys created and it was highly necessary to make basic changes that improved the first proposals.

The validation of the surveys consisted in a group of nine experts verifying two of the surveys created and used to analyse the EMI classes observed. It was considered that the *Teachers and the Activity surveys* were highly relevant to be validated, considering the amount and kinds of questions in each of them. The experts were asked to grade each scale of each question on the surveys, from 1 to 4, being 1 the least important and 4 the most important. Table 18 shows the scales considered:

Table 18

Scales considered in the pilot study.

Importance	The degree of significance of the item for the study
Appropriateness	The degree of adequacy of the item within the category which it is found
Observability	The degree to which the item can be observed for its analysis
Uniqueness	The degree to which the item can be understood or interpreted unequivocally

The results were obtained in Excel format and they were analysed. Firstly, the average of each question scales was calculated. The scales obtaining an average of three out of 4 were considered correct and reliable. However, the items with a low punctuation according to the scales under consideration were modified. What’s more, some questions obtaining a two or less in all scales were changed. Some experts made general comments at the end of the surveys. They were positively admitted, and they were taken into account in the construction of the

surveys' final version. The final version surveys, together with the comments made to each surveys' questions, are included in annex 6.

Table 19 presents some of the results of the questions' scales made by the experts. The average of the questions' examples is presented, together with a comment. More information is given in annex 6.

Table 19

Changes proposed after piloting for improving the surveys

Surveys	Questions	Punctuation	Justification
Teachers	<i>Q.22_ Do the teacher and the student agree on the class and subject norms?</i>	This question obtained the following scores: Importance = 3 Appropriateness = 3 Observability = 2 Uniqueness = 2	The average is 2.5. This question was removed because it was difficult to observe this aspect in a random class recording.
	<i>Q.24_ What is the percentage of learning focus in class?</i>	This question obtained the following scores: Importance = 2 Appropriateness = 2 Observability = 2 Uniqueness = 2	The average is 2. As the results indicated, the question was removed because of the experts' recommendations.
	<i>Q.32 and Q.33_ 32. Does the content teacher have any meetings with the L2 teacher? 33. How often (on a yearly basis) do the content and the language teacher meet?</i>	These two questions were highly scored, both averaging 4 in all the question scales.	They were removed from this questionnaire because they were already used in the questionnaire given to the EMI teachers. Therefore, the information would have been repeated.

Tasks	<i>Q.5_ What is the percentage of students using each of the languages chosen in the previous question?</i>	This question obtained the following scores: Importance = 4 Appropriateness = 4 Observability = 3 Uniqueness = 3	The average is 3.5. Even though the score was over 3 points, it was decided it should be removed, as it was very difficult to get a percentage on the students' language use in class.
	<i>Q.40_ How does the teacher give feedback to students?</i>	This question obtained the following scores: Importance = 4 Appropriateness = 4 Observability = 4 Uniqueness = 3	The average is 3.75. The question was necessary in the survey; we added the words "during class" to make it more unique and specific.
	<i>Q.41_ Does the teacher assign the activity for homework if it is not finished in class?</i>	This question obtained the following scores: Importance = 2 Appropriateness = 2 Observability = 4 Uniqueness = 4	The average is 3. This question was removed from the survey. According to the experts, it was not important nor appropriate at the university level.

2.3.3.2.3. Video recordings

Video recordings were used to collect information of the different EMI classes during first year Bilingual Degree sessions. Four different EMI subjects were recorded; two took place in the 1st term and two in the 2nd term. There are a total of eight sessions recorded, two sessions per subject, which adds up to 14hrs of video recording. The recordings were obtained in MP3 format and they can be found in annex 7.

Table 20 shows the EMI subjects recorded and the amount of hours devoted to them. The dates when the recordings took place are also included in the table.

Table 20

Recordings of the EMI subjects

Subject	N. sessions	Hours
<i>Numbering, Calculus and Measurement (6 ECTS)</i>	2 sessions	Session 1= 1hr
1hr class	-18/11/2015	Session 2= 1hr
	-16/12/2015	Total = 2hrs
<i>Sociology of Education (6 ECTS)</i>	2 sessions	Session 1: 2hrs
2hrs class	-14/12/15	Session 2: 2hrs
	-15/12/15	Total= 4hrs
<i>Family and School (6 ECTS)</i>	2 sessions	Session 1: 2hrs
2hrs class	-29/04/2016	Session 2: 2hrs
	-13/05/2016	Total= 4hrs
<i>Fostering Sociolinguistic Competence (6 ECTS)</i>	2 sessions	Session 1: 2hrs
	-29/04/2016	Session 2: 2hrs
	-13/05/2016	Total= 4hrs
		Total= 14hrs

As explained above, there were more subjects in this Bilingual Degree where EMI was the methodology used. However, only the teachers of the subjects detailed in the table above allowed the researchers to record the sessions. It was considered that recording two sessions of each subject would be enough to have a clear and useful vision of the methodology used in their EMI classes.

2.3.3.3. Teachers' and students' questionnaires

2.3.3.2.1. Questionnaires

Two different questionnaires were administered to both students and teachers to control for some variables related to their linguistic profile, attitude and contact with the target language usage.

The students' questionnaire was run at the beginning of the academic year, starting September 2015, together with the linguistic test. The questionnaire was designed using the online survey tool Typeform and it took around 10 minutes to complete.

The teachers' questionnaire was administered during the first term of the same academic year (September-December 2015). A message was sent only to the EMI teachers who were going to be teaching to the experimental group during the first 2 years of their degree. The main aim of the survey was to collect information about the linguistic and teaching methods they used in those specific classes where English was the medium of instruction. Six teachers answered the questionnaire. The type of questionnaire was the same in the online survey tool Typeform and it took around 10 minutes to answer it.

2.3.4. Measures

Different measures were used for the analyses of the data gathered for this investigation. On the one hand, some L2 measures were analysed because previous research had used them successfully (Wolfe-Quintero et al., 1998); Guiraud's Index of Lexical Complexity was also used, and some measures were obtained from the raw scores of the grammar and oral comprehension tests. On the other hand, the analysis of the results of the EMI classes consisted of the codification of the answers provided by the analysis of the different surveys. And finally, the questionnaires were analysed.

2.3.4.1. L2 measures

2.3.4.1.1. Written and oral production measures

The following measures accounted for the oral and written L2 development: lexical richness, syntactic complexity and accuracy. In this section these measures will be explained, and a justification will be provided.

Syntactic complexity

The syntactic complexity was calculated by means of the ratio of clauses per T-unit (CLTU), which is calculated by dividing the total number of clauses in the written texts or the oral speech by the total number of T-units. This ratio is expected to be higher in the post-test. Hunt (Hunt, 1965) defined a T-unit as “one main clause with all subordinate clauses attached to it”.

Lexical complexity

The measure adopted in the present study to account for lexical complexity was Guiraud’s Index of Lexical Richness, as it has proven to be an efficient measure (Daller, 2003; Hout & Vermeer, 2010). It is calculated by dividing the total number of types by the square root of the total number of tokens. A higher value of this measure in the post-test would indicate that participants’ vocabulary is richer.

Accuracy

In the present study, two measures were chosen to account for accuracy; error free T-unit per T-unit and Error per T-unit. The first ratio is calculated by dividing the total number of error-free T-units by the total number of T-units (EFTU/TU). The second one is calculated by dividing the total number of errors by the total number of T-units (ERR/TU). The researcher adopted two measures of accuracy instead of one due to the fact that the two measures provided different, yet valuable information. It is expected to obtain a low measure in the Post-test for the ERR/TU in case there is improvement. However, a higher measure is expected for the EFTU/TU measure. There was also an interest in investigating specific type of errors, both in the oral and written production, in which case the ratios can be calculated, following Serrano et al. (2012): morphological error per clause (merr), syntactic errors per clause (serr); lexical errors per clause (lexerr) and spelling errors per clause (sperr). All these specific ratios were used in both oral and written production, except for the spelling error ratio, which was just used for the written production.

2.3.4.1.2. Grammar and oral comprehension measures

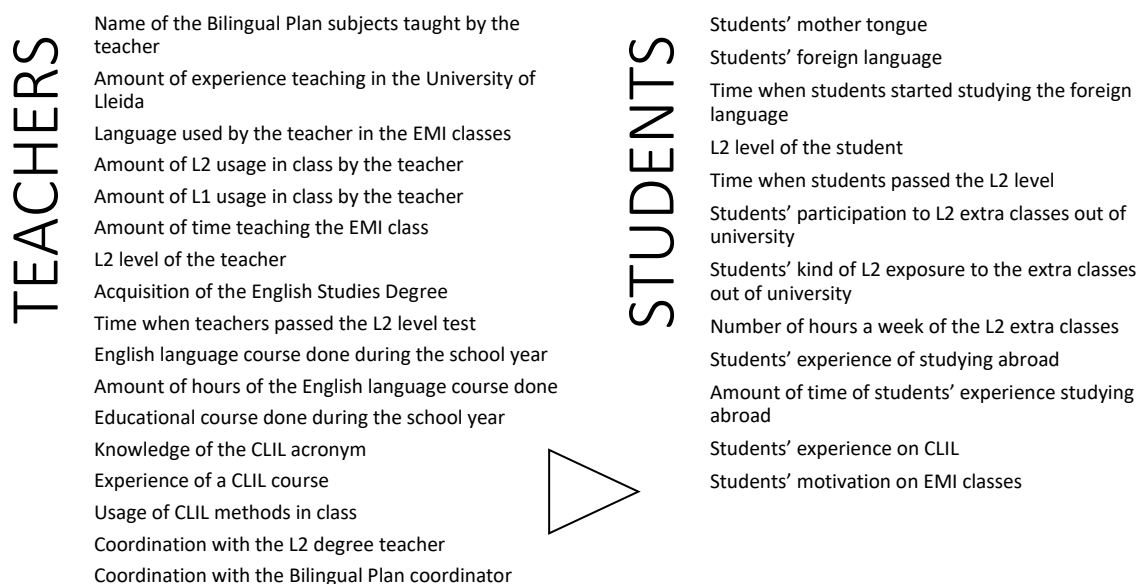
The grammar test (OPT) and the oral comprehension tests were analysed by means of raw scores. The grammar test was out of 60 questions, and the oral comprehension test out of 14. The questions were all multiple choice for the OPT test, whereas one of the oral comprehension exercises asked students to fill in the gaps.

2.3.4.2. Teachers' and students' questionnaires

The teachers' and the students' questionnaires were designed and presented in the following figure 12. The former has the objective of describing the teachers' profile, together with the teaching subjects' conditions. The latter's main objective is to collect information about the students' English language exposure. Annex 4 shows both questionnaires. Descriptive statistical analysis has been used and so, the items considered in these questionnaires are the following:

Figure 12

Design of the Teachers' and students' questionnaires



These questionnaires contained qualitative questions, and the answers were also included and commented in the results chapter. The qualitative items are presented in table 21 and 22:

Table 21

Teachers' questionnaire: qualitative questions

Items:

According to your opinion, what would you need to provide a good implementation in your sessions?

How could the institution help you?

What is your opinion about using the English language as the medium of instruction?

Table 22

Students' questionnaire : qualitative questions

Items:

What does the acronym CLIL stand for?

What is your opinion about the usage of the English language as the medium of instruction in University subjects?

What do you find motivating when teaching these sessions?

2.3.4.3. Diagnosis of EMI classes

To analyse the diagnosis of EMI classes, a descriptive statistical analysis was followed and different items were considered on the six questionnaires used for the diagnosis of the classes, some of them were quantitative and others qualitative. As previously mentioned, the items selected in each survey were obtained from different CLIL and EMI theoretical books and resources, and the items included in the surveys were the ones considered relevant to make a diagnosis of an EMI plan.

The following figures 13 and 14 list the items analysed in each survey:

Figure 13

Surveys' items selected to analyse the teaching methods.

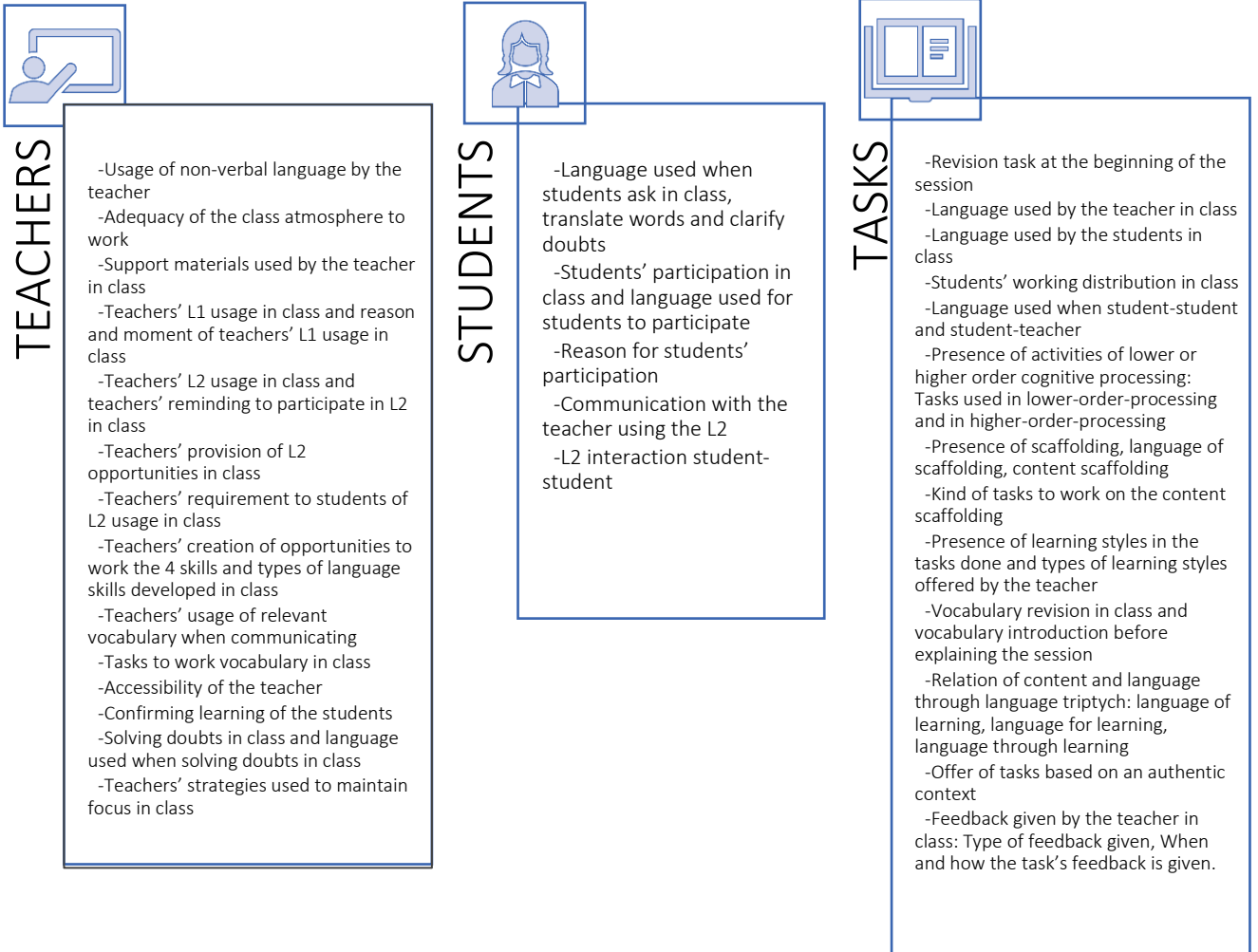
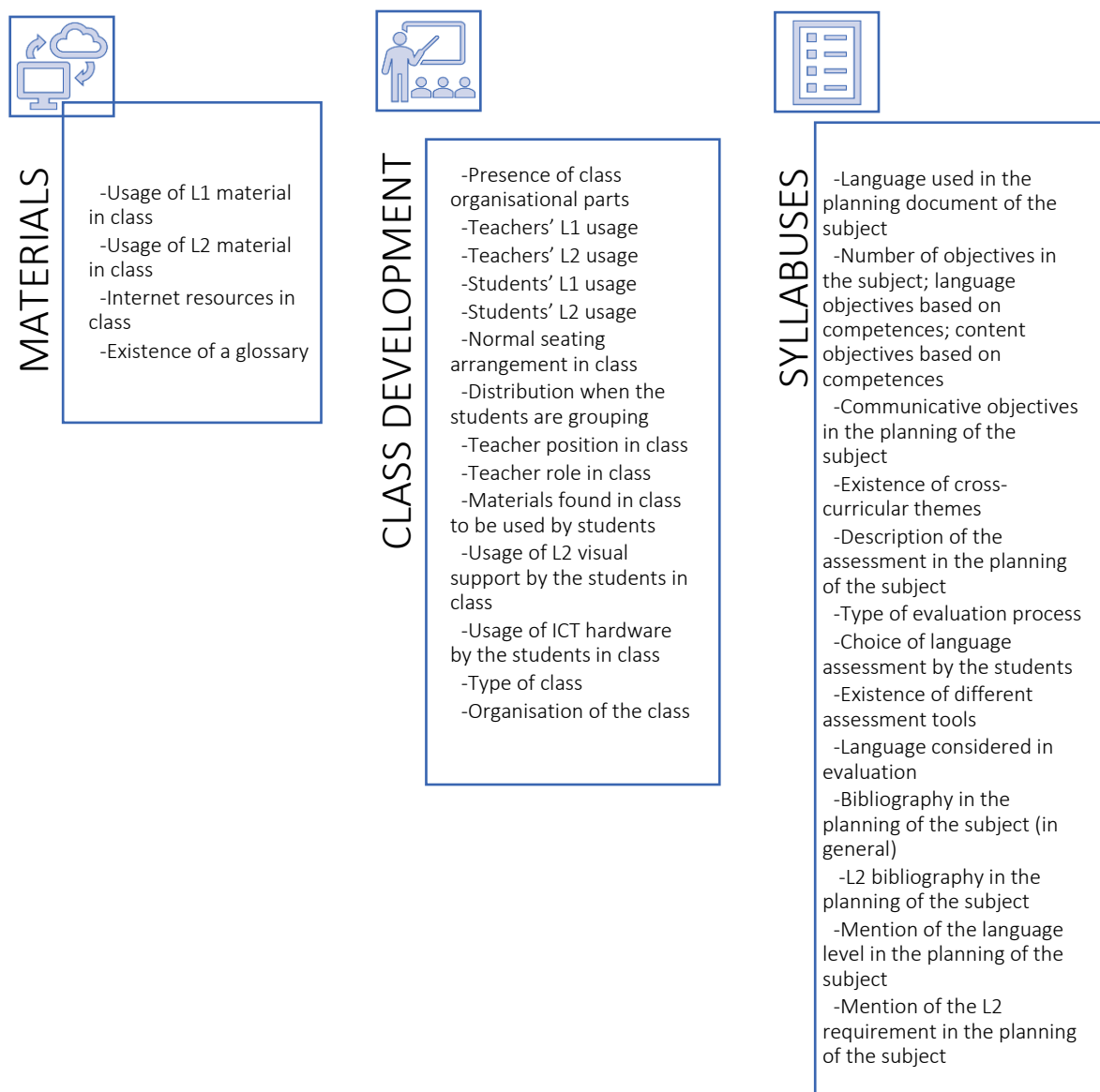


Figure 14

Surveys' items selected to analyse the teaching methods.



The questionnaires contained qualitative questions, and the answers are also included and commented on in the results' chapter. From each questionnaire administered to analyse the EMI classes, the following questions are part of the qualitative analyses. Tables 23 and 24:

Table 23

Qualitative questions for the diagnosis of the Materials questionnaire

Diagnosis of the Materials
Name of different online tools used in class/session

Table 24

Qualitative questions for the diagnosis of the syllabuses questionnaire

Diagnosis of the Syllabuses
How the assessment criteria are described in the syllabuses
Examples of assessment tools used in class
Kind of extra resources and materials

As mentioned above, in the section describing the validation of the surveys, the questionnaires prepared to analyse the EMI classes were revised by some experts and the recommendations made were taken into account. The following tables 25 and 26 show the questions which were not part of the analysis and the justification of their removal from the surveys is added below each item:

Table 25

Questions Removed from the analysis.

DIAGNOSIS OF THE TASKS
Does the content of the unit mentioned in class have relevance worldwide? <i>Justification: The observability was thought to be difficult just by making a general analysis of the subjects' syllabuses and two sessions recorded.</i>
Does the subject provide any kind of contact with an international institution? <i>Justification: It was not considered an important or appropriate question for this kind of survey.</i>
How does the activity integrate current materials from the media and other sources? <i>Justification: The question was not thought to be useful just by recording two sessions of a subject.</i>

Table 26

Questions Removed from the analysis

TEACHER'S DIAGNOSIS
Is the teacher's speaking speed adequate? <i>Justification: Measuring the adequacy of the language speed when speaking is difficult. Moreover, the experts considered it not important that it be included in the survey.</i>
Does the teacher articulate clearly?

Justification: The observability of this aspect was also thought to be problematic.

Does the teacher repeat what he/she has said if asked by the student?

Justification: The researcher thought that this question was similar to another one, which referred to solving doubts in class. For this reason, this question was removed.

Does the teacher use suitable grammatical expressions when communicating with students?

Justification: It was arduous to establish the level of the grammatical expressions to be used in class, especially in a class with students with different language levels.

The measures created for the EMI surveys also presented some limitations, which need to be acknowledged in this chapter. Firstly, the survey did obtain the general information it aimed to but not the specific one. Secondly, the survey about the syllabuses contained two questions that were not properly formulated, and therefore, the information should have been obtained from interviews to the teachers or through other possible measures.

The following, table 27, shows the questions that presented the above-mentioned problem:

Table 27

Questions that presented some limitations in the questionnaires.

Diagnosis of the Syllabuses	
Does the unit include supplementary tasks for the students?	<i>The information related to this question cannot be verified just by checking the subjects' syllabuses. An interview with the teachers should have been done.</i>
Are the supplementary tasks part of the evaluation?	
Diagnosis on the Class development	
Do students use computers in class?	<i>The questionnaire contains a previous question that is: Which of the following ICT hardware do students use in class?</i> <i>The list of ICT hardware used is registered, but not the reason for its usage.</i>
What do students use the computer for?	
Do students use tablets in class?	
What do students use the tablets for?	
Do students use mobile phones in class?	
What do students use mobile phones for?	

2.3.4.4. Coding and Statistical Analyses

The coding process and the statistical analyses of the data gathered in this research is presented in this section and it is divided into two parts. Firstly, the information about language tests is provided. Then, the explanation about the diagnosis of the EMI classes and finally, the description of the questionnaires is given.

On the one hand, to analyse the written and oral data of the language tests, the CHILDES programme (MacWhinney, 2000) was used. Once the data were transcribed, the compositions were coded in CHAT format. The oral and written texts were transcribed as written by students, including their spelling mistakes in the written production but not in the oral ones. Regarding the oral and written data, some coding decisions were made. Here in table 28 there is a list of linguistic choices, for both the written and oral texts, and which facilitated and systematised the coding of all the data gathered.

Table 28

List of linguistic choices used when coding the oral and written texts in CLAN.

VOCABULARY CHOICES	1. hear music – Listen to music
	2. bank – bench (when referring to the object where you sit)
	3. Recipient or cube (as an object). The correct words would be: pan, container, box, bucket, bowl of water
	4. Gap or hole are correct words to mean an opening on the ground.
	5. in time – early enough, not late. On time – punctuality, according to the schedule.
PREPOSITION CHOICES	2. All options are correct: jeweller's / jeweler's / jewelry shop
	3. ask to him
	4. walk ___ the street. The options are: down, along, on, through
	5. consist in/of
	6. in the floor - on the floor
	7. at the background - on/in the background
	8. sitting in a bench – sitting on a bench

	9. on / at the first picture – in the first picture
	10. Both options are possible: on - in the street arrive home – arrive at home
	11. in the back – location At the back – behind something / location
	12. on the right / on the left side
	13. in the end – finally At the end – at some point
GENERAL CHOICES	1. No Catalan or Spanish nouns were excluded from the count.
	2. “Five” would be incorrect if the purpose is to say “fifth”. This would be a morphological mistake (merr)
	3. The word “Bueno” was coded as a vocabulary mistake (lexerr)

While coding the oral and written texts, some symbols were commonly used in all of them. They can be found in annex 8.

The CLAN programme was used to analyse the frequency of all the measures adopted in the present dissertation (total number of words, number of types, number of tokens, number or error-free T-units, number of T-units, number of errors and number of clauses). The formulas used to calculate the measures used are described in annex 8.

Afterwards, the Statistical Package for Social Sciences (SPSS) was used to carry out the statistical analyses. The data obtained from the CLAN programme was introduced into an SPSS matrix. A formula was needed for each ratio. Finally, the statistical analyses were done and the results were obtained.

In order to calculate the interrater reliability of these language tests, one additional researcher coded a random 10% of the oral and written texts of all the samples; both in the pre- and post-tests, and the codifications from the researcher were compared. The interrater reliability was 96.7%. In order to calculate the intrarrater reliability the researcher who carried out the investigation, who did the transcriptions and previously coded all the data, coded 10% of the

data that had been previously computed several months after the first coding, and then, she compared both codifications. The intrarrater reliability was slightly higher, reaching 97.6%.

On the other hand, the diagnosis of the EMI classes and the teachers' and students' questionnaires followed the same process regarding the coding and the statistical analysis. We obtained different questionnaires, which came from the observation of each EMI class diagnosis videos, and together with the teachers' and students' ones, the answers were coded following numerical order. Each different answer had a different number. The open answers were grouped according to the information given and a number was assigned to each group.

Afterwards, the Statistical Package for Social Sciences (SPSS) was also used to carry out the statistical analyses of the questionnaires, both to the diagnosis of the EMI classes and the teachers and students' questionnaires. Finally, the statistical analyses were done and the results were obtained.

CHAPTER 3

RESULTS:

This chapter presents the results of the analyses undertaken in the research to provide an answer to the three research questions formulated in chapter 2. As previously described, the research questions intended to examine the English linguistic impact on students attending EMI classes and to analyse the types of teaching methods used in this bilingual degree in order to present a protocol for the implementation of the CLIL methodology in the university context.

The present chapter has been organized into different sections and the two research questions and sub questions are dealt with. Firstly, section 3.1 presents the results of the English language tests administered to the students attending the EMI classes and which correspond to the first research question (RQ1):

RQ1. What is the linguistic impact that the implementation of the EMI methodology has on the English language communicative competence development of the students from the Primary Education Bilingual Degree at the University of Lleida?

In this section, the results on the students' linguistic impact are presented, focusing first, on the accuracy results and followed by the syntactic complexity ones, both for the oral and the written production. Next, the lexical complexity results are described, and then, the oral comprehension results are shown. Finally, the grammar results are presented. The results correspond to the pre-test and post-test.

Secondly, section 3.2 describes the results obtained from the EMI class diagnosis surveys, corresponding to the second research question (RQ2):

RQ2. What are the types of teaching methods used in the Primary Education Bilingual EMI classes of this pilot Degree?

Firstly, the section presents the results of the *Teachers' and Students'* questionnaires. The information described in this section is essential because it gives details of the control group, the teachers and the students.

Secondly, in section 3.3, a detailed description of the specific methods used in these classes is provided. Six surveys were used to describe this EMI class. These results will help improve the creation of a CLIL protocol for this Primary Education Bilingual Degree.

The third research question will be developed in chapter 5 and it offers a proposal of two decalogues which deal with the implementation of a more CLIL-ised methodology in the EMI programmes offered. A list of necessary methodological and organisational changes will be presented, which will help to implement the appropriate CLIL-ised methodology in a university context.

Here is the presentation of these results.

3.1. Language test results

This first section is divided into five subsections. In the first subsection (3.1.1), the results of the accuracy measures from the written and oral production tests are presented. Here, the description of the types of accuracy errors corresponding to the same tests is also presented. The results that are described here correspond to the morphological, syntactic, lexical and spelling errors. Section 3.1.2 presents the results related to syntactic complexity. Section 3.1.3 offers the results on lexical complexity. The oral comprehension results are presented in section 3.1.4 and finally, the grammar results are presented in section 3.1.5.

It must be highlighted that the values of the post-test should be higher for most of the measures analysed in the study (CL-TU, EFTU-TU, Guiraud, Oral Comprehension, OPT). However, some of the accuracy measures (ERR-TU, both the oral and written merr, serr, lexer and the written sperr) have values which need to be lower in the post-test if gains have occurred.

First, the data was explored to check if the measures were distributed normally. In order to see whether there were significant differences between the pre- and the post-test for the measures under study, a parametric test (Paired Samples T-Test) was used for the measures that were distributed normally and a Wilcoxon Ranked Test for the ones that violated the assumption of normality. As can be seen in Table 29, participants improved their written accuracy (Wt_EFTU_TU, Wt_ERR_TU, merr, sperr and serr) and oral accuracy (Or_EFTU_TU, Or_ERR_TU, merr and serr). However, the results of the Paired Samples T-Test indicated that improvement from the pre- to the post-test was significant in the following measures: Written Error Free T-unit ($t(35) = -2.947, p = .006$), Written Error per T-unit ($t(35) = 3.417, p = .002$), Written merr ($t(35) = 2.051, p = .048$), Oral merr ($t(35) = 2.969, p = .005$), Oral serr ($t(35) = 2.312, p = .027$), Oral lexerr ($t(35) = -2.988, p = .005$) and OPT ($t(35) = -5.012, p = .000$). However, no significant improvement was found for Written Clauses per T-unit ($t(35) = .034, p = .973$), Oral Error Free T-unit ($t(35) = -.239, p = .812$), Written sperr ($t(35) = 1.119, p = .271$), Written serr ($t(35) = .390, p = .699$), Written lexerr ($t(35) = -.460, p = .649$) and listening ($t(35) = -1.791, p = .082$), with the latter approaching significance. The results of the Wilcoxon Ranked test showed that participants scored significantly higher in the post test in the Written Guiraud ($z = -3.440, p = .001$). Nonetheless, gains in Oral Guiraud were not significant ($z = -.409, p = .682$), and the same was true for Oral Error per T-unit ($z = -.950, p = .342$), and Oral Clauses per T-unit ($z = -1.826, p = .068$), the latter approaching significance.

The following table 29 corresponds to the descriptive statistics table results of all the measures analysed.

Table 29*Descriptive statistics table results*

Paired Samples Statistics		
Measures	Pre-test	Post-test
WtCL_TU	1.85 (0.375)	1.84 (0.26)
Wt_EFTU_TU	.44 (0.200)	0.55 (0.192)
WtErrTU	.8759 (0.43415)	.6386 (0.31731)
OrCLTU	1,0000 (0.0000)	.9956 (0.01280)
Or_EFTU_TU	.4759 (0.15798)	.4820 (0.17683)
OrErrTUP	.6850 (0.36558)	.6266 (0,32844)
Wtmerr	5.51 (4.189)	3.80 (3.385)
Wtsperr	1.71 (2.204)	1.26 (1.314)
Wtserr	2.80 (2.167)	2.60 (1.973)
Wtlexerr	1.37 (1.416)	1.49 (1.337)
Ormerr	7.80 (4.071)	5.69 (3.104)
Orserr	4.86 (3.300)	3.46 (2.571)
Orlexerr	1.69 (1.510)	2.71 (2.163)
WtGuiraud	6.3089 (0.71963)	6.7742 (0.82799)
OrGuiraud	6.2006 (0.73684)	6.1650 (0.57256)
Oral C. out of 14	5.54 (2.683)	6.29 (2.845)
OPT out of 60	32.83 (6.823)	36.37 (6.481)

3.1.1. Accuracy measures_ Written and oral production

This section provides the results of the accuracy measures (Error Free T-units per T-unit (EFTU/TU) and Error per T-unit (ERR/TU)), which are shown in table 29 and table 30. Moreover, to measure specific accuracy, the errors were classified as morphological, spelling, syntactic and lexical. Table 29 and 30 illustrate these results.

Table 30*Inferential statistics of syntactic complexity and accuracy measures*

Paired Samples Correlations				
	Paired Differences			
	Mean	Std. Deviation	t	Sig. (bilateral)
WtCL_TU_Pre WtCL_TU_Post	.003	.477	.034	.973
Wt_EFTU_TU_Pre Wt_EFTU_TU_Post	-.107	.214	-2.947	.006
WtErrTUPre WtErrTUPost	.23732	.41086	3.417	.002
OrCLTUPre OrCLTUPost	.00441	.01280	2.038	.049
Or_EFTU_TU_Pre Or_EFTU_TU_Post	-.00615	.15200	-.239	.812
OrErrTUPre OrErrTUPost	.05838	.31748	1.088	.284

As can be observed in table 29, the participants scored significantly higher in the post-test in Written EFTU/TU ($t(35) = -2.947, p = .006$), and significantly lower in the Written ERR/TU ($t(35) = 3.417, p = .002$) measure. The inferential statistic table 30 shows these two measures to be significant. The oral measures ERR/TU ($t(35) = 1.088, p = .284$) and EFTU/TU ($t(35) = -.239, p = .812$) did not appear to be significant, even though students made less Errors per TU and more EFTU/TU in post-test results.

Table 31*Inferential statistics of syntactic complexity and general accuracy measures*

Paired Samples Correlations				
Paired Differences				
	Mean	Std. Deviation	t	Sig. (bilateral)
WtmerrPre WtmerrPost	1.714	4.944	2.051	.048
WtsperrPre WtsperrPost	.457	2.417	1.119	.271
WtserrPre WtserrPost	.200	3.037	.390	.699
WtlexerrPre WtlexerrPost	-.114	1.471	-.460	.649
OrmerrPre OrmerrPost	2.114	4.213	2.969	.005
OrserrPre OrserrPost	1.400	3.583	2.312	.027
OrlexerrPre OrlexerrPost	-1.029	2.036	-2.988	.005

As can be appreciated in table 29, the descriptive statistics table shows that participants scored lower in the post-test in the Written merr, sperr, serr and also on the Oral merr and serr, which means that they reduced the number of errors from the pre- to the post-test. The inferential statistics, table 31, show that the improvement of these measures was significant for the written morphological error ($t(35)= 2.051, p= .048$) (although with an almost non-significant p value), and it was significant for the oral morphological errors ($t(35)= 2.969, p=.005$) and for the oral syntactic errors ($t(35)=2.312,p=.027$). Participants made significantly more oral lexical errors ($t(35)= -2.988, p= .005$) in the post test. Finally, as appreciated in the inferential statistics, table

31, the other specific errors did not appear to be significant even though participants improved from the pre to the post test except from the written lexical errors, which shows worst results in the post test. They are described as follows: written spelling errors ($t(35)= .1.119, p= .271$); written lexical errors ($t(35)= -.460, p= .649$); and written syntactic errors ($t(35)= .390, p= .699$).

