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Content and Language Integrated Learning (CLIL)

Yolanda Ruiz de Zarobe

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CONTENT AND LANGUAGE INTEGRATED LEARNING (CLIL)

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Content and Language Integrated Learning (CLIL)

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Abstract: Content and Language Integrated Learning (CLIL) is an educational approach that combines the teaching of subject content with language learning. Originally developed in Europe, CLIL has since been adopted across diverse educational and geographical contexts. This Element offers a comprehensive overview of CLIL, tracing its origins and global development. It examines the theoretical foundations of the approach, as well as key implementation strategies and their impact on language acquisition, content understanding, learner motivation, and attitudes. Special attention is given to how CLIL addresses diversity in the classroom. The text also explores innovative pedagogical practices, such as translanguageing and multimodality, that promote deeper learning and student engagement. It concludes with a discussion on assessment and teacher education within CLIL contexts and outlines the steps needed for its continued growth. This title is also available as Open Access on Cambridge Core.

Keywords: Content and Language Integrated Learning (CLIL), bilingual and multilingual education, language teaching, teacher education, innovative pedagogical approach

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1 Introduction

Content and Language Integrated Learning (CLIL) is an educational approach in which subjects are taught through an additional language, integrating both content and language learning. This methodology has gained global popularity due to its dual focus on subject-matter mastery and language development, and it has had a significant impact on language policies and pedagogical practices worldwide.

More than thirty years have passed since the term CLIL was coined in Europe and, since then, it has evolved into what Morton (2019) describes as a transgressive methodology, as one that ‘transcends’ traditional borders. This evolution is evident in its adoption across educational levels, from preschool to university,¹ across diverse academic disciplines, within various theoretical frameworks, and across many countries and continents. Over time, CLIL has been supported both by top-down policies of educational authorities and bottom-up initiatives by individual schools and teachers (Ruiz de Zarobe, 2013). However, its implementation has differed significantly depending on linguistic and cultural contexts. In many areas, CLIL has emerged as a timely response to the multilingual turn in education (Canagarajah, 2013; May, 2013).

Building on these diverse implementations, research on CLIL has also evolved considerably, not only in scope but also in focus. Whereas earlier studies tended to examine learning outcomes, more recent research has shifted towards exploring the processes involved in CLIL-based education. This growing body of work positions CLIL as a contemporary educational approach that supports not only language learning but also the development of cognitive and interdisciplinary competences, potentially serving as a catalyst for more collaborative and multidisciplinary teaching practices (Dalton-Puffer, Hüttner, & Llinares, 2022). Its relevance has also been recognised in the broader (multilingual) education agenda, where it contributes to promoting deeper learning (Coyle, 2018). As Morton (2023, p. 523) suggests, ‘CLIL can thus be seen as currently in expansive mode, as it moves beyond an exclusive concern with language(s) education towards presenting itself as a catalyst for providing higher quality deeper learning experiences for all learners.’

However, this development has been accompanied by ongoing debates surrounding a range of issues, including the most-effective pedagogical practices for CLIL implementation, the roles of translanguaging and

¹ Although the term CLIL has also been applied to university settings, in this Element we will focus on CLIL mainly in primary and secondary education.

multimodality, the alignment of educational objectives among stakeholders, and concerns about elitism and inclusivity within the approach.

The aim of this Element is to offer an up-to-date review of both the theoretical foundations and practical applications of the approach, offering insights into its implementation, effectiveness, pedagogical approaches, and assessment needs. In doing so, it seeks to demonstrate how CLIL represents a dynamic and effective model for bilingual education and the promotion of multilingualism.

1.1 Plan of the Element

Following the introduction (Section 1), Section 2, ‘What Is CLIL’, provides a definition of the approach and highlights its varied interpretations across different contexts, such as North America and Europe. This section also offers an overview of the theoretical foundations of CLIL, emphasising its dual focus on integrating language and content learning, along with its core concepts and guiding principles.

Section 3, ‘CLIL Implementation’, explores the origins of the educational approach and its expansion around the globe. It presents examples from Europe, Latin America, and Asia, showcasing the flexibility of the approach in different settings.

Section 4, ‘The Effectiveness of CLIL’, is central to any discussion of CLIL. It provides an overview of detailed studies addressing language use and the impact of CLIL on additional language acquisition, content learning, and first language (L1) development. Two subsections 4.3 and 4.4 further examine the impact of CLIL on stakeholders’ attitudes and motivation, as well as its role in addressing classroom diversity.

Section 5, ‘Pedagogical Approaches to CLIL’, analyses two key components of CLIL practice: translanguaging and multimodality in the classroom. These are presented as valuable methodological and practical resources for both subject and language teachers.

Section 6, ‘Assessment and Teacher Education in CLIL’, explores the role of assessment within the CLIL framework and addresses professional development. It highlights essential training needs for effective CLIL instruction and underscores the importance of raising teacher awareness.

The final section (Section 7), ‘Conclusion and Future Perspectives’, summarises the key points covered throughout the Element and offers insights into future directions for the CLIL approach.

