Alternation between L1 (Italian) and L2 (English) in Three CLIL and EMI Contexts (2nd Edition)

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By

Francesca Costa

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To Marco and Carlo

Nature is a language
The Smiths, 1986

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FOREWORD

The utilisation of the L1 in lessons that are being conducted in an L2 has always been a matter of discussion in the world of foreign language teaching and now, with the flourishing of bilingual education programmes, this debate has been extended to these settings. Whether in English-medium instruction (EMI) or in content and language integrated learning (CLIL and also ICLHE if specific for higher education), this controversy is open to debate. The dilemma is clear, using more the L1 facilitates the understanding of content but, on the contrary, it reduces the time of exposure to the L2, it debilitates the attention of students to the L2 and, hence, it may slow down the development of this additional language. Understanding this controversial relationship is a complex endeavour and there are not many studies that have been carried out to investigate the characteristics and results of the combination between the L1 and L2 in CLIL.

As things stand, it is logical that any effort to shed some more light has to be welcomed, especially, as it is the case, when the approach is rigorous and with some degree of innovation. As stated before, there is not much in scientific literature on the use of different languages in the bilingual classroom and, when existing, a lot has been researched about what the practitioners say but much less on what they really do during their lessons. Given this situation, there are several reasons to consider this book a useful contribution. Perhaps the most outstanding aspect in this study is that it combines the insight in the teachers' opinions with the analysis of what they really do during their lessons. Also, it covers three different levels of education (primary, secondary and university) and not only one. In addition, another main asset here is that this book has been written from the passion of an experienced teacher at different levels, a fact that transpires in all the work. I also find a sensible decision the use of *alternation* as an umbrella term due to the difficulty to draw a line between strategies like codeswitching, translanguaging, and other practices involving the use of the L1 and L2.

With regards to the contents, the study is divided in five sections: review of existing literature, context of the study, research methodology, data analysis (questionnaire and observation), and transcriptions. To start with, the author offers a detailed exploration of existing literature on the

combination of two languages in the classroom, especially interesting is the review of studies with respect to the difficulty of finding a dividing line between codeswitching and translanguaging. This section also offers a profound understanding of initiatives, practices and studies. As a continuation, the author outlines the main differences between CLIL (and ICLHE for the tertiary level of education) and EMI, an excellent idea as probably many of the different outputs in the alternation between L1 and L2 stem from the conceptualisation of these two approaches. As pointed out by the author, CLIL protects the mother tongue of the students, a very important fact for the consideration of the value and usefulness of the L1 as a pedagogical tool for the construction of meaning. In the next section, the book also offers a complete contextualisation of the study, starting with a broad, yet necessary, analysis of the current situation of languages in Italy, the characteristics of the programmes, and the existing regulations at the three different levels of education under scrutiny: primary, secondary (lower and upper) and university. The following section deals with the research methodology, describing the instruments (a questionnaire to gather teachers' opinions and observation of sample lessons), and it provides with the necessary information regarding the context, participants, instruments, data gathering procedure, presentation of results, and ethical issues and limitations. I find really appropriate the combination of a quantitative and qualitative research approach as a way to provide a more complete vision of the area investigated.

With respect to the findings, I think that many interesting aspects have been unveiled. For example, in terms of the opinions of teachers, they show a general acceptance of the use of the L1 in their lessons although they are not very much aware of the different kind of alternations they are bringing in. Obviously, the competence of the students is one of the most significant factors for the utilisation of alternations. With regard to the different types of alternation, results show that, irrespective of the level, teachers do not differ much in the use of this strategy, with the explanation of specific lexis as one of the most frequent type of alternation. The results allow the author to pinpoint several interesting pedagogical implications. The first one is the recognition of the relevance of lexis for the construction of meaning in the bilingual classroom. In fact, in combination with an appropriate use of language functions and communication strategies, subject-specific vocabulary is positioned as one of the cornerstones to build an adequate integration of content and language. Secondly, the clear similarities found in the pedagogical behaviour of teachers at the three different levels, even though they are not normally aware of the characteristics of the alternation. This fact actually constitute a verification of the necessity to gain more

knowledge of the L1 strategies and techniques as well of their purpose in order to delineate a more fruitful and effective use the alternation. In the third place, the opportunity that alternation practices brings in with respect to the preservation of languages also constitutes a relevant pedagogical aspect due to its implications.