3.1.2. Syntactic complexity_ Written and oral production

This section provides the results of the syntactic complexity measure (Clauses per T-unit (CL/TU)). The results are shown in tables 29 and 30.

As can be observed in the descriptive statistics in table 29, it shows, participants did less clauses per T-unit in both the written and oral post-test. Therefore, the inferential statistics table shows that they did significantly worse in Oral CL/TU ($t(35)= 2.038, p=.049$) from the pre- to the post-test, although with a borderline p value. Finally, Written CL/TU ($t(35)= .034, p=.973$) did not show an improvement from the pre- to the post-test.

3.1.3. Lexical complexity_ Written and oral production

The results of lexical complexity from the written and oral production are presented in the following tables: 29 and 32.

Table 32

Inferential statistics of lexical complexity measures

Paired Samples Test				
Paired Differences				
	Mean	Std. Deviation	t	Sig. (bilateral)
WtGuiraudPre	-.46536	.72582	-3.793	.001
WtGuiraudPost				
OrGuiraudPre	.03559	.53564	.393	.697
OrGuiraudPost				

The descriptive statistics described in table 29 show that participants obtained higher results in the post-test for the Written measures, whereas the Oral results were lower in the post-test. As can be observed in the inferential statistics in table 32, participants scored significantly higher in Written Guiraud ($t(35) = -3.793, p = .001$) in the post-test. However, participants failed to show improvement in Oral Guiraud ($t(35) = .393, p = .697$) on the post test.

3.1.4. Oral comprehension results

The oral comprehension results are described in the following tables: 29 and 33. As can be appreciated in the inferential statistics, table 33, students did not significantly improve in oral comprehension ($t(35) = -1.791, p = .082$) even though this measure was approaching significance. As observed in table 29, the students obtained more correct answers in the post-test.

Table 33

Inferential statistics of oral comprehension results

Paired Samples Test				
Paired Differences				
	Mean	Std. Deviation	t	Sig. (bilateral)
Out of 14	-.743	2.454	-1.791	.082

3.1.5. Grammar results

The grammar (OPT) results are presented in tables 29 and 34. The results show that the students significantly improved their scores on the OPT from the pre- to the post-test ($t(35) = -.5.012, p = .000$).

Table 34

Inferential statistics of grammar results

Paired Samples Test				
Paired Differences				
	Mean	Std. Deviation	t	Sig. (bilateral)
Out of 60	-3.543	4.182	-5.012	.000

3.2. Teachers' and Students' questionnaire results

This section presents the results of the Teachers' and Students' questionnaires. The information described in this section gives more details of the participants, which are the teachers doing the EMI subjects and the students taking them.

3.2.1. Teachers' questionnaires

The teachers' questionnaire intends to collect information about six teachers who teach EMI subjects in the first two Years of the PEBD. In these questionnaires, information about the languages used in the class was collected, the EMI experience, their L2² level, their type of educational or linguistic courses previously taken, their coordination with the L2 teacher and the knowledge of the CLIL methodology. These statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS). The results are presented in four different fields, which are related to the teachers' language level and language use in class, the teachers' training, the CLIL methodology and the EMI coordination.

Each teacher participating in the survey taught a different subject. This is the list of subjects analysed in the present study:

- *Numbering, Calculus and Measurement*
- *Educational Psychology*
- *Family and the school*
- *Sociology of Education*

² L2 as the English language.

- *Fostering Sociolinguistic Competence*
- *Experimental Science*

Firstly, the results from the first field are presented, which correspond to the teachers' language level and language use in class. Table 35 displays the experience teachers had in teaching the subject using the L2. Five out of the teachers (83.3%) had between 1 and 2 years' experience teaching in the L2, and one of the teachers (16.7%) had between 5 and 10 years of experience.

Table 35

Experience of teachers using the L2 in the subject

		Frequency	Valid Percent
Valid	1-2 years	5	83.3
	Between 5-10 years	1	16.7
	Total	6	100.0

Finding out the teachers' English level was a relevant aspect so it was asked if the teachers had any official English certificate. The levels mentioned here correspond to the official levels of the Common European Framework of References for Languages (CEFR), created by the Council of Europe. In the next table 36, we can see the results: three teachers (50%) had a C1 level; one teacher (16.7%) had a B2 level; one teacher (16.7%) had a C2 level; and finally, there was one teacher (16.7%) that did not have any official L2 level certificate. The teachers who obtained a certificate had done it more than ten years ago.

Table 36

Teachers' English level

		Frequency	Valid Percent
Valid	B2	1	16.7
	C1	3	50.0
	C2	1	16.7
	No certificate	1	16.7
	Total	6	100.0

The second question shows the languages teachers used in their EMI classes. As observed in table 37, four teachers (66.7%) used English; one of the teachers used Catalan and English (16.7%); and one teacher used Catalan, Spanish and English (16.7%).

Table 37

Languages used in EMI classes

		Frequency	Valid Percent
Valid	English	4	66.7
	Catalan and English	1	16.7
	Catalan, Spanish and English	1	16.7
	Total	6	100.0

We asked about the amount of the L1 and L2 used in their EMI classes. On the one hand, four teachers used the L2 throughout their class. One of the teachers used the L2 around 80% of the session, and there was another teacher who used it half of the class. On the other hand, the L1 was used differently in the EMI classes recorded. There were four teachers who did not use the L1 at all. However, there was one teacher who used the L1 20% of the class, and another one who used it half of the session (50%).

The second field of this survey comprises information about the teachers' training. Table 38 shows the results about the teachers enrolled in an English language course, the teachers who attended educational courses every year, and the teachers who had attended CLIL courses before. Firstly, teachers were asked if they were doing any English language course at the time the survey was sent. As shown in column one, five of the teachers (83.3%) were not doing any English course, and just one teacher (16.7%) was enrolled in a four-hour L2 course. In order to better define the teachers' profile, it was important to find out if the teachers participated regularly in educational courses every year. As included in the second column of this table, four teachers (66.7%) answered positively, meaning that they enrolled educational courses every school year, whereas two teachers (33.3%) said that they did not take educational courses every

year. The type of educational courses that these four teachers attended varied according to two teachers. However, the other two teachers enrolling in educational courses said that they did the courses by the university teacher training service department. Finally, the third column contains the results from the teachers who had ever done a CLIL course before. The results show that four teachers (88.7%) had not done a CLIL course before, whereas two of them said they had (33.3%). This question was completed when asking if these two teachers were following a CLIL methodology in class. The two teachers (33.3%) thought they were doing CLIL classes. In this same question, we asked about the reason for answering yes in the survey, and their answers were because teachers promoted communication skills in English, and they were teaching the concepts in English. Another answer was that they were not teaching English language in class but educational contents.

Table 38

Teachers enrolled in an English language course

Teachers enrolled in an English language course			Teachers attending to educational courses every year			Teachers having done a CLIL course		
Item	F	VP ³	Item	F	VP	Item	F	VP
No	5	83.3	no	2	33.3	No	4	66.7
Yes	1	16.7	yes	4	66.7	Yes	2	33.3
Total	6	100.0	Total	6	100.0	Total	6	100.0

The last field considered in this survey is related to the coordination between teachers. This question was related to the coordination with an English (L2) teacher during the academic year. As the results show in table 39, five of the teachers (83.3%) did not coordinate at all with an English teacher, and just one teacher (16.7%) did coordinate, which happened once a term.

³ Note: the value for the F is Frequency and for the VP is Valid Percent.

Table 39*Coordination with the L2 teacher*

		Frequency	Valid Percent
Valid	No	5	83.3
	Yes	1	16.7
	Total	6	100.0

The following question intended to find out if there was any kind of organisation with the Primary Education Bilingual coordinator. As illustrated in table 40, four of the teachers (66.7%) answered no, but two of them (33.3%) said that they did coordinate. The teachers that did coordinate explained that the meetings were useful because they would agree on the different organisational aspects of the subjects, so they could share a fundamental vision of the objectives of the degree. Moreover, the PEBD coordinator solved the doubts and questions the teachers could have.

Table 40*Coordination with the Primary Education Bilingual coordinator*

		Frequency	Valid Percent
Valid	No	4	66.7
	Yes	2	33.3
	Total	6	100.0

The last three questions of the survey intended to learn the teachers' opinion about the resources needed for the good implementation of EMI classes, how the institution could help, and finally, their opinion about using the L2 as a medium of instruction.

Referring to the first question, which was "According to your opinion, what would you need to provide a good implementation in your sessions?", the teachers documented four types of needs; the first one was related to the language level, and some teachers' comments were related to improving their English level, specially their oral communication when explaining the

contents; the second one was related to revising the materials and photocopies and having access to them; the third one referred to the specific teaching of the methodology; and finally, the teachers considered that having more courses, referring to CLIL or EMI courses, would be necessary.

The second question, which was “How could the institution help you?”, referring to the good implementation of their EMI classes, shows different results. Some teachers thought that the institution could help them by providing English courses, training, lectures about CLIL methodology and training abroad. What’s more, other teachers’ opinions expressed that more paid time to prepare better classes is needed, as well as more access to materials in English, both for students and teachers.

Finally, the last question was the teachers’ opinion about the English usage in their EMI classes. All the teachers’ answers were related to the improvement of the students’ competences, both in the language and content learning and therefore, in their future career. For instance, one teacher said that EMI was the best way to learn a language. Another explained that the L2 should be compulsory because it was an open door to Europe, so it enabled students to have access to a wide range of materials and research.

To sum up, the results described above present the profile of the six teachers doing EMI subjects during the first two years of the PEBD. According to the results found, most of the teachers (83.3%) had between 1 and 2 years’ experience teaching EMI, and all of them had between an independent and a proficient level of the English language, which means that nearly all of them had more than a B2 language level. Regarding the language used in class, the teachers mainly used the English language (66.7%), even though some of the teachers used the Catalan and Spanish language during their class. When talking about the number of the languages used during the session, most of them used the L2 throughout the session, whereas the L1 was partially used in some sessions. The teachers’ information on their training complemented the teachers’ profile. As the results show, just one of the teachers was doing an English language

course at the moment of the survey. When talking about educational courses, four of them said that they participated in educational courses every year, which include the university teacher training courses. What's more, the knowledge of the CLIL methodology was an aspect to consider when creating the profile. As it is described, most of the teachers (88.7%) had not done a CLIL course before, and the ones who had, believed they were following the CLIL methodology in class. Finally, regarding the coordination among teachers, most of them did not coordinate at all with the English teacher nor with the Primary Education Bilingual coordinator. The last piece of information considered refers to the teachers' opinion about the resources needed to deliver good EMI classes. In general terms, the results can be grouped in three different fields; the improvement of the English language level, the revision of materials and resources and the offer of CLIL and EMI teaching courses. In this regard, the teachers thought that the institution could help by providing English courses, training, lectures, etc. All in all, the English usage in EMI classes was thought to be positive for students as it improves students' competences and helps them in their future careers.

3.2.2. Students' questionnaires

The students' questionnaire was created to obtain more information about the 35 students participating in the research. It was necessary to find out their mother tongue; what foreign languages they spoke, when they started studying the L2 and their current level, if they attended extracurricular L2 classes during the time of this research and the nature of this extra L2 input, their experience abroad and their motivation to choose EMI classes. All this information is presented in the tables below.

Table 41 shows the students' mother tongue. As we can observe, there were 25 students whose mother tongue was Catalan (71.4%); for two of them it was Spanish (5.7%); seven of them considered themselves balanced bilinguals (20%); and there was just one student that had a different foreign language as their mother tongue (2.9%).

Table 41*Students' mother tongue*

		Frequency	Valid Percent
Valid	Catalan	25	71.4
	Spanish	2	5.7
	Other	1	2.9
	Catalan and Spanish	7	20.0
	Total	35	100.0

Considering the number of foreign languages spoken by students, all of them spoke English as a foreign language. Apart from English, out of the 35 participants, seven students spoke French, and four of them spoke German.

As shown in table 42, more than half of the students (62.9%) had started studying English over 10 years before the survey (62,9%); nine of them (25.7%) between 6 and 7 years before; three of them (8.6%) between 4 and 5 years before; and just one (2.9%) 3 or less years before.

Table 42*When students started learning English*

		Frequency	Valid Percent
Valid	More than 10 years ago	22	62.9
	Between 6/7 years ago	9	25.7
	Between 4/5 years ago	3	8.6
	3 or less years ago	1	2.9
	Total	35	100.0

Table 43 shows the students' certified L2 level and their correspondence to the official levels of the Common European Framework of References for Languages (CEFR), created by the Council of Europe. The results show that there was one student with an A2 level; 15 students who had an intermediate B1 level; fourteen students with a B2 level; one student who had the proficiency C1 level; and finally, there were four students who did not have any official language certificate.

Most of the students had passed their English language certificate between 2012 and 2015; there was one student who did it in 2010, and there were four students who did not know when they had done it.

Table 43

Students' English certified level

Language levels	Number of students
A2	1
B1	15
B2	14
C1	1
none	4

In order to control the students' English input, we needed to know if they attended English extracurricular activities outside university. As it can be observed in table 44, 23 students were receiving some English input outside the university (65.7%), whereas 12 of them (34.3%) did not attend English extracurricular lessons. The students who did attend language schools, such as the EOI (Official Language School run by the regional governments in Spain), the university Linguistic Services department courses, or they attended private classes to prepare for an official language level exam.

Table 44

Students' English extracurricular activities

		Frequency	Valid Percent
Valid	no	12	34.3
	yes	23	65.7
	Total	35	100.0

Regarding the students' previous experience abroad, more than half of the students (54.3%) had studied English abroad at some point. There were 16 students that had not (45.7%). Table 45 shows the table with the results:

Table 45

Study Abroad Experience in English

		Frequency	Valid Percent
Valid	No	16	45.7
	Yes	19	54.3
	Total	35	100.0

It was relevant to know the students' time spent abroad studying English. As we know from the previous table 46, there were 16 students (45.7%) that had never studied abroad; six of them (17.1%) had spent 2 weeks abroad studying English; three more (8.6%) had been 1 month abroad; another two students (5.7%) had spent 3 weeks; two students (5.7%) 2 months; two students (5.7%) that had had a three-month experience abroad; there was one student (2.9%) that had spent 1 week abroad; one student (2.9%) had spent one month and a half abroad; one more (2.9%) that had spent three months and a half; and finally, there was one student (2.9%) that had spent four months abroad studying English.

Table 46

Time students had spent studying abroad prior to this study

		Frequency	Valid Percent
Valid	0	16	45.7
	1 week	1	2.9
	2 weeks/15 days	6	17.1
	3 weeks	2	5.7
	4 weeks/1 month	3	8.6
	2 months	2	5.7
	3 months	2	5.7
	1 month and a half	1	2.9

	3 months and a half	1	2.9
	4 months	1	2.9
	Total	35	100.0

The last few questions in the survey aimed to find out if the students knew about the CLIL methodology, the usage of the English language in their EMI classes and their motivation towards EMI classes. Table 47 shows that nearly all the students (82.9%) had not participated in a CLIL class before. There were six students that said that they had participated in it (17.1%).

Table 47

Students' experience with CLIL

		Frequency	Valid Percent
Valid	No	29	82.9
	Yes	6	17.1
	Total	35	100.0

The six students that had attended CLIL classes before, had done so when they were in Primary education (two of them), Secondary education (four of them) and at university (one of the students that had also had CLIL classes in secondary education).

Regarding the students' opinion on the usage of English as the medium of instruction in university subjects, all of them had a positive opinion towards it, and different opinion groups could be identified. Some of them said that these EMI classes would improve their English language level and that they could improve their English language skills; others said that it was relevant for the students to find good jobs opportunities, even in other countries; these classes would also give them a different perspective of teaching from when they were receiving other lectures in their L1; and finally, students said that English should be used in other degrees.

When they were asked about their motivation towards EMI classes, all the students answered positively. Different opinion groups could be classified: some of the students felt motivated because they liked English and they could learn it while doing class; other students said that

using English would be good because it is important for the future; they considered their EMI classes interesting, productive and they could see English in a different context; and finally, some of the students said that these classes would be good to improve their skills, their level and gave them more opportunities to express themselves in English.

To sum up, after analysing the results described above, the average student profile is the following. The participants of this research are mainly Catalan speakers (71.4%), even though there are some of them that consider themselves Spanish and Catalan speakers (20%), two of them are Spanish speakers (5.7%), and one student has a different foreign language (2.9%) as a mother tongue. Considering foreign languages, all the students spoke English as a foreign language, and the majority of them started studying it between 4 and 10 years prior to the study. Some of them spoke other foreign languages, such as French and German. Regarding the students' English levels obtained, most of the students had a B1 or B2 English level when the survey was answered. In order to control the students' English input, they were asked about their English extracurricular activities, and more than half of the students (65.7%) were receiving some English input outside university, attending language schools or having private classes. Regarding the students' previous experience abroad, more than half of the students (54.3%) had studied English abroad. Finally, most of the students (82.9%) did not know about the CLIL methodology, and their opinion on the usage of the EMI in the tertiary level was positive when saying that it would help students with their language proficiency and to find job opportunities. The students' motivation towards the EMI classes was also considered positive because of the importance of English for their future.

3.3. EMI classes' diagnosis results

Section 3.3. is also part of the second Research Question. The whole section is devoted to presenting a detailed description of the specific methods used in these EMI classes. Section 3.3.1 presents the quantitative results of the surveys used in the EMI class' observations and the examples provided. The frequency tables of the six different surveys' questions, which are about different factors involved in the EMI methodology: *Teachers, Students, Tasks, Materials, Class development and Syllabuses* are described in this section. These tables are grouped into different general fields, which contain specific items on the same topic.

The results shown in this section correspond to the results from the EMI classes recorded in the PEBD. As mentioned in chapter 2, there were eight EMI sessions recorded, two sessions for each of the four subjects analysed. All the statistical results described in this chapter provide information on these sessions.

The examples provided in this section correspond to the videos recorded⁴. A different name and code were given to each video to simplify their identification. Table 48 summarises the codes given:

Table 48

Videos' names and codes for each EMI subject recorded

Subject	Codes	Videos' names and codes
Numeration, Calculus and Measurement	Subject 1 (S.1)	Video number 1 (S.1.1) Video number 2 (S.1.2) Video number 3 (S.1.3) Video number 4 (S.1.4) Video number 5 (S.1.5)

⁴ This chapter presents a selection of examples. The complete compilation of recording files can be found in annex 7.

Sociology of Education	Subject 2 (S.2)	Video number 1 (S.2.1) Video number 2 (S.2.2) Video number 3 (S.2.3) Video number 4 (S.2.4) Video number 5 (S.2.5) Video number 6 (S.2.6) Video number 7 (S.2.7) Video number 8 (S.2.8) Video number 9 (S.2.9)
Family and School	Subject 3 (S.3)	Video number 1 (S.3.1) Video number 2 (S.3.2) Video number 3 (S.3.3) Video number 4 (S.3.4) Video number 5 (S.3.5)
Fostering Sociolinguistic Competence	Subject 4 (S.4)	Video number 1 (S.4.1) Video number 2 (S.4.2) Video number 3 (S.4.3) Video number 4 (S.4.4) Video number 5 (S.4.5) Video number 6 (S.4.6)

The names of the professors and students will also be used in this chapter when transcribing some exemplifying videos. The code for professors will be P, and for the student S.

3.3.1. Video recording results

Teachers' survey

The next section presents the results extracted from the analysis of the EMI teachers' survey. The videos recorded different aspects about the teaching methods and roles in class, and these aspects were distributed in diverse fields, which are; Teachers' L1 Language in class, Teachers' L2 Language in class, Language skills used by the teacher in class, Vocabulary used and Teachers' role. For instance, these fields show information related to the teachers' nonverbal language

used, the class atmosphere, the materials support given, the teachers' use of the L1 and L2, the L2 practice opportunities given by the teacher, the skills developed in the EMI sessions, the vocabulary tasks used, and the teachers' accessibility to students.

Firstly, considering the L1 language usage by the teacher, table 49 shows that in most of the EMI sessions (6/8) (75%) the teacher used the L1 in class. Just in two of them (25%), the teacher did not use the L1 at all during the session recorded. This is true for both sessions of the *Fostering Sociolinguistic Competence Subject*.

It was also relevant to pin down the moment when the teacher used the L1 in class. In two EMI sessions, they used the L1 when answering the students' L1 questions (25%). One example can be found in video S.1.5 (11:25-28:40). Besides, in one of the sessions, the L1 was also used by the teacher when translating, paraphrasing, answering students and answering questions in the L1 (25%). To exemplify this aspect, we can see two transcribed examples of the teacher paraphrasing one of her explanations while asking the students:

S.3.1

(19:10-19:36)

The teacher was explaining the theory in class. She paraphrased some ideas and she asked questions to the students during the presentation.

T1: There is like a period of time, depending on each family, because every family is different, that we need to readjust. And after this readjustment, what happens? Què passa després d'aquest readjustment?

S1: doncs que es creen noves relacions, no?

T1: New relationships, correct. But the function is good again? Or it's still unstable?

S2: Good

T1: In general, it would be good.

S.3.5

(05:07-05:40)

The teacher was paraphrasing some concepts and making the students participate in class by asking questions.

T1: And now, to end today, to end the unit, we are going to talk about something that is equally important that is the environment educational plan. O el que es coneix amb català com Pla... Ajudeu-me...

Students: Educatiu d'entorn

Teacher: Educatiu d'entorn. Ok? What is that? Why do we need that? Mireu que hi posava gros en català eh. Què és això ? what... have you heard about it ? it's the first time you hear about it?

Moreover, in one of the sessions, the teacher used the L1 just when explaining and answering students (12.5%) (e.g. S.4.4 (12:06-12:45)). The teacher also used the L1 when answering students or when answering questions in the L1 (12.5%) (e.g. S.1.3 (00:00-21:05)). The two remaining EMI sessions that are not commented here relate to the two sessions where the teacher did not use any L1 language (25%) and which belonged to the subject *Fostering Sociolinguistic Competence*.

Table 49

Teachers' L1 usage in class

Teachers' L1 usage in class			When the teachers used the L1 in class		
Item	F	VP	Item	F	VP
No	2	25.0	0	2	25.0
Yes	6	75.0	Answering students' questions in the L1	2	25.0
Total	8	100.0	Translating, paraphrasing, answering students, answering questions in the L1.	2	25.0
			Explaining, answering students	1	12.5
			Answering and speaking with students, answering questions in the L1.	1	12.5
			Total	8	100.0

The second field of this section is related to the teachers' L2 usage. As can be observed in table 50, in the EMI sessions recorded, there were three EMI sessions (37.5%) where the L2 was used more than 85% of the class; there were two sessions (25%) in which the teachers used the L2 100% throughout the class. In two sessions (25%) the teachers used the L2 50% of the time approximately. Finally, there was one session (12.5%) where the use of the L2 was more than 65%.

The second column of the table shows that in seven out of the eight EMI sessions (87.55%), the teachers did not remind students to participate using the L2 in class. There was just one session

(12.5%) where the teacher did remind them to. This example can be observed in video S.4.1 (20:18-20:35), when the teacher reminded one student to speak in English during the class.

The third aspect described in table 50, shows that in all the EMI sessions recorded (100%), the teachers provided L2 practice opportunities for students to speak in front of the class, or in groups, in order to practise the language. A small sample of these linguistic opportunities can be seen in the following videos: S.4.1 (46:24-46:40), S.2.1 (09:57-10:04), S.1.4 (13:00-13:20) and S.3.4 (24:25-25:20). The minutes selected show moments when the teacher was asking questions to the students in order to foster speaking in class. One of the examples transcribed is presented:

**S.1.1
(17:14-17:41)**
The teacher was providing L2 opportunities to students by making them ask questions to a group of students that had just presented a project in front of the rest of the class.

T1: Come on, don't be shy. Comments, questions, constructive ideas. For them, your comments are important, so don't be shy.

Finally, the last aspect analysed in this field aimed to see if the teacher required students to use the L2 in class. In nearly all the EMI sessions (87.5%), teachers did not require students to answer questions using the L2. There was just one subject in which the teacher did require the students to answer using the L2 (12.5%) and this was the case in one session of the subject *Fostering Sociolinguistic Competence*.

Table 50

Teachers' L2 usage and its promotion in class

Teachers' L2 usage in class			Teachers reminding students to use L2 in class			Teachers giving L2 practice opportunities to students			Teachers requiring students to use the L2 in class		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
100%	2	25.0	No	7	87.5	Yes	8	100.0	No	7	87.5
more than 85%	3	37.5	Yes	1	12.5				Yes	1	12.5

more than 65%	1	12.5	Total	8	100.0		Total	8	100.0
50%	2	25.0							
Total	8	100.0							

The next aspect is related to the language skills developed in class. As observed in table 51, nearly all the EMI teachers provided opportunities for students to develop all four language skills (listening, reading, writing and speaking) during their EMI classes (87.5%). There is just one EMI session in which this variety of skill opportunities could not be observed (12.5%).

Looking at the second column of table 51, the opportunities created by the teachers to develop linguistic skills can be observed. We can see that there were two sessions where reading, listening, writing and speaking were all performed (25%). In another session, reading, listening and speaking skills were performed (12.5%). For instance, the speaking skill is exemplified in video S.4.2 (27:20-31:48). There was one session where just the speaking skill was developed (12.5%), and which coincides with the same session from the previous chart which did not provide all the four language skills opportunities. What is more, the listening, the writing and the speaking skills were also worked on in one session (12.5%). Some examples can be seen in the videos S.3.4 (19:50-20:07) and (24:25-25:20). And finally, the writing and the speaking skills were present in one more session (12,5%) (e.g., S.2.6 (18:40-21:42)); and in the last two sessions analysed, the listening and the speaking skills were developed (25%).

Table 51

Language skills developed in class

Opportunity to develop the language skills			Skills developed in class		
Item	F	VP	Item	F	VP
No	1	12.5	Speaking	1	12.5
Yes	7	87.5	Reading, listening, writing and speaking	2	25.0
Total	8	100.0	Reading, listening and speaking	1	12.5

	Listening, writing, and speaking	1	12.5
	Writing and speaking	1	12.5
	Listening and speaking	2	25.0
	Total	8	100.0

Table 52 illustrates that in nearly most of the EMI sessions, the teachers used appropriate and content-related vocabulary in class (87.5%), which means that the vocabulary was worked among the students in groups and that it was related to the subjects' content. Moreover, the teachers tried to translate or paraphrase it if what they had said was not understood. For example, two examples are found in video S.3.2 (07:40-12:16), (38.30-40:17). However, there was one session with a negative answer in the table provided, meaning that the teacher did not seem to provide a good vocabulary approach in class (12.5%). This is because the nature of the session was students' group work, where the teacher was not required to speak.

As described in the second column of table 52, there was just one EMI session where the teacher translated difficult words from the document (12.5%) (e.g. S.3.1 and S.3.2). In the other six sessions, the teachers did not do any vocabulary task (75%). There is one session with no figure assigned due to the fact, as mentioned before, that the teacher did not speak in class (12.5%), and it was the students who worked in groups.

Table 52

Vocabulary used in class

Usage of content related vocabulary in class			Tasks used to work the vocabulary		
Item	F	VP	Item	F	VP
No	1	12.5	0	1	12.5
Yes	7	87.5	No vocabulary tasks done in this session	6	75.0
Total	8	100.0	Just translating difficult or key content words	1	12.5
			Total	8	100.0

Table 53 and table 54 show the aspects grouped in the teachers' role field. The first aspect commented is the teachers' usage of non-verbal language. In five out of the eight sessions (62.5%), the teacher used nonverbal language when explaining; there is just one session where it cannot be observed if the teacher used nonverbal language or not (12.5%). In one session, the EMI teacher was using nonverbal language when explaining, answering questions or getting the attention of the students (12.5%) (e.g. S.4.2 (26:10-26:30)). When the teacher was talking or waiting for the class to be in silence, the teacher also used nonverbal language (12.5%) (e.g. S.1.5 (6:00-06:06)).

The material used by the teacher in the sessions recorded was also considered to be part of the teachers' role in class. As we can see in the second column of table 53, there was one session (12.5%) where the teacher did not use any type of material during the session (e.g. S.1.1-S.1.3, as the teacher was speaking in class all the time, without any support material). In another session the teacher just used the board (12.5%). This can be observed in video S.2.6 (18:00-21:31). In one of the sessions (12.5%), the teacher was not explaining, just observing how some students were presenting tasks in front of the class (e.g. S.4.3-S.4.6). There was one session (12.5%), where the PC, the board, audio files, the Internet and PowerPoint were used by the teacher (e.g. S.4.1-S.4.2). They also used the digital board, the PC and the PowerPoint in another session (12.5%) (e.g. S.3.3-S.3.5). In the following session (12.5%), the teacher used the PC, the board and the PowerPoint (e.g. S.3.1-S.3.2). Finally, in the last two sessions, the teacher used the Digital board, the PC, the board, notes, audio files and the PowerPoint (12.5%) (e.g. S.2.1-S.2.5), and in the last one (12.5%), the PC, the board and audio files (e.g. S.1.4-S.1.5).

Another aspect analysed was the class atmosphere. The third column shows that all the EMI sessions presented an adequate class atmosphere for students to work (100%). In other words, the class was adequate, and the students seemed to feel comfortable working there. In one of the sessions, for example, the teacher made sure the students felt comfortable while in class (e.g. S.3.1 (13:28-13:45)).

S.3.1**(13:28-13:45)**

The teacher was asking two students if they could see well from the table where they were sat.

T1: Do you see well here behind? Ho veieu? Here, there are seats.

S1: És que no ens hem volgut...no, volíem aixecar-nos però o sigui, no ho hem fet perquè com que has començat i tal, però no...

T1: No no, si volem passar, passeu, és que aquí no crec que vegeu massa cosa.

All the EMI sessions recorded (100%) show that the teachers were close to students in class. This was exemplified when the teacher answered the students' questions and doubts, when they confirmed the students' learning, and when they helped the students' during their group work. Moreover, the students seem to be comfortable when asking questions to the teacher to solve or clarify concepts.

Table 53*Teachers' role in class*

Teachers' usage of nonverbal language in class			Support material used by the teacher to do class			Adequate class atmosphere to work			Predisposition of the teacher towards the students		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
Can't see	1	12.5	0	1	12.5	Yes	8	100.0	Yes	8	100.0
When explaining	5	62.5	Board	1	12.5						
When explaining, answering questions or getting attention	1	12.5	The teacher is not doing class, just observing	1	12.5						
When talking or waiting for the class to be in silence.	1	12.5	PC, board, audio files, Internet, PowerPoint	1	12.5						
Total	8	100.0	Digital board, PC, PowerPoint	1	12.5						

	PC, board, PowerPoi nt	1	12.5
	Digital board, PC, board, notes, audio files, PowerPoi nt	1	12.5
	PC, board, audio files	1	12.5
	Total	8	100. 0

What is more, table 54 presents four more aspects which are considered important in the role of a teacher. These revolve around the teacher confirming learning in class, solving doubts, having the language to solve these doubts and the teachers' strategies to maintain students' focus in class.

As observed in the first column of table 54, five of the EMI sessions (62.5%) recorded show that teachers asked students if they had understood the lesson by making them focus on the learning process. This is observable in the following videos: S.2.6 (21:30-21:42), S.3.1 (11:45-12:00) and (22:27-22:38), S.3.2 (01:00-01:20), and S.3.3 (09:27-09:54). There were three sessions (37.5%) where it could not be observed if the teacher had done this.

The second column shows that in all the EMI sessions recorded (100%) the teachers solved the students' doubts in class. Some of the examples can also be found in the Class development survey analysis, where the language used by the teacher when answering or solving doubts to students is exemplified. One example of each subject is provided here: S.3.1 (33:12-33:25), S.2.7 (09:14-10:35), S.1.5 (10:05-11:00) and S.4.1 (04:35-05:40).

It was relevant to observe the language used by the teachers when solving the students' doubts in class. As shown in the table, five teachers (62.5%) used both Catalan and English, two teachers

(25%) just used English, and one teacher (12.5%) used the Catalan language when solving doubts.

Finally, the last aspect analysed when looking at the teachers' role focuses on the strategies and actions the teachers used to maintain the students' focus in class. As shown in table 54, two teachers (25%) would ask questions to students and give examples to keep the attention of the students. This is demonstrated in S.1.4 (13:00-13:20) and S.21 (10:05-10:44). One teacher (12.5%) proposed doing some tasks to maintain the class focus (e.g. S.2.6-S.2.9). Another teacher (12.5%) was not doing class that session, that teacher was just observing how the students presented (e.g. S.4.3-S.4.6). Asking questions, proposing to do tasks and showing videos and articles were also strategies another teacher used (12.5%) and which can be exemplified in the videos S.4.2 (31:50-32:50) and (39:40-40:22). In another session (12.5%), the teacher asked questions, proposed to do tasks, challenged the students and gave examples (e.g. S.3.3 (25:28), S.3.4 (22:20-22:30) S.3.5(04:05-04:10) and (06:12-06:30). One teacher (12.5%) also asked questions, proposed to do tasks and gave examples. Some examples can be observed in the videos S.3.1 (27:17-28:23), (29:38-30:50) and S.3.2 (16:30-16:51). Finally, giving examples to students and asking them to be in silence are two more actions seen in another teacher's session (12.5%) (e.g., S.2.4 (22:23-22:28)).

Table 54

Teachers' role in class

Teachers' confirming learning in class			Teachers' solving doubts in class			Language used by the teacher when solving doubts in class			Teachers' strategies and actions to maintain focus in class		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
No	3	37.5	Yes	8	100.0	Catalan	1	12.5	Proposing to do tasks	1	12.5
Yes	5	62.5				English	2	25.0	The teacher is not teaching, just observing.	1	12.5

Total	8	100.0	Catalan and English	5	62.5	Asking questions, proposing to do tasks, showing videos, reading articles.	1	12.5
			Total	8	100.0	Asking questions, proposing to do tasks, answering doubts from students, giving examples	1	12.5
						Asking questions, proposing to do tasks, giving examples	1	12.5
						Giving examples, asking them to be in silence.	1	12.5
						Asking questions, giving examples	2	25.0
						Total	8	100.0

Students' survey

This section presents the results from the analysis of the surveys made to the students who participated in the EMI classes. The videos recorded different aspects about the students, and these aspects were distributed in diverse fields, which are; Language used in class by the students, Students' participation in class and Students' communication with the teacher.

Table 55 shows the analysis of the languages used by the students when they asked, translated words and clarified doubts in class. Regarding the first aspect, the first column describes that in the majority of the EMI classes recorded (75%), the students used both their L1 (Catalan/Spanish) and their L2 (English language) to ask the teacher something in class (e.g. in

sessions S.1, S.2 and in one session of S.3 and S.4). In the two other EMI sessions, the students used either the mother tongue (12.5%) (e.g. in one S.2 session) or English 12.5% (e.g. in one session of S.4).