This Element will be of interest to researchers, graduate students, and teacher educators engaged in CLIL, as well as to anyone involved in or curious about multilingual education.

2 What Is CLIL?

2.1 Definition of CLIL

CLIL is an approach that combines the teaching of academic content with the learning of a foreign or second language (L2).² The term originated in Europe in the mid-1990s to describe programmes aimed at improving foreign language (FL) proficiency while simultaneously teaching subject matter.

CLIL is characterised by its dual focus, flexibility, and adaptability to various educational settings. That is why it is often described as an umbrella term for educational contexts where a non-native language is used to teach content subjects, integrating language, and content learning. This encompasses a range of models that can be positioned along a continuum from content-driven to language-driven approaches (Cenoz, 2015; Dale & Tanner, 2012; Lyster & Ballinger, 2011).

At one end of the continuum, content-driven, are immersion programmes, such as those traditionally found in Canada, where different subjects are taught in an additional language by content teachers. These range from full immersion, sometimes with 100% of the teaching day, to partial immersion, with a smaller portion of instruction in the additional language. At the other end, the language-led side, are examples such as language classes structured around thematic units, which occur in diverse geographical contexts.

This continuum also corresponds to what are commonly referred to as the strong and weak forms of CLIL: hard CLIL and soft CLIL (Ball, Clegg, & Kelly, 2015; Bentley, 2010). According to Ball et al. (2015), this distinction is often influenced by the type of teacher delivering the instruction. Soft CLIL typically describes approaches led by language teachers, while hard CLIL describes programmes that are more subject oriented, with content teachers delivering subject matter through an additional language.

As shown in Figure 1, various contextual factors influence the different types of CLIL. These factors may include the programme's objectives (whether content-related or language-related), its type (ranging from total immersion to language-oriented courses), the intensity of instruction (in terms of exposure time), as well as the learners' age and the language of instruction (e.g. foreign, second, heritage, or minority languages).

² We use the terms *additional*, *foreign*, and *second* languages interchangeably to refer to any language learned after the first language. In the context of CLIL, the foreign language is most often English, but we prefer the broader notion of *additional languages* to reflect a more inclusive and flexible perspective.

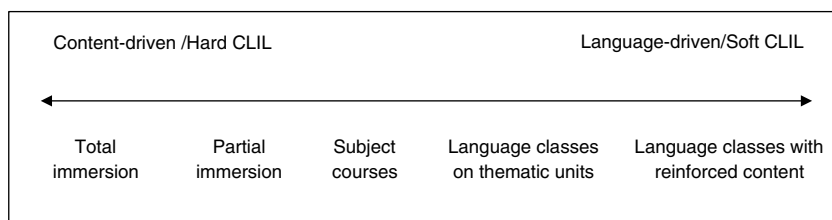


Figure 1 The CLIL continuum (adapted from Ball, 2009 and Lyster & Ballinger, 2011)

This continuum evidences the disparity and variety of programmes that combine language and content across contexts, which probably explains why the definition of CLIL can be ambiguous and has even sparked debate over the years (see, for instance, Cenoz, Genesee, & Gorter, 2014 and the response by Dalton-Puffer, Llinares, Lorenzo, & Nikula, 2014). Nonetheless, there are some common features that can be addressed in order to understand what CLIL is. First, CLIL programmes focus on both subject matter and the language of instruction, aiming to simultaneously improve content comprehension and language proficiency. This dual focus is central to many definitions of the approach, such as the oft-cited one by Coyle, Hood, and Marsh (2010, p. 1): ‘Content and Language Integrated Learning (CLIL) is a dual-focussed educational approach in which *an additional language* is used for the learning and teaching of both content *and* language.’ In their definition, the authors underline the idea of an additional language, which ‘is often a learner’s “foreign language”, but which may also be an L2 or some form of heritage or community language’ (Coyle et al., 2010, p. 1).

The duality present in the Coyle et al. definition also appears in other scholarly definitions. For example, Banegas (2012, p. 117) defines CLIL as ‘an approach in which various methodologies are used to achieve a dual-focussed form of instruction in language and content.’ Similarly, Dalton-Puffer (2016, p. 29) states: ‘Content and language integrated learning (CLIL) needs to articulate substantial links between the pedagogies of different subjects like mathematics, history, or economics and the pedagogy of language teaching in order to fulfil its promise of “dual focus”.’ In this statement, Dalton-Puffer underscores that the duality of the approach requires pedagogical connections between content and language teaching, which often requires collaboration between content and language teachers. As discussed in Section 5, this pedagogical enterprise is not always easy to overcome.

The balance between language and content instruction, as well as the nature of the CLIL target language, is among the core features of the approach that have been open to different interpretations

(Cenoz et al., 2014). In fact, as several authors argue (Cenoz et al., 2014; Ruiz de Zarobe, 2013), CLIL shares essential properties with other content-based programmes, such as Content-Based Instruction (CBI). Cenoz et al. (2014) and Ruiz de Zarobe (2013) argue that both CLIL and CBI employ an L2 as the medium of instruction and share similar educational objectives. The preference for one term over the other is often context dependent: CLIL is more frequently used in Europe, Asia, and South America, while CBI is typically preferred in North-American contexts. However, both terms are sometimes used interchangeably. For example, Lyster and Ruiz de Zarobe (2018) and Ruiz de Zarobe and Lyster (2018) referred to both CLIL and immersion in their discussions on content and language integration in school and higher education settings. More recently, Ballinger, Fielding, and Tedick (2024) used the term content-based instruction to describe content teacher education initiatives across Africa, Asia, Australia, Europe, and North America.