This book is far from walking solely on the path of the presentation of scientific data and, accordingly to its nature as an educational text, it also exhibits a necessary applied nature. The author has been able to present a solid account of the opinions of teachers and of the strategies regarding the use of the L1 in three different bilingual education settings, but at the same time she has managed to exemplify the pedagogical precepts behind these practices. It is a work of undoubted value that will put knowledge in the hands of researchers, but also will allow teachers to understand and, presumably, work properly on the complex combination of the L1 and L2 in CLIL.

Víctor Pavón Vázquez
Full Professor of English Language
University of Córdoba (Spain)

INTRODUCTION

My first teaching job was as an English teacher in 1997 in my home country, Italy. Like many new teachers stepping into the classroom for the first time, I did not truly understand the intricacies of the profession. Among the more peculiar things I found myself doing as a novice teacher was occasionally recurring to my L1 (first language, Italian) while teaching the L2 (second language, English). This practice was not because I could not express myself in English nor due to my students' proficiency. Instead, it was something I did almost unconsciously, without deliberate intention or forethought.

During this early period, I felt a guilty sense of shame about this habit. Oftentimes, it felt like there was a metaphysical angel and devil on either shoulder compounding my internal struggle. The angel urged me persistently to desist using the L1, insisting that immersion in the L2 was the path to effective language learning. Meanwhile, the devil planted seeds of doubt, questioning why I was so determined to abandon a tool that seemed to facilitate comprehension and engagement in my lessons. This internal debate marked the beginning of my curiosity about the role of the L1 and the L2 in language teaching. Over time, this conundrum sparked a curiosity which developed into a research interest.

The transition to teaching at the university level prompted a deeper exploration of the topic. The research reviewed indicated a gradual yet significant change in attitudes toward the use of alternation between L1 and L2 in language education. Historically, the dominant view had been that L1 use in the classroom was a crutch that hindered students' progress in learning the L2. However, more recent perspectives began to challenge this notion, recognising the potential value of strategic L1 use as a resource for enhancing understanding.

As for specific Medium of Instruction contexts, such as Content and Language Integrated Learning (CLIL) and English-medium instruction (EMI)[1], the available research on the alternation between the L1 and the L2 in these settings was relatively limited. Even more striking was the paucity

[1] A discussion on the ontological differences between Content and Language Integrated Learning (CLIL), Integrating Content and Language in Higher Education (ICLHE) or English-medium instruction (EMI) is carried out in Chapter 2.

of studies that compared different educational contexts, such as primary, secondary, and tertiary levels. This gap in the research further highlighted the relevance of L1–L2 alternation in medium of instruction settings for both meaning-making and understanding the content of taught disciplines.

While the topic had not been extensively studied, there were some notable and comprehensive contributions. For example, a special issue of the International Journal of Bilingual Education and Bilingualism in 2019 (volume 22, issue 1) focused on content-based teaching, codeswitching and the use of the L1 in such contexts. Similarly, in 2021, another significant volume titled English-Medium Instruction and Translanguaging[2] was published. These works provided valuable insights, but they also underscored the need for further research that systematically examines forms of alternation between the L1 and the L2 across educational levels. Although research on this phenomenon remains limited, it is undoubtedly expanding, as evidenced by a bibliometric analysis conducted in a 2024 study by Zhu and Wang. This study reveals a growing trend within EMI studies toward a translanguaging turn: "Translanguaging theory has broader development prospects indicating the trend of translanguaging turn in multilingualism in EMI research" (2024, 16), within which the use of L1 and L2 in these contexts is encompassed.