The second item analysed, as it can be observed in column two, refers to the language used by the students when they needed to translate words in class. This aspect was difficult to observe in most of the EMI sessions recorded, as the recording could not get the whole perspective of the class and all the conversations among the students were difficult to understand. Therefore, this aspect was not observed in three of the sessions (37.5%). Several options were documented: the students asked questions to a classmate using the L1 (12.5%); the students asked the teacher using the L2 but asked a classmate using the L1 (12.5%) (e.g. in S.4), and finally there were two sessions where the students asked the teacher using both the L1 and the L2 (25%) (e.g. in S.3). In one of the sessions, the students did not ask any questions at all to the teacher (12.5%) (e.g. in S.1).

Item number three, presented in the last column, provides the frequency of which languages students used to clarify doubts in class. Half of the sessions (50%) recorded show that the students asked teachers using both the L1 and L2 to clarify doubts (e.g. S.3.3 (06:45-07:48), S.3.3 (10:00-10:30) and S.3.3 (17:40-17:50)). 25% of the sessions, which stands for two sessions recorded, the students asked the teacher using both L1, L2 or by asking a classmate using L1 (e.g. in sessions from S.4 and S.1). Moreover, 12.5% of the students asked the teacher using their L1 (e.g. S.2.4 (22:09-23:26)) or asked the teacher and a classmate using their L1 (e.g. S.3.2 (35:33-35:51) and S.3.2 (39:40-40:17)).

Table 55

Languages used by students in class

To ask in class			To translate words			To clarify doubts		
Item	F	VP ⁵	Item	F	VP	Item	F	VP

⁵ Note: the value for the F is Frequency and for the VP is Valid Percent.

L1	1	12.5	0	1	12.5	Asking teacher using their L1	1	12.5
L2	1	12.5	Asking a classmate using their L1	1	12.5	Asking teacher using their L1, Asking teacher using their L2	4	50.0
L1 and L2	6	75.0	Not observed in this session.	3	37.5	Asking teacher using their L1, Asking teacher using their L2, Asking a classmate using their L1.	2	25.0
Total	8	100.0	Asking the teacher using their L2, asking a classmate using their L1.	1	12.5	Asking teacher using their L1 and asking a classmate using their L1	1	12.5
			Asking the teacher using their L1, asking the teacher using their L2.	2	25.0	Total	8	100.0
			Total	8	100.0			

Table 56 presents the field related to the students' participation in class. The items commented are about the language used when participating and the reasons for the participation. Firstly, the first column shows that in 100% of the EMI classes recorded students participated in class. The second column of the same table presents the percentage of the language choice used by students when participating in class. An approximate calculus was done based on the total time of the recording. In two of the EMI sessions recorded (25%), the students interacted 60% of the time using their L2. The other EMI sessions show different results each: in one session (12.5%) the students used their L2 100%, because the session was devoted to presenting the students' projects in groups, and the presentations were entirely in English; in another session (12.5%), the L2 was used 80% of the time; and in another session it was just 40% (12.5%). In the other three remaining sessions recorded, the students used their L1 to participate: there was one

session where all the students participated using their L1 100%, because it was a class where students had to prepare a project in groups, and the students' interaction was entirely in their L1; in another session the participation with the L1 was 80%, and finally, in one session the L1 was used 60% of the time.

The last column shows the different situations and contexts that were considered when the students participated in the EMI sessions. As is described, the students participated most in two of the EMI sessions (25%) recorded when answering teachers' questions, when doing tasks or when solving class doubts. Some of the examples are found in the following videos: S.3.3 (06:47-7:22) and (20:15-21:20); S.3.4 (12:00-13:31); S.3.5 (08:20-08:50); S.4.4 (18:13-18:42) and in S.4.5 (01:28-02:25).

S.3.3

(06:47-7:22)

The teacher was explaining some contents to the students, and they asked questions if needed.

S1: And why is not positive the...la sobre-regulació?

P1: Good question. Why do you think it's not a positive thing? Because regulating is good no? Because everybody thinks that regulating is good. O no? Penseu que regular no és bo? Si, no? It is very Good. So, If I do it extra? Si faig extra feina, per què no és bo? What do you think?

S2: Perquè no els deixa fer autònoms als nens, no ? Fas molt més.

P: Clar, però llavors ets molt autònom, perquè tu estàs, estàs sobre regulant o sigui hasta el que no et fa falta regular, t'ho regula. Ho vaig dir l'altre dia. What did I say?

There was also students' participation when answering the teacher's questions or when doing tasks in class (25%). The examples appear in the videos: S.1.1 (06:28-07:37) and S.1.2 (00:00-03:27).

S.1.1

(06:28-07:37)

The students were presenting a task in front of the class. The teacher and the students asked questions at the end, and the group of students answered them.

P: I have some comments. I think it is interesting they way you have designed the bingo because the teacher says the result and the students need to find the addition according to the number and I think it is interesting doing it this way even more as we know as they are in the fifth grade. Maybe in second it would be deeper.

S1: I think we are going... if we did it with second, the sums would be more easy.

S2: Yes, because these additions, maybe they are a little bit difficult so.

S3: We have thought it special from this age.

P: it would be interesting to specify more the... which kind of additions you want your students to learn.

In one of the EMI sessions, the students participated only when they were doing tasks (12.5%).

In another session (12.5%), the students asked questions to other groups presenting or when the teachers asked them to do it, for example in S.4.3 (17:07-17:54) and (17:57-19:29); S.4.4 (00:00-04:06) and (22:29-26:11).

**S.4.4
(22:29-26:11)**
A group of students was presenting a project in front of the class. The rest of the students were listening and at the end, they asked questions to the group.

S1: Why do you think this project is collaborative?

S2: Well, in first place, we thought that it is collaborative, as I said, because the two schools are collaborating, and well, while they are working during all the year, each partner, it is about to learn but also to communicate with other students. As I said also, they can share the vocabulary and help each other. And we thought that with this is collaborating.

S3: Not every part of the project will be just... because for example the first part will be created in groups, and they can make their own individual reflections, but they can put them in groups as well. And the same with this.

S4: and the content that you are going to work in the project is the one that follows the textbook or each month is a...

In one of the sessions (12.5%), the students interacted when they answered the teachers' questions, when they were doing tasks or correcting exercises, such as in S.4.1 (10:15-12:50) and in S.4.2 (27:20-31:48). Finally, it was observed that in one session (12.5%) the students communicated when answering the teachers' questions or when solving doubts, for instance, S.3.1 (12:10-12:39) and in S.3.2 (28:14-28:40).

Table 56

Participation in class

Participation in class			Language used			Reasons for its usage		
Item	F	VP	Item	F	VP	Item	F	VP
Yes	8	100.0	100% L2	1	12.5	Doing tasks	1	12.5
System	19		80% L2	1	12.5	When asking questions to the other groups presenting and when the	1	12.5

						teacher asked them to.		
Total	27		60% L2	2	25.0	Answering teachers' questions, doing tasks, correcting exercises	1	12.5
			40% L2	1	12.5	Answering teachers' questions, doing tasks, solving doubts	2	25.0
			100% L1	1	12.5	Answering teachers' questions, solving doubts.	1	12.5
			80% L1	1	12.5	Answering teachers' questions, doing tasks.	2	25.0
			60% L1	1	12.5	Total	8	100.0
			Total	8	100.0			

Next, table 57 displays the frequency tables results related to the students' communication by class field. One item shows the amount of teacher-student interaction and another the student-teacher one. The recorded sessions show that in nearly all the sessions (87.5%), the students communicated smoothly in the class using their English language, whereas in one session (12.5%), they did not have a successful interaction with their teacher using the L2. The last figure stands for one of the S.2 sessions in which the students worked in groups preparing a project, and the teacher did not interact with them.

When it comes to student - student communication, the percentage decreases. In five of the sessions recorded (62.5%), the students did not interact in English (L2) among themselves. Just in three sessions (37.5%) the students used the L2 to communicate in class (e.g. S.1.3 (02:34-03:27)), and in the S.4.4, S.4.5 and S.4.6 videos, where the students' interaction is 100% in English. It should be noted that this item was difficult to observe considering the number of students in the class and the recording of the video.

Table 57*L2 communication in class between teachers and students*

Communication with the teacher using the L2			L2 interaction among students in class		
Item	F	VP	Item	F	VP
No	1	12.5	No	5	62.5
Yes	7	87.5	Yes	3	37.5
Total	8	100.0	Total	8	100.0

Survey about the tasks

The type of tasks done in the EMI classes recorded were also analysed. In other words, a list of relevant practices was created to describe the EMI sessions, which helped us analyse how the EMI class tasks were developed. The results are distributed in different fields and presented in the following tables following this organisation: Language used by the teacher and students in class, Language triptych, Vocabulary revision, scaffolding in class, Feedback given in the EMI classes, Learning styles, Thinking skills of the tasks done in class, Students' grouping when working in class, Tasks based on authentic contexts.

Firstly, the language used by the teacher and the student in class was considered important when analysing the development of the EMI classes. Table 58 shows that in five of the sessions recorded (62.5%), the teachers used both Catalan and English when they were explaining the content or the tasks to be done in class (e.g. S.3.1-S.3.3, S.1.4-S.1.5, S.2.1-S.2.5, S.3.1-S.3.5). Just in three sessions (37.5%), did the teachers use only the English language to communicate in class. When referring to the language used by the students in class when doing the tasks, the second column of table 58 shows that most of the students used both Catalan and English (87.5%). Just in one of the sessions (12.5%) was the English language completely used in class.

The next column shows that the students' interaction among themselves in class when doing tasks was not in the L2 (87.5%). Just in one of the sessions (12.5%) recorded, did the students use the L2 meaningfully when working in class. This happened in the second session of *Fostering*

Sociolinguistic Competence (S.4.3-S.4.6). During this session, the students did oral presentations in groups, and the audience asked questions to each group, and they had to answer them. Their interaction was completely in English (L2).

The L2 interaction between teachers and students provided different results. As illustrated in the fourth column of table 58, in five out of the eight sessions recorded (65.5%) there was a meaningful interaction between teachers and students using the L2. To exemplify this, some examples are found in the videos S.4.1, S.4.2, S.4.3, S.3.3, S.3.4 to mention a few. In three sessions, the results show that there was no interaction in the L2 (37.5%).

Table 58

Language used by the teacher and students in class

Language used by the teachers in class			Language used by the students in class			L2 interaction among students in class when doing tasks			L2 interaction between teachers and students in class		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
English	3	37.5	English	1	12.5	No	7	87.5	No	3	37.5
Catalan and English	5	62.5	Catalan and English	7	87.5	Yes	1	12.5	Yes	5	62.5
Total	8	100.0	Total	8	100.0	Total	8	100.0	Total	8	100.0

The following table refers to the Language Triptych (Coyle et al., 2010). The aim was to find out if there were connections between content and language, through the Language Triptych, which happened in just one session. As observed in table 59, the usage of the Language of, for and through learning was only used in one class (12.5%), when answering some questions, so it was already implemented when the students were writing. This information was gathered in the second session of the *Sociology of Education* subject.

Table 59*Language triptych*

Language of learning			Language for learning			Language through learning		
Item	F	VP	Item	F	VP	Item	F	VP
Not worked in this session / Not used in class.	7	87.5	Not worked in this session / Not used in class.	7	87.5	Not worked in this session / Not used in class.	7	87.5
It is used when answering some questions. The language is already implemented when writing.	1	12.5	It is used when answering some questions. The language is already implemented when writing.	1	12.5	It is used when answering some questions. The language is already implemented when writing.	1	12.5
Total	8	100.0	Total	8	100.0	Total	8	100.0

Regarding the vocabulary revision during the session, we can see in table 60 that there was not any kind of revision concerning vocabulary during the session, not even when the unit started or when the teacher explained theory. As described, both columns show the same results; in all the 8 sessions the answer was 100% negative.

Table 60*Vocabulary revision*

Vocabulary revision in class			Vocabulary introduction before explaining the session		
Item	F	VP	Item	F	VP
No	8	100.0	no	8	100.0

Knowing how the scaffolding worked in the class was one of the necessary target aspects under the analysis. Scaffolding can be considered in class as a variety of strategies which help students understand and improve in the learning process. It is considered a key technique in EMI or CLIL classes. As can be seen in table 61, we can see that in 87.5% of the EMI sessions recorded, scaffolding was not used. Just in one session (12.5%) can we see that scaffolding was used. This

can be found in S.4.1 (04:00-04:40). At the beginning of the class and before starting the main task, the teacher let the students think about the topic, brainstorm some ideas on a paper and compare them with a classmate. After that, the task started. This is the transcript of the example mentioned.

**S.4.1
(04:04-04:40)
The teacher was presenting the task by asking the students to make a list of vocabulary.**

T1: Now, we are going to start working in pairs or small groups, yes? Before I play the video, I would like you to think about the title of the video which is 21st Century Education, and in small groups of pairs, I would like you to create a list of concepts that you connect to this 21st century education, ok? any concepts that you consider may be link to that. So please, start now with this list. I am going to go around and then we will share the info, ok?

The following two columns show the type of scaffolding used in the EMI session mentioned before, and which just refers to content scaffolding (12.5%). This concretely refers to the video S.4.1 (04:04-04:40), when the teacher asked the students to brainstorm “about concepts that can be linked to 20th century education”. As can be observed, there was not any kind of language scaffolding.

As described in table 61 and the previous paragraph, the only session where the scaffolding was used was to brainstorm and give clues in S.4.1.

Table 61

Scaffolding in class

Scaffolding in the sessions			Language scaffolding			Content scaffolding			Kind of content scaffolding		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
No	7	87.5	No	8	100.0	No	7	87.5	0	7	87.5
Yes	1	12.5				yes	1	12.5	brainstorming and giving clues	1	12.5
Total	8	100.0				Total	8	100.0	Total	8	100.0

Another relevant item from this field is the feedback given by the teacher during the class tasks. Table 62 shows that the teacher corrected or gave feedback in 87.5% of the EMI classes. There was just one session (12.5%) where the teacher did not give any kind of feedback. This was the session mentioned before, the second session of the subject called *Sociology of Education* (S.2.6-S.2.9), in which the teacher asked the students to answer some questions, and he did not interact or give feedback during the session. At the end, the students delivered the tasks written on a paper.

The second column shows that in most of the sessions (75%), the feedback given was related to content correction. An example can be observed in the following video:

S.3.5

(06:55-07:28)

The teacher was commenting on one student's answer. She was giving oral feedback about what the students had just said.

T1: For example. Es que sembla que parleu però no...

S1: És que estic comentant però no ho sé segur.

T1: Diga-ho, diga-ho.

S1: Doncs per exemple, jo que sóc d'aquella zona, a Tarragona, pues que hi ha l'amfiteatre Romà, i treballar a l'escola l'antiga roma, pues anar d'excursió allí i pues veure-ho i treballar tot el que hem vist.

T1: Vale, sí, però això seria realment un pla d'entorn si les institucions (diguéssim com per exemple l'ajuntament també) estiguessin implicades de manera sistemàtica.

There was one session (12.5%) where the feedback was related to language and content (session from videos in S.4.3-S.4.6); and one session showed that there was not any feedback at all (12.5%), which was the same session mentioned in the previous paragraph.

Concerning when giving feedback, column three provides different answers; in three of the sessions recorded (37.5%) the teacher gave feedback after correcting; just in one session (12.5%) did the teacher do it while correcting; and in three of them (37.5%), the correction was given after and while correcting. There was just one session where there was no feedback at all (12.5%).

The recorded sessions show how the feedback was given. As described in the fourth column, in 37.5% of the sessions feedback was oral (e.g. S.3.1, S.3.2, S.1.1, S.1.2, S.1.). There was one

session (12.5%) in which the feedback was written, since it was a project and the teacher gave corrections on content and language (S.4.3-S.4.6). Another session (12.5%) showed that the feedback was oral when giving examples:

S.4.1
(27:30- 28:10)
The teacher was correcting some questions orally with the students.

T1: OK, let's correct all together. So, what was question number one? What does it say the video about our society? And the moment we are living? What is saying? Anybody can answer that?

S1: Yes

T1: Roser

S1: Redefining the experiences of students and teachers

T1: Ok. So we are redefining the experiences. Something else? Anybody?

S2: There is a lot of knowledge.

T1: Ok. We have a lot of knowledge which is available. Obviously thanks to the internet. Yes? Anybody has got something else? Did you listen something about the revolution?

S: Yes

There was another session (12.5%) in which the teacher used written feedback and examples too (e.g. S.3.3-S.3.5); in one more session (12.5%) the teacher gave oral feedback, and took notes from the students' presentations, which were part of a mark (e.g. S.2.1-S.2.5). Finally, there was just one session (12.5%) where there was no feedback at all (e.g. S.2.6-S.2.9).

Table 62

Feedback given in the EMI classes

Teachers' feedback to the students			Type of feedback given			When the feedback is given			How the feedback is given		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
no	1	12.5	None	1	12.5	After correction	3	37.5	oral	3	37.5
yes	7	87.5	Language and content	1	12.5	While correction	1	12.5	No feedback given	1	12.5
Total	8	100.0	Content correction	6	75.0	No feedback given	1	12.5	Written. It is a project. The teacher gives written corrections on content and language	1	12.5

	Total	8	100.0	After correction and while correction	3	37.5	Oral and exemplifying	1	12.5
				Total	8	100.0	Written and exemplifying	1	12.5
							Oral and teacher taking notes for a mark.	1	12.5
				Total	8	100.0			

It was important to find out if the EMI tasks responded to different learning styles. As shown in table 63, most of the sessions recorded (87.5%) were prepared for different learning styles. Just in one session (12.5%) were different learning styles not considered. This is exemplified in the second session recorded at the *Sociology of Education* subject (S.2.6-S.2.9), in which the students spent the whole class doing a group task. The second column illustrates that all the seven sessions (87.5%) that considered different learning styles used the visual and auditory supports. The remaining session was the one in which there was not any kind of learning style worked with the students.

Table 63

Learning styles

Learning styles			Kind of learning styles		
Item	F	VP	Item	F	VP
No	1	12.5	0	1	12.5
Yes	7	87.5	Visual and auditory	7	87.5
Total	8	100.0	Total	8	100.0

Another item of this field is related to thinking skills, the kind of tasks done in class which were prepared to take the student from lower to higher order thinking processes. As described in table 64, there were seven sessions that did not show this pattern (87.5%). Just in one session

(12.5%) was the task presented by the teacher ordered from lower to higher order thinking processing. This can be seen in the video S.4.1. As also described on the second column, we can see the type of task done for the only session mentioned (12.5%) before and which took into account the low order thinking processing. This session was about “recognising, interpreting, explaining”. More specifically, the task was a listening exercise, in which the students needed to recognize some ideas first, and then, interpret what had been said in order to explain their opinion in class. The other sessions (87.5%) did not take this procedure into account. The task used in the higher order thinking processing was about “producing and giving opinion on the topic”, and it was just for the only session mentioned before (12.5%). This can be observed in the following example:

S.4.1
(42:12-42:51)
The teacher was asking questions to the students after having watched a video in class.

T1: Anybody...about the digital textbooks we don't need to say anything because I know your opinion and you hate them, yes?
S1,2,3: Yes
T1: You have some opinion, different?
S1: We don't like it but Roser says that maybe in South Korea there are a lot of good technology and maybe there can work.
S2: it works better.
T1: it works better than in Catalunya in the high-school if there is no connection. Ok. That's a possibility.
S3: and also they have more money.
T1: OK, so they can buy more computers for students.

As seen in table 64, the other sessions did not take this procedure into account (87.5%).

Table 64

Thinking skills of the tasks done in class

Presence of tasks of low or high order thinking processing			Tasks used in low order thinking processing			Tasks used in high order thinking processing		
Item	F	VP	Item	F	VP	Item	F	VP
No	7	87.5	0	7	87.5	0	7	87.5
Yes	1	12.5	Recognizing, interpreting, explaining	1	12.5	Producing and giving opinion on the topic	1	12.5
Total	8	100.0	Total	8	100.0	Total	8	100.0

Regarding the review at the beginning of the EMI classes recorded, table 65 shows that in half of the classes (50%) the teacher reviewed at the beginning of the class. Some examples can be observed in the following videos: S.4.1 (01:40-03:38), S.4.3 (00:00-00:20), S.2.1 (00:00-01:07) and S.3.1 (00:00-01:20). This means that the teachers explained briefly what the previous session had been about and the objectives of the session ahead. This is one example transcribed:

S.4.1
(01:40-03:38)
The teacher was starting the session.

T1: We can start. Perfect. Let's begin by refreshing what we did last session, ok? Because we had those small holidays, so remember in last session, we were preparing the TAC PowerPoint, yes? and you had to send to me in Google Drive. Remember that you were working with online tools. We had some activities and you had specific online tools to check for those activities. Today, we are going to go a little bit further and we are going to deal with ICT projects in the school, TIC projects, yes? Because for your next subject project, project number 7, you will have to create one, so I think it is important that we take a lot at some TIC projects. Before we start, I will explain the time for today, yes? We are going to divide the session in three parts. In the first part, we are going to watch a video. It is very short, and the video is about 21st education. I sent you in google drive one document with some questions about the video. Just in case you did not receive it, I printed for you. Don't worry about that. In the second part, we are going to get in groups, OK? And you will analyse a specific ICT project and you will explain that project to the rest of the class, so that we can see different examples of projects. And at the end, if we have time, I will explain project 7.

Table 65

Class review at the beginning of the session

		Frequency	Valid Percent
Valid	No	4	50.0
	Yes	4	50.0
	Total	8	100.0

Table 66 provides information on the kind of tasks done in class and the students' grouping to do them. As presented in the table, in three of the sessions recorded (37.5%), the students worked in groups. The other sessions show different results: working individually (12.5%), working in pairs (12.5%) such as in video S.2.6 (21:30-21:44); both in pairs and in groups (12.5%) such as in video S.4.1 (47:00-47:32); individually and in groups (12.5%), and individually and in pairs (12.5%). Two examples are transcribed here:

S.2.6**(21:30-21:44)****The teacher was explaining the task, which was going to be in pairs or threes.**

T1: As you know, you work in pairs or threes until 11 you complete the exercise. Let me know if you have questions.

S.4.1**(47:00-47:32)****The teacher was explaining the second task of the class, mentioning the group distribution of the second task.**

T1: Good. Let's move to the second part of the class, yes? We have finished with that. Now, we are going to analyse the TIC projects, OK? You have the document on Google Drive, which is this one. I have printed it just in case you want to do it digital format and XX format. I have the webpages here, ok? For the group. You have to get in groups of four or five students.

Table 66

Students' grouping when working in class

		Frequency	Valid Percent
Valid	Individually	1	12.5
	In pairs	1	12.5
	In groups	3	37.5
	In pairs and in groups	1	12.5
	Individually and in groups	1	12.5
	Individually and in pairs	1	12.5
	Total	8	100.0

Analysing the type of tasks was one of the objectives when recording the EMI sessions. Table 67 shows the number of sessions and the degree to which the tasks were based on authentic contexts. In other words, it refers to tasks which were meaningful and significant for the students, and which engaged them in achieving the objectives and outcomes. As described, 62.5% of the sessions were 100% based on authentic contexts. Just 37.5% of the sessions were 80% based on authentic context.

Table 67

Tasks based on authentic contexts

		Frequency	Valid Percent
Valid	100%	5	62.5
	80%	3	37.5
	Total	8	100.0

Survey on the materials

Knowing the material support used in class was highly important when analysing the EMI sessions. The focus was on three different fields of analysis; Language of materials, Internet usage to develop the tasks in class and the class glossary. The results are presented in table 68. The first column shows the L1 support material used in the EMI sessions. As can be observed, the usage of L1 support material was low. It was only used for advertisements and images (12.5%) (e.g. socio4), and in the tasks prepared by the students (12.5%) (e.g. maths4-5). There was no more usage of L1 support material (75%). The second column shows the L2 support material used in the EMI sessions recorded. The usage of L2 material was higher compared to the L1 material. It was used in the sessions for: showing the theory in PowerPoint (25.0%) (e.g. family1-2 and maths1-3); students' presentations in PowerPoint or Prezi (12.5%) (e.g. fostering 3-6); when the PowerPoint was used in the session by the teacher (12.5%) (e.g. family3-5); for displaying ads and images (12.5%) (e.g. socio1-5); for showing material from the tasks prepared by the students (12.5%) (e.g. maths 4.5); and for newspaper, webpages and videos (12.5%) (e.g. fostering1-2). Concerning the webpages and videos used in one of the *Fostering Sociolinguistic Competence* subject sessions, they referred to YouTube, Campus Virtual (the university's own online management system), Google Drive. There was just one session where there was no L2 support material usage (12.5%), which was the second session of *Sociology of Education* (videos socio6-9).

Table 68

Language of materials

L1 support material			L2 support material		
Item	F	VP	Item	F	VP
None	6	75.0	None	1	12.5
Advertisements and images	1	12.5	Students' presentations in PowerPoint or Prezi	1	12.5
Material from the tasks prepared by the students	1	12.5	PowerPoint used in the session by the teacher	2	25.0

Total	8	100.0	Theory in the class PowerPoint	1	12.5
			Ads, images	1	12.5
			Material from the tasks prepared by the students.	1	12.5
			Newspaper, webpages, videos.	1	12.5
			Total	8	100.0

Table 69 illustrates that the usage of the Internet in class was necessary in half of the sessions (50%), but, in the other half, the usage Internet's was not necessary (50%).

Table 69

Internet usage to develop tasks in class

		Frequency	Valid Percent
Valid	No	4	50.0
	Yes	4	50.0
	Total	8	100.0

As shown in table 70, the EMI subjects did not offer a glossary (100%).

Table 70

Class glossary

		Frequency	Valid Percent
Valid	No	8	100.0

Survey on the class development

The following section is devoted to presenting the results from the class development survey in order to have a clear description of the EMI class organisation. The results are grouped in main fields and presented in different related items, which are: Organization of the class, Language used by the teachers in class, Language used by the students in class and Materials and resources used in the class.

Table 71 depicts part of the class organisation item. The data obtained shows that there were two EMI sessions (25%) where the class involved: Introducing session, explaining the previous one, explaining the session's topic, announcing aspects for the next class. This can be exemplified in the following transcriptions:

S.2.1

(00:27-01:30)

The teacher was introducing the session, explaining what the class was going to be about.

T1: Today we continue with lesson four. Remember we are talking about differential achievements, focusing on three main variables; social class, ethnicity and gender. And in the last class we were talking about gender, and specifically about sexism, gender roles, sexual division of labour and gender segregation in employment. Now, we continue with gender, as a main variable. As you know, we have today the presentations about the optional activity. Finally, seven pairs have prepared their work about gender stereotypes, OK? We start the class with these presentations.

S.2.1

(48:52-49:41)

The teacher was concluding the session explaining the next session.

T1: We have to finish the class because we have no more time. New week I will explain project number 7 ok? For you. And also, Gemma will come next week, and she will bring you some tests because she told me that you did a test at the beginning of the year, yes? and next week we have to do another one, OK?

S1: [unintelligible words]

T1: yes, but it is very easy, very simple and you are...you can do it perfectly yes? with no problem. And after that, we will do normal class because it will be very short, OK?. We will do the test and normal class.

There were also two more sessions (25%) where we can see the teacher: introducing the session, explaining the session's topic, summarising the session, announcing aspects for the next class.

This can be observed in the videos: S.3.2 (48:33-49:11) and S.3.5 (11:27-13:00). The other results

show that there was one session where the class consisted only of the introduction and the practice during the session (12.5%) (e.g. S.1.1-S.1.4). There was an EMI session where the teacher introduced the session at the beginning of the class (12.5%) (e.g. S.4.3 (00:00-00:20)); in another recorded session the teacher just offered an explanation of the topic (12.5%); in one session it was observed that there was just practising and no introduction (12.5%) (e.g. S.1.1-S.1.3).

On the second column of the same table, it can be observed that all the EMI sessions recorded for this research show that the seating arrangement in class consisted in lines of tables (100%). The last column illustrates that six out of the eight EMI sessions recorded showed students working in groups (75%). In the two remaining sessions, the students did not work in groups (25%) (e.g. S.3.1, S.3.2, S.2.6-S.2.9).

Table 71

Organisation of the class (1)

Class organisation			Seating arrangement in class			Students' grouping in class		
Item	F	VP	Item	F	VP	Item	F	VP
Introducing session	1	12.5	Tables forming lines	8	100.0	Groupwork	6	75.0
Explaining the topic of the session	1	12.5				No groups in this session	2	25.0
Practising	1	12.5				Total	8	100.0
Introducing the session, explaining the previous one, explaining the session's topic, announcing aspects for the next class.	2	25.0						
Introducing the session, explaining the session's topic, summarising the session, announcing aspects for the next class	2	25.0						
Introducing session, practising.	1	12.5						
Total	8	100.0						

The following table, Table 72, shows four more aspects related to the class organisation. The first column presents the results from the teachers' position in class. In three of the EMI sessions (37.5%), the teacher was moving around the class (e.g. S.4.1-S.4.2, S.1.1-S.1.3, S.3.1-S.3.2); in another session (12.5%), the teacher was sitting with the students, looking at the presentations they were doing in front of the class (e.g. S.4.6-S.4.9); there was one session (12.5%) where the teacher spent all the time sitting with the students (e.g. S.1.4-S.1.5); moreover, in one of the sessions (12.5%), the teacher was walking around the class, next to the board or in the front of the front lines (e.g. S.3.3-S.3.5); the teacher was also behind the front table in one session (12.55%), sitting on the front table (e.g. S.2.6-S.2.9); finally, it was observed that in one of the sessions (12.5%) the teacher was moving around the class, next to the board (e.g. S.2.1-S.2.5).

The second column of the same table illustrates that half of the EMI sessions (50%) recorded show that the teacher's role in class was as a supervisor. However, there were two sessions (25%) where the teacher's role was as an assessor (e.g. S.1); and in the other two sessions (25%) the teacher acted as a supervisor and as an assessor (e.g. S.4.1-S.4.2 and S.2.1-S.2.5).

Finally, the EMI sessions recorded show that in six out of the eight sessions (75%), the class was student-centred compared to two sessions (25%) where the class was teacher-centred, both of which were the sessions of the *Family and School* subject. The teacher spent most of the time speaking and explaining theory. There were few moments where the students had to interact or do exercises.

The last item analysed regarding the EMI classes is the class organisation. As the results present, half of the EMI sessions (50%) recorded were devoted to doing tasks in class. Some examples can be seen in subjects S.1, S.2, and S.4. There was one session (12.5%) where that was 80% tasks and 20% theory (e.g. S.4.1-S.4.2); in another session (12.5%) 90% theory and 10% tasks (e.g. S.3.3-S.3.5); the next result shows that in one session (12.5%) there was 70% theory and 30% tasks (e.g. S.3.1-S.3.2); and finally, one session (12.5%) was 70% tasks and 30% theory (e.g. S.2.1-S.2.5).

Table 72

Organisation of the class (2)

Teachers' position			Teachers' role			Class centred			Class organisation		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
Moving around the class	3	37.5	Supervisor	4	50.0	Student centred	6	75,0	100% tasks	4	50.0
Sitting with the students, looking at the presentations.	1	12.5	Assessor	2	25.0	Teacher centred	2	25,0	80% tasks 20% theory	1	12.5
Sitting with the students	1	12.5	Supervisor and Assessor	2	25,0	Total	8	100,0	90% theory 10% tasks	1	12.5
Moving around the class, next to the board, along the front lines	1	12.5	Total	8	100,0				70% theory 30% tasks	1	12.5
Behind the front table, sitting on the front table.	1	12.5							70% tasks 30% theory	1	12.5
Moving around the class, next to the board.	1	12.5							Total	8	100.0
Total	8	100.0									

The second field included in this survey is related to the language used in class. Table 73 shows the languages used by the teachers, and table 74 shows the students. The first column in table 73 shows the teachers' usage of their L1. The results show that there were two sessions (25%) where there was no L1 usage by the teacher, and this happened in both sessions of the *Fostering Sociolinguistic Competence* subject (e.g. S.4.1-S.4.6). However, the other seven sessions recorded showed that the teacher used the L1 at some point and for several reasons. In one of the examples (12.5%), the teacher used the L1 to clarify doubts, explain the theory, when

students asked in English, and to translate words. This can be exemplified in the following video transcription:

S.3.3

(07:46-09:28)

The teacher was explaining the theory in class and she was clarifying some vocabulary words and rephrasing the theory explained using the L1 because there was a student with a doubt.

T1: The second aspect is that there are things that do not need to be that related because then they are suppressed. What's suppression? Do you know that it's suppression? I say it in Catalan because maybe you are not understanding this concept and it is very important. Si jo sobreregulo, el que estic fent al final és fer una supressió, el que jo estic fent és, estic reprimint una sèrie d'emocions que són necessàries també d'extreure i de mostrar, d'acord? Imagineu-vos per exemple algú que està que està patint un moment complicat, està trist. I en comptes d'externalitzar-ho, per tal de processar-ho, ho encapsula, és a dir, ho deixa a part. Fa com si no existís. Fa com una negació, com una supressió. Això a la llarga també pot provocar determinants problemes. Pot sortir ansietat, i no sabem perquè. Pot sortir malestar, i no sabem exactament d'on ve. I pot ser per aquesta sobre-regulació, m'enteneu? O sigui, els extrems mai són bons. No és bo infra-regular, ja hem vist el que seria el [inintel·ligible], i tampoc és bo sobre-regular, val? Que seria [inintel·ligible] educatiu, que és el que fa. Ens hauríem de trobar en una cosa intermitja, i que la figura de vincle principal també tingués la possibilitat de regular-nos, o sigui, d'interactuar i que m'ajudi a regular, especialment en aquestes edats. Potser un gran ja s'entén que regulem millor o de manera més efectiva o de manera diferent. Vale. S'entén? T'he respost la pregunta? Good. Any other questions?

The teachers also used their L1 to clarify doubts, paraphrase, exemplify or give examples (12.5%). The following transcription shows an example when the teacher used the L1 to paraphrase while explaining.

S.3.1

(19:10-19:35)

The teacher was paraphrasing what had just been said, helping the students understand.

T1: Yes, right? There is like a period of time, depending on each family because every family is different, that we need to readjust. And after this readjustment. What happens? Què passa després del reajustament?

S1: Doncs que es creen noves relacions.

T1: New relationships. Correct. But, the function is good again? Or it's still unstable?

S1,2,3: Good

Another example of the L1 usage in class was when the teachers answered questions to students when they asked in their L1 (12.5%). In another session (12.5%), the teacher used the L1 to explain the theory. This happened in the second session of the *Sociology of Education* subject (e.g. S.2.6-S.2.9). Moreover, the teacher used the L1 when talking to the students, when asking

questions, when commenting and when correcting (12.5%) (e.g. S.1.4 and S.1.5). Finally, in the first session recorded from the *Numeration, Calculus and Measurement's* subject (12.5%), the L1 was used by the teacher to talk to the students, to ask questions and to solve doubts.