These considerations led to the development of a study aimed at addressing this research gap. This book focuses on three distinct educational contexts: primary, secondary, and tertiary education, precisely because this area of research remains largely unexplored. Teaching experience across all three levels revealed connections and overlaps between them. These meeting points appear to hold significant implications for understanding how L1 and L2 alternation functions across different stages of education. To date, no studies have examined CLIL and EMI from a vertical perspective spanning primary, secondary, and tertiary education in Italy.

The methodological framework for this study was informed by the insightful observations of Gierlinger who said that "the majority of these studies base teachers' beliefs on code switching on qualitative interviews or questionnaires without any reference to classroom data, and therefore may run the risk of presenting a perspective whose results do not adequately portray the complexity of the classroom code-switching context" (2015, 351). With this in mind, the research adopts a qualitative paradigm complemented by quantitative elements, incorporating both CLIL and EMI teacher questionnaires as well as classroom data, including audio recordings

[2] Paulsrud, B.A., Tian, Z., and Toth, J. (eds.). 2021. English-Medium Instruction and Translanguaging. Bristol: Multilingual Matters. See chapter 1 of this volume for a distinction between codeswitching and translanguaging.

and transcriptions. The focus of the study was on teachers' alternation between the L1 (Italian) and the L2 (English), which was examined through their stated beliefs in the teacher questionnaires, observed practices in classroom discourse data, and the counting of the occurrences of such alternation.

This book is organised into five main sections, each of which serves a distinct purpose in advancing the central argument. The first section presents a concise overview of the existing literature on L1 and L2 alternation in educational settings, providing the theoretical foundation for the study. The second section focuses on the context of the research, offering a description of CLIL and EMI in the three educational levels examined. The third section outlines the methodological approach, describing the tools and procedures used to collect and analyse data. The fourth section presents the findings, drawing on both questionnaire responses and transcription analysis to trace key trends and patterns. Finally, the fifth section discusses the implications of these findings. Sample transcriptions to illustrate the practical applications of the research are also included.

This book aims to contribute to a growing body of knowledge on the interplay between L1 and L2 in CLIL and EMI contexts. By focusing on three educational levels (primary, secondary and tertiary) and adopting a specific methodological approach, this study aims to provide insights for educators, researchers, and policymakers involved in L2-medium instruction and multilingual education.

CHAPTER 1

THE ALTERNATION BETWEEN THE L1 AND THE L2

1.1. History and terminology

The alternation between the L1 and the L2 in educational contexts is a very topical issue that has been gaining ground. Poza (2016, 15) underlines "the importance of teaching practices that allow for these translanguaging interactions by fomenting spaces of collaboration in which language boundaries are not policed and in which students are encouraged to rely on their full bilingual repertoires". It is also one of the main reasons of attrition between teachers who see themselves as either pro or con on the use of alternation (Cook 2001).

For years, the shift from the L1 to the L2 was prohibited in language classes, driven by the belief that any use of the L1 would hinder foreign language exposure and learning. Educators were encouraged to create a full-immersion environment, emphasising constant exposure to the L2 as the most effective way to foster language acquisition. This approach created a stigma around alternation, leading teachers to feel that incorporating the L1 was detrimental to their students' progress (Baker 1996; Cook 2001).

In recent years, however, attitudes toward alternation have shifted significantly. Alternation is now recognised as a natural strategy employed by bilingual speakers and an effective tool for facilitating comprehension and meaning-making. Research has shown that alternating between the L1 and L2 can enhance understanding, clarify complex concepts, and reduce student anxiety, particularly when dealing with abstract ideas or new content (Gajo 2001).

The negativity surrounding alternation can partly be traced back to early immersion studies, such as those highlighted by Lin (2015) and Chin and Lin (2019). These studies emphasised the importance of L2 input but undervalued the benefits of L1 use. Swain, Kirkpatrick, and Cummins (2011) challenged this view in their handbook How to Have a Guilt-Free Life Using Cantonese in the English Class, reframing alternation as a valid,

guilt-free teaching strategy.