The next column of the same table shows the teachers' usage of the L2 in class. In two of the EMI sessions (25%) the classes were completely in English (L2) (e.g. S.4.1, S.4.2, S.3.3, S.3.4 and S.3.5). In two other sessions (25%), the teacher used the L2 when commenting on the presentation, when asking some questions, and when speaking to the students. We can observe one example in the following transcription.

S.4.5

(28:00-28:50)

The teacher was asking some questions to the students who had just presented in front of the class.

T1: So that would be the final product of one student? Or?

S1: Of each group.

S2: Each group have to create one activity for a blog.

T1: so, they would be creating this, the groups? That, what you are showing now.

S3: Yes.

S1: and each group of the other schools and other countries will have to create another blog too, but each school will create it about, for example, our students will create it about Spain, about Galicia, about their country. And then, the English students will create it about England. And the, via skype, they will explain them what they are doing.

S3: They will present.

The other 4 EMI sessions recorded show different results. In one of them (12.5%), the teacher used the L2 to explain the theory and the task, to ask for some examples, to clarify doubts and to paraphrase, which can be demonstrated in videos S.3.1 (15:00-15:21), (18:20-18:45) and (29:38-30:50) and in S.3.2 (28:14-28:40). In another session (12.5%), the teacher used the L2 when explaining the task in class (S.2.6 (18:00-21:45). In the remaining two sessions recorded, the teacher used the L2 when the students presented their topics delivering oral presentations (12.5%) (S.2.1-S.2.5), and when wanting to comment and answer questions while the students were presenting in English (12.5%) (S.1.1-S.1.3).

Table 73*Language used by the teachers in class*

Teachers' L1 usage			Teachers' L2 usage		
Item	F	VP	Item	F	VP
Never / No use L1	2	25.0	The whole class is in English	2	25.0
To clarify doubts, explain the theory, when students ask in English, to translate words.	1	12.5	When commenting on the presentation, when asking some questions, when speaking with students.	2	25.0
To clarify doubts, paraphrase, to exemplify, to ask or give examples.	1	12.5	To explain the theory and the task, to ask for some examples, to clarify doubts, to paraphrase, etc.	1	12.5
To answer questions to students when they ask in their L1	1	12.5	To explain the task	1	12.5
To explain the theory	1	12.5	When the students present their topics doing oral presentations.	1	12.5
When talking to them. When asking questions. When commenting. When correcting.	1	12.5	To comment and answer questions when they are presenting in English	1	12.5
When talking to them. When asking questions. To solve doubts.	1	12.5	Total	8	100.0
Total	8	100.0			

The students' language usage in the EMI classes was also considered when analysing the videos recorded. As can be observed in table 74, in three of the sessions recorded (37.5%), the students used the L1 when talking among them, when doing tasks in groups that didn't involve whole-class participation (S.4.1, S.2.6). In one of the sessions (12,5%), the students used the L1 when they spoke among them while they were waiting to present their projects. In another session recorded (12.5%), the students used the L1 to ask some questions to the teacher, to clarify some doubts, and when they answered the teachers' questions. This can be exemplified in the following video transcription.

S.3.3 (23:00-24:29)

The teacher was asking some questions to the students using the L2, and the students answered in their L1.

T1: Before continuing, I want that you girls, because we were talking about something important, I want that you share what you asked me to all the class because I need to know the opinion of the other classmates of yours. Can you please tell them? M'han preguntat una cosa, mentre estàvem compartint les opinions i els recursos, que considero que pot donar lloc a reflexió, i que m'agradaria que tots escoltèssiu. Can you please explain them very short?

S1: Bueno, doncs nosaltres estàvem parlant de lo dels grups de WhatsApp i tot això, que normalment també surt a les classes, i ...

T1 : grups de WhatsApp s'entén els grups de WhatsApp de pares sobre la classe.

S1 : Exacte. I que nosaltres també doncs, fent el treball, amb els pares que vam entrevistar, també ens ho van comentar, que hi ha famílies, bueno que hi ha escoles, que hi ha famílies que tenen grups de WhatsApp i parlen entre elles, i a vegades si que fan els deures, però també hi ha opinions i tal que critiquen i que surten fora de context, perquè hi ha de tot, com a tot arreu. Però bueno, i si que, això, que creiem que és algo que s'hauria de tractar, una mica d'orientació perquè no passi entre nosaltres.

T1: Ok. Have you ever thought of them? Or have you ever experienced that?

Another session shows (12.5%) that the students also used the L1 to ask some questions to the teacher, to clarify doubts or the theory, to do tasks among themselves (e.g. S.3.2 (28:14-28:29) and (35:33-35:51). Finally, the students used their L1 (12.5%) to ask questions to the teacher, or in another session (12.5%) when the theory was explained using the L1, so they used the same L1 language to ask or solve doubts.

The students' usage of L2 (English) in class was varied, according to the following results presented on the second column of table 74. There are different answers for nearly all the sessions. In two of the sessions (25%) the students presented their topics in pairs in front of the class, and they used their L2, which can be exemplified in the following videos: S.1.1 (06:28-09:14), S.1.2 (00:00-03:57) and in S.2.1-S.2.3.

In another recorded session (12.5%), the students used their L2 when presenting the task in class, when answering questions from students or the teacher. The students also used their L2 (12.5%) when speaking with the teacher if the teacher spoke English, when answering questions and when correcting in class. One example is transcribed:

S.3.3

(39:40-40:22)

The teacher was asking some questions to the students using the L2, and the students answered using the L2.

T1: One question. Did you have...Did you explain the project as one academic year with their bodies?

S1: No, it doesn't say anything. But we suppose that...

T1: Did you see the photos or the pictures?

S1: yes, but we suppose that the teacher tells for example, today, we are going to work the skype app, or another one, the YouTube app.

S2: it's using the apps for normal activities.

T1: What about the age of the students? what do you think about the age?

S2: yes, small children.

T1: Thank you.

Another session (12.5%) shows that the students used the L2 when they answered the teacher's questions or when they gave examples (e.g. S.3.3 (20:15-21:20) and (12:25-13:31). When asking questions to the teacher or when clarifying doubts (12.5%) were also examples of the students' L2 usage in EMI sessions. One example can be demonstrated:

S.3.1

(12:10-13:16)

The teacher was explaining and asking questions to the students using the L2. The students answered in the L2.

T1: Give me an example.

S1: the educational system.

T1: Ok, yes, it could be. Why did you think on the educational system?

S1: I don't know. I am thinking about the word and...

T1: but, why is it a system?

S1: [unintelligible] I can't carry on.

S2: It has an organisation

T1: It has an organisation, great. It has a lot of individuals, more aspects to interact. And is it different from other systems? Like, for example, is it different from, I don't know, a working environment in a company or is it different from our family for example? Is it something different or it goes together?

S1: but all of them have an organisation.

Moreover, the students also used the L2 to ask questions to classmates when they needed the translation, or they did the task (12.5%). The L2 was also used for the students in one EMI session (12.5%) when presenting the English tasks, when answering the teacher and when correcting (e.g. S.1.4 (24:40-29:26) and S.1.5 (00:00-03:25)).

Table 74*Language used by the students in class*

Students' L1 usage			Students' L2 usage		
Item	F	VP	Item	F	VP
When they speak among themselves while they are waiting to present the projects.	1	12.5	When presenting the tasks in class. When answering questions from students or the teacher.	1	12.5
When talking among themselves. When doing tasks in groups that don't involve whole-class participation.	3	37.5	When speaking with the teacher if she speaks in English. When answering questions in class. When correcting.	1	12.5
Ask some questions to the teacher, or when they want to clarify some doubts. They answer the teachers' questions	1	12.5	When they answer the teacher's questions or when they give an example.	1	12.5
To ask some questions to the teacher. To clarify doubts or the theory. To do the tasks among other students.	1	12.5	To ask questions to the teacher to clarify doubts.	1	12.5
Ask questions to the teacher.	1	12.5	To ask some questions to their classmates because they need a translation or while doing the task.	1	12.5
When the theory is explained using the L1, the students use the L1.	1	12.5	When presenting their topics in pairs in front of the class.	2	25.0
Total	8	100.0	When presenting the English tasks. When answering the teacher. When correcting.	1	12.5
			Total	8	100.0

The results presented in table 75 correspond to the materials and resources that could be found in the EMI class recorded and which were used by students. The first column shows that in four of the EMI sessions (50%), the students used a PC, the board, audio files and the Internet; in two of them (25%), they had a PC, the digital board, the board, audio files and the Internet. In one of the sessions (12.5%), the students used a PC, the digital board, audio files and the Internet. Finally, there was just one session (12.5%) where the students used a PC, the board, audio files, the Internet, their own notebooks or paper.

It was important to find out if there was L2 visual support usage in the EMI sessions. As can be observed in the second column, in seven out of the eight sessions (87.5%) there was L2 visual support usage. Just in one of the sessions (12.5%), there was not any L2 visual support. The last column of the table presents the results of the L2 ICT resources used by the students in the seven sessions in which visual support was actually used. In five of them (62.5%), the students used computers/laptops; in one session (12.5%), the students used computers or tablets; in another session (12.5%), they used computers and mobile phones. Finally, there was a session where there was no usage at all (12.5%), which corresponded to the session mentioned in the previous column.

Table 75

Materials and resources used in the class

Materials to be used by the students			L2 visual support usage			Students ICT resources usage		
Item	F	VP	Item	F	VP	Item	F	VP
PC , digital board, audio files, Internet	1	12.5	No	1	12.5	None	1	12.5
PC , board, audio files, Internet	4	50.0	Yes	7	87.5	Computer, laptops	5	62.5
PC , digital board, board, audio files, Internet	2	25.0	Total	8	100.0	Computer, tablets	1	12.5
PC , board, audio files, Internet, their own notebooks or paper.	1	12.5				Computer, mobile phones	1	12.5
Total	8	100.0				Total	8	100.0

Survey on the syllabuses

The syllabuses that are part of the different EMI sessions recorded were also analysed in this study. This survey aimed at obtaining a clear description of the subjects' syllabuses. Concretely, the results presented are classified into the following fields: Language of the syllabuses, Objectives of the syllabuses, Assessment of the subject in the syllabuses, Bibliography included in the subjects' syllabuses, Cross curricular themes and projects. The syllabuses analysed were obtained in the Faculty of Education, Psychology and Social Work, concretely on the Primary Educational Bilingual degree website during the academic year 2015-2016.

Table 76 shows information regarding the field of languages, concretely with information about the linguistic aspects of the syllabuses. The first column shows that there were 3 subject syllabuses presented in English and Catalan (75%). There was just one syllabus (25%) which could only be found in English (e.g. S.4). The second column describes if there was any language level mentioned in the subject's syllabuses. As shown, none of the subject syllabuses analysed (100%) mentioned the language level (Catalan, Spanish or English) required for the subject. Moreover, the last column illustrates that the subject syllabuses described (100%) did not show any L2 language requirement for the students to take the subject.

Table 76

Language of the syllabuses

Language of the subject syllabuses			Mentions the language level required in the subject syllabuses			Students L2 language requirement mentioned		
Item	F	VP	Item	F	VP	Item	F	VP
English	1	25.0	No	4	100.0	Not mentioned	4	100.0
English and Catalan	3	75.0						
Total	4	100.0						

The second field analysed in this survey is related to the objectives found in the subject syllabuses. The results are shown in table 77 and table 78. The first column provides the results

from the number of objectives found in the syllabuses. There were two subjects (50%) which included between 5 and 10 objectives (e.g. S.1, S.4) and there were two subjects which included between 10 and 15 objectives (50%) (e.g. S.2, S.3). Considering the objectives that each subject syllabus had, the following column shows the ones that referred just to language. In three of the subject syllabuses (75%), there were between 1 and 3 language objectives. There was just one subject (25%) that did not include any language objective in its syllabus. This is the case of subject S.1. The previous language objectives found in the three subject syllabuses were based on basic competences from the subject. Some examples found in the syllabuses are:

S.2: To show good understanding of oral and written expressions, as well as the arguments in oral and written texts.

S.3: To show good understanding of oral and written expressions, as well as the arguments in oral and written texts.

S.4: To develop strategies to favour linguistic learning in multicultural and plurilingual contexts.

Table 77

Objectives of the syllabuses (1)

Number of objectives in the subject syllabuses			Number of objectives referring to language			Language objectives based on competences		
Item	F	VP	Item	F	VP	Item	F	VP
Between 5-10	2	50.0	1-3 language objectives	3	75.0	None	1	25.0
Between 10-15	2	50.0	None	1	25.0	1-3 language objectives (competences)	3	75.0
Total	4	100.0	Total	4	100.0	Total	4	100.0

Table 78 includes three more aspects related to the objectives of the syllabuses. The first column shows that there were three subjects (75%) with more than six content objectives (75%) and that there was one subject (25%) that had between four and six content objectives (e.g. S.4). The very same content objectives of the first column were analysed to check if they were based on the basic competences of the subject. The results show that there were two subjects (50%)

where there were more than six content objectives based on competences (e.g. S.1, S.4); there was one subject (25%) where there were between one and three content objectives based on competences (25%) (S.3), and there was one (25%) subject where there were between four and six content objectives based on competences (e.g. S.2). The third column shows that all the EMI subject syllabuses analysed contained communicative objectives (100%). They refer to the goals devoted to promoting the language and content for different purposes. Some examples found in the subject syllabuses are:

- To promote asking habits and skills for cooperative learning.
- To work in teams collaboratively.
- To show an open and respectful attitude towards linguistic and cultural diversity.
- To develop strategies to favour linguistic learning in multicultural and plurilingual contexts.

Table 78

Objectives of the syllabuses (2)

Number of objectives referring to content			Content objectives based on competences			Communicative objectives		
Item	F	VP	Item	F	VP	Item	F	VP
4-6 content objectives	1	25.0	4-6 content objectives (competences)	1	25.0	Yes	4	100.0
more than 6	3	75.0	more than 6 content objectives (competences)	2	50.0			
Total	4	100.0	1-3 content objectives (competences)	1	25.0			
			Total	4	100.0			

Another field analysed in this survey was the assessment of the subject. Table 79 contains the results related to the different aspects analysed from the assessment instruments. The first

column shows that all the subject syllabuses analysed included the assessment instruments and criteria in it (100%). The specific tools for each subject are described in table 80:

Table 79

Assessment subject in the syllabuses

Assessment instruments and criteria described in the syllabuses			Evaluation process described in the syllabuses			Choosing the language of the assessment			Assessment tools used			Language considered in evaluation		
Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP	Item	F	VP
Yes	4	100.0	Both formative and summative	4	100.0	The teacher decides and it is mentioned in the syllabuses	2	50.0	No	1	25.0	Yes	2	50.0
			Total	4	100.0	Not described/mentioned in the syllabuses.	2	50.0	Yes	3	75.0	Not described in the syllabuses.	2	50.0
						Total	4	100.0	Total	4	100.0	Total	4	100.0

The evaluation process described in the subject syllabuses shows that all subjects (100%) have summative and formative assessment. On the one hand, the subjects include a range of assessment items such as tasks, exams, projects, tests, participation, and this was observed in the recordings obtained. On the other hand, it was registered that the teacher gave feedback in class while the students were doing the tasks, such as when the students were doing a presentation or when they were working in groups on the specific tasks assigned. Therefore, the evaluation can be considered both summative and formative, although the formative assessment still needs more development. Just two sessions for each subject were analysed, and a more detailed analysis should be done through the term to establish this kind of assessment.

Considering the third column, the subject syllabuses analysed described that there were two subjects (50%) where the teacher decided the language of the assessment and it was mentioned

in the syllabuses (e.g. S.2 and S.4), whereas the other two subjects (50%) did not include any kind of information in the syllabuses regarding this (e.g. S.1 and S.3).

The next column shows that there were three subject syllabuses (75%) which included different assessment tools. According to the survey done, the tools used were rubrics, an oral presentation, a written document, oral tasks in class, short questions, class participation, group projects, written and oral projects. There was one subject (25%) which did not use different assessment tools.

Finally, the last column illustrates that two subject syllabuses (50%) mentioned that language was taken into account in the evaluation process. This happened in the subjects of S.2 and S.4.

The other two subject syllabuses (50%) did not mention anything about this.

Table 80

Specific tools used for the assessment of each subject

Subject	Instruments and Criteria
S.1	60% exams / 30% projects / 10% participation
S.2	25% practice experience at school / 25% educational project / 25% written test / 15% participation in school and in class / 10% efficient use of the ICT.
S.3	Sociology (written test 3 points; ethnography 2 points). Psychology (written test 3 points; practice exercises 2 points)
S.4	Group projects (oral or written) 40% // Individual projects (oral or written) 50% // Active participation in class 10%.

Another field included in this survey is referring to the bibliography of the syllabuses. Table 81 describes the results from the bibliography included in the syllabuses analysed. The first column shows that all the subject syllabuses analysed (100%) included bibliography. Considering the bibliography included, there were two syllabuses (50%) that did not contain any bibliography in the L2 (e.g. S.1 and S.3); there was one syllabus (25%) that contained 80% of the bibliography in

the L2 (e.g. S.4); and one remaining subject syllabus (25%) contained less than 40% of the bibliography in the L2 (e.g. S.2).

Table 81

Bibliography included in the subjects' syllabuses

Bibliography			Bibliography in the L2 in the subject syllabuses		
Item	F	VP	Item	F	VP
Yes	4	100.0	80% in the L2	1	25.0
			None	2	50.0
			Less than 40%	1	25.0
			Total	4	100.0

Finally, table 82 illustrates that all the subject syllabuses (100%) contained cross curricular themes and projects. The cross curricular themes and projects refer to topics that include questions or situations from other disciplines or viewpoints. In the syllabuses we can observe the following examples:

- To know how to apply ICT and technological resources and audio-visual languages.
- To have the ability to integrate ICT as a formative tool in the didactics of languages learning.

Table 82

Cross curricular themes and projects

		Frequency	Valid Percent
Valid	Yes	4	100.0

CHAPTER 4

DISCUSSION:

In this chapter the results of the three research questions put forward in the present study will be discussed. Little research has focused on both the analysis of the English language impact on a group of students participating in EMI subjects together with the types of teaching methods used in the classes of the degree they were attending. Moreover, the teachers' and students' questionnaires have added further details to this study. Therefore, this investigation adds insights into research on this matter.

This chapter is divided as follows: Section 4.1 discusses the results on the linguistic impact on the students' L2. First, the accuracy results are presented, followed by the syntactic complexity ones, both for the oral and the written production. Next, the lexical complexity results are described, and then, the oral comprehension results are shown. Finally, the grammar results are presented. Section 4.2 analyses the results of the control group referring to the teachers' and students' questionnaires. To conclude, section 4.3 deals with the description of the specific methods used in the classes observed and that were later analysed.

4.1. Discussion of the linguistic impact on the students' L2

The first Research Question (RQ1) of this study focuses on the linguistic impact that the EMI methodology has had (if any) on the English language communicative competence developed by the students enrolled in the Primary Education Bilingual Degree at the University of Lleida. Participants were administered two tests, a pre- and a post-test with a nine-month lapse between both. From the 17 measures analysed, 12 improved from the pre- to the post-test, but only for 7 out of these 17 the improvement was significant. There were 5 measures which improved, but not significantly. For the remaining 5 measures, no improvement was found, on

the contrary, they showed negative results. Therefore, the impact the EMI approach had on the students can be considered positive overall.

4.1.1. Accuracy results – Written and oral production

Starting with the accuracy measures from the written and oral productions tests, **the students showed significant gains in written production in the post test, concretely in EFTU/TU and ERR/TU.** A possible explanation to this finding is that these written measures might have been more sensitive to capture gains, and they might have improved at the expense of other measures, such as the written and oral CL/TU, which did not show any gain, or the non-significant improvement of the oral accuracy EFTU/TU and ERR/TU. The positive results may be due to different actions and strategies used in the observed classes, for example, the presence of written tasks, as in nearly all the classes observed written skills were practised, and as previous research shows (Loranc-Paszylk, 2009; Roquet et al., 2019; Yang, 2014), this is positive for the development of the writing skills. The same happens with the usage of the English language in class, which took place 85% of the time in three out of the six classes analysed, and which could have influenced the writing skill of the students who were attending the sessions and who could have practised it there. The presence of different learning style tasks in seven out of eight classes might have affected the positive written measures obtained as the tasks could have catered to different types of students, and their language learning could have improved as a result.

As the observation analyses also showed, in seven out of eight classes the teacher gave both oral and written feedback and corrected the tasks in class. The support material used in the classes consisted of the usage of PowerPoint, images, webpages, videos, and newspapers. Moreover, it should be noted that in most of the sessions analysed, the students were working in groups or in pairs, which may have influenced the results of the writing tasks. Finally, the

assessment tools used in three out of four syllabuses were group projects, mostly written projects, and which in a way, could have affected the written production results.

EMI seems to have had a greater impact on the students' writing skills in comparison to their oral skills which failed to show significant results from the pre- to the post- test, even though some of the oral measures showed a slight improvement (ERR/TU and EFTU/TU). This is in line in Loranc-Paszylk (2009), who showed that the CLIL students obtained gains on academic writing too. In Loranc-Paszylk's study, the CLIL group was characterised by working with a range of prepared materials, such as academic textbooks, Internet resources, and handouts prepared by the teacher. Moreover, the organisation revolved around working in collaborative and individual tasks, which in a way, may have influenced the students' good results on their writing skills. The CLIL group was organised following some stages, such as providing feedback, discussing homework, presenting summaries, explaining new vocabulary, providing reading exercises as well as writing and vocabulary ones, among others. As stated (Loranc-Paszylk, 2009, p.52), the "systematic text-responsible writing contributed to the effectiveness of the course attended by the experimental (CLIL) group in relation to target language competence gains". Some other relevant factors are shared by the same author, and which could be considered key in CLIL HE approaches. The first one is related to "in-depth processing of information resulting from text-responsible writing" (p. 52), in which the students themselves would write essays they select in order to work the vocabulary and grammatical structures necessary. "Organizing and restructuring information" (p. 52) is another tip to consider, so that students work the basic structural and lexical processes. The author proposes to focus on written rather than on spoken production. Finally, Loranc-Paszylk (2009, p.52) proposed "thematically-coherent writing and reading activities", which need to be contextually described and which definitely would develop "cognitive structures, accumulate knowledge and engage in systematic practice which helped develop discourse skills and acquire specific vocabulary". All these statements could be integrated when adopting a CLIL approach, or when revising the EMI programmes established

in the higher educational contexts. Research on primary and secondary education also showed gains on the same L2 global development for oral and written production (Admiraal et al., 2006; Canga Alonso, 2013; Navés & Victori, 2010), so this shows that EMI is positive in terms of global development, regardless of the students' age or level.

The oral measures analysed (EFTU/TU, ERR/TU) failed to show significant improvement in the post-tests, and it could be due to a lack of oral practice in the EMI classes. As stated in several studies (Al-Mashikhi et al., 2014; Kim et al., 2014; Wan Cho, 2012), the students' oral participation tends to be reduced in EMI programmes, as the students do not feel confident enough to question and answer in class. They show themselves shy and they express fear of interacting using their L2 and making mistakes. This lack of significant development in oral skills could be attributed to what was observed in class: in three out of the eight sessions the students used just their L1 to participate in class; in more than half of the sessions, they did not interact with peers in English, and in five out of eight sessions, the students used both Catalan and English to solve doubts with the teachers. Moreover, the results from the observation classes showed that in seven out of eight sessions the teacher did not remind the students to participate in class. This aspect could have been key in promoting the students to use the foreign language and this may have been reflected in a lack of significant improvement in their oral skills.

The lack of significant improvement shown in the oral measures seems to be in contradiction with the fact that the oral skills could have been practised in most of the sessions observed, which showed that in all the sessions the teachers provided L2 opportunities to work the different language skills. Therefore, the speaking skill could have been practised in all the classes. What is more, the students' participation was positive in the sessions analysed, and they could have practised the oral skill more, had they chosen to. Basically, the students used the L2 to participate when they were presenting in class a pair or group task, possibly because it was part of the assessment of the subject; when answering the teachers' questions while doing the oral

presentation tasks, when speaking with the teacher if he or she spoke in English, when they gave examples and when doing a task.

Regarding the specific type of errors from the participants' written and oral productions, **the students obtained significantly improved results in written morphological errors, and in oral morphological and syntactic errors. It is worth mentioning that the other specific accuracy errors (written spelling and written syntactic errors) showed better results on the post-test, but the improvement was not significant.** If comparing the results of the present study to the ones by Roquet, Vraciu and Nicolás-Conesa (2019), they seemed to be contradictory when they stated that syntax seemed easier to learn than morphology, given that students in the present study did better at improving on their oral and written morphological errors rather than in their syntactic ones. This difference could lie on the type of immersion and the amount of L2 hours the participants were exposed to. These results could be explained by the fact that 65,7% of the participants had some English input outside university, which basically consisted of attending language schools. This type of input could favour the improvement of the L2 morphological and syntactic aspects at the same time. Roquet, Vraciu and Nicolás-Conesa (2019) concluded that the participants in a full EMI immersion group would obtain better results in syntactic knowledge rather than the students in semi-immersion groups. Moreover, they stated that "basic L2 syntactic knowledge develops before accurate production and comprehension of functional morphology" (p. 86). This suggests that the amount of input received in bilingual programmes could be crucial for the students' English language development. HE programmes should be designed to include the maximum number of subjects in the L2 so as to offer the maximum amount of input and therefore, the possibility to acquire the necessary linguistic knowledge.

Considering the EMI class observations, the fact that in half of the EMI classes the L2 language was used more than 85% of the time could have contributed to an improvement in the second language learning, concretely on the mentioned measures, as the students were exposed to the language structures more often. Moreover, the teachers offered opportunities to develop the

four language skills in almost all the sessions, as well as in the tasks. It is worth mentioning that the support material used was mostly in English. All these reasons could have influenced the positive results in these measures.

In consonance with the results obtained, Ament and Pérez-Vidal (2015) also showed that the SIM (semi-immersion group) participating in their study obtained significant linguistic gains in both lexico-grammatical abilities in the writing production. The IM (immersion group) failed to show the advantages in the same measures due to the students' high level of English, which made them stabilize their language and who did not need to show any kind of effort towards the improvement. Some research from primary and secondary perspective also stated that L2 morphosyntax and the written production were positively affected by the CLIL approach (Ackerl (2007), Hüttner and Rieder-Bünemann (2007), Villarreal and García-Mayo (2009) and Roquet (2011).

Finally, there was one measure (Orlexerr) that showed unexpected results. **Participants made significantly more oral lexical errors in the post-test.** This could be due to gains in other measures. Regarding class observations, it was noticed that the vocabulary was just worked in two out of the eight EMI sessions analysed, and consequently, there were no vocabulary tasks registered. For instance, there was no vocabulary revision before explaining the lesson, so the new glossary was not introduced. Similarly, with other negative results, the language triptych was not considered enough in the EMI sessions, and it could have influenced the weak language results obtained. In six out of eight class observations, it was noticed that the teachers used the L1 at some point during the class in order to clarify doubts, explain the theory, translate words, paraphrase, exemplify, correct or comment. The usage of the L1 in the mentioned examples possibly did not favour the improvement of the oral lexical measure, so instead of acquiring new vocabulary from the rephrasing or exemplification, the teachers solved the problem using Catalan. Finally, the analyses of the EMI classes also revealed that two out of the four subject syllabuses analysed did not mention the language of the evaluation. This could have influenced

the students' involvement in the learning of the language, to be more precise with choosing between learning the language or overseeing it to focus on the content.

So far, our findings show that the EMI programme under analysis has a positive linguistic impact on some accuracy written (EFTU/TU, ERR/TU, merr) and oral (merr and serr) measures. The group and individual written and oral projects in class, the English material and resources shared, and the teachers' feedback, among others, could potentially explain these positive findings. However, the lack of significance in some of the oral (ERR/TU, EFTU/TU) and written (sperr and serr) measures could be explained by different reasons. One of them is the good language level of some of the students (Ament & Pérez-vidal, 2015), who could have stabilised their level and not reported significant gains. Another reason can be the time devoted to the EMI subjects, so more hours might be needed to obtain significant accuracy results in the measures (Roquet et al., 2019). This is in line with Serrano et al. (2012), who analysed the progress of Spanish learners of English during a period of time abroad. They found that "for L2 accuracy to develop, longer stays might be necessary in some cases" (p. 153). Thus, some considerations must be carefully analysed when deciding the EMI hour distribution in the degree under analysis.

4.1.2. Syntactic complexity – Written and oral production

The written and oral CL/TU measure did not show any improvement from the pre- to the post-test. This may be at the expense of gains in some other measures such as the written EFTU/TU and the ERR/TU measures, the improvement of the oral ERR/TU and EFTU/TU, or because the type of L2 instruction did not favour this measure. It should be noticed that working using the L2 was not the focus of any of the classes. For instance, just one of the sessions analysed considered the language triptych (Coyle, 2008).

4.1.3. Lexical complexity results – Written and oral production

Regarding lexical complexity, **the students scored significantly higher in the Written Guiraud in the post test.** Again, Ament and Pérez-Vidal (2015) support these results, given that their participants obtained better results in lexical complexity, especially the SIM (semi-immersion) group, which achieved significantly higher gains than those in the IM (immersion) group. The findings show that the IM group would probably have stabilised after reaching the EMI class language level, whether B1 or B2, and they did not have to put any effort into learning new vocabulary. Similarly, in the present study, most of the participants had between a B1 and B2 level at the beginning of the study, and this might have affected the language learning results. What is more, all the teachers' L2 level was higher than a B2. Moreover, Salaberri and Sánchez (2015) examined the written production competence of a group of CLIL students, and in a similar vein, their results showed that the vocabulary and grammar field were affected positively. Thus, it seems that written lexical richness is favoured positively in the CLIL/EMI groups.

On the one hand, this finding could be explained by the opportunities to practise the language in class, both orally and in written form, when doing tasks and projects together or individually, as observed in the EMI classes. On the other hand, the feedback given to the students by the teachers could have favoured the results obtained. All these actions could have benefited the written vocabulary positive results. Another aspect that might have affected this improvement in vocabulary can be the L2 support material offered. Moreover, the presence of the English language in different written, digital and oral support forms might have been key in the development. It was also relevant that in four out of the eight sessions observed, the class was devoted to content practice and doing tasks instead of them being a theoretical class, and in the rest of them, the majority of the sessions were practical and not theoretical. This could positively impact on the students' language learning, so practising the language in pairs, individually or in group most of the session instead of listening to the teacher could benefit the learning of the language.

As for lexical learning in the primary and secondary education context, several studies (Agustín-Llach & Canga Alonso, 2014; Canga Alonso, 2013; Saladríguez & Llanes, 2014; Várkuti, 2010; Ruiz de Zarobe, 2008) confirm that CLIL students have greater results in receptive vocabulary compared to non-CLIL students, and therefore, these students have a better English language competence and proficiency level.

In contrast with the positive vocabulary written production results, **the oral ones failed to show an improvement in the post-test**. This finding seems to confirm the lack of oral production tasks done in class, the few oral interactions among the students, the low amount of the teachers using the L2 and the students' fear of interacting in class (Al-Mashikhi et al., 2014; Kim et al., 2014; Phuong & Nguyen, 2019; Tatzl, 2011). Regarding the EMI observations done in the different sessions, it must be remarked that the teachers did not require students to use the L2 in class when they were asking questions. What is more, in seven out of the eight sessions, the students did not use the L2 to interact in class, but they mostly used the L1. In the same line, when the students participated, they did it both in the L1 and the L2 in half of the sessions. The low participation and production in the L2 could explain the weak results in the oral lexical complexity measure.

Moreover, there were no vocabulary tasks registered in the sessions recorded, and this could have influenced the improvement on this measure as the students did not have a common list of frequent words and they may not have practised them at all in class. In addition, and as previously mentioned, the lack of a subject glossary could have affected the low range of oral vocabulary.

Another possible explanation to this lack of improvement in the vocabulary in the oral production may be attributed to the teachers' low proficiency level, in particular in their oral production, which may not help enrich the students' input or help with their output (Arnó & Mancho, 2015), or to a lack of effort and preparation made by the teacher in this kind of EMI programmes (Başibek et al., 2014; Jensen & Thøgersen, 2011; Kiliçkaya, 2006). When looking at

the teachers' questionnaire results, teachers revealed their need of improving their oral communication in class when explaining the content. Thus, more emphasis should be put on improving the teachers' oral communication, as it could directly affect the students' advance in their oral lexical complexity.

4.1.4. Oral comprehension results

Considering the oral comprehension measure, **the results indicated that the students improved from the pre- to the post-test. Even though this measure was not significant, it was approaching significance.** Similarly, Ament and Pérez-Vidal (2015) found that the listening task was not satisfactorily positive for neither the SIM nor the IM group. This lack of progress in the listening measure could be due to the teachers in the programme being non-native speakers so the students did not need to make a strong effort to understand the language neither produce it, and which may have led to a slow improvement in this oral receptive skill. Likewise, the study by Roquet (2011) with high school participants showed that the CLIL group outperformed the non-CLIL group in most of the measures analysed but it fails to show an advantage on the listening skill. However, the result of our study is in contrast with the research by Aguilar and Muñoz (2014), who stated that the CLIL group of participants showed a significant gain in listening skills in the post-test.

One possible explanation for this lack of significance in oral comprehension results could lie in the type of listening test administered. The listening comprehension test was made up of two exercises; the first one consisted in completing eight sentences with the missing information, and the second one had six questions with four possible answers. The first exercise was cognitively less demanding than the second one, as the students could write down the words without really knowing their meaning. However, the second exercise implied a more accurate comprehension of the interview between two journalists, with specific information. A similar situation happened in the study by Llanes and Prieto (2015), who explained that the students

showed a significant improvement from the pre- to the post-test administered, but this improvement did not extend to all listening situations equally, meaning that out of the three parts administered, one of them was cognitively more demanding than the others.

Furthermore, another reason for the lack of improvement in the listening competence could be reasoned by the absence of listening tasks done in the EMI classes in the programme analysed. As observed, the EMI sessions worked on different language skills tasks, but the amount of time spent on each skill was not registered although it was noticed that oral comprehension was the skill least worked in these EMI sessions.

Moreover, another reason for this lack of significance could be related to the teachers' and students' interactions in class. In six out of the eight sessions, the teachers used the L1 when translating, paraphrasing, answering doubts or students' questions. This may not have contributed to enhancing the students' oral comprehension skill. The teachers' ideal role would have been to explain things or answer doubts without translating or using the L1. This might have pushed the students to make a stronger effort to gain new linguistic oral strategies. Moreover, the lack of vocabulary tasks in class might have an influence on the weak improvement in the oral skill, as the students might not have acquired the necessary and adequate words to express and communicate effectively in class yet. Despite all these facts, the result was approaching significance, and it might have turned out to be significant with a larger pool of participants.