Terminologically speaking, as is sometimes the case in applied linguistics, different terms are used to describe the alternation between the L1 and the L2 (Lin 2013): for example, the terms codeswitching and translanguaging (Williams 1994; Baker 2006; García 2009; Balam 2021). Bullock and Toribio (2009, 1) describe codeswitching as "the ability on the part of bilinguals to alternate effortlessly between their two languages". Lasagabaster (2013, 2) tries to distinguish between the two terms: "Whereas code-switching assumes that bilinguals use their two languages as two separate monolingual codes, translanguaging posits that bilinguals have one linguistic repertoire which they select strategically to communicate effectively". Experts usually choose one of the two terms, but rarely do they engage in a comparative analysis. An OUP blog with an article by Wei tries to carry out such a comparison: "Code-switching refers to the alternation between languages in a specific communicative episode, like a conversation or an email exchange or indeed signs like the ones above. The alternation usually occurs at specific points of the communicative episode and, as linguistics research demonstrates, is governed by grammatical, as well as interactional (conversational sequencing), rules" (Wei 2018, n.p.). As for translanguaging, Wei writes: "The analytical focus is therefore on how the language user draws upon different linguistic, cognitive and semiotic resources to make meaning and make sense. […] Moreover, Translanguaging defines language as a multilingual, multimodal, and multisensory sense- and meaning-making resource. In doing so, it seeks to challenge boundaries: boundaries between named languages, boundaries between the so-called linguistic, paralinguistic and non-linguistic means of communication, and boundaries between language and other human cognitive capacities".

The issue of codeswitching and translanguaging in EMI contexts was further explored by Sahan and Rose in 2021. They argued that translanguaging in particular is seen as a natural multilingual practice in the EMI classroom. Understanding these dynamics more comprehensively can provide valuable guidance for refining teaching strategies and curriculum design.

In a very comprehensive volume devoted to translanguaging (2018, 3), Prada and Nikula give a trans-gressive connotation to the prefix trans: "To those three levels from which the prefix *trans-* draws its meaning, we add a layer at which translanguaging is a form of *transgression*. The idea of translanguaging as transgression highlights the potential that translanguaging has to remove language-related hierarchies (e.g. García 2009) and for bi-/multilingual individuals to engage in situated practices that challenge

traditional normativity of language use". Canagarajah (2011, 403) uses the term codemeshing "for the realization of translanguaging in texts". The term translanguaging is also used by Moore (2024) in a positioning paper on translanguaging in CLIL. She distinguishes between translanguaging at word or text level and gives examples of translanguaging tasks (translation, bilingual label quests, twisted dictation, re-elaboration, entextualisation).

Sohn, Dos Santos and Lin (2022) worked on the concept of translanguaging as transemiotising firstly developed by Lin in 2015 and Lin in 2019 (see also Liu and Lin, 2021 and He and Lin, 2024) in CLIL and EMI contexts, highlighting how this could lead to a better integration between content and language: "Translanguaging pedagogy calls for a dynamic and holistic view of bilingualism. Unlike the view of adding two or more autonomous languages, such as L1 and L2, the dynamic conceptualization of bilingualism turns attention to a speaker's semiotic repertoire, called a trans-semiotic system" (2022, 361).

Along these lines, the Multimodalities-Entextualization Cycle (MEC) framework, proposed by Lin (2015), was originally developed as a lesson planning tool designed for educators applying translanguaging and transemiotising in CLIL-like contexts. This framework unfolds in three distinct stages. First, it involves the creation of a rich experiential context in which students engage with and define the phenomenon through various multimodal resources, such as videos, visuals, experiments, and both written and spoken texts in L1 and L2. Second, students are encouraged to investigate the phenomenon further using tools like graphic organisers, mind maps, comics, and additional written and spoken texts in both L1 and L2. Finally, the third stage focuses on entextualising the experience, where students articulate their understanding through both spoken and written academic genres. This phase is supported by language scaffolding and the strategic use of multimodality to facilitate academic expression and comprehension.