4.1.5. Grammar results

Regarding the grammar results, **it was found that students improved significantly in the general proficiency test scores from the pre- to the post-test.** This result partially agrees with the one by Aguilar and Muñoz (2014), who after observing a group of CLIL students most of whom had a B2 level, obtained significant improvement results in the grammar test, especially those with a lower level of English. Thus, it could be concluded that in the present research, the participants

observed could have belonged to a group of less proficient students as their benefits appear to be more significant. Moreover, the results could be explained by the instruments used (OPT), as other English measures could provide different results. Ament and Pérez-Vidal (2015) provided similar results to the ones by Aguilar and Muñoz (2014), when they found that the SIM group significantly outperformed the IM group in lexico-grammar measures. The authors (Ament & Pérez-Vidal, 2015, p.62) tried to justify the few improvements by the IM group by stating that “Students may feel they have a good enough level and that they can get by, giving them little incentive to enhance their English language skills”.

When comparing the results to a secondary education context, Roquet (2011) also found that the grammar linguistic domain was higher in the CLIL group of students compared to the group who only received formal instruction in the L2. The authors explained these results by the fact that this group of students participated both in a CLIL context together and in a FI context, in which the grammar was often practised.

When taking into account the students’ results from the questionnaires, it can be observed that more than half of the students had extra L2 input outside university. This could affect the results on the grammar test positively, as most of the input received by the students came from the work done in language schools, which in a way, focuses more on grammatical aspects.

Considering the EMI classes observed, some of the strategies used could influence the positive results on the grammatical aspects. These strategies are related to: the opportunities to develop the different language skills; the majority of the material being in the L2; the L2 support material used in class such as books, articles, videos, audio files, etc; the feedback and corrections given by the teachers in nearly all the sessions; the fact that in most of the sessions observed the class was devoted to doing content tasks, instead of listening to the teachers; and that the language was considered part of the assessment, at least, in two of the subjects’ under study. All these actions mentioned could have affected the learning of grammar positively.

Several general considerations regarding the language progress made by the students from the pre- to the post-test should be made here, as they might have influenced the positive results obtained in the students' English language learning:

First, when analysing the questionnaires administered to the teachers, some important aspects rose from the aspects analysed, which may have affected the results. On the one hand, the teachers who participated in the study had a good level of English, most of them being above B2 for (66.7%). What is more, four out of the six teachers used only English in their sessions. These aspects can be considered added value to the PEBD of the University of Lleida, and that may have influenced the students' language learning progress and the results obtained.

Secondly, the extracurricular English language input the students had during the academic year might have been an added benefit to their language learning results. More than half of the students (65.7%) had some English classes outside university, which may have influenced the positive results obtained. Moreover, individual factors such as motivation could also explain the favourable language results obtained. The students had different opinions regarding their motivation towards the EMI subjects, and according to several authors (Al-Mashikhi et al., 2014; Arnó & Mancho, 2015; Dafouz et al., 2007; Hamid et al., 2013; Phuong & Nguyen, 2019; Tatzl, 2011; Toledo, I., Rubio, F. D. & Hermosín, M., 2012), they could have focused on the positive aspects of improving their English language skills to express themselves in the L2 better; and also to improve their future opportunities.

Now, careful thought must be given to the less favourable results obtained on the students' English language learning results, and which may have affected the linguistic findings achieved. On the one hand and regarding the teachers' training information, the results showed that five out of six teachers (83.3%) were not taking any English course when the interview was administered, whereas four of them (66.7%) would enrol in educational courses every year. Given these results and according to some authors (Airey, 2012; Jiang et al., 2019; Pecorari et al., 2011), it is clear that these EMI teachers did not focus on language but on content as a

general aspect of their teaching training, as the majority of them were enrolled in pedagogical courses, and the potential language improvements were disregarded. These results appear to be contradictory with the general common fear lecturers have and their lack of preparation to face an EMI class (Arnó & Mancho, 2015; Jensen & Thøgersen, 2011; Jiang et al., 2019). More training is necessary to create better settings for the students, where could foster the linguistic skills while they acquire the content given.

On the other hand, the lecturers' coordination with the language teachers and the EMI programmes was nearly non-existent. As stated, five of the teachers (83.3%) did not coordinate with the English teacher of the degree, nor did four teachers (66.7%) meet with the PEBD coordinator. Thus, the linguistic aspect was not properly controlled nor covered between the language and the content teachers. Had there been better coordination, this could have influenced positively on the language results obtained. The same occurs with the coordination of the teachers in the PEBD, regardless of whether they are content or language teachers, therefore this aspect could be improved. The results are in line with most of the teachers' opinions in several studies (Airey, 2011; Arnó and Mancho, 2015; Dearden and Macaro, 2016; Jensen and Thøgersen, 2011; Jiang et al., 2019; Wan Cho, 2012) when claiming that more coordination and training is needed. The presence of teacher training programmes for the EMI lecturers should be a must for the universities that offer this kind of bilingual approaches but that are not offering these educational and pedagogical courses to their EMI teachers (Escobar & Sánchez, 2017; Guarda & Helm, 2017; Ole Hellekjaer, 2010; Pavón & Gaustad, 2013).

4.1.6. Summary of the linguistic impact on students

In summary, RQ1 focused on the linguistic impact that the implementation of the EMI methodology had on the English language communicative competence development of the students attending the PEBD. The findings from the present investigation show that the students improved significantly in some accuracy written (EFTU/TU, ERR/TU, merr) and oral (merr and

serr) measures from the pre- to the post-test. Moreover, they also showed improvements in other oral (ERR/TU, EFTU/TU) and written (sperr, serr) measures, even though they did not appear to be significant. The oral and written accuracy measure of lexerr failed to show an improvement in the post-test. In the same vein, there was a lack of improvement in the written and oral syntactic complexity (CL/TU) measures, which had a negative impact on this study. Considering the lexical complexity, the students obtained significant gains in the written measure, but the oral one showed negative results in the post-test. Finally, regarding the grammar results, the students' improved significantly, whereas the oral comprehension results did not appear to be significant.

These findings lead us to state that the first hypothesis is partially confirmed, as the linguistic impact that the EMI programme had on the students' English language competence can be considered positive for their L2 language learning. Mostly, these gains are attributed to the type of tasks done in the EMI classes; the L2 material given; the teachers' feedback to students, and the group work and cooperative tasks done. Furthermore, the results show that some improvements need to be made so as to favour the weak measures obtained.

4.2. Analysing the teachers and students' questionnaires

The second Research Question (RQ2) focused on the types of teaching methods used in the EMI classes of the Primary Education Bilingual Degree at the University of Lleida. This research question was tackled from two perspectives: the analysis of the teachers' and students' profile, and the description of the methods used in the EMI classes. Within this first section 4.2, the teachers' and the students' results are commented on and compared to previous research. Both questionnaires were administered at the beginning of the academic year, and they were answered online. Stemming from the analyses, a profile of both, teachers and students, has been hereby created.

4.2.1. Teachers' profile

As regards the issue of **the teachers' language level**, the results show a variety of levels as three of the teachers had a C1 level, one had a B2, another had a C2 level, and there was one teacher without a recognised English language certificate. Thus, there is a lack of agreement on the teachers' language level required in the university context where the study was carried out. In fact, the same happens in most of the European higher education community, where there is not an established proficiency level requirement, nor an obligatory continuity in language training over the years. According to Macaro et al. (2019, p.104), "there is currently no international certification for EMI teachers, and in most settings, this is also the case at the national level". What it does exist is the Cambridge TKT tests (University of Cambridge ESOL Examinations, 2019) that are designed to help teachers in their professional development of the English language teaching. They offer a CLIL module that can be a good resource to all teachers involved in bilingual programmes. However, these tests are not compulsory for these lecturers teaching in English and even less this is a uniform practise across all European HE institutions. In Catalonia though, the Catalan Interuniversity Commission for Language Training and Certification (CIFALC)⁶ offer the possibility to the academic staff interested to certify the level of language competence required to teach in English at the university context. This certification, called CLUC-EMI, is offered by the university itself, and it is a voluntary service, but not a requirement for EMI teachers. Apart from this, teachers can obtain a language certificate if they enrol in private organisations. However, those certificates measure general English and do not focus on teaching through a foreign language. Even though the final objective of the EMI approach is to promote students' language learning, the teachers' language level is not considered, and it needs to be a key factor if the programme is to succeed. For this reason, it is necessary to have specific training on how to teach content through a foreign language if

⁶ The objective is to promote and guarantee language training and certification for teachers.

preparing EMI programmes (Macaro et al., 2019). However, one example in an European country where a test is offered in the University of Copenhagen, which has the TOEPAS (*Test of Oral English Proficiency for Academic Staff*) (Kling & Stæhr, 2013), and whose main aim is to identify who the EMI lecturers are and to help them improve their linguistic weaknesses. In Denmark, they established this common certificate to be able to ensure homogeneity among lecturers and to provide a quality standard in the EMI programmes done. O'Dowd (2018), Tatzl (2011) and Escobar and Sánchez (2017) also mentioned their concerns on this lack of consensus regarding the linguistic profile EMI teachers should have in HE, mentioning that the students themselves preferred teachers with a good language level, such as the native ones. Moreover, other studies show that in some cases, teachers do not know if to be competent as an EMI teacher, their level of English is adequate. Some of them have been volunteered to be EMI teachers just because they have spent some time abroad, or because they have a good command of the language, and even because it is the language the lecturers use to do research. Furthermore, and apart from the language level required, **the pedagogical knowledge needed is another relevant topic to deal with in the teachers' profile**. Lecturers do not only need to know the foreign language to teach in an EMI class, they also need to have certain pedagogical strategies that can help them communicate and transfer knowledge adequately. Therefore, more emphasis should be put on offering pedagogical courses as well as language ones to EMI teachers (Aguilar, 2017; Dearden & Macaro, 2016; Wan Cho, 2012).

All in all, the language level requirements plus the pedagogical knowledge the lecturers should have generates a difficulty in HE contexts. Finding professionals with a good second language command and who have been attending pedagogical courses to manage the EMI classes is challenging. More emphasis should be given to this topic and more research should be done (Macaro et al., 2019; O'Dowd, 2018; Pavón & Gaustad, 2013).

Regarding **the teachers' training information collected**, most of the EMI teachers were not doing any language course at the moment the survey was administered. Only one of the

teachers of the study under analysis was attending a language course. This is in line with recent studies published on the same topic, which showed the EMI teachers' need to attend more linguistic courses (Guarda & Helm, 2017), to improve their English proficiency level, or to share strategies that can support this linguistic demand (Ole Hellekjaer, 2010), and also on the vital need of continuous teachers' learning (Escobar, 2013). However, the lack of teacher's participation in linguistic courses may be due to different factors: one of them could be linked to the lack of formative options presented by the very university; or the insufficient recognition to those teachers attending extra language or pedagogical courses; or the absence of time to enrol on these courses (Drljača Margić & Vodopija-Krstanović, 2018), and it cannot be forgotten that there are sceptical teachers against EMI who believe that focusing on language rather than on the content is a waste of time (Airey, 2011; Jensen & Thøgersen, 2011; Jiang et al., 2019). However, in our study, the results showing the attendance to educational courses appears to be quite the opposite. Four out of six teachers did enrol on these pedagogical courses. This is positive for our context, but maybe it is not the case in all the university EMI programmes. **What would be necessary is the creation of an integral plan that could cover both the support on the teaching and the training of these EMI teachers.** EMI programmes should be better structured and organised so that the lecturers themselves could easily have access to these training courses, which in a way would solve these weaknesses at the teachers' level, as well as those related to time constraints, credit recognition, etc. (Airey, 2011; Macaro et al., 2018; O'Dowd, 2018; Wan Cho, 2012). It is also relevant to mention that two out of four teachers who answered the survey had attended a CLIL course before, and in fact, they thought they were following the methodology in class. These two pedagogical approaches (EMI and CLIL) are commonly brought up when dealing with the internationalisation of the university programmes, as both intend to promote students' language learning. However, there are differences among them; the EMI approach focuses more on form rather than on language, whereas the CLIL methodology integrates both language and content at the same level (Tsou & Kao, 2017). This

presents a challenging situation for higher education contexts and the lecturers themselves, as decisions need to be taken on which kind of scope should be used by lecturers on these bilingual programmes. A deep analysis should be done on the human resources available at the university itself and all the specific requirements that would support the chosen methodology. Both scopes promote L2 learning but deciding on one or the other would very much depend on the resources available in the context. What is true is that there is a necessity to promote the English language as a way to internationalise and open doors to the world, and a way of doing it is by promoting bilingual programmes.

In relation to the EMI teachers' coordination, the results obtained appear to be totally in line with the previous research mentioned, when saying that five out of six EMI teachers did not coordinate with the language specialist or the Primary Education Bilingual coordinator. It must be said that these results clearly represent the situation and the common structure of the plan analysed, which is an EMI plan, and where it is not necessary to coordinate the language objectives with the content ones. However, the majority of the scholars analysing EMI state that a collaboration between content and language teachers is key for a good implementation and the success of these courses (Airey, 2012; Doiz et al., 2012; Martyn, 2018; Pavón & Gaustad, 2013; Pecorari et al., 2011; Yip, 2004). Teaching a specific content class through a foreign language implies a different paradigm. It involves using technical vocabulary, specific grammatical structures, and even idiomatic expressions commonly used in the content class. This is not as simple as replacing the L1 for the L2. For instance, knowing how to approach a report or academic writing of a specific topic through the L2 has challenging aspects. As stated by Doiz et al. (2012, p.219):

“Today few university teachers in the area of business administration, engineering, law and medicine are likely to possess the linguistic and meta-linguistic competence to address language-related issues (including possible language-learning issues) raised in their L2-mediated courses. “

Content and language coordination is of vital importance in both EMI and CLIL methodologies if what is sought is the learning of both, language and content.

The last questions of the survey administered to the EMI teachers of the PEBD at the University of Lleida intended to elicit **the teachers' opinion about the resources needed for a good implementation of EMI classes, the usage of the L2 as a medium of instruction and how the institution could help**. The EMI teachers expressed again their need to improve their level of English, especially their oral communication skills, by attending more English courses. The teachers believe that their language skills should be enhanced if classes need to be done through the English language. As the results show, lecturers care about their students' learning, and they need more strategies to amend possible weaknesses at this level. Not only were the English training necessities mentioned in the survey, but also the pedagogical ones, which are also relevant in this project. Offering more training courses, and lectures about language, EMI and CLIL methodology is what the participants are asking of the institution. These results manifest the current need of EMI teachers to improve their classes, their teaching practices, and their linguistic abilities. These results are in line with previous research done on this topic, and even though EMI teachers are faced with challenges in their everyday classes, linguistic and pedagogical, they keep fighting and trying to overcome these obstacles in their classes (Arnó & Mancho, 2015; Dafouz, 2018; Drljača Margić & Vodopija-Krstanović, 2018; Escobar & Sánchez, 2017; Guarda & Helm, 2017; Ole Hellekjaer, 2010; Pavón & Gaustad, 2013). What is more, the lecturers also highlighted the need for materials and revision photocopies in order to help students better cope with the content through a foreign language, and they also demanded easier access to content material, especially in English (Dearden & Macaro, 2016). For instance, one solution to handle this situation would be what Mancho and Arnó (2017) proposed in their study, which is the incorporation of an ESP (English for Specific Purposes) teacher, who could be working together with the content teacher. Maybe it could be key when designing and coordinating all the linguistic and pedagogic aspects of the subjects. Another possible answer to

this situation could be the so-called “team-teaching approach” by Doiz et al. (2012), which promotes the collaboration between the content and language staff. Additionally, other teachers of the study suggested more paid time to better prepare their EMI classes. It is true that the preparation of an English-medium class does not involve the same amount of time as the one done through one’s mother tongue, let alone if the teachers follow this scaffolding approach and fulfil with the required characteristics of what an EMI class, or CLIL in some cases, implies (Airey, 2011; Wan Cho, 2012). In this sense, it is important to highlight the teachers’ preoccupation and willingness to improve these above-mentioned obstacles, even though their principal aim was basically to share the content knowledge rather the linguistic one, but also consider that the English language usage in class is a great opportunity to develop their linguistic competences and help in their research careers.

4.2.2. Students’ profile

The group of participants of this study is formed by 35 students whose main foreign language is English, and who started studying it more than 10 years before (in most of the cases). It is interesting to note that **most of these students had obtained a B1 or B2 level certificate of English (corresponding to the CEFR) by the time they started their EMI courses in this degree.** This information is relevant if we consider that not all EMI degrees request a specific foreign language level to enrol. In the case of the PEBD at the University of Lleida, there is a recommended English language level to join the Bilingual programme. This recommendation does not appear on the official website of the programme, but it is explained to the students during the information meetings. As it was concluded with the EMI teachers, a fixed criterion among universities in Europe that clarifies this aspect when enrolling on an EMI programme does not exist (in general), and this becomes a bit disconcerting both for the students, the teachers, and the general organisation of the programme itself. Some possible explanations for this drawback were described in the research carried out by Doiz et al. (2012), who proposed

screening students in order to find out what the students' weaknesses are when accessing an EMI programme. The authors stated that many students have a "lack of CALP" (2012, p.216), and that this would become an obstacle once in the EMI classes. In this vein, Rose et al. (2019) also carried out a study in which they predicted the academic success of students depending on their English language proficiency level. The results were conclusive in saying that the English language level of students did affect their success in the ETP (English-Taught-Programmes). For this reason, Rose et al. explained that lower proficiency level students would have more difficulties compared to their higher-level counterparts. Despite the results obtained, what the authors mentioned proposed was to help low-level students with language support in the form of ESP courses that would focus on vocabulary, language and academic needs. This is in line with Arnó and Mancho (2015), who also stated that language support is necessary when joining EMI programmes.

Considering the bilingual plan degree under analysis, the students have a compulsory subject during their first year, whose main objective is to focus on the basic vocabulary of the degree, working on the language and developing some academic skills. This subject is called "Fostering Sociolinguistic Competence in Plurilingual Contexts". It is made up of six credits, which are distributed throughout the first year.

Establishing a fixed and common criterion on the minimum language level to join in EMI programmes may be a bit controversial depending on the context where the courses are carried out, as many external factors can influence this decision (Dimova, 2020). More research should be done in this vein to see the advantages and drawbacks of this entrance requirement. However, and according to what previous studies exemplified, asking students to present a foreign language certificate level can help them succeed in this kind of programme.

Another topic of interest when defining the students' profile of this research is **their opinion about the usage of English as the medium of instruction**. In line with previous research (Al-Mashikhi et al., 2014; Arnó & Mancho, 2015; Hamid et al., 2013; Phuong & Nguyen, 2019; Tatzl,

2011), the students hereby observed believe that EMI is a positive methodology to improve their level of English language, to acquire new competences and skills and even to have more opportunities when looking for jobs. They showed a positive attitude when experiencing EMI in their degree, and they even thought that EMI would be necessary in more degrees. Motivation towards all these aspects is what could make these students succeed. Not only do linguistic and content objectives need to be attained, but intrinsic and extrinsic motivation also need to be taken into account and fostered. It is important to highlight that all the students taking in the PEBD did so voluntarily. The same degree is offered in the same faculty but without the English language as the medium of instruction. The students' choice to enrol in this plan shows their willingness to learn different skills and go beyond the mainstream offer.

To complete the students' profile, it is worth mentioning that half of the students also attended extracurricular English lessons outside the university. In most of the cases, this implied taking part in English language courses, possibly to reinforce their language or even for extending linguistic contents. Moreover, half of the participants also expressed having had an experience of studying English abroad for the same reason. This information describes a group of motivated students, prepared to learn the English language and ready to face the possible drawbacks the methodology entails.

4.2.3. Summary of teachers' and students' profiles

The results of this section give us the possibility of creating an EMI teacher and student's profile of the average Primary Education Bilingual Degree at the University of Lleida. This is key to determine possible future implications and changes for a more CLIL-ised proposal. **In this section, part of the second research question is answered as the profiles presented offer the possibility to know about the types of methodology used, the teachers and students' own experience and the decisions taken for its participation in this programme.**

On the one hand, what firstly emerges from the EMI teachers' surveys is that much more work needs to be done in the field of the English language proficiency level, such as the creation of a common and homogeneous certificate to guarantee the teachers competences and skills when facing an EMI class. There should be a minimum language proficiency level required, which should give teachers the necessary skills and capabilities to succeed in these programmes. Even though there exists a certificate called CLUC-EMI in some of the Catalan universities, there is not an obligation to have it, which implies that the university itself will not be able to ensure the EMI lecturers' linguistic and pedagogical ability. More research should be done on which level and certificate would be adequate, and how this could be adapted to the whole university education area.

The second aspect to highlight is related to the teachers' training. It is clear that lecturers need to improve both linguistically and pedagogically by being more open to enrol in different courses. Another feature to take into account, and which is in consonance with the previous research, is the strong collaboration required between content and language teachers. Researchers justify this need, as well as EMI teachers themselves, and a fixed organisation and coordination is necessary in the EMI programmes. Some authors would justify it by adding an ESP teacher or others just simply providing the resources to have frequent co-teaching opportunities. What is true is that a change is required to provide successful foreign language programmes in HE. Finally, EMI teachers also demand some more requisites referring to the revision of resources, easier access to materials, having more time to prepare classes and better remuneration, given the greater responsibility they have in being EMI teachers. All in all, the mentioned requirements and possible improvements should be part of the integral plan of this bilingual programme, and all should be taken into consideration as a whole.

On the other hand, the average students' profile that has been analysed corresponds to a clearly motivated student towards the English language, willing to improve their linguistic competences and to acquire the necessary skills to face the real world we are living in. All the students chose

to be part of the Bilingual plan voluntarily, and this speaks well of their predisposition towards learning the L2. The participants know about the future job opportunities the English language could give them, and how they can have access to global employability thanks to these skills. Their opinion about the EMI methodology used in the degree is favourable and they all expressed that more degrees should incorporate it. However, some drawbacks have been found in the students' profile discussion, which would need to be addressed. One of these is the language level required from these students. Contrary to what some authors (Rose et al., 2019) claimed regarding the minimum level that should be required from the students attending EMI, the group of participants of this study obtained improvement results in their first-year degree. The linguistic results show improvements in the language tests in 13 out of 18 measures analysed. Therefore, the impact that the EMI programme had on the students is considered positive during the first-year degree, even though the students did not attend any preparatory EMI course before and that they all came from different contexts. An initial language certificate pre-requisite to participate in an EMI programme is important, but it is also relevant to take into account the smoothly progression of the English language courses offered in the degree, which should be done gradually, and focusing on two fields; the language input offered and the preparation for these kinds of courses. These strategies would help students handle the bilingual programme successfully.

After having contrasted the results obtained with the research, we are facing a change of model, concretely the EMI methodology. The different weaknesses encountered in the approach are required to be changed by the very stakeholders, and thus, asked to be improved by the very institutions. Even the main purpose of the EMI approach is being questioned. All these proposed modifications are leading us to a change of paradigm, which brings us into a more CLIL-ised methodology. Given this situation, improvements are welcomed, since they would be used to develop a more successful practice in the field of HE.

4.3. Discussion of the EMI class diagnosis surveys

As part of the second research question of the study, the results from the EMI class observations are discussed in this section. As described in the methodology section, there were a total of eight EMI sessions recorded, two sessions for each of the four subjects analysed. The sessions recorded were random and they were adequate to observe the general development of an EMI class. It is possible that some characteristics of the EMI classes were not captured on the EMI sessions recorded. The analysis of the results obtained will be presented regarding the different surveys administered, which correspond to the *Teachers', Students', Tasks, Material, Class Development and Syllabuses*. From each survey, the relevant aspects that could justify the results obtained in previous sections will be commented on, as well as the characteristics of the EMI methodology that could have an impact on future improvements or that could involve a usage that is closer to the CLIL methodology.

It should be noted that the questions used in the surveys for the class observations were based on the research done about the CLIL theory and its methodology. The most relevant aspects were chosen in order to characterise the teaching practice. The annexes' section provides some examples of the data obtained from the recorded EMI classes.

4.3.1. Teachers' survey

Concerning the teachers' methodology and its roles in the EMI classes, **firstly, the usage of the L1 in most of the sessions recorded should be noted**. It is relevant to highlight the use of the L1 to face the linguistic barriers or the constructions that were not being understood, which in a way, helped students come to a closer understanding of the content topic. The teachers considered that code-switching was necessary to communicate effectively in class on some occasions. They used it when answering students' questions in the L1, when exemplifying, when paraphrasing, when translating, and even to explain some concepts. Jiang et al. (2019, p.116) supported the same idea in their study, stating that "Instruction and communication

effectiveness are reached in one way or another via the assistance of pragmatic strategies". The usage of pragmatic strategies appears to be key in this kind of programmes, where one of the aims of the EMI teacher is to make their students acquire content. In another study, Al-Mashikhi et al. (2014) stated that students also supported this same idea of code-switching since it ensured that this strategy would minimise their content understanding problems, and it would also improve their linguistic skills.

The usage of the L1 in EMI or CLIL sessions is a necessary technique in these multilingual programmes. Moving from L1 to L2 or vice versa is used to clarify the content, but it can also have the value of getting the students' attention, making them participate in class, providing a more comfortable atmosphere to speak and interact in class. San Isidro and Lasagabaster (2019, p.3) supported that "code-switching is also perceived today as a phenomenon that has an interpersonal and social function by which multilingual speakers try to monitor and accommodate to their interlocutors' language use". This technique favours the communicative functions among the students and the teachers themselves, and it is a pedagogical skill to consider in the EMI/CLIL methodology.

Not only is the code-switching strategy required in an EMI class, but other strategies need to be used to favour communication and interaction in these sessions. Lightbown and Spada (2013, p.114) described "the modified interaction" as a "necessary mechanism for making language comprehensible". The EMI sessions observed in this study have proved that some of these strategies are used by the teachers, and in a way, it is believed they could have favoured class conversation. For example, the results of the present research show that teachers believed these strategies helped the learning process in class, solved the students' doubts, and showed a range of techniques to maintain the focus in the class, such as asking questions, showing videos, providing tasks, giving examples, asking the students to be in silence, challenging the students by asking a question or putting forward doubts. Tsai and Tsou (2015) also supported the benefits of using accommodation strategies in EMI classes, in a way that it favoured reaching the content

level and it promoted participation in class. The strategy of giving examples was repeatedly used in several sessions of the study, enabling students to make connections to previous knowledge. Therefore, taking advantage of accommodation strategies and using modified interaction techniques are some pedagogical adaptations that need to be done in EMI classes if the aim is to exchange information and effectively communicate.

The L2 language was used more than half of the time by the teachers in nearly all the class observations done, which surely may have contributed to the positive linguistic impact obtained by students. However, it is surprising to see that the teachers did not promote the direct usage of the language of instruction among students. As shown in the results section, the teachers did not remind or require students to use the L2 in class. This could be explained by the fact that they did not want to push their students to use the language if they did not feel capable; or because they did not feel responsible for the students' language outcomes at the end; or also because the teachers would need to modify and adapt their input in the EMI classes to favour this interaction among students (Dearden and Macaro, 2016). The students' communicative strategies could have been reduced because of this aspect, and this may be one of the reasons for the limited interactions in class. This could have contributed to the low improvement of the students' oral production skills, as seen in the linguistic impact study done.

The EMI sessions recorded did provide the opportunity for the students to work the different language skills (reading, listening, writing and speaking), as in most of the classes the students had the opportunity to develop some or all of them. However, it is noted that vocabulary was not directly approached. This might have caused problems for the students' understanding of the content, and it can indirectly affect their participation, interaction and output outcomes of the subject. In this line, Tatzl (2011) mentioned that subject-specific vocabulary becomes a key aspect in EMI, as well as in the students' better understanding if language is supported by technical words. Moreover, Phuong and Nguyen (2019) also corroborated that vocabulary was the principal problem for students' understanding in EMI classes. All in all, more time must be

devoted to working on the vocabulary issues of the content in particular, by revising key words and concepts before lectures or preparing students (Ole Hellekjaer, 2010).

Finally, in line with Ole Hellekjaer (2010), **the use of visual posters and supporting material is considered positive when dealing with EMI classes**, and it was considered an advantage in the present study. The use of resources like presentations, visual notes, audio files, Internet resources and the use of the computer, as it happened in most of the sessions observed in EMI classes, could have favoured the understanding of the content subject, especially for those weak students that need this extra support.

4.3.2. Students' survey

Two relevant aspects need to be highlighted when considering the students' observation results, which are: **the students' participation** and **the students' language usage in class**.

On the one hand, **the students' participation was high in all the sessions recorded, meaning that they interacted in class, answered questions, responded to teachers' questions, etc.** This could be due to their motivation to learn the content of the session, to improve their English language, their free choice to attend the Bilingual programme and their future career prospects this programme is offering them, among other reasons. As mentioned in section 4.2, the participants that were part of the study were a group of students whose main foreign language was English, who took part in extracurricular L2 lessons and who also had travelled abroad to learn the English language. It is clear that one of their objectives was to improve their foreign language. This idea is corroborated by Toledo et al (2012) and Dalton-Puffer (2009), who also expressed that students' attitude and motivation played an important role in the success of EMI classes. This suggests that students' intrinsic and extrinsic motivation towards the language is a key factor when choosing to be part of a Bilingual programme.

On the other hand, **the positive participation of the students in the sessions was not directly linked to the use of the L2, as the students used both the L1 and the L2 when asking the**

teacher, clarifying doubts, or participating. This statement seems contradictory with the previous paragraph where the motivation- and attitude-related reasons were given. However, the students' interchange in the use of both languages may be due to several reasons. In line with previous research on students' attitudes in EMI classes (Al-Mashikhi et al., 2014; Kim et al., 2014; Phuong & Nguyen, 2019; Tatzl, 2011; Wan Cho, 2012), one of the reasons is the lack of command in the language, in this case of the English language, as not all the students may feel ready to participate orally in class or to ask direct questions to teachers. They may have also been afraid of making mistakes in front of their classmates, and this could have led them to use the L1 instead of the L2, as observed in some of the sessions. The same could happen if the students had vocabulary problems or if they could not understand some terminology of the content. Tatzl (2011) showed that spoken and interaction skills were the most demanding ones for students, creating a linguistic challenge difficult to handle. The same was stated Phuong and Nguyen (2019, p.97), in expressing that "Nearly 45% of the respondents considered their limited vocabulary as an obstacle to expressing their content knowledge, asking and answering questions and interacting well with their lecturers or peers". Thus, the students in our study could have been afraid of asking questions in the L2 if they did not feel confident enough to master the communication effectively. This may cause this low usage of the L2 when participating in class or when interacting with other students and teachers, a matter that needs to be handled in bilingual programmes if the main purpose is to create a proper context where students feel confident to communicate in English.

4.3.3. Survey about the tasks

It is assumed that in an EMI class students are able to understand the content of the subject and do the tasks through a foreign language, and that they need to progress both in the content and the language. Thus, the understanding and usage of the language is as important as the content given in that class. For this reason, there should be coordination between the content explained

and the language used to understand it, or the language needed to communicate. When referring to the CLIL methodology, this process is regulated through the language triptych approach (Coyle et al., 2010), in which the language given is controlled depending on the content offered, so the progress will be directed in terms of the type of tasks done in the EMI classes. If comparing this to a similar bilingual context, in this case the EMI context, **in the present study there was just one session where the teacher controlled the usage of the language. This was so in a session where the teacher answered some questions, provided and revised content vocabulary words**, so students would be able to do the next writing task. Offering the appropriate language support to students enables them to connect systematically with the content given, to feel more secure of their content learning, and maybe even foster students' participation in class. As some studies described (Phuong & Nguyen, 2019; Tatzl, 2011; Wan Cho, 2012), students' attitudes and beliefs towards the EMI/CLIL instruction very much depend on their command of the English language, which means that the appropriate language instruction is a key factor in these methodologies.

In addition, it was also analysed if vocabulary in the L2 was worked on in the EMI classes, in terms of translating words, making glossaries or lists, doing some tasks, revising words, etc. **The results showed that there were no specific vocabulary tasks, which suggests that the sessions recorded did not deal with this area of knowledge**, or that the teachers did not spend time revising this linguistic aspect. In fact, vocabulary tasks and strategies should be included as part of the language triptych approach, concretely in the language learning section. As mentioned above, the lack of these tasks should be revised in the EMI methodology, and closer support needs to be offered to EMI students.

Considering EMI (also the CLIL methodology) implies the learning of both content and language, the pedagogical strategy of scaffolding is used in these methodologies to see if the main objective can be satisfactorily achieved. **As the results show, just one of the two sessions recorded provided a content scaffolding to the students, meaning that the teacher offered the**

possibility to access previous knowledge, analyse it, create new information and links, to understand the topic better. This happened in one session, and language, in this case, was not directly worked on, only content. The use of this technique is considered necessary in the use of these methodologies. Both teachers and students need to make pedagogical efforts in class, so the learning process becomes a success. According to Mehisto et al. (2008, p.139), the scaffolding technique “lowers frustration and it builds success”, and it also “helps students feel emotionally secure, motivates them and provides the building blocks needed to do complex work”.

Considering that some of the drawbacks of the EMI and CLIL methodology are the fear of interacting using the L2, the lack of language and content command, the extra effort to deal with the subject, the lack of terminology, etc. (Kim et al., 2014; Phuong & Nguyen, 2019), **scaffolding is thought to be a must in the EMI and CLIL methodology as it enables students to structure their learning step by step**, and successfully achieve their learning outcomes. Using images, visual aids, highlighting the most important texts, brainstorming the topic, among others, would be structures and techniques that would help EMI/CLIL students (Mehisto et al., 2008).

It is also relevant to focus on the feedback given in the EMI sessions recorded, as in nearly all the sessions the teachers gave oral feedback related to the content (as opposed to feedback related to language) after or while they were correcting or doing the tasks in class. This finding supports the longstanding claim that lecturers prefer to focus on content rather than on language, that English learning is “accidental” rather than approached, and sometimes, that the lack of language feedback may be due to a fear to face the linguistic aspects required in the session (Aguilar, 2017; Airey, 2012; Jiang et al., 2019; Pecorari et al., 2011). As previously mentioned, the lack of linguistic feedback may be directly linked to the lack of language command some teachers experience, as well as the shortage of pedagogical resources for bilingual programmes. Thus, more emphasis should be put on teachers training language courses to reinforce their L2 skills (Klaassen, 2008); on a closer coordination between language

and content lecturers, which could favour the exchange of resources and techniques, and also on the incorporation of pedagogical courses where more guidance and support strategies would be given to deal with feedback and assessment received from the teacher trainers (Guarda & Helm, 2017).

It should be highlighted that teaching content through a foreign language does not necessarily entail the understanding and acquisition of the content. It is necessary to consider which strategies and techniques can be used to facilitate the understanding and learning of the content through a foreign language. Cummins (2008) presented this idea with the concept of BICS (*Basic Interpersonal Communicative Skills*) and CALP (*Cognitive Academic Language Proficiency*), in which he assured that learners would need to develop not just the BICS but also the CALP to successfully develop the linguistic competence, and therefore, acquire the content better.

The Blooms' taxonomy cognitive process dimensions are also associated as key concepts for effective content learning in a CLIL or EMI setting (or in any teaching context). They are presented in different types of dimensions that divide knowledge into conceptual, procedural, and metacognitive processes. By identifying the processes associated with the content to be taught, learners would have a greater possibility to acquire both the content and the language as they put them into practise while practising high order thinking skills (Coyle et al., 2010; Vega & Moscoso, 2019). **The results from the present study show that most of the teachers did not use any kind of process which could favour the learning of the content together with the language one. The content given by the teachers in most of the sessions recorded did not show any kind of knowledge construction in which the cognitive and thinking skills were developed.** Just one of the sessions did evidence a lower order processing strategy, concretely one about recognising, interpreting, and explaining, and later, a high order processing strategy when producing and giving opinions about a topic. **As observed, there was a lack of cognitive and thinking skills used in the EMI sessions recorded, and which could have affected the content and language objectives.** These conclusions could reason previous results when the students

used both their mother tongue and the English language in most of the sessions, when speaking in class and not just the foreign language. They may have had insufficient linguistic and cognitive skills to use the foreign language when solving doubts, asking questions, debating with the teachers, etc. Moreover, their participation in class was positive, even though the students did not use the foreign language a lot when communicating with the teacher. The study by Hu and Li (2017) showed similar results when describing that the EMI teachers participating in the study mostly used lower-order processing strategies, and few highly challenging processes were focused on making the students analyse, evaluate, or create. As the authors suggested, this could be reasoned by the fact that EMI teachers felt the need that the student had understood the content of the lesson, and, because of the insufficient language level of the teachers and the students. That would be why students expressed their comprehension in their L1 rather than their L2.

Thus, it is reasonable to speculate in the present study that the EMI teachers may have had insufficient pedagogical knowledge when dealing with cognitive processes and enhancing thinking skills in the EMI sessions. As shown in the lecturers' profile, most of the teachers have not attended a CLIL course before even though they are active in participating in educational courses every year. Thus, more teacher training courses focused on bilingual programmes, such as EMI or CLIL instruction, should be offered to tackle this situation. Another possible explanation for the short usage of cognitive processes in the EMI sessions observed can be due to the low proficiency language level, both on the part of some of the EMI teachers and also, of some of the students (Hu & Duan, 2018; Hu & Li, 2017; Yip, 2004).

4.3.4. Survey on the materials

When looking at the materials used in the EMI sessions analysed, it is important to mention that **nearly all the support material used in the sessions observed were L2 materials such as presentations, images, ads, teachers' notes, newspapers, webpages, videos, etc.** Just in two of

the sessions the support material was presented using the L1. Moreover, the Internet support was considered necessary in half of the sessions recorded. This contributed to creating a better content and language learning environment for students and to foster their linguistic competence by offering the support material in English. As González and Barbero (2018) presented in their decalogue for a CLIL methodology implementation in the tertiary level, the use of material should be done in English, and it needs to be considered key when implementing these kinds of programmes. They also suggested that “a reference lexical corpus” (p.57) should be required for each of the tasks carried out, meaning that a list of specific vocabulary should be created to facilitate learning the content. **In this case, the results fail to show the use of a lexical glossary in the EMI sessions analysed.** In both of the sessions analysed, it was not observed whether there was a lexical list of words to properly prepare the content of the subject. However, it is possible that a glossary was started and worked during previous sessions that were not observed. Work on a lexical glossary could have improved the lexical complexity results, and maybe, the oral results could have been higher.

4.3.5. Survey on the Class Development

Not only are the teachers’ strategies used, the students’ use of languages or the tasks done in the sessions, among other representative factors to justify if an EMI programme is successful, but also the class organisation itself can become a fundamental aspect when dealing with bilingual programmes. Different aspects regarding the organisation of the sessions can be key for the improvement of language and content learning.

As assumed, the EMI and CLIL methodology require a change of paradigm, and with it, a change of class methodology. One of the items that should change is the approach offered in these classes, which needs to focus on the students, instead of adopting the traditional teacher-centred approach. **The present study shows that in most of the sessions, the classes were basically student-centred, in that the students worked in groups or in pairs, and in most of the**

sessions, the class organisation was devoted to doing tasks, leaving behind the theoretical traditional sessions where the teacher spoke for the whole duration of the session. By adopting these strategies, the teachers favoured the students' communication and the high participation shown in the results analysed. The students could have felt more confident and motivated when using the language, while being supported by their peers and classmates. However, the fact that most of the EMI sessions were devoted to mostly doing written tasks in groups or in pairs, meant that the linguistic results of the group analysed could have been affected favourably in this study, which showed significant positive results in the written measures. The students spent a lot of time practising in class, mostly in written formats rather than in oral ones. These tasks could have helped the students' language and content learning because of the higher contextualised and practical practice from the theory. In line with this idea, one of the points in González and Barbero (2013) 's CLIL-methodology decalogue refers to the usage of a student-centred approach promoting pair and group work.

With the rapid growth of internalisation programmes at universities worldwide and the incorporation of EMI programmes over the last few years, it should be questioned if the lecturers and the students have had time to adequately adapt to the linguistic requirements of EMI degrees. University boards started to offer English programmes simply expecting teachers with knowledge of English to change their language in class, but the truth is that more planning and organisation is necessary, teachers and students need to be previously prepared and offered training possibilities to face the content demands through a foreign language as the vehicular one (Airey, 2012; Dearden & Macaro, 2016; Wan Cho, 2012). **Regarding the use of languages of the EMI programme analysed in the present study, it can be observed that the teachers and the students used both their L1 and their L2 in the EMI sessions recorded.** On the one hand, most of the teachers used the L1 to clarify doubts in class, to explain some parts of the theory and when answering students' questions. In line with previous studies, some of the main reasons for this L1 usage in class could be attributed to the teachers' low confidence level to use the

English language in class all the time (Aguilar, 2017; Jensen & Thøgersen, 2011); or they might not be ready to use the language for “incidental learning” (Airey, 2012; Pecorari et al., 2011), and even some of them might think that exemplifying in the mother tongue would be better to reach the understanding of the content and not lose any information (Başibek et al., 2014; Jensen & Thøgersen, 2011; Kiliçkaya, 2006), among other reasons. Using the L1 in the aforementioned reasons could have affected the students’ use of the L2, as they knew that the teachers supported the class content with L1 explanations, examples and when answering their questions. Thus, more linguistic strategies should be shared among teachers so they can ensure the content is transmitted successfully, giving examples and clarifying doubts. Regarding the students’ L1 usage in class, they mostly used the L1 when asking questions to the teachers or when clarifying doubts. Moreover, the students used the L1 if the theory was explained in the L1. It seems that this can be due to a lack of language command, and therefore, a fear of interacting using the L2 in front of their classmates (Al-Mashikhi et al., 2014; Phuong & Nguyen, 2019; Wan Cho, 2012). Again, the students may also benefit from a supplementary language course that could support the bilingual programmes.

On the other hand, **the teachers’ use of the L2 in the EMI sessions was mostly related to the explanation of the theory or the task, when commenting on students’ presentations or tasks and when asking questions. However, when analysing the students’ L2 usage in class, the results show a direct relationship between the teachers’ choice of language and the students’ one.** The student’s choice of language very much depended on the teachers’ choice. Students answered in the L2 if the teacher had asked using the L2. Moreover, the students also used the L2 when they were doing an assessment task in which they were obliged to use the English language. There is a strong relationship between the teachers’ language usage and the students’ one. **Maybe more teachers’ usage of the L2 in class could favour the students’ participation in the L2, and at the same time, more practice of their linguistic skills.** As corroborated by previous research (Dafouz, 2018; Drljača Margić & Vodopija-Krstanović, 2018; Escobar, 2013;

Guarda & Helm, 2017; Ole Hellekjaer, 2007; Pavón & Gaustad, 2013), more pedagogical and linguistic guidance is required for EMI teachers. Universities need to realise that it is not just a matter of changing the language of instruction in class, but that there are other important issues to consider so that EMI programmes succeed. Among these proposals, there is the incorporation of teacher training courses for EMI teachers, in which guidance should be given on how to organise and plan the lectures and in which linguistic strategies can be used in the sessions. All these changes could directly improve the students' participation in class, their motivation towards the degree, and their linguistic and content learning.

Another aspect worthy of analysis is the usage of ICT resources in the EMI class sessions recorded, which could have influenced the students' content and language learning. As

observed in the results, in most of the EMI classes, both the teacher and the students used the Internet tools, the computer, audio files and the digital board. The visual support was also presented in the L2, and the students could use their computers, mobile phones or tables in most of the sessions. Offering the possibility to use these technological gadgets was an open window to the world and to its resources, and to the subject's context. In line with Oliver (2002), the use of technology facilitates that students take responsibility for their own learning, and it supports a more student-centred model. Teachers favour students' independent learning, and this helps students get deeply immersed in their learning process. Also, Hernández-Nanclares and Jiménez-Muñoz (2016) confirmed the positive impact of ICT usage in a group of EMI students who were offered a different approach to class materials for content, skills and language and which helped them structure the subject from a different perspective. The results of the study mentioned corroborated that the EMI group outperformed the non-EMI group when analysing their grades.

The fact that in nearly all the EMI sessions recorded in the present study the students had the possibility to use ICT resources could have favoured their linguistic and content learning. They had the chance to check on language meaning, on any type of content, and use the appropriate

tools to deal with the subject's content. The teacher gave them the possibility to look up the meaning of words and construct their learning, and this implied a change of paradigm, which leads into a more student-centred approach.

4.3.6. Survey on the syllabuses

The design of bilingual programmes in the university context implies a deep analysis of the objectives to be achieved, and a series of structural, organisational and methodological decisions that need to be mainly discussed among teachers and coordinators when designing the syllabuses of these programmes.

One of the first aspects that was analysed in the present study was the linguistic aspects of the syllabuses. It was found that three out of four syllabuses were presented in two languages, Catalan and English, and just one was found only in English. Out of these four syllabuses, none mentioned the language level required for the subject or the L2 requirement from students. This may appear quite irrelevant for the organisation of the subject itself, but it is not, as being part of bilingual programmes, the linguistic requirements are a must. It is important to bear in mind that most of these bilingual programmes are offered as an open door to Europe and other parts of the country to attract students (Coleman, 2006; Doiz et al., 2011; Macaro et al., 2018), and also for the students who are highly motivated to enrol in a bilingual programme due to its future opportunities or just for linguistic reasons (Hamid et al., 2013; Phuong & Nguyen, 2019). **Thus, the fact that the subject syllabuses are presented in different languages represents a great chance.**

The same happens with the L2 language level required in each subject, which in the case of the syllabuses under analysis can be considered a weakness, as there is no information about the L2 level the student will need. Students should know the level of the subject and what to expect when taking it, as it can be part of their intrinsic motivation towards deciding on this programme.

It is possible that the missing information specified on the syllabuses affected the students'

decision to take part in the programme. Some could have thought the programme would be more difficult, or on the contrary, that English would not be a problem for them. However, it is well known that the local students at the University of Lleida, willing to participate in the Primary Education Bilingual Plan, can get information about the linguistic requirements once they decide to enrol in it if they ask for advice from the coordinator.

Another significant aspect of the syllabuses analysed refers to the objectives of the subjects.

The teacher must ensure that the content objectives are covered throughout the planning of the subject, while using a foreign language as the language of instruction. Consequently, the content objectives are not the only ones to be acquired, but also the linguistic ones need to be considered and included in the syllabuses. Lecturers must ensure that students assimilate content through a foreign language, and that they can do it without difficulty. Thus, the same lecturers must set a series of language objectives in the subject syllabuses that could support the acquisition of the content ones (Pavón & Gaustad, 2013). The bilingual programme under analysis shows that three out of four subjects examined included language objectives within their syllabuses, and they were objectives based on general linguistic competences. The rest of the objectives of each subject referred to specific content objectives. The linguistic objectives were based on the acquisition of general and basic competences of the foreign language, such as showing understanding, aptitude for oral and written expressions and competence for giving arguments of ideas. **The fact that most of the syllabuses under analysis incorporated the previously mentioned language objectives might have positively affected the students' language results, especially those measures with significant results. For instance, it could have had an impact on the writing and oral competence, the lexical complexity results in writing, which also showed to have improved, and the general grammar results which appeared to be higher in the post-test. Teachers might have considered some strategies and tasks to deal with the linguistic issues in class.** The incorporation of linguistic objectives could have been key to fostering the English language level while learning the content of the subject.

Some lecturers may think that the syllabuses of EMI programmes should not include language objectives as it is not their responsibility to deal with linguistic aspects in a content subject (Airey, 2012; Başibek et al., 2014; Jensen & Thøgersen, 2011; Jiang et al., 2019; Kiliçkaya, 2006). However, this appears to be contradictory for the content subject itself within an EMI programme. If the linguistic obstacles are not approached and solved within the same class, the content acquisition can be affected (Ole Hellekjaer, 2010; Vinke, 1995). Language is the tool for communication in these content classes, and it must be approached successfully if what it is expected is both a good content acquisition and the improvement of the language skills. As Do Coyle (2008) expressed, “Language needs to be learned in context, learning through the language, reconstructing the subject themes and their related cognitive processes” (p.104). All in all, bilingual programmes need to contemplate both the content and the linguistic objectives within its syllabuses. This can be done through the use of pedagogical and linguistic strategies and techniques, the coordination with the content and the linguistic teachers (Doiz et al., 2012; Yip, 2004) and even with the support of extra language courses for teachers and students and the external support of an ESP expert (Dafouz, 2018; Guarda & Helm, 2017; Mancho & Arnó, 2017).

Another aspect examined in the syllabuses of bilingual programmes under analysis is the assessment process used. In these kinds of programmes, decisions must be made on what to assess, how to do it and when to do it, as the method of the programme itself is different from a normal L1 subject class. Thus, the organisation requires the implementation of a quite different methodology. On a first step, we should consider content as the main aspect to be evaluated, but language needs to be assessed as well, together with the appropriate instruments and tools that can provide an appropriate assessment process, and which will support the acquisition of the learning outcomes defined in these programmes. After analysing all the EMI subject syllabuses, they contemplate formative assessment (assessment for learning), so the focus of assessment is not at the end of the unit, but during the learning process, looking for

shortcomings to improve and through different processes that favour the students' learning (Coyle et al., 2010). In other words, the subjects are planned and organised according to different assessment instruments, such as tasks, exams, projects, tests, and participation in order to support the learning process of the students. Besides, the syllabuses analysed also present different assessment tools, such as rubrics, oral presentations, written documents, oral tasks, class participation, and group written or oral projects, which in a way, try to support this formative methodology used when assessing. **Thus, considering that the subject itself was taught and learned using a different language of instruction from the L1 of the students and lecturers, the formative assessment used in the subjects under analysis seems to be positive.** For instance, in one EMI subject's final grades it can be observed that the strategies and instruments used in the assessment organisation favoured the acquisition of the objectives proposed. As mentioned before, the subjects analysed presented a good assessment organisation, like the one used in the CLIL methodology. **Besides, this can also show that the teachers were aware of the EMI programme requirements and necessities in their subjects, and that the design of the syllabuses was done considering different pedagogical and linguistic strategies.** As mentioned in the teachers' questionnaire results, the majority of them participated in educational courses every year, which could have helped their decisions in designing the syllabuses.

Finally, just in half of the subjects analysed in the present study, language was considered in the assessment, whereas the other subjects did not mention if language was evaluated or not. This shows that the use of the foreign language in the assessment process is something more delicate to tackle. In line with González and Barbero (2018) and Morgado et al. (2015), who gave specific tips to deal with CLIL classes in the tertiary context, they stated that planning for the assessment of the subject is essential in CLIL classes, as teachers must provide the necessary tools to assess the learning outcomes defined. Both studies confirmed that these kinds of bilingual programmes should consider different assessment instruments, such as diagnostic tests, peer assessment,

projects, portfolios or oral presentations, among others. The assessment criteria used in the EMI programmes analysed in the present study shows that the programme has been organised considering some of the above-mentioned characteristics for CLIL programmes, and that it looks as if it has undergone a CLIL-ised process. It seemed teachers were aware of the new methodology, that it needed to be adapted from a different perspective, and that some new strategies needed to be shared and learned to face up the challenges (Li & Wu, 2018). Therefore, **the findings show that the formative assessment used in the EMI subjects under analysis contemplates a range of strategies and instruments that could have assertively influenced the students' linguistic results shown.**

In addition to the topic of the foreign language in EMI programmes, **there is a general concern among lecturers about the need to assess language in the subjects.** Since the main aim of these programmes is to learn the content while students improve their foreign language level, there is a need to establish linguistic objectives on the syllabuses, and plan for different strategies to deal with it throughout the programme. In this sense, teachers need to be sure which objectives will be set for language, and how they will be achieved. It is very important to remember that language should be used as a communicative tool, as the vehicular language, but it should never prevent the student from showing their acquisition of the content. In EMI or CLIL programmes, teachers should make corrections and give feedback on language during the formative assessment; they should do tasks where language is worked on and used, and which, in a way, can help students gain confidence when learning the content; teachers should also provide language scaffolding to help students get the appropriate structures to share content, among many other actions (Coyle et al., 2010, p. 119-120). Thus, when assessing the subject, teachers must set the appropriate language objectives to approach language successfully, which means selecting the linguistic aspects to be assessed, analysing the students' level and adopting different strategies. As exemplified in the EMI syllabuses of the current study, linguistic objectives are normally based on general basic language competences, since the main aim is not

on a specific linguistic area but on the comprehensible output or ability to communicate by the student.

All in all, the EMI subject syllabus represents how the subject should be approached, showing what to consider in both content and language, how the objectives will be achieved and which kind of assessment process will be used in the programme. Thus, it is important to tackle different issues concerning this document if changes need to be done when adopting a more CLIL-ised methodology.

4.3.7. Summary of the EMI class diagnoses

The third RQ addressed the types of teaching methods used in the Primary Education Bilingual EMI classes of the degree under analysis. Findings described in this last section support the results obtained in the previous two parts, which focused on the linguistic impact on students and also on the teachers' and the students' profiles. Moreover, the results obtained will justify the changes to improve the bilingual programme, which could be used to create a more CLIL-ised programme.

Regarding the teachers' surveys, the results obtained confirm that pragmatic and accommodation strategies are key in these kinds of programmes, and they need to be learned and used by lecturers in EMI classes. Positive evidence was given for the teachers' L1 usage in class, as it proved to bring benefits in terms of language understanding, when clarifying doubts or questions or when exemplifying. The teachers' L2 usage during most of the sessions was key in the sessions analysed, as it promoted the students' L2 language learning, especially in the oral measures. The teachers' language usage described could have supported the improvement of the students' language learning. What was considered relevant was the usage of different language skills in class, even though the vocabulary was not employed much in the sessions observed.

Considering the students' survey, the students' participation was one of the distinguishing aspects observed, as they were very active in the sessions analysed. However, what would need to be improved is the usage of the students' L2 in class, which appeared to be weak. The students' linguistic impact could have proven to be better if more participation had been done using the L2. Thus, some strategies need to be established to improve the active participation using the foreign language in class.

When analysing the tasks of the sessions, the results indicated that more language reinforcement should be included when doing content classes. The tasks analysed did not contemplate any vocabulary support, nor scaffolding strategies or cognitive processes that could help the students' content and language learning. These findings confirm that more training needs to be offered and asked from lecturers in charge of EMI programmes. This would help them tackle these weaknesses, and at the same time, students would possibly obtain more favourable results both for content and language learning.

The material used in the EMI sessions analysed was considered to be positive as it included L2 materials and resources, and it promoted the usage of the Internet to help students approach a real L2 learning context. However, one of the weaknesses encountered was the absence of a glossary in each subject, which was not found in the analyses of the survey. Working on the L2 language of a content class is considered key if better learning wants to be obtained.

The survey which analysed the EMI class showed favourable results in line with the CLIL methodology characteristics, as most of the sessions were student-centred, with group-work tasks and with the usage of ICT. However, it was concluded that more linguistic and pedagogical support should be given to both teachers and students to promote the participation and interaction in the L2 in class and to avoid their potential fear of interaction due to their lack of language command. As expressed, this support could be given by offering more training courses to both stakeholders.

Finally, the analysis of the syllabuses of the EMI subjects revealed they did not have an L2 requirement for students in this document. No specificity was found where the L2 language was required. Moreover, the syllabuses contained content and language objectives, as well as the assessment description, which was considered to be both formative and summative. However, the planning of the assessment did not include the language aspect in its criteria, something that would need to be revised.

All in all, this last section has presented further insights into the type of methodologies used in the EMI plan under analysis and has helped justify the students' L2 learning over one year period. **Hypothesis number 2 was confirmed, since the Primary Education Bilingual pilot degree under analysis contemplated different methods in its classes. The need for teacher training courses is corroborated in the findings described, as a more systematic approach needs to be ensured, which could benefit the methodology, and at the same time, the students' learning of the English language.**

From the results obtained, some methodological and organisational guidelines should be considered and developed in order to improve the bilingual programme under analysis. Thus, two CLIL-ised decalogues will be presented in the following chapter, which would help improve the EMI degree by adding strategies to favour the students' content and language learning in class.

CHAPTER 5

PEDAGOGICAL AND ORGANISATIONAL IMPROVEMENTS

This section answers the third research question of the study which focuses on the pedagogical and organisational improvements that have been considered necessary for the EMI degree under analysis. Even though HE institutions have put much emphasis on EMI programmes over the recent years, a common protocol for this kind of programme has not yet been established. Worldwide universities are involved in using the EMI approach, but surprisingly, there is no consensus on the actions and strategies to implement it in tertiary contexts although it could favour the benefits of their programme. It seems contradictory compared to the growth of internationalisation or to other programmes or methodologies, such as CLIL, with which it shares common structures, but there is no consensus on a set of guidelines regarding the design of the EMI programmes. Thus, two decalogues are presented in this last section, with the main aim of complementing the EMI programme already existing, concretely, in the Primary Education Bilingual Degree (PEBD) at the University of Lleida, and with the purpose of considering some key elements that are part of the CLIL methodology. Section 5.1 includes the decalogue with the list of pedagogical improvements that can be done within the EMI classes, and section 5.2 presents the organisational proposals advised for the efficient implementation of the bilingual programme hereby studied.

It should be mentioned that this is a live study and that some of the strategies presented in both decalogues could have improved or changed the EMI programme offered in the context where the study was carried out. If improvements have been notified or captured, they will be mentioned in the decalogues' description.

Moreover, both decalogues are especially designed for the study done in the PEBD under analysis, but the same proposals can be adapted to other bilingual university programmes willing to improve.

5.1. Pedagogical improvements – Decalogue

After having analysed the specific methods used in the EMI classes of the PEBD at the University of Lleida, and having compared the results to previous research, a pedagogical decalogue with ten guidelines is hereby presented. The proposal intends to deal with the weaknesses encountered in the EMI approach offered by providing more effective actions that could foster content and language learning in the bilingual programme.

1. Establishment of outcomes from a dual-focused content and language perspective:

Nowadays, two of the main reasons for incorporating bilingual programmes in higher education contexts are the internationalisation of their programmes and the promotion of the English language among students (Pavón & Gaustad, 2013). One way of accomplishing these objectives is by adding EMI classes, among other kinds of approaches, to degrees or master's programmes of tertiary institutions. Thus, these bilingual programmes must have a dual-focused aim, which is the need to establish outcomes related to both, content and language. **The first proposal for this decalogue is that EMI programmes present a series of objectives that could tackle both the learning of the content of the subject, as well as the learning of the foreign language in an integrated way.** In fact, the language objectives should be linked to the completion of the content learning, as the language would work as the means to learning the content. Content teachers do need to support their classes by adding language knowledge, which in a way would prevent missing information and mastering the content given (Mehisto et al., 2008). Coyle et al. (2010) proposed a conceptual representation for the CLIL methodology called “language

triptych”, which considered the integration of content with language learning. The same could be applied to the EMI programmes willing to move towards a CLIL-ised methodology.

The proposal for EMI teachers would be to analyse the language needed for the specific content from three interrelated perspectives: language of learning, language for learning and language through learning. This would ensure the content learning, as well as the students’ language progression (Coyle et al., 2010). Some sample guidelines would be to establish linguistic strategies that could work for these language objectives, such as by adding a glossary of the content given, working on the content vocabulary in particular, providing certain linguistic structures, offering specific strategies for oral presentations, etc. (González & Barbero Andrés, 2013; Martyn, 2018). Considering what previous research (Doiz et al., 2012; Rose et al., 2019) claims about the students’ English language proficiency level when starting in HE contexts, content teachers should establish linguistic aims that could help acquire the content objectives of the programmes. Possibly, if the students’ language barriers are solved within the class itself, there will not be the need to provide external linguistic support to students.

The syllabus of the bilingual degrees under analysis included at least one language objective, which referred basically to basic linguistic competences. This was positive as it showed that the lecturers themselves were proactive in working on the language. However, deeper planning should be done considering dual-focused objectives, in which the language aims are integrated into the content outcomes.

2. Reflection on assessment integrating both the content and language progress: It is commonly known by teachers that the moment of assessment is one of the trickiest ones of all. It is the moment when decisions on what to assess, when to assess, how assessment should be done, apart from the selection of tools and instruments that will be used. If we consider the lecturers involved in bilingual programmes, the situation becomes much more complicated, as several factors come into play. **In an EMI or CLIL programme for example, where content and**

language should both be considered, some decisions need to be taken on *what, when, which instruments, and which strategies will be used in the assessment process*. Regarding the aspect of *what to assess* and considering that the programme has inherent dual-focused aims, **the assessment should be done on both content and language. Thus, the lecturers must plan for content goals, as the main priority in the EMI class, but not oversee language goals** (Coyle et al., 2010; González & Barbero Andrés, 2013). As Coyle et al. (2010, p.120) stated:

“It is important to be clear that this [the priority of content in an assessment process] does not mean we should ignore all errors and never assess language, but we can create specific opportunities to do this rather than offer continual corrective feedback which undermines content confidence. The “language clinic” is a potentially useful version of this practice: from time to time, the teacher gathers language errors which need to be addressed as a class and holds a “language clinic” in a lesson, explaining to learners that this is a necessary step to support better communication of content”.

Lecturers must consider language as part of the evaluation process of the EMI students, as it appears as an incidental part of the content learning. However, it is true that content learning should be a priority in the assessment process. Apart from these two main aspects, other aspects need to be assessed as part of the process, as for example, students’ effort, communication, participation, cooperation, etc. (Mehisto et al., 2008)

Moreover, **when to do the assessment** is key in these kinds of programmes. **The suggestion for the improvement in EMI programmes is that the assessment should be formative (focus on the whole process of learning) and summative (done at the end). Lecturers must guarantee that the assessment is done before (when preparing), during (in daily observation in class or tasks) and after (at the end of the term) the instruction** (Mehisto et al., 2008). Following this type of assessment will guarantee the students’ effective learning, both for content and language. To guarantee this kind of assessment, lecturers must provide useful tools and instruments that capture the students’ evolution during the whole subject.

Regarding **the type of instruments and tools to be used in the assessment process**, the proposal for EMI programmes willing to improve into a more CLIL-ised approach should include different types of instruments in the students' assessment, such as projects, participation, oral presentations, tests, exams, peer assessment, portfolios, etc. The tools that could be considered would very much depend on the instruments chosen, but they should also be varied, as for example, rubrics, presentation of posters, written projects, both individual or group ones, or different digital tools, etc. The research done in this field supports the usage of different types of instruments and tools in bilingual programmes (Hernandez-Nanclares & Jiménez-Munoz, 2016; Mehisto et al., 2008; Morgado et al., 2015; Oliver, 2002).

Last but not least, **the role of the lecturers** is not of least importance when dealing with assessment in bilingual programmes. It is key in the assessment process, as they are the ones monitoring and evaluating the different processes in the class. Some of the strategies that could be improved by lecturers involved in a more CLIL-ised methodology would be to favour content and language feedback during the class, providing opportunities to practise different skills, revise tasks or modify them according to their execution or reinforce competences, among others (Morgado et al., 2015).

The subjects analysed from the PEBD at the University of Lleida did meet some of the guidelines given in this section. For instance, all the subjects analysed had a range of tools in their assessment process, mostly two or three assessment instruments. As the results showed, most of the teachers gave feedback to their students after the correction of an exercise or task done in class, and most of this feedback was oral. Even though some of the guidelines given to improve the present methodology are already being used, other strategies can be used that could favour language and content learning in bilingual programmes.

3. Usage of scaffolding strategies to activate learning in bilingual programmes: lecturers teaching in bilingual programmes, such as in EMI or CLIL methodologies, have a challenging task

different from their colleagues in regular settings, which is the one of transmitting content knowledge through a foreign language. Implicit in this last condition are the strategies that should be offered to students to expand and support their learning, and which refer to scaffolding, promoting critical thinking or offering tasks to cater for different learning styles, among others. These actions enable students and teachers to take control of the learning process and therefore, improve the learning results (Mehisto et al., 2008). **The proposal for a more CLIL-ised programme would imply using *scaffolding strategies* to foster students' learning.** This strategy implies a “temporary supporting structure” that would help students “access previously acquired learning, to analyse it, to process new information, to create new relational links and to take their understanding several steps further” (Mehisto et al., 2008, p. 139). This technique empowers learners and makes them feel more confident within their foreign language learning process (Morgado et al., 2015). Scaffolding is constantly rebuilt, and it is not always present in class tasks or the class development. Lecturers decide when it needs to be used or when students feel capable enough to manage the learning process themselves. Some of the strategies that can be used to scaffold in a foreign language class are modelling (providing examples); bridging (connecting to prior knowledge); contextualizing (giving visual or verbal support); schema building (organising input by mindmaps or other tools); re-presenting text (using other types of texts, genres), and developing metacognition (planning and monitoring one's learning) (adapted from Morgado et al., 2015). Lecturers teaching in bilingual programmes should be aware of the different techniques that provide scaffolding, use them in class to promote learning, and thus, smooth the learning process for students. For all this, previous content and language planning is required from these lecturers, who need to organise themselves pedagogically to support these techniques. In this respect, good coordination among content and language teachers would provide advantages on this topic, as well as training meetings to deal with the pedagogical strategies of bilingual programmes. In fact, **lecturers participating in bilingual programmes should be capable of offering both content and language**

scaffolding support. Some examples offered by Morgado et al. (2015, p.34) in their CLIL training guide proposal are:

Language scaffolding:

- Brainstorming related to language or concepts before launching a task.
- Grouping language according to use (procedures, equipment, personal attitudes).
- Rewriting texts so that new nouns are repeated, sentences and paragraphs are shorter, synonyms are given, etc.

Content scaffolding:

- Avoiding language that is expressed in compound or complex sentences.
- Rewriting texts with direct language whenever possible.
- Highlighting or underlining key ideas or facts.
- Using other graphics to organise new information.
- Providing sample answers or examples of good work.

Many other techniques can be found to provide scaffolding strategies, but all of them share the same idea, to give support to understand the learning process better. Research on this topic evidences the use of these strategies for students to succeed in the learning process, especially if the subject is taught through a foreign language (González & Barbero Andrés, 2013; Martyn, 2018; Mehisto et al., 2008; Strotmann et al., 2014).

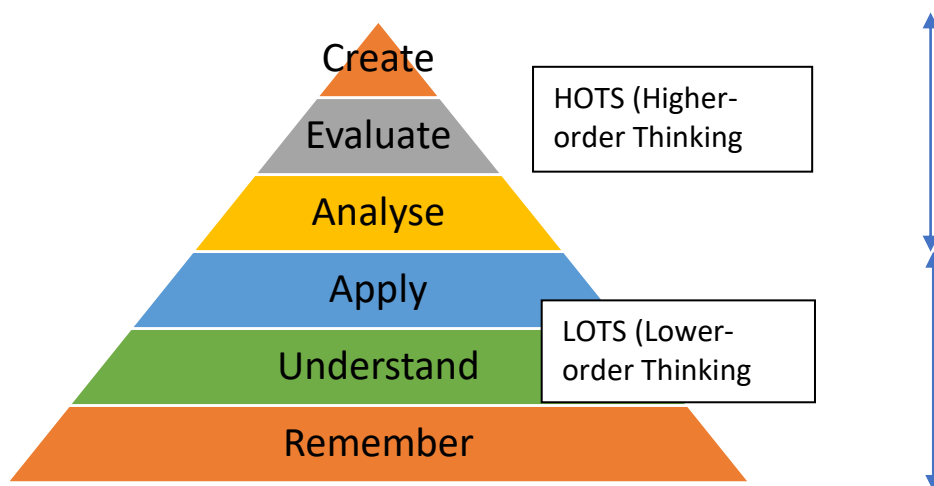
Regarding the scaffolding strategy used in the subjects analysed from the PEBD at the University of Lleida, a content scaffolding technique was used only in one of the sessions recorded, which was brainstorming. As observed, there were no more content or language scaffolding strategies used in the classes observed, and this appears to be one of the weaknesses of this plan.

4. Fostering of creative and critical thinking in class: another way of promoting learning opportunities to students of a bilingual programme is by **fostering *critical thinking***. Thus, it is considered a must that lecturers develop thinking and problem-solving skills within these

programmes. One of the most well-known thinking models is Bloom’s taxonomy, constructed in 1956, and which established six levels of complexity, starting at the lower order thinking skills and moving upwards to the higher order thinking skills. Later, in 2001, Anderson et al. (2001) revised Blooms’ taxonomy (Mehisto et al., 2008), and now, the modified version is the most well-used model. It provides a series of verbs in each stage that help lecturers use the pyramid model to plan for their learning tasks. Figure 15 shows the pyramid triangle, in which the six verbs are clearly graded from the lower to the higher order process thinking skills.