As previously noted, the distinction between the two terms (codeswitching and translanguaging) is not consistently clear in the existing literature. In the present work, both terms (codeswitching and translanguaging) have been considered; however, the final choice for the title of this monograph was to adopt a more neutral term: *alternation*. This position is also shared by Macaro (2019, 272), who thinks the two terms are loaded: "I am deliberately avoiding the more contentious and value laden terms 'translanguaging' and 'codeswitching'". In the description of the literature review, however, the terminology will reflect that used by the author of each reference.

Another term which could be grouped with the ones just cited is

diglossia. In this sense, the alternation is seen from a macro perspective (with an entire linguistic community using alternation), with the two languages seen as separated in their context: one used at an institutional level and the other for ordinary tasks. An example of diglossia is German Swiss and German. The former is commonly used in everyday discourse, while the latter is employed in institutional contexts.

1.2. Studies in educational contexts

As previously stated, studies on the alternation between the L1 and the L2 are increasing especially in educational contexts. Hereafter, some of the most important studies on the alternation between the L1 and L2 will be presented.

Among the first scholars to research the alternation between the L1 and the L2 were Baker (1996), Antón and DiCamilla (1998), Butzkamm (1998), Cook (2001), Gajo (2001), and Macaro (2001). In different ways, they all pointed to the fact that the alternation between the L1 and the L2 was a natural process.

Baker (1996) distinguished between an alternation that separates and a concomitant alternation. The former divides the language based on various criteria (person, subject, time, place, materials); the latter is a type of code commutation, where the languages alternate within the educational context. The division occurs based on 1. type of skill (written or oral); 2. the non-didactic function (class management); and 3. the task type (presentation, summary, reinforcement or expansion).

Antón and DiCamilla (1998) saw the L1 as a fundamental tool for making meaning in text, retrieving language from memory, and exploring and expanding context. They argued that the first language plays a crucial role in supporting learners as they engage with new linguistic and cognitive challenges. Through the use of the L1, students can scaffold their understanding, clarify difficult concepts, and strengthen their ability to retrieve and apply previously learned language structures. In their view, the L1 is not merely a fallback option for learners struggling with the target language; rather, it serves as a strategic resource that enables deeper comprehension and more effective communication. By allowing students to process information in their first language, educators can facilitate cognitive connections that enhance second-language acquisition. Furthermore, Antón and DiCamilla emphasised how the L1 helps learners maintain dialogue with both their peers and instructors, ensuring that the communicative process remains active and meaningful. Additionally, the use of the L1 can provide emotional and cognitive support, reducing anxiety and fostering

confidence in language learners. By integrating the first language into their teaching, teachers can create a more inclusive and effective learning environment where students feel empowered to engage with complex linguistic and academic tasks.

Butzkamm defined alternation in this way (1998, 95) "Used properly and systematically, but on the whole quite sparingly and unobtrusively, it is clearly not a last resort, but a natural short-cut". His studies are in bilingual settings which are very close to CLIL ones, and he thinks that scientific terms should be taught in the L1 as well as in the L2. He states that codeswitching is an integral part of bilinguals; if used properly and systematically, it represents a natural aid, with the teacher serving as a bilingual dictionary in interactive classes. However, he also argued that codeswitching can also be effective in teacher-centred presentations.

Cook (2001, 405) used a very emblematic expression to underline how the use of the L1 and L2 is a spontaneous process: "Like nature, the L1 creeps back in, however many times you throw it out with a pitchfork". The author declared that codeswitching is by no means incompatible with learning the L2 and highlighted the fact that the L1 has been used in various methods: the New Concurrent Method, Community Language Learning and Dodson's Bilingual Method. In the New Concurrent Method, the teacher switches from one language to another following particular rules (when the concepts are significant or students are not focused). In Community Language Learning, students speak in the L2 via the mediation of the L1: the L1 is a way of giving L2 meaning in complete sentences. In Dodson's Bilingual Method, the teacher reads an L2 sentence aloud and then does the same in the L1. Cook claims that the L1 is a classroom resource used to convey meaning, explain grammar, and organise the class as a collaborative learning tool as well as an individual strategy for students. For these reasons, it is undesirable as it seems unreasonable to ban codeswitching from the class, since L2 and L1 meanings do not exist separately from the L2 meanings; the two languages coexist in the same mind. Codeswitching, therefore, is a highly skilled activity.