Figure 15

Revised Bloom’s taxonomy thinking skills

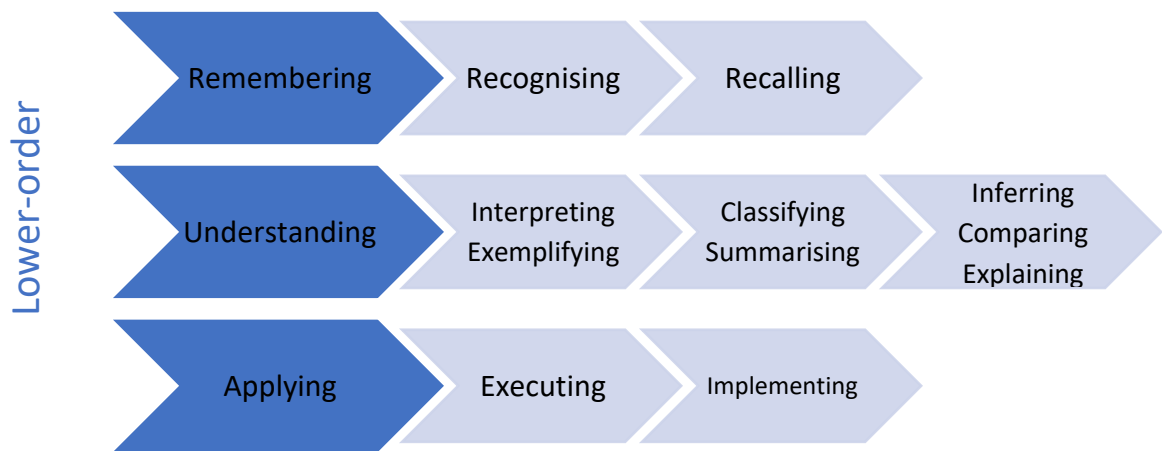


Adapted from Anderson et al. (2001, p.31)

In the current CLIL-ised proposal methodology in a higher education setting, the use of these verbs is key when organising and presenting the learning tasks and providing the content of the subject. The tasks proposed by the teachers should offer tasks starting at the bottom level (with tasks based on lower-order thinking skills) and moving up (contemplating tasks with higher-order thinking skills). Coyle et al. (2010) offered a more precise list of verbs within the general categories of the taxonomy, emphasising that the key is to identify the cognitive processes within the content and language given in the CLIL class. Figures 16 and 17 present the verbs of each category:

Figure 16

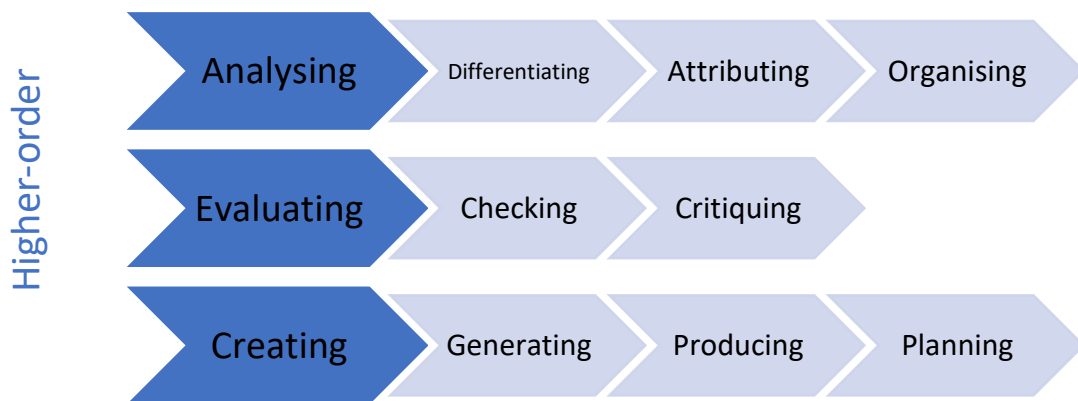
Lower-order processing thinking skills



Adapted from Coyle et al. (2010, p. 31)

Figure 17

Higher-order processing thinking skills



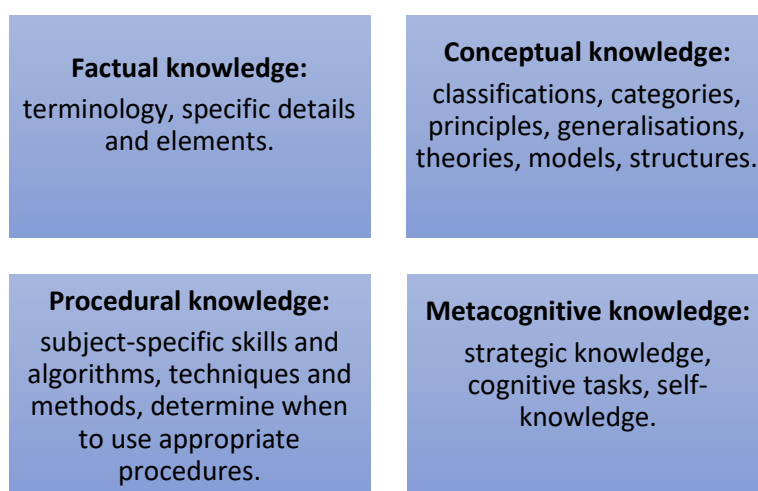
Adapted from Coyle et al. (2010, p. 31)

Coyle et al. (2010) emphasised the importance of cognitive engagement as an essential asset when working on content in CLIL classroom. Thus, as corroborated by different research (Hu & Duan, 2018; Hu & Li, 2017), integrating the different cognitive processes mentioned is key in a CLIL setting, as not only do they foster cognitive engagement and promote deep content learning but also increase the English language input and consequently the learning. Apart from the cognitive process dimension chart, **the knowledge dimension chart** presented by Anderson et al. in 2001 within the revised version of Bloom's taxonomy must not be forgotten as it

provided a **framework to explore the demands of different types of knowledge**. The authors thought that the identification of the cognitive and knowledge processes associated with the CLIL content is essential to make sure learners have the possibility to develop these processes, together with the appropriate language to do so (Coyle et al., 2010). The following figure 18 presents them:

Figure 18

Different types of knowledge



Adapted from Coyle (2010, p.31)

All in all, higher education lecturers involved in bilingual programmes must ensure that “the teaching practices and methodologies adopted correspond to the learning outcomes and assessment criteria defined” (Morgado et al., 2015, p.58), and that the students have the necessary language to do so (Anderson et al., 2001).

Considering the thinking skills in the analysis done in the PEBD, it was found that in one session, the teacher presented a task that went from lower to higher-order processing, firstly making the students recognise and interpret, and later, discuss and give their opinion about the topic. As observed, there was a lack of tasks programmed to develop thinking skills, and the teacher’s design and implementation of tasks did not take into account the cognitive and knowledge processes.

5. Planification of tasks considering the different students' learning styles: it is also important to consider the students' different *learning styles* when planning and organising bilingual programmes. **One way of enhancing communication and learning in a bilingual class is when the teacher promotes the usage of different learning preferences, so as to reach all students' learning styles.** Mehisto et al. (2008, p.167) stated that "raised awareness of learning styles can help students take greater control of their own learning". Not all students learn in the same way or using the same learning strategies, and therefore, lecturers must ensure that all knowledge gets to all the students in different ways. Mehisto et al., (2008) distinguished three learning styles and strategies, which were visual, auditory, and kinaesthetic. They stated that in a CLIL class, lecturers must ensure that the content, the outcomes required, the teaching' instruction, and the materials presented take into account different learning styles. For instance, lecturers may give the content orally, using visual support and/or through written support. Another example would be related to the final tasks or projects, which could also be designed to develop diverse styles.

Nearly all the EMI tasks recorded presented a variety of learning styles scenarios, as the teacher used different techniques to share the content and develop the class, from visual to auditory. Much more emphasis should be given to how teachers could develop the aforementioned strategies and create more learning opportunities for students, as for example, by participating in more pedagogical training courses or by sharing practices among content and language lecturers.

6. Promotion of strategies to foster a student-centred approach and active learning in class: fostering a student-centred methodology is more enriching both for the teacher and the students if we compare it to the traditional teacher-centred approach. In a student-centred approach, teachers act as guides, supporters of the learning process, and they try that "the nature of classroom discussion successfully integrates the students in a balanced manner"

(Morgado et al., 2015, p. 19). Thus, **the proposal for a more CLIL-ised methodology decalogue would be to offer more communication and discussion in these classes and promote strategies for adopting a student-centred approach.** Morgado et al. (2015) compared both the teacher and the student-centred approaches in different classroom situations. The following table 83 show some examples adapted from the previous authors:

Table 83

Examples of teacher and student-centred approaches

Teacher-centred class	Students-centred class
Teacher lectures.	Students engage in discussions on the topic based on individual or group reading.
Lots of teacher talk.	Lots of student talk.
Questions are asked at the end of a topic.	Regular interruption and discussion take place throughout any topic presentation.
Students take copious notes on lectures.	Students write their own and group interpretations of the material. Then, they confirm it through their own reading and teacher correction of their writing.
Teacher controls the lessons.	Students feel more empowered as they participate constructively.
Students learn privately.	Students learn collaboratively.

Bilingual programmes would improve if more student-centred class strategies that could favour active learning in class were used. Similarly, Mehisto et al. (2008) provided a list of tools that can be used in CLIL for promoting connectivity among students and lecturers. Among them, **the strategies that favoured a more student-centred approach are the ones related to “students helping and enriching one another”, empowering students”, “classroom set-up”, “taking into account students’ interests”, “giving students opportunities to lead conversations”, and “empowering students to take part in decision making”**, (Mehisto et al. 2008, p. 182). In a CLIL methodology, lecturers must ensure that students feel comfortable in the class environment and promote communication and connectivity among them. The guidelines and examples shown would be interesting tools to be used in CLIL settings.

As previous research states (Coyle et al., 2010; González & Barbero Andrés, 2013; Mehisto et al., 2008; Morgado et al., 2015), lecturers in bilingual programmes need to change the traditional methodology into a more student-centred approach in order to succeed. Learning the specific content of a subject through a foreign language implies these pedagogical changes and adjustments if the objectives want to be achieved. Thus, an active learning, in which lecturers act as facilitators and students play a more important role in class, should be promoted in various ways, and using these strategies would favour its accomplishment.

The results of the study showed that most of the lecturers considered different learning styles when planning and doing tasks in their EMI classes. In most of them, the students were offered different learning supports (visual, auditory, and kinaesthetic), such as when the teacher explained or when the students were doing and practising tasks. In a way, the combination of styles may have favoured the students' content and language learning.

7. Introduction of interactional strategies within the classroom discourse: one of the conditions to succeed in acquiring a second language is when communication and conversation are provided. It is well known that lecturers modify their speech and interaction structures to help learners participate and understand a conversation, or to make them understand new meanings. Lightbown and Spada (2013, p. 114) stated that “modified interaction is the necessary mechanism for making language comprehensible”. The authors also affirmed that ***modified interaction*** involved “elaboration, slow speech rate, gesture or the provision of additional contextual cues” (p.114). Similarly, a study made by Tsai and Tsou (2015, p.15) also confirmed that **the use of accommodation strategies favoured communication in class**, “preventing misunderstandings and enhancing learners' knowledge of subject matters”. Thus, it is essential to consider these strategies in bilingual programmes in HE contexts, where the language of instruction is a foreign language, and where one of the main objectives is to learn both the content and to improve on the language. **One of the proposals of this decalogue is**

that conversational and accommodation strategies be included in the class context. Lightbown and Spada (2013) distributed **conversation modifications** into three groups, which are presented in the adapted table 84 below:

Table 84

Conversation modification following Lightbown and Spada (2013)

MODIFIED INTERACTION	USE	EXAMPLE
Comprehension check-efforts	To ensure that the learner has understood.	“Do you understand?”
Clarification request-efforts	To clarify something that has not been understood.	“Could you repeat that, please?”
Self-repetition or paraphrase	To repeat the sentence partially or in its entirety.	

Lecturers in bilingual programmes should promote the use of these conversation characteristics in order to favour students’ learning and promote their participation and communication in class. However, apart from these three examples, Tsai and Tsou (2015) also provide **six types of accommodation strategies** for lecturers, which were collected from a study in which five teachers were analysed in developing EMI classes. The strategies are described in the following table 85, adapted from the study of Tsai and Tsou (2015):

Table 85

Types of accommodation strategies adapted from Tsai and Tsou (2015)

ACCOMMODATION STRATEGY	USE	EXAMPLE
Introducing	To trigger background knowledge and indicate the structure of ideas that follow.	-I would like to say... -Let’s start with... -Let’s take a very careful attention to -I ask you to move to...
Defining	To give explanations with specific meanings, a concept, or a term.	-That means... -That is... -X means that...

Listing	To list or number separate ideas, in a sequential order. To connect each point in order.	-The first one is... -First of all... -The second point is.... -Last...
Eliciting	To give guidance for further thinking and provide questions to help students find solutions.	-What was X? -What does it mean? -What choice do you want? -What do you think about...?
Giving examples	To support concepts to make a connection to previously discussed concepts.	-I will give you an example. -For example -Such as X...
Emphasizing	To highlight important ideas or concepts and draw students' attention to significant points.	-Remember that... -X is very important.... -Make sure that... -Focus on... -Use of synonyms -Repetition of the sentences

The teachers participating in the study (Tsai & Tsou, 2015) used the listed accommodation strategies when facing content difficulty, students' language proficiency, student feedback and appropriate English in expressions. These were the main reasons why the lecturers appealed to the strategies mentioned. Moreover, Hahl et al. (2016) study proposed another accommodation strategy that could be used in an EMI or CLIL class, mostly if we consider that the lecturers are foreign language speakers. We are referring to the code-switching strategy, especially when the lecturer is lacking a word.

Despite the modified and accommodation strategies mentioned, it is worth emphasising **the importance of the types of questions made by teachers and the answers given by students in EMI or CLIL contexts, which are also relevant to consider in this protocol line.** As exemplified in the studies by Hu and Li (2017) and Hu and Duan (2018), the type of questions made by the teachers in both EMI contexts corresponded to lower-order processing questions, as well as the answers given by the students in the studies. These results may have indicated that both teachers and students lacked proficiency in language and that it was difficult to formulate higher-order questions and answers with ease. Moreover, another justification for the findings

obtained is that there were too few higher-order questions in the sessions analysed to observe their effect, or/and that the EMI introductory modules analysed did not contemplate complex cognitive processes. From these findings obtained, it can be concluded that **EMI teachers need to be more cognitively aware of the type of interactions done in their own classrooms to engage students in higher-order cognitive processes, and as stated by Hu and Duan (2018, p.15) “to create conditions for deep subject learning and effective development of English proficiency”**. In this line, teacher training programmes should help teachers plan and organise these processes appropriately, giving special attention to the variety of questions that can be made in an EMI or CLIL class.

In a similar vein, Evnitskaya (2018) gave value to a series of interactional strategies to guide teachers through the teaching-learning process. Firstly, she mentioned the toolkit created by Neil Mercer in 1995, in his book *The Guided Construction of Knowledge*, which presented the distribution of interactional strategies used by teachers to promote classroom interaction. Table 86 shows the distribution of the three groups of the interactional strategies:

Table 86

Interactional strategies to promote classroom interaction

TO ELICIT KNOWLEDGE FROM LEARNERS	TO RESPOND TO WHAT LEARNERS SAY	TO DESCRIBE SIGNIFICANT ASPECTS OF SHARED EXPERIENCES
Direct elicitations Cued elicitations	Confirmations Rejections Repetitions Elaborations Reformulations	“We” statements Literal recaps Reconstructive recaps

Moreover, Evnitskaya (2018) also mentioned **the concept of Classroom Interactional Competence (CIC)**, coined by Walsh in 2006, and which referred to features of conversations between teachers and students in which high quality interactions were produced and created. **She distinguished three broad categories, which contemplated different interactional strategies, and which are considered highly important to be included in this decalogue**

principle. The first one corresponds to the “use of learner-convergent language” (Evnitskaya, 2018, p.11), including the teachers’ interactional skills, which refer to checking students’ understanding of what has been done or said; using linguistic resources such as synonyms, paraphrasing, examples, non-verbal language and material resources to explain unknown vocabulary items or complex facts; making pauses to let students process input; using discourse markers, such as “ok”, “well”, “now”, etc. The second category includes “facilitation of interactional space” (Evnitskaya, 2018, p.12), including skills that refer to reducing the teacher echo; asking good questions to promote critical thinking and reasoning; promoting student-initiated questions or allowing student self-selection. The third category describes the “shaping of learner contributions” (Evnitskaya, 2018, p.12), referring to helping students express what they mean by using the appropriate language. The skills described in this category are using model academic language; using active and proactive ways of feedback; accepting students’ contributions and paraphrasing them to make them more linguistically appropriate for the class. As stated by Evnitskaya (2018, p.13), the mentioned categories should be considered as:

“teachers’ abilities to make on-line decisions and employ appropriate interactional strategies which allow them to skilfully create ‘space for learning’ and promote students’ participation in classroom interaction, that is, to engage them in the negotiation of meanings and the co-construction of subject- specific knowledge in the target language.”

All in all, lecturers participating in bilingual programmes should be aware of the accommodation strategies and the modified interactions that need to be done in classrooms to activate the students’ learning, as well as the different skills related to the classroom interactional competence. Being aware of the types of classroom discourse can be key to maintaining communication in class and to favouring the students’ content and language learning.

Regarding the study under analysis, neither the accommodation strategies nor the modified interactions were analysed. However, the teachers had strategies to maintain focus in class, such

as by asking questions, proposing to do tasks, giving examples, translating words or by solving doubts. More emphasis should be put on developing and using these mentioned patterns, emphasising the use of cognitive processes that go from lower-order to higher-order processing levels.

8. Creation of a safe and enriching learning environment in class: one of the core features of bilingual programmes in primary, secondary or tertiary studies is the creation of a safe and enriching environment in class. This is considered key for the good development of the methodology and for all stakeholders involved in it (Mehisto et al., 2008). Favouring a safe environment in class will promote the communication and interactions among teachers and students, and this will activate the participation and consequently learning on the part of the students. **The proposal in this decalogue is to present different features that would favour the creation of an optimal classroom climate for developing a CLIL methodology in tertiary contexts.** The presented features are based on some of the strategies developed by Mehisto et al. (2008, p. 172-195) and Morgado et al. (2015), and which were considered useful and applicable in tertiary contexts.

1. Deciding on classroom norms and rules. In tertiary contexts, this would imply cooperating with teachers when establishing rules that can be applied to procedures or equipment.

2. Supporting and rewarding risk-taking. Teachers should encourage students to be part of the class, to participate and be active during the learning process. Sometimes, this is challenging for students learning through a foreign language. Thus, teachers should support and reward students' efforts when participating in the L2, even if making language or content mistakes.

3. Respecting the student's silence. Students must be given time to think, to comprehend, to organise themselves, and to get ready to take part in the active learning

in a bilingual class. Thus, lecturers must permit students to take this time and wait for later contributions. Allowing this may contribute to creating more opportunities.

4. *Showing trust and consistency to students.* Students in a CLIL environment need to feel secure and trust their teacher to be active assets in class. Lecturers should be consistent with their norms, classroom patterns and behavioural strategies, and even learn their students' names.

5. *Maintaining positive tension in class.* An interesting way of involving students into the class tasks is when lecturers offer tasks that consider challenging and cognitive demanding objectives.

6. *Empowering students and recognising success.* This can be accomplished when lecturers let students choose one task over another, or let a student adopt leadership role in class or when students are allowed to make suggestions for improvement in the class or the programme. Celebrating students' success, such as by showing a project done, recognising students' contributions to class, etc, is another key element to create a productive environment in class.

7. *Favouring flexible seating arrangements.* Giving the opportunity to students to sit in groups, in pairs or in circles would help build a beneficial atmosphere for learning. Promoting the sense of group, facilitating graphics or vocabulary lists on the class wall are extra actions to consider.

8. *Considering students' interests.* It is when lecturers consider learners' lives and interests that the learning becomes real, meaningful and relevant to students. Connecting class tasks to students' interests (of any topic and with the usage of any tools) will promote this safe atmosphere.

9. *Managing the emotional dimension.* In a foreign language class, students' emotions are more present in the atmosphere, and lecturers must give extra emotional support

to their students to help them build self-confidence and recognise feelings. Using a lexis of emotions in class may contribute to creating a warmer learning environment.

10. *Connecting classrooms to local communities and to the world.* It is important to create opportunities in which students can work with others, explore different contexts, and impact on the local community or other global settings. Favouring the usage of local resources (museums, libraries, professions, government officials, cultural organisations, agencies), and connecting learners to the world (by exchanges, articles, media, textbooks) is how an enriching environment for learners can be created.

The quality of interactions done in a CLIL class will influence the kind of learning achieved. Thus, promoting these types of interactions will benefit both the students and the teachers as a safe and enriching bilingual environment will be created (Escobar, 2019).

The study under analysis did not examine all the mentioned features described. However, some strategies were captured from the recordings done. For instance, teachers gave L2 practice opportunities to students to develop their L2 and they used non-verbal language when explaining on some occasions. Regarding the class atmosphere, it was observed that the class was adequate for working, and that the teacher asked, on one occasion, if the students felt comfortable. Moreover, the teachers were accessible to students, and they helped them in any case they needed, solving doubts or when confirming their learning. Considering the sitting arrangements, students sat at tables forming lines, even though in some sessions, they worked in groups or in pairs.

9. Benefits of ICT resources: Nowadays, technology is part of our daily life, and it surrounds us in many ways. In the educational field, technology (ICT) has also changed how education is planned and delivered, and how knowledge is being learnt too. The impact of ICT in this field is huge, as it makes learners responsible for their own learning, among other things (Oliver, 2002). As stated by Oliver (2002, p.4), “technology has the capacity to promote and encourage the

transformation of education from a very teacher directed enterprise to one which supports more student-centred models". **The proposal for this decalogue would be to benefit from ICT resources in the CLIL class.** Using technological tools will facilitate active student participation, their self-expression, and a more student-centred learning. Students will have the possibility to access any kind of content and language materials, look for appropriate resources, and they will be exposed to different approaches (González & Barbero Andrés, 2013; Hernandez-Nanclares & Jiménez-Munoz, 2016; Morgado et al., 2015; Oliver, 2002). The different students' learning styles will also benefit from the usage of different technological tools. **CLIL teachers need to search for adequate tools to be used in class and see the possibilities that each one offers for the students' active learning of content and language, as well as for the development of their competences.** Morgado et al. (2015) present a list of Internet tools that could be adapted for CLIL purposes. They are distributed in different categories:

- Use of educational platforms (Moodle, ted talks, forums, chat rooms, conferencing, blogs, wikis, WebQuests).
- Other social networking tasks (PowToon, Animoto, Twitter, Facebook, Wordle, Dipity, Glog, Quizzes, Online games, Quizinator, etc.)

As technology is evolving, many more education tools can be used to plan for a class, to organise the content, connect with the language and to capture the students' learning. The objective for bilingual teachers is to consider these resources as part of the planning of their subject. As it has been shown, multiple benefits can be obtained.

Comparing this decalogue principle with the EMI sessions analysed, the results did not study the benefits of using ICT tools, but it did capture their use in the sessions examined. For example, the materials used in class contemplated the use of the Internet, and some digital resources were used in some of the sessions, such as the presence of online newspapers, webpages and videos, YouTube, Google Drive and Campus Virtual (the university's own online management system). The results showed that the students' usage of ICT resources was high in most of the

sessions, as most of them had computers, laptops, or mobile phones with direct access to the Internet.

All in all, more focus should be given to orientate teachers in promoting the use of ICT in bilingual classes, such as by offering them more technological resources and tools that could be used both in the teaching process and to capture the development of their students' content and language objectives.

10. Provision of current and authentic learning materials and resources: the last guideline offered in this pedagogical decalogue for a CLIL implementation refers to the important aspect of providing authentic materials and resources. "Authenticity will be the primary guide to selection of material for any CLIL course" (Morgado et al., 2015, p. 30). **Lecturers need to choose materials and resources that promote motivation, stimulate students' learning and become meaningful for them.** Morgado et al., (2015) proposed that CLIL materials should meet the following characteristics:

- Be meaningful, challenging and authentic.
- Have a multi-modal input.
- Contemplate different learning styles and multiple intelligences.
- Promote visual literacy to capture the understanding of the content better.

Apart from these characteristics, the creation of materials for bilingual classes should also support the accomplishment of learning outcomes, and therefore, **lecturers should consider the quality of their materials in terms of promoting cooperative learning, fostering critical thinking, incorporating authentic language, raising the development of learning skills and autonomy, etc.** (Mehisto et al., 2008; Morgado et al., 2015).

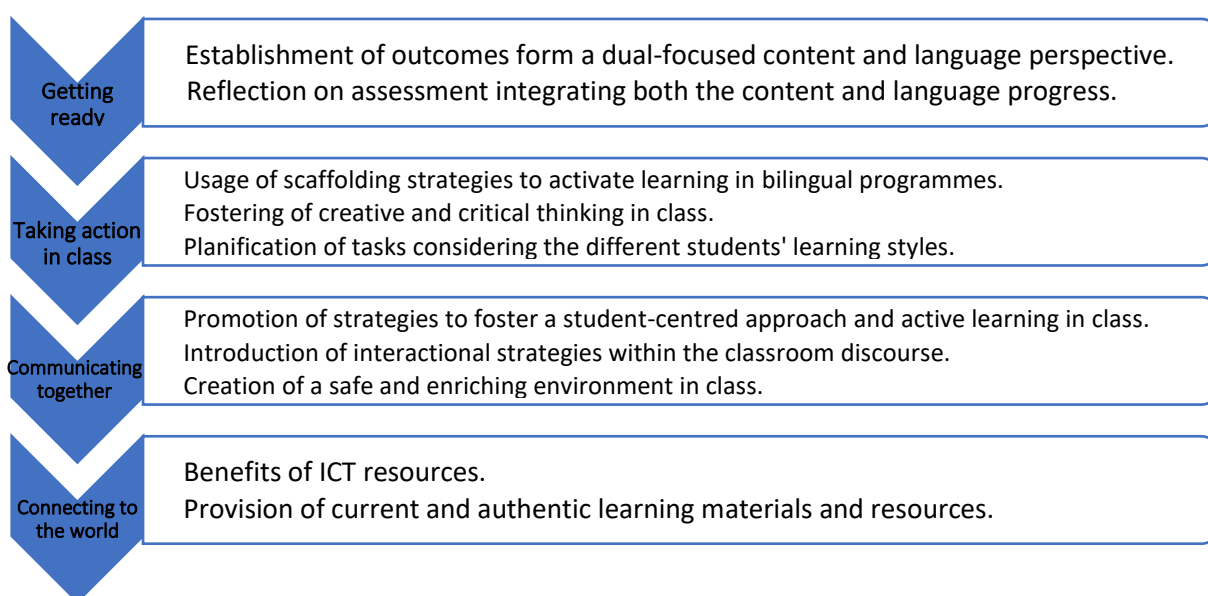
In the PEBD analysed, it was observed that not all the tasks offered in the EMI sessions were based on authentic contexts. Some of them did consider the students' life and context, and they appeared to be meaningful and challenging for them. However, a deeper analysis should be

done to analyse the materials and resources offered in the bilingual programme. Choosing the appropriate materials and resources for CLIL classes is a challenging and time-consuming task for lecturers. Thus, a specific guided training course could tackle this aspect, as well as the provision of materials and resources by the university.

In summary, ten pedagogical proposals have been presented in this first decalogue, which can be used for the implementation of a more CLIL-ised methodology in the Primary Education Bilingual Plan under analysis. The decalogue can be used for other future bilingual programmes at the same university or in other contexts. Its main objective is to improve the existing programmes by proposing some principles that would favour the content and language learning of the students involved. The guidelines presented can be grouped into three different big fields, which are: getting ready, taking action in class, communicating together and connecting to the world. As a way of summarising this section, the decalogue’s proposals are presented in a more summarised version in the following figure 19.

Figure 19

Pedagogical proposals summary



5.2. Organisational improvements – Decalogue

Considering the research done in the context under analysis (PEBD) and the previous theoretical literature review on the topic, **the present decalogue includes ten different actions that are recommended to make the EMI approach more effective.** The decalogue may include positive aspects considered from EMI programmes or CLIL methodology studies that would complement and enrich the programme. Moreover, each point of the decalogue includes a justification based on the evidence found in the research done in the present study.

1. Teaming-up with fellow content and language teachers: it is essential that **content and language teachers of the same degree coordinate among them, especially EMI content teachers.** Deciding on the essential language structures, the grammatical aspects and the vocabulary structures to be used in the different content and language subjects is going to benefit the acquisition of the contents. Thus, both the content and language teachers could use a similar range of vocabulary and language structures, which would facilitate content acquisition. Moreover, content teachers could feel more secure and supported within their content subject if the language teachers had dealt with the language required for the content classes (Doiz et al., 2012; Doiz et al., 2019; González & Barbero Andrés, 2018; Pavón & Gaustad, 2013; Soler et al., 2014; Yip, 2004). If the main objective of the degree is to raise the level of the English language, we cannot omit the need for this kind of agreement and coordination. Apart from the importance of the coordination between both, the language and the content teachers, **more frequent follow-ups with the EMI/CLIL lecturers involved in bilingual programmes would provide extra support that could make a difference to these programmes.** In line with research done in a Croatian study (Drljača Margić & Vodopija-Krstanović, 2018), these peer-group meetings could be used to share successful experiences, comment on doubts and problems, give feedback to each other and establish guidelines that can work in these kinds of programmes. Even a coordinating figure, specialised in the development of bilingual programmes, could lead

these meetings every term or biannual group, and in a way, they could detect which kind of support and training is needed among the lecturers.

The PEBD under analysis offers English language subjects every academic year, and there also exists a Bilingual plan coordinator. These English teachers should coordinate with their EMI content colleagues frequently, so as to establish common guidelines and give each other support in their role in these subjects. A peer-group among lecturers involved in these bilingual programmes should be established to favour the exchange of experiences, tools and support their teaching.

2. Organisation of a gradual increase of EMI/CLIL subjects: the introduction of EMI or CLIL subjects in the HE context is demanding, both for the teachers and the students themselves. A bilingual programme cannot be implemented overnight in any faculty, as several actions need to be considered. One of these actions refers to the use of a foreign language in the subjects of a degree. Thus, the proposal is to offer a gradual increase of these types of subjects and distribute them throughout the degree. In the case of the Primary Education Bilingual Plan at the University of Lleida, the recommendation would be to start offering EMI/CLIL subjects from the first year, but progressively. The programme could start by offering two or three EMI/CLIL subjects and increase the offer through the years. Both students and teachers need to adapt to this new methodology, both linguistically and pedagogically and it takes time to do it properly. Moreover, some support can be given over the different Years, so as to maximise and professionalise its programmes. Pavón and Gaustad (2013) supported the idea that an effective organisation in the implementation of bilingual programmes in HE spheres implied the gradual implementation of the programme. As stated by Pavón and Gaustad (2013, p.87):

“One way is to establish a calendar for the gradual implementation of the programme, introducing a number of hours devoted to the teaching through the additional language that will increase gradually. This would ensure that students’ language skills, as well as

the methodological and linguistic preparation of teachers could improve and adapt to new needs as they arise”.

A deep analysis must be done when deciding to implement EMI/CLIL subjects in HE degrees, so a structured distribution of these subjects would facilitate its success.

In the case of the Bilingual plan under analysis, the subjects offered in the Degree are distributed within two levels of English language intensity, so the total immersion subjects are located during the third and fourth Years of the Degree, and the partial immersion subjects in the first and second Year. Moreover, as described on the official website, during the third Year, students must do a compulsory stay abroad period; spend their internship period at a school and produce their end-of-degree research project, which is also written in English. The organisation of the Primary Education Bilingual Degree (PEBD) under analysis is now organised in a progressively demanding way in terms of English language teaching and learning.

3. Incorporation of a figure of leadership – coordinator: All new programmes, methodologies or projects need coordination, a person or group of people, that can take care of its good organisation, implementation, revision and improvement. **Therefore, the Primary Education Bilingual Degree needs a figure of leadership, a coordinator capable of analysing both the pedagogical and the organisational aspects that will be developed in it.** The coordinator of this plan should oversee the programme’s implementation, its changes and offer new resources, as well as contribute to its sustainability. Moreover, a coordinator would also be responsible for analysing the students’ and lecturers’ needs in terms of language or academic support. As Pavón and Gaustad (2013, p.88) stated:

“It is essential to establish a mechanism that acts as a ‘backbone’ of the programme to coordinate and provide support for the full array of resources and actions which, from the linguistic and methodological point of view, must be put into operation.”

The authors proposed that there should be a coordinator for every degree where the bilingual methodology would be established. Among the many actions that these leaders could do, Pavón and Gaustad (2013) described that coordinators could find out the language needs of the students, schedule programme meetings to coordinate the content and language teachers, support teachers in organising the courses and their objectives, and offer the necessary resources so that lecturers can design appropriate materials for the classes. Similarly, Soler et al. (2014), also believe that the figure of leadership is essential when adopting new methodologies, and they proposed five key factors that should be promoted through the role of leadership to obtain effective CLIL programmes. They refer to the following aspects (p.14): “teacher training; collaborative culture; structure, continuity, and sustainability; methodologies and resources; and coordination and involvement”. Taking these factors into account could favour the success in bilingual programmes.

Regarding the PEBD under analysis, a coordinator that deals with some of the issues mentioned previously already exists. This leader is well-known by all the bilingual students and acts as their first contact when they enrol in the plan and if any issue is found during the degree. A deeper analysis could be done in cooperation with the present coordinator of the bilingual degree in order to see if the aforementioned factors could be implemented successfully or whether other improvements need to be done.

4. Provision of teacher training courses to EMI/CLIL lecturers: most of the EMI teachers in Higher Education contexts are specialised in their own field of instruction, and few have a linguistic and educational profile. As corroborated in some studies (Aguilar, 2017; Arnó & Mancho, 2015; Dearden & Macaro, 2016; Jensen & Thøgersen, 2011; Jiang et al., 2019), most EMI teachers feel insecure and not ready to teach through a foreign language. They do have the abilities to transmit content, but this is challenging if the class is done through the English language. For this reason, **universities should provide *teaching training courses on how to***

teach their subject in a foreign language. This should be compulsory to all EMI teachers. These courses could be presented yearly, and offer a range of levels and topics, from the Initial EMI courses to Advance EMI/CLIL courses. **Two different kinds of courses should be distinguished: linguistic and pedagogical courses.** The former one could deal with specific linguistic skills for EMI/CLIL classes, in which different strategies are given to favour communication skills (Freeman et al., 2015; Klaassen, 2008). The latter kind of courses could present the pedagogical strategies necessary to conduct an EMI class (Costa & Coleman, 2013; Dafouz, 2018; Drljača Margić & Vodopija-Krstanović, 2018; Escobar & Sánchez, 2017; Guarda & Helm, 2017; Macaro et al. 2019; Ole Hellekjaer, 2010; Pavón & Gaustad, 2013). It is important these courses help with classroom discourse strategies, class management tips, types of groupings in class, etc. Incorporating these EMI/CLIL courses would improve the pedagogical strategies of EMI teachers and would improve their self-confidence, as well as give them the techniques to be really effective in class (Doiz et al., 2019).

As analysed in the context where the study was carried out, the institution offers pedagogical and linguistic courses every academic year. However, they are not specific for bilingual programmes, but general language courses lecturers can enrol. A more specialised offer is what is proposed in this statement. At the University of Lleida, a new plan, called English Linguistic Competences for Teaching (called Pla CLAD in Catalan), is about to be published. It is going to offer the possibility to improve lecturers' teaching according to the EMI methodology. This new plan will be divided in two parts, one related to English language training, concretely related to the EMI approach, and the other one to the accreditation for teaching in a foreign language. Given the imminence of this new plan, this phase of the decalogue would be partially accomplished.