Gajo (2001) highlighted differences between micro-alternance, meso-alternance, and macro-alternance. Micro-alternance refers to a switch from one language to another within the same verbal interactions. Meso-alternance happens within the same lesson and according to task. Macro-alternance occurs when the decision is made to teach all or part of a discipline in the L1/L2 (see the example of parallel language use in Kuteeva 2014).

Macaro (2001) carried out a study on the use of the L1 and the L2 in secondary schools in the UK. Among the unexpected results of this study is

the fact that the teachers' use of L1 or L2 was not consistently replicated by the students. Macaro (2009) described two experimental studies in secondary Chinese classes in which they tested vocabulary either by using codeswitching or by using English and paraphrasing. Macaro concluded that there was no harm in the use of the L1 (Chinese). Another study by Tian and Macaro (2012) was carried out with university students in China. They tested students on vocabulary acquisition to evaluate listening activities in a focus-on-form context. The results showed better outcomes for the students who had received focus on form and codeswitching.

1.3. Teacher and student alternation in CLIL and EMI contexts

In a comprehensive article on translanguaging, Lewis, Jones and Baker state that: "Firstly, translanguaging may help students to gain a deeper and fuller understanding of the subject matter" (2012, 645). Lin (2019) is of the idea that translanguaging and transemiotising help the construction of knowledge and are crucial for CLIL and EMI contexts. Therefore, the alternation between the L1 and the L2 may be a clear advantage in CLIL-like contexts where both content and language learning are taken into consideration. To gain a better picture of CLIL and EMI contexts at all educational levels, where possible, a chronological overview of studies on the alternation between the L1 and the L2, mostly with English being one of the two languages, follows. In the studies described below (related to both teachers and lecturers), the terms (codeswitching/translanguaging; CLIL/EMI) used by the scholars themselves have been retained.

A CLIL study on the role of L1 and L2 in Canada was conducted by Myers (2006), focusing on the effects of codeswitching on content learning among university students. The study employed a simulation activity, which Myers observed and recorded, analysing how students alternated between their L1 and L2 during the task. While students predominantly aimed to use the L2, Myers noted frequent and natural switches to the L1, especially when grappling with more complex aspects of the activity.

The study sought to answer two main questions: first of all if content learning is more effective or less effective when the L1 is also used. Myers observed that codeswitching facilitated the use of metacognitive strategies, such as planning and self-monitoring, enabling students to refine their understanding of the subject matter. The second question explored whether the use of the L1 results in L2 learning gains or losses. Myers found that L1 inclusion positively impacted L2 acquisition, particularly in areas like reading comprehension and vocabulary production. Students demonstrated

significant lexis improvement, although gains in grammatical competence were less pronounced. Overall, the study highlighted the strategic use of the L1 as a supportive tool. It served as a cognitive backup, helping students process information and refine their thinking without detracting from L2 development.

Ricci Garotti (2006) in the Italian context pointed out that if too much L2 input is reduced in CLIL contexts, some of the content might be lost. In her opinion, there should be a balance and a shift from primary education, where the teacher should adopt active bilingualism and the students passive bilingualism and in secondary education, where the teacher as well as the students should adopt active bilingualism, therefore using both the L1 and the L2. The L1 should be functioning as a support to L2.

Méndez García and Pavón Vázquez (2012) worked on codeswitching in Spanish CLIL contexts in primary and secondary schools. They believed that codeswitching is connected to the teachers' roles (English language teacher and content teacher) in team teaching: one taking care of BICS (basic interpersonal communication skills) and the other of CALP (cognitive academic language proficiency). Teachers seemed to appreciate forms of codeswitching even though they felt they were not trained enough to perform it correctly. In 2013, Lasagabaster interviewed 35 Colombian (mostly secondary) teachers on the use of the L1 in CLIL teaching, and they all had a positive impression.