5. Offer of a language level certification for EMI/CLIL lecturers: Nowadays, a common agreement on the language proficiency level the lecturers should have to teach an EMI class does not exist. The six EMI lecturers participating in the present study had different language levels (ranging from B2 to C1, and one had no certification), which can lead to internal differences in class discourse and language skills improvement. For this reason, **one of the actions that should be carried out when organising an EMI programme is establishing a common framework that contemplates the language proficiency level required from EMI lecturers** (Macaro et al., 2019). There should be a more global (or local) system that could ensure a minimal homogeneity and quality of EMI programmes. This topic is also important for students themselves, who appear to be sensitive and demand EMI teachers have a certain proficiency level (Escobar & Sánchez, 2017; Tatzl, 2011). Thus, a decision must be taken on which L2 language level would be considered adequate to deliver successfully an EMI class. Like the University of Copenhagen, which has created TOEPAS (Test of Oral English Proficiency for Academic Staff), the University of Lleida could establish an internal test through which lecturers could know if their language level is enough to teach in EMI courses, and at the same time, to detect their linguistic weaknesses. It is true that this action may lead to a decrease in the number of EMI lecturers available at university, but extra linguistic support could be given to mitigate this inconvenience by offering teachers the possibility of enrolling to linguistic courses.

Concerning the need of incorporating a common language certificate for EMI/CLIL lecturers, some Catalan universities offer the CLUC-EMI certificate, which certifies the capability of lecturers to teach through a foreign language. This is an optional certificate that lecturers can take, but there is no obligation to have it. As mentioned before in point 1, the University of Lleida is going to offer the possibility to lecturers to enrol into this English language certification.

6. Minimum language proficiency level requirement from a student: Not only is the teachers' proficiency level necessary for the success of EMI/CLIL programmes, but also the students' level should be taken into account. Students with a low level of L2 may encounter difficulties and linguistic barriers in assimilating complex academic content through a language that is not their mother tongue, as depending on the level they have, they may have not mastered it enough when starting to participate in HE EMI programmes (Arnó & Mancho, 2015; Wan Cho, 2012). According to Doiz et al. (2012), having a lack of CALP in a foreign language can represent an obstacle for some EMI faculties and for the students' motivation itself. In their study, they described that some Norwegian upper-secondary students did have a good command of BICS, but not of CALP. They proposed screening students' level of English as a possible solution to detect the linguistic problems students may have. Thus, having an appropriate level of the L2 would facilitate the acquisition of content learning outcomes, and it would ease linguistic and content issues that can appear within bilingual classes. **One way of facing this situation would be to establish an initial L2 benchmark of linguistic competence for those students willing to participate in bilingual programmes offered by universities** (Dimova, 2020; Doiz et al., 2019; Pavón & Gaustad, 2013). However, introducing an L2 proficiency level test may restrict the number of students who can enrol in these kinds of programmes, which would not favour at all the university objective to internationalise its boundaries. Rose et al. (2019) investigated the effect the students' English proficiency could have on their success in EMI, and they found that high proficiency level students had an advantage over low proficiency students, but all of them were able to pass the course. The authors proposed that the best solution would be to offer language support while undertaking their studies rather than limiting the access to the course. They suggested a kind of help that could prepare them for the "vocabulary, language, and academic needs associated with the subject area" (p.12). **Thus, the possibility of offering external linguistic support for students that could help them face EMI-CLIL classes would add value to the programme (Dimova, 2020).**

At the University of Lleida (UdL), there is no requirement as to which L2 proficiency level students should have when they start their degree. However, there is a requisite, published in July 2021, (University of Lleida, 2021) that says that students must certify a B2 at the end of their undergraduate studies if they had started them during the academic year 2018-2019 or then on. Before this last regulation, the mandatory rule had the same requisite of certifying a B2 at the end of their studies, but a moratorium was established in which the B1 level was also accepted. Now, this has changed, and the students must provide a B2 language level certification when they finish. If we consider these premises for the degree context of the present study, the situation is positive for them, as the B1 level would be considered too low to certify at the end of their degree, considering that the students would be involved in EMI/CLIL classes over four years. In the case of these same students, the B2 level would be even considered low when they finish their studies. **Thus, on the one hand, the Primary Education Bilingual Degree at the University of Lleida, to which this protocol is addressed, should establish an initial L2 language proficiency level from students of a B1-B2 as the minimum requirement to enrol in EMI courses, and should also detect and analyse the linguistic weaknesses and strengths of the students participating in these courses.** At the end of their studies, students should be able to certify a C1 for these groups, as their final L2 proficiency level. **On the other hand, the university should also offer L2 language courses to support the low-level students registered with their L2 proficiency language level.** These kinds of courses should work on the linguistic necessities that these students could encounter once in an EMI programme.

7. Offer of language support to students or/and include co-teaching: As described in previous sections of this decalogue, offering language support to students is considered essential when dealing with bilingual programmes. Their lack of language command and the fear and anxiety of interacting in class are some of the main reasons for students' weaknesses and fears when attending bilingual programmes (Al-Mashikhi et al., 2014; Kim et al., 2014; Phuong & Nguyen,

2019; Tatzl, 2011). However, these drawbacks should be approached and solved from different perspectives. **The first proposal would be offering an ESP language course to the students participating in the bilingual programmes, offered by the University of Lleida. This course could be added as a compulsory subject itself within the same bilingual programme degree curriculum, and it could be taken during the first Year of the degree. It could deal with the basic linguistic content to face the language skills that can be encountered in EMI classes.** For example, academic language can be taught (CALP), a general glossary of the subjects in the degree can be produced, or common written discourses used in productions can be considered (Rose et al., 2019). The language teacher in charge could deal with a series of strategies that could help the students face EMI classes.

The second reinforcement that could be implemented in HE the context where bilingual programmes are being established refers to co-teaching, or in specific cases, offering an adjunct teaching course. The adjunct course would imply the simultaneous teaching of the EMI content course together with a language course that would support the content topics addressed and provide the necessary linguistic knowledge and skills to follow the content instruction successfully. This would imply that both the content and language teachers meet and work collaboratively throughout the content courses. As previously mentioned, this kind of coordination is essential for the success of EMI programmes (Doiz et al., 2019; Pavón & Gaustad, 2013). In line with Roquet et al. (2020), the presence of Adjunct Instruction benefited the group of students analysed in their study, promoting the increase of these kinds of courses in that they could develop their specific vocabulary and grammar needs. **Another interesting proposal could be the creation of “learning communities” among EMI or CLIL teachers.** Coyle (2008) already stated that “CLIL learning communities” could be a way of promoting the diverse models of implementation and that they could favour the integration of both content and language. In line with this, Soler et al. (2014) stated that offering organisational learning among lecturer communities would increase cooperation, participation, motivation, the promotion of language

and content teaching. This proposal can be adopted in the organisation of bilingual programmes, scheduling a monthly or term meeting, where all the EMI-CLIL lecturers could meet to deal with academic and linguistic issues.

8. Recognition to EMI/CLIL lecturers in terms of credits or extra remuneration: It is commonly assumed that it is a challenge for a content lecturer to teach through a foreign language. These lecturers spend much (more) time preparing their classes and designing their material and resources, so their workload increases, as does the students' one (Tatzl, 2011). As Lasagabaster (2017) affirmed, some of the reasons for the unwillingness to shift from EMI to CLIL is the lack of recognition the teachers receive, and also the amount of time they spend adapting the materials compared to the L1 content teachers. For this reason, **the proposal is to recognise this extra effort to EMI lecturers by offering a reduction of their teaching load or a monetary compensation, which would make up for the extra work on their EMI sessions.** More funding should be given if the objective of the university is to promote and stimulate bilingual programmes. This would favour the internationalisation of HE content and its programmes. (Dafouz et al., 2007; Dafouz & Smit, 2020; Doiz et al., 2019; Lasagabaster, 2017; Schmidt-Unterberger, 2018). This may sound presumptuous considering the financial limitations universities are facing nowadays, but different options can be found to overcome this obstacle, such as looking for funding from innovative research (Doiz et al., 2019).

9. Provision of a range of materials and resources: Implementing an EMI/CLIL class in HE contexts is challenging due to many factors, but one of them is because of the content materials and different resources that should be offered in this type of classes (Doiz et al., 2019). On the one hand, **lecturers need to search for L2 appropriate materials related to their teaching objective and learning outcomes**, such as articles or books, videos, web quests, maps, presentations, tasks, etc. Preparing this range of material in a foreign language is a time-

consuming task, more so if it contemplates authenticity and the significance of the context for students. According to Morgado et al. (2015), they made a list of specific characteristics to consider when designing or selecting appropriate CLIL materials. They agreed that materials should be meaningful, challenging, and authentic, considering a multi-modal input, taking into account different learning styles and multiple intelligences and promoting visual literacy. Moreover, the material prepared for EMI or CLIL classes should consider scaffolding, so it should be properly adapted depending on the content, language and learning skills to be worked on (Morgado et al., 2015).

On the other hand, **resources are also an important aspect when planning for an EMI/CLIL session**. A proper analysis of the context is essential to identify the available resources that can be used in the bilingual programmes. For instance, **it is highly important to know which linguistic resources exist in the context**, such as identifying available and certified teachers, coordination among them, L2 courses both for teachers and students, possible international agreements to do exchanges, agreements with other faculties, companies, or associations, etc., as it has been described in the previous point in the decalogue. However, **a deep analysis should be done to consider digital and online resources**. Lecturers would need access to diverse online resources that could facilitate EMI/CLIL classes. Having access to digital materials is essential in these bilingual classes, as teachers need to offer real-life contexts, search for authentic materials, and guide students in the use of ICT (Morgado et al., 2015; Pavón & Gaustad, 2013). As Oliver (2002) and Hernandez-Nanclares and Jiménez-Muñoz (2016) stated, the use of ICT in EMI classes favours the students' chances of achievement thanks to the students' personal learning environment that is created and the use of the virtual learning environment offered. Implementing EMI or CLIL in Higher Education contexts implies having and using a range of materials and resources of all kinds in order to help students achieve the learning objectives. Doing a deep analysis of the context and the resources offered by the university is essential when designing a bilingual programme. If policy makers at university insist on adding these kinds

of programmes, a range of resources should be offered if the programmes presented are to succeed (Arnó & Mancho, 2015; Dearden & Macaro, 2016).

10. Benefiting from the possibility of international exchanges as a way of raising linguistic, academic and cultural competences: Being one of the main objectives of most of the worldwide university communities to favour the internationalisation of its boundaries, the promotion of international exchanges, both for students and teachers, should be a requisite in tertiary bilingual programmes. Adding bilingual programmes like EMI or CLIL in the degree offer of faculties' is one way of learning the foreign language and of promoting the internationalisation of the university, but it is not the only aspect that could be done. **Another option is to promote the study of a degree or part of it at a different university other than their own, such as exchanges abroad. These exchanges could be done for a whole year, or just a term.** This is a common practice in Spain and in Europe, where economic grants are given by the Spanish and Catalan government to support this kind of European and international exchanges, and where lots of students have the possibility to study abroad for a period of time. **For the lecturers themselves, promoting exchanges abroad would be a positive factor that could be considered, and that could promote their language learning, pedagogical exchanges with other colleagues and raise the level of cultural awareness as well. For them, and according to Pavón and Gaustad (2013), this kind of programmes abroad could work as incentive strategies.** For instance, the European Higher Education Area (EHEA), as well as the Spanish Educational Service for Internationalisation (SEPIE in Spanish), favour exchanges around Europe among students and teachers by offering these kinds of exchange programmes. Among the benefits of these exchanges, there is the fact that that they promote students' L2 learning (as in most of the cases the vehicular language is English); favour the possibility of learning in a different context and educational setting, which opens doors to future job opportunities; foster students' cultural and

plurilingual competence, which are learnt by living in a context different from one's own and where different communication situations are found.

In the case of the University of Lleida, the Operational Plan for Internationalisation was operational during the period 2012-2016, (University of Lleida, 2012) and intended to internationalise the teaching offer, raise the mobility of students and teachers and attract foreign language students. With these objectives in mind, the university wanted to improve its degree plans; foster relationships with different universities; offer the possibility to students to do their working experience abroad; and favour teachers' and other staff's mobility, among other actions. All these actions have been accomplished during these last few years, and they could have favoured the rise of multicultural competences and promoted the learning of the L2 students and lecturers. For the Primary Education Bilingual Degree (PEBD) under analysis, the proposal would be the one mentioned, but as documented, students already have the possibility to do one semester or full year abroad and do the internship in another country. Concurrently, the same possibilities are offered to the lecturers as a way of stimulating their motivation towards bilingual programmes, which would allow them to develop their language proficiency at the same time they could exchange pedagogical strategies for bilingual classes or do study research abroad.

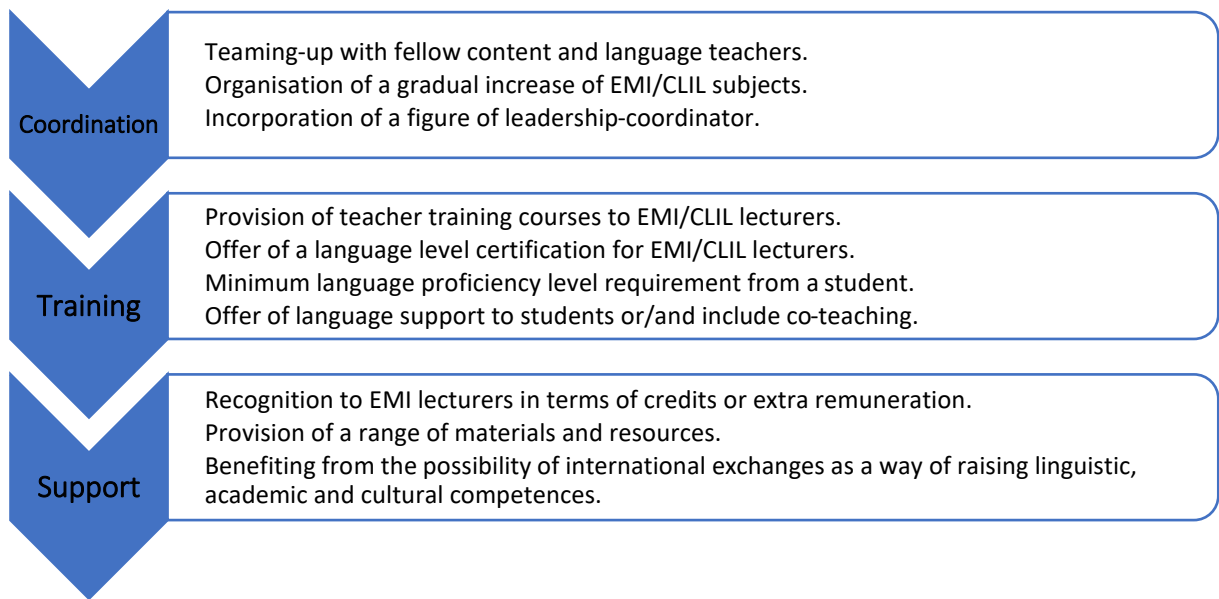
Fostering the possibility of travelling abroad, learning from other contexts, colleagues and students, and gaining cultural awareness skills and competences are valuable incentive programmes that should be considered in any university bilingual programme.

In summary, the decalogue has included ten organisational proposals that would favour the implementation of a more CLIL-ised methodology in the Primary Education Bilingual Degree under analysis, and which at the same time, could be used for other future bilingual programmes in the same faculty or others. The proposals presented can be grouped into three different big fields, which are: coordination, training, and support. As a way of summarising

this section, the proposals in the decalogues are presented in a more summarised version in figure 20 below.

Figure 20

Organisational proposals summary



CHAPTER 6

CONCLUSIONS

In this final chapter, the main outcomes and contributions of the present study are highlighted. The chapter is divided into three sections. Firstly, the main findings of the study are summarised. Secondly, the limitations of the study are explained, along with the directions for further investigation on the topic. Finally, the pedagogical implications of the study are described with regard to the second language teaching and learning methodologies in higher educational contexts.

6.1. Originality of the study and summary of the main findings

This research seeks to address one of the main current areas of interest in the tertiary level regarding the boosting of second language teaching and learning among students, more specifically the impact bilingual programmes have on students' language and content learning. More to the point, the present study refers to programmes that include the EMI methodology in higher educational contexts.

The main purpose of the present research was to analyse the content teaching and language learning methodology of a bilingual degree within the tertiary field. More concretely, the investigation had three main objectives which were to examine the English language communicative competence of a group of students attending EMI classes, to analyse the types of teaching methods used in a bilingual degree, and to present improvement protocols for a more CLIL-ised methodology' implementation in the tertiary context where the study was conducted. Little research has focused on the impact of both, the English language acquisition of the students participating in EMI subjects and the teaching methods used in the classes of the bilingual degree they were attending. Moreover, the teachers' and students' questionnaires used in the present study added further information to the research. Thus, the study was

motivated by the need to increase the research on second language teaching and the learning methodologies field.

The present study corresponds to a quantitative and longitudinal design. It focused on the diagnosis of the Primary Educational Bilingual Degree at the University of Lleida, where four EMI subjects were analysed. The participants of the study were a group of 35 students enrolled in their first-year degree. The data collection was done during the 2015-2016 academic year, and the study had a pre- and post- test design, where different language tests were administered. Concurrently, in order to collect information about the teaching methods used, eight EMI classes were recorded, where the same group of students participated. The sessions recorded were analysed using six different surveys, and they focused on essential elements that define the teaching processes. All the data gathered in the study were analysed statistically. On the one hand, the CHILDES programme was used to transcribe and analyse the written and oral data from the language tests, and the SPSS programme was employed to carry out the statistical analyses. On the other hand, the EMI class diagnosis surveys and the students' and teachers' questionnaires were coded following a numerical order, and the same statistical analyses programme was utilised.

The findings obtained from the present investigation can be distributed into three main categories: 1) the impact that the implementation of the EMI methodology had in the English language communicative competence development of the students, 2) the types of teaching methods used in the EMI subjects of the Primary Education Bilingual Degree, and 3) the presentation of two decalogues for the implementation of a more CLIL-ised methodology.

To start with and according to previous research (Aguilar & Muñoz, 2014; Ament & Pérez-Vidal, 2015; Omar & James, 2014; Roquet et al., 2019;), **the first hypothesis predicted that the students' English language communicative competence would improve as a result of participating in a bilingual programme after an academic year. Empirical evidence was obtained to ensure that the participation in an EMI programme favoured the English language**

learning of the students. The results showed that from the 17 measures used to analyse the language tests administered, 12 had improved from the pre- to the post-test although only for 7 out of these 17 the improvement was significant. There were 5 measures that improved, but not significantly. No improvement was found in the remaining 5 measures, which show negative results. **All in all, the impact the EMI approach had on the students can be considered positive overall. The first hypothesis was partly confirmed given that the students improved on most of the measures examined, even though this improvement was not significant across measures and skills.**

In a more particular way, the students obtained significant gains in written EFTU/TU, ERR/TU, morphology errors, in Guiraud, and in oral morphology and syntactic errors and in the general proficiency test scores (OPT). As explained in Chapter 4, these positive results may be due to different factors such as the presence of writing tasks in nearly all classes, the active participation of the students in class and the input given by the lecturers. These measures may have been more sensitive to capture gains.

The language results also showed that some other measures analysed improved from the pre- to the post-test, even though not significantly. These measures correspond to the oral measures of ERR/TU and EFTU/TU, the written measures for spelling and syntactic errors and the oral comprehension test. These findings can be attributed to the few instances of L2 use in class and the low interaction with peers and teachers, the type of listening tests administered, and the lack of vocabulary tasks done.

Finally, there were four measures that did not show any improvement from the pre- to the post- test. Regarding the syntactic complexity measures, both for the written and oral CL/TU, the results failed to show an improvement in the post- test. One of the reasons can be that the L2 instruction used did not favour the improvement of the syntactic complexity measures. Possibly, another pedagogical methodology in class would have fostered them. **The other two measures that did not show gains in the post-test correspond to the oral and written lexical**

complexity measures. Some of the reasons could be due to the fact that no vocabulary tasks were done, and that the teachers' usage of the L1 when solving, clarifying or exemplifying did not help improve these measures.

As a way of concluding, it can be asserted that the EMI programme had a quite positive impact on the students' English language communicative competence overall, and that the different teaching methods used in the EMI class, together with the students' input and background, contributed to support this linguistic positive effect. However, considering the weak measures obtained, improvements should be offered to teachers in order to foster these other language skills, such as by providing more oral production tasks, using the L2 all the time when exemplifying, clarifying, solving doubts, increasing the vocabulary and the oral comprehension tasks in class. Apart from these improvements that need to be done to the methodology in class, more teacher training courses, both pedagogical and linguistic, should be offered to provide more resources to lecturers. Language support for students should also be present in bilingual programmes. All the aforementioned recommendations could be key to maximise the benefits of bilingual programmes.

The second hypothesis of the present investigation speculated that different types of teaching methods be used in the Primary Education Bilingual Degree at the University of Lleida, and it foresaw that more teacher training courses would be needed in order to establish a systematic approach that could foster the benefits of the EMI methodology. Conclusive remarks to confirm this second hypothesis are presented from two perspectives: the teachers' and students' profile, and the description of the methods used in the EMI classes. From them, several final considerations have been obtained, which will support the research on bilingual programmes in the tertiary level, second language teaching and learning methodologies too. On the one hand, the creation of a teachers' and students' profile has offered the possibility to learn about the type of teachers and students involved in the bilingual programme at the University of Lleida, the methodologies used by lecturers, their teaching expertise and the

students' and teachers' background in terms of language learning. **These two profiles have helped us determine future implications and changes for bilingual programmes in the context where the study was carried out, which is the University of Lleida.**

Regarding the teachers' profile, an integral plan to support the teachers' proficiency language level in English and their pedagogical knowledge is needed for all the lecturers involved in bilingual programmes. Some guidelines of this integral plan could contemplate the creation of a common and homogeneous English language proficiency level certification for lecturers, which could guarantee their competences and skills when facing teaching an EMI class, as well as linguistic support throughout the academic year. Moreover, more training courses should be offered to favour the pedagogical implications in these programmes. Apart from this, structured organisation and coordination between content and language teachers is also considered key to be part of the plan. EMI lecturers are facing a huge challenge when implementing content through a foreign language, and they need all the support given by the institutions to carry out these programmes successfully.

The students' profile obtained from the research done is one that contemplates a group of students moved by their wish to learn the English language, improve their skills and competences and that can foresee the importance and future opportunities this bilingual plan can give them. The students' profile needs to specify two aspects: the required English language proficiency level of students wanting to enrol in this programme and the linguistic support given within these programmes. The proposals given refer to establishing a minimum language certificate level to students interested in enrolling in bilingual programmes or the possibility of offering a specific language course (ESP) or subject to students that would support the language necessary for content classes. Decisions need to be made concerning these two aspects in order to give strategies to students to handle linguistic issues in bilingual programmes better.

On the other hand, **the EMI sessions observed enabled to identify different teaching methods and propose some pedagogical and organisational guidelines that would improve the bilingual**

programme under analysis. Eight EMI sessions were analysed through the usage of six surveys and different pedagogical remarks and improvements derived from these results.

Regarding the teachers participating in the study, it should be remarked that the code-switching technique was considered useful in bilingual programmes as well as the usage of accommodation and modified strategies for fostering communication and participation in class. The lecturers participating in the present study were characterised by using the L2 most of the time in class and promoting the usage of different language skills tasks. However, more attention should be given to working on the vocabulary related to the class content. In the sessions recorded, no vocabulary tasks were observed, and this could have been in detriment of language improvement.

Regarding the students' observations, the results suggest that the students were highly motivated towards the bilingual programme. They were active in class, participated and interacted. This motivation may have contributed to their positive results in language learning. However, their participation was not always done through the foreign language. This is one of the weak aspects of the observations done. Several improvements could be applied from these results obtained so as to foster students' L2 participation in class. Among the strategies, more language support can be given to students through working on vocabulary tasks or as additional language courses.

It was key to analyse the types of tasks done in the EMI sessions observed, as they provided plenty of information on how the content and language of the subjects were pedagogically approached. Some decisive improvements should be considered in this section. One of them is that teachers should support the content given through the appropriate language structures and the necessary vocabulary. Together with this strategy, more focus should be given to the type of tasks done in EMI classes, and the cognitive processes associated with them. Lecturers should take into account that the tasks should be gradually adjusted from lower to higher order thinking processes to favour content and language acquisition. Another fundamental strategy to favour

content acquisition through a foreign language is by using scaffolding strategies. Finally, the feedback given by the teachers was also outlined in the results obtained, as there was a lack of language feedback, and it should be more present in EMI sessions. Teaching in bilingual programmes implies that both content and language need to be supported. All in all, the analysis of the tasks done in the EMI programme show that more pedagogical strategies should be shared among the lecturers involved in bilingual programmes.

When analysing the materials used in the EMI sessions observed, it was positive to see that most of the materials shared were in the L2, and that the usage of Internet resources was positive. As an improvement, a glossary could be added to each EMI subject to foster the use of the vocabulary of the subject among students.

Considering the analysis done of the class development, it must be remarked that the EMI classes were basically student-centred, where the students mostly practised and communicated with the teacher and their classmates during the sessions. However, it was observed that the students' and teachers' communication was mostly in the L1, and this is an improvement to be done. More strategies should be offered to teachers to handle the interactions in class so as to promote the usage of the L2 among students. Finally, another relevant characteristic of the observations done to the EMI classes was the positive usage of ICT resources.

Finally, **the analysis done to the syllabuses of the subjects has been useful to determine some improvements and considerations for EMI programmes**. The first one is that syllabuses should be offered in different languages and specific language requirements to enrol in them should be added. Another aspect to consider is the incorporation of content and language objectives and a dual-focused assessment of them. A range of different assessment instruments and strategies needs to be used in these programmes, which could facilitate both the learning of content and language. Lecturers should be aware of the pedagogical techniques and strategies to be used in bilingual programmes to favour students' learning.

All in all, the types of methodologies used in the EMI programme analysed has added further information on how bilingual programmes are approached and on which improvements need to be made to provide a more systematic approach in these contexts.

The third hypothesis of the investigation speculated that some guidelines should be established to tackle the improvements encountered in the EMI programme analysed to provide a more CLIL-ised methodology for the bilingual programmes offered at the University of Lleida. This goal was achieved by creating two decalogues with proposals stemming from the analysis done, and which were organised in two fields: a pedagogical and an organisational decalogue. On the one hand, **the main objective of the pedagogical decalogue was to provide a common protocol for lecturers that could help them have successful strategies and techniques to favour the content and language learning of the students in their classes. It includes a list of ten strategies that have been considered key for promoting a more CLIL-ised approach in the classes of the Primary Education Bilingual Degree at the University of Lleida.** They refer to techniques that favour the organisation of the subject outcomes and their assessment, the strategies to plan the tasks that could trigger communication, participation and active learning, and finally, some guidelines centred on promoting authentic resources and on creating a safe and enriching atmosphere in class.

On the other hand, **the objective of the organisational decalogue was to offer guidelines to the coordinators and managers of the faculties that could support the creation of an appropriate context where the CLIL methodology can be developed and supported by different agents.** **This decalogue considers ten different proposals that are intended to** favour the coordination among content and language teachers, the good organisation of the subjects, the availability of continuous training for lecturers, both linguistic and pedagogical, the importance of co-teaching and student language support, and some other guidelines that focus on the materials and resources that should be given to lecturers and students.

Having summarised the main results of the investigation and given future improvement proposals, the limitations of the study and directions for further research are described in the following section.

6.2. Limitations of the study and directions for future research

First, one of the limitations of the present investigation is related to the amount of data gathered from the EMI sessions observed that helped determine the types of teaching methods used in the bilingual plan under analysis. Although the EMI lecturers involved in the bilingual programme were open to participate in this research and gave permission to have their sessions recorded, time constraints only allowed the recording of two sessions for each EMI subject. More specific information would have been captured if more sessions had been observed. Thus, a deeper and more complete analysis of the EMI subject sessions may have added more pedagogical strategies and techniques and given further evidence to support teachers on how to improve their second language teaching methodology in bilingual programmes.

Secondly, this limitation is very much related to the one previously explained, as it deals with the type of surveys designed for the analysis of the teaching methods used in the EMI sessions. The design of the six surveys and the items selected for each of them were based on different CLIL and EMI theoretical literature and resources, and they were chosen for their relevance and validity for a diagnosis of an EMI plan. However, because these surveys were not following any common or established educational framework, it is possible that some aspects were not included in them, and that some pedagogical features involved in the teaching and learning were left out. In this regard, more research needs to explore if other educational characteristics should be included in the analysis of a bilingual plan.

Furthermore, some of the questions created for the two of the surveys were removed and not considered in the analysis of the data gathered. Regarding the questions removed, this happened in the class and syllabus surveys. The questions that were eliminated from the class

survey were the ones corresponding to the kind of tasks recorded. It was difficult to observe if the lecturers recorded information on the students' tasks in class. There was just one camera, and it could not capture all the information, and no questions related to these notes were asked to the teachers. From the survey about the syllabuses, two questions were eliminated, which corresponded to the L2 materials and resources in each subject syllabus. They were removed because the same information was taken in the survey about the materials.

Apart from removing some questions from the surveys created, some of the weak aspects that appeared during the general observation process must be considered and should be taken into account for further research. Considering general aspects when observing the sessions, one of the weak aspects is that there was just one camera in the observation process, and not all the dynamics going on in the class could be captured. For instance, it was difficult to observe if the lecturers were registering students' comments or if they were marking them, or if the students took the notes in English, Catalan or Spanish. The notes written on the blackboard were also difficult to capture depending on the camera's position. For further investigations, two cameras would be needed if observing the teaching methods used in class. Regarding the specific improvements to the different surveys, some of the questions that were used to analyse the EMI sessions should be revised if another diagnosis needs to be done. There are some questions that are too general, they miss some information, they cannot obtain enough information with just two recordings of the EMI sessions, or maybe they should be reformulated so as to capture all the information needed.

Thirdly, the type of measures used to capture the students' English linguistic gains over an academic year were chosen among the most common ones from second language acquisition research. However, in our view, the lack of progress in the listening comprehension measure may be due to the test designed for this investigation. As explained in Chapter 4 (section 4.1.4), the type of listening test administered included one cognitive demanding exercise, which may have caused the lack of improvement given the lapse of time between both tests or the difficulty

in the same exercise. Thus, in a future investigation, a more reasonable cognitively demanding exercise should be added to capture the students' oral skills.

Fourthly, given the time conditions involved in the development of this kind of research, the longitudinal study had to focus on adding the students' English linguistic data from just one academic year. However, the same post-tests were administered to most of the same participants during the second, third and fourth years of their degree. Further research needs to explore the data gathered, as it will enrich the bilingual plan degree, and offer a full diagnosis of its participants in terms of language learning and also, on the teaching methods used in an EMI programme.

Another limitation of the study when analysing the types of teaching methods in the EMI programme is that it does not provide any comparison to lecturers implementing the CLIL methodology or to a whole faculty organised to do it. This was not possible as there was not a parallel group or example in the same faculty in which the CLIL methodology was being used. The University of Lleida has bilingual programmes in different faculties, but none of them uses the CLIL methodology, except for the EMI one. It would have been interesting to compare the teaching methods of the EMI teachers to lecturers implementing CLIL, as well as the organisational aspects supporting its application. This would have added more precise information about the kinds of pedagogical improvements for lecturers and also tips for organisational aspects for the present research.

Finally, the last shortcoming is related to the number of participants in the study. For the present study, a group of 35 students participated in the study, which were the students enrolled in the PEBD at the University of Lleida during the 2015-2016 academic year. Even though it was a quite big class, it would be good that future research included a larger number of participants to have more robust results.

In conclusion, despite the limitations mentioned above, the present study has contributed to add further information to the second language teaching and learning methodologies in higher

educational contexts. The research lends support to previous research evidencing the effectiveness of second language learning in these programmes and the promotion of CLIL approaches in tertiary levels. Moreover, it is the first longitudinal study that provides a diagnosis of the Primary Education Bilingual Plan of the University of Lleida. The investigation is also relevant for analysing both the students' English language communicative development and the types of teaching methods used in some of the EMI subjects of the bilingual programme. Finally, the investigation suggests some pedagogical and organisational improvements that derived directly from the findings obtained, and that can be key to enhancing the bilingual programmes at the University of Lleida.

6.3. Pedagogical implications

The accomplishment of the present investigation enables the presentation of some final conclusions and provides different pedagogical implications to the Primary Educational Bilingual Degree of the University of Lleida. These conclusions can also be considered for other tertiary contexts where bilingual programmes are implemented, and surely, they may influence the research fields of second language teaching and learning, as well as bilingual education programmes in the tertiary field.

Firstly, one of the pedagogical implications refers to students' second language learning. It can be concluded that the EMI methodology used in the bilingual programme has had a positive impact on the students' learning of the English language, especially on their writing skills and their general proficiency language level. This conclusion supports the continuous implementation of the plan and justifies one of the main objectives of the internationalisation plan of the University of Lleida (University of Lleida, 2012), which was to foster the English language in its faculties with the implementation of bilingual programmes. However, more research should explore the language skills that appeared to be weak in the study done.

Secondly, the teaching methods used in the EMI subjects have proved to influence the students' language learning. The results from the different surveys used to analyse the EMI sessions have demonstrated that the pedagogical features of the EMI sessions favoured the students' learning. However, it was also remarked that some improvements need to be done regarding the types of tasks, the promotion of oral skills and the approach given to both content and language objectives, among others.

Thirdly, the relevance of the present study is that it presents two practical decalogues with pedagogical and organisational proposals based on the context where the research was carried out. The improvements are found in a real context and have been selected after the analysis of the results obtained. Both decalogues form an integral plan to improve the bilingual programme by adopting a more CLIL-ised methodology.

In conclusion, the fundamental pedagogical implication of the present research is that it provides evidence supporting the fact that the EMI methodology has a positive impact on the students' second language learning in tertiary fields. Moreover, it proposes that in order to get more benefits, a CLIL methodology integral plan needs to be established, considering both pedagogical and organisational features.

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ANNEXES

Annex 1: Consent form of the participants and ethical policy.

Annex 2: Language tests administered to the students.

Annex 3: Links to the six surveys used to analyse the teaching methods.

Annex 4: Links to the questionnaires for students and teachers.

Annex 5: Comments from the piloting process done to the surveys.

Annex 6: Comments from the experts that validated the surveys.

Annex 7: Recordings from the EMI sessions.

Annex 8: Transcription Symbols from CLAN CHAT Conventions, measures and formulas.

The information of each annex can be found in the following link, which contains a folder for each annex described.

<https://cutt.ly/9R9WFMB>