Mazak and Herbas-Donoso (2014) analysed translanguaging in Spanish university science classes (English and Spanish), discovering that it is used mainly for key terminology. Translanguaging in science is a way of "breaking the monopoly of English as the only language of academia in science as a field" (2014, 15). This aspect is particularly interesting because it hints at a multilingual pedagogical function of alternation.

Focusing on patterns of codeswitching in CLIL, Lo (2014) and Wannagat (2007) investigated its use in Hong Kong, noting that it is more prevalent in the earlier stages of education and tends to decrease as students advance. This observation aligns with Ricci Garotti's (2006) findings in Italy, suggesting that younger learners rely more on L1 support, while older students gradually transition toward greater L2 use as their proficiency and confidence improve. The progressive reduction in codeswitching at higher levels of education indicates a developmental shift in language competence, where students become more adept at functioning in the target language without frequent recourse to their L1. However, these studies also suggest that while the frequency of codeswitching may decline, its strategic use remains an essential tool for scaffolding learning, particularly in complex subject matters.

Gierlinger (2015) examined secondary CLIL classrooms in Austria, categorising codeswitching into two main functions. The first, regulative codeswitching, involves language alternation used for classroom management, task instructions, and behavioural regulation. The second, instructive codeswitching, plays a pedagogical role at three levels: content-focused (clarifying the subject matter), word-focused (explaining terminology), and deficit-focused (addressing comprehension difficulties). Her study underscored the importance of codeswitching not only as a linguistic tool but also as a cognitive strategy that enables students to grasp subject-specific knowledge more effectively. The findings emphasised that codeswitching serves not just as a bridge between languages but also between abstract concepts and students' prior knowledge, reinforcing the interconnected nature of language and content learning.

At the university level, Gotti (2015) investigated codeswitching in specialised courses at an Italian university, focusing on how language alternation facilitated lecturer-student communication. His analysis revealed that codeswitching helped bridge comprehension gaps, particularly in disciplines requiring precise technical terminology in English. By enabling clearer exchanges of complex ideas, it fostered collaboration and enhanced knowledge acquisition, demonstrating that language alternation can be a resource rather than a hindrance in higher education. His study reinforced the notion that, rather than obstructing learning, the strategic and purposeful use of L1 in academic discourse plays a constructive role in supporting specialised subject matters. Furthermore, he observed that codeswitching not only facilitated comprehension but also contributed to a more dynamic and interactive classroom environment, where students felt more comfortable engaging in discussions and seeking clarification.

Beyond individual case studies, Lin (2015) provided a broader theoretical perspective on L1-L2 alternation in CLIL. She examined historical attitudes that framed L1 use negatively, linking this perception to the influence of the maximum input hypothesis and the traditional grammar-translation method. According to Lin, these perspectives created barriers to the acceptance of bilingual or multilingual pedagogies in CLIL contexts. However, she argued that CLIL, from its inception, has been inherently aligned with plurilingualism, aiming to integrate multiple languages as part of a holistic approach to learning. Lin identified three key functions of L1 in CLIL: ideational (explaining content in a way that deepens conceptual understanding), textual (structuring lessons by marking different stages of instruction), and interpersonal (facilitating engagement and rapport between teachers and students). Her work highlights the necessity of recognising the L1 as an asset rather than a drawback in CLIL classrooms, particularly when

used strategically to support student comprehension. She also anticipated future research to further explore L1-L2 alternation, not only in spoken discourse but also in academic writing, where the dynamics of translanguaging may play an equally significant role.

Expanding on this theoretical framework, Lin and Wu (2015) conducted a classroom study on science learning in a Hong Kong secondary school. Their research highlighted the importance of translanguaging and transemiotising (the use of multiple semiotic resources, such as visuals, diagrams, and other multimodal representations to support meaning-making in science education). They concluded that scientific discourse itself is a crucial component of science learning, reinforcing the idea that flexible language practices in CLIL and EMI contexts can enhance conceptual understanding. Their findings suggested that language is not the only vehicle for meaning-making in content-based instruction; rather, it operates alongside other semiotic resources to create a more comprehensive and accessible learning experience for students. By incorporating translanguaging and transemiotising strategies, educators can facilitate deeper engagement with scientific concepts and improve overall academic outcomes.

Moore and Nikula (2016, "Introduction") argue that "rather than content and language integration being about L2 monolingualism, first language (L1) is also always in play, as suggested by the very notion of 'bilingual' education associated with CLIL". They acknowledge that the use of the L1 is present in CLIL classrooms and that it has various functions: facilitating content, managing the classroom, creating language awareness, and signalling alignment (see also Bieri 2018; Gallagher and Colohan 2014). They distinguish between "a broad distinction between episodes when translanguaging can be perceived as salient, as participants orient to language in order to facilitate content learning and, in contrast, to moments when translanguaging is unmarked in the unfolding talk, as participants orient primarily to the flow of interaction" (Moore and Nikula, 2016: "Orienting to language and content"). They note that "saliency in language in content learning revolves principally around lexis/terminology, with language issues being explicitly oriented to in CLIL classrooms, with the emphasis on meaning rather than form" (Moore and Nikula 2016: "Orienting to flow of interaction"). The present study adopts this categorisation of alternation into salient and unmarked forms as a reference framework for the analysis (see section 3.1.).

Poza (2016) investigated translanguaging practices in U.S. primary school science classrooms, where students alternated between Spanish and English. By analysing classroom discursive data, he explored how these practices influenced students' academic performance, particularly in their

understanding and application of scientific concepts. His findings indicated that the ability to switch between languages allowed students to grasp complex material more effectively by drawing on their full linguistic repertoire. This flexibility enabled students to clarify difficult concepts, make cross-linguistic connections, and engage more deeply with the subject matter. Poza concluded that translanguaging facilitated both language and content learning, allowing students to navigate the curriculum with greater ease, particularly when faced with challenging scientific terminology. However, he was critical of rigid translanguaging policies, arguing that they restricted students' natural language use and limited their ability to take full advantage of their skills. Instead, he advocated for a more flexible and student-centred approach, where learners could alternate between languages as needed without constraints. Such an approach, he argued, would better support students' academic development, foster confidence in their bilingual abilities, and promote a more inclusive learning environment.

Similarly focusing on primary school students, García Mayo and Hidalgo (2017) examined the role of the L1 in CLIL and non-CLIL settings by comparing 32 Spanish primary school students as they performed a communicative task twice over two school years. Their analysis revealed that the L1 was predominantly used for vocabulary support and that CLIL learners relied on it less frequently than their non-CLIL peers. This finding suggested that increased exposure to the target language in CLIL settings led to a greater ability to function without L1 support. However, their study also highlighted that even CLIL learners continued to use the L1 strategically, particularly when encountering unfamiliar vocabulary or complex linguistic structures. The continued use of the L1, even in environments designed to promote target-language immersion, underscored its persistent role in facilitating lexical access and reinforcing comprehension. Their research reinforced the idea that, rather than hindering language development, the L1 serves as a useful cognitive tool that can support learning when used judiciously.

Bieri (2018) compared the use of translanguaging in CLIL (English) and non-CLIL (German) Biology courses in Switzerland for secondary-school students by means of transcriptions and interviews with teachers. She found a great deal of salient (Nikula and Moore 2016) translanguaging in both cohorts in which biological concepts (key lexis and scientific concepts) were helped by translanguaging. Unmarked (Nikula and Moore 2016) translanguaging was also used for metacomments. Bieri concluded that: "In fact, these excerpts show that translanguaging with subject-specific terminology, using all linguistic resources available, can be an efficient pedagogy to clarify and negotiate meaning in biology lessons" (2018, 104).