Despite their shared foundations (Cenoz, 2015), CLIL and CBI do not share the same historicity, understood as the historical and cultural embeddedness of educational practices, nor the same political and contextual backgrounds (Gabillon, 2020). Therefore, in order to fully understand what CLIL is (and is not), it is crucial to identify its distinctive characteristics and engage with the ongoing debates surrounding its evolution (Hemmi & Banegas, 2021). Clear definitions and consistent methodologies are needed to provide a coherent and context-sensitive explanation of CLIL across educational settings. As a highly contextualised approach (Hüttner & Smit, 2014), CLIL requires locally grounded research and adaptation to specific needs. While implementation and practice can vary considerably, there are core theoretical foundations that support the approach. These will be explored in the following section.

2.2 Theoretical Foundations of CLIL

CLIL is supported by various theoretical frameworks that emphasise the integration of content learning and language acquisition. Among these are Sociocultural Theory, Systemic Functional Linguistics, and Cummins' framework of BICS (Basic Interpersonal Communication Skills) and CALP (Cognitive Academic Language Proficiency), all of which are supported by research and contribute to understanding the cognitive and linguistic demands of CLIL. While other well-recognised theories from Second Language Acquisition, such as Krashen's (1985) Input Hypothesis and Swain's (1985) Output Hypothesis, also offer valuable insights, we

have chosen to focus on frameworks that address both cognitive and academic language development, as these play an important role in supporting CLIL learning.

Lev Vygotsky's Sociocultural Theory (Vygotsky, 1978) emphasises the importance of social interaction and cultural context in learning, which is highly relevant to CLIL environments. According to Vygotsky, learning occurs most effectively within the Zone of Proximal Development (ZPD), the space between what learners can do unassisted and what they can do with support from an adult or collaboration with more capable peers. CLIL environments align with this concept, as they often involve collaborative activities and discussions that provide opportunities for learners to engage in meaningful, socially mediated interactions. Furthermore, the use of a foreign language in these interactions can promote deeper cognitive engagement (Coyle et al., 2010).

Related to this is the concept of scaffolding, a term introduced by Bruner in the 1970s and defined as a 'process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts' (Wood, Bruner, & Ross, 1976, p. 90). Scaffolding is often associated with ZPD and sociocultural theory (Mahan, 2020; Mahan & Ruiz de Zarobe, 2024), as a dynamic practice that encourages progress and gradually allows for greater autonomy on the part of learners. As a sample, the study by Mahan (2020) investigated how three CLIL teachers supported L2 learners' performance through scaffolding. Twelve lessons (science, geography, and social studies) were videotaped in an 11th-grade CLIL class. A coding manual (Language Arts Teaching Observation Protocol [PLATO]) was used to identify the scaffolding strategies used by the teachers. The outcomes indicated that CLIL teachers provided scaffolding strategies with which to understand some material. The scaffolding strategies included linking concepts in L1 and L2, defining subject-specific terminology, and using visual aids. In addition, the CLIL teachers developed different scaffolding strategies in natural and social sciences.

Building on this perspective, Hill (2020) showed that applying cognitive linguistics in CLIL contexts enhances L2 learners' awareness and comprehension of polysemous lexis, thereby improving their understanding of both everyday and genre-specific meanings. The study focussed on how polysemous words, those with both common and academic or scientific meanings (Vygotsky, 1978), can be better understood through cognitive approaches. Specifically, Hill showed that employing such approaches within learners' ZPD increased their awareness of metonymic extensions,

facilitating the shift from everyday to disciplinary meanings. In this regard, sociocultural theory proves valuable for understanding the role of language in cognitive development: linguistic development reflects cognitive growth, and meaningful social interaction among teachers, students, and peers supports learners' progression along the learning continuum.

Although not a cognitive theory *per se*, Bloom's Taxonomy is a widely used framework that classifies educational goals into levels of complexity and specificity. Originally developed in the 1950s, it was later revised by Anderson and Krathwohl (2001), who reorganised the taxonomy into a hierarchy of cognitive skills – ranging from lower-order thinking skills (LOTS), such as remembering, understanding, and applying, to higher-order thinking skills (HOTS), such as analysing, evaluating, and creating. CLIL can promote the development of HOTS by encouraging learners to engage with complex subject matter through the medium of a second or foreign language, thereby deepening both content understanding and language proficiency.

In their study conducted in the region of Murcia, Spain, Campillo Ferrer and Miralles-Martínez (2022) investigated the development of LOTS by CLIL teachers in science and social studies during the first two years of primary education. Employing a mixed-methods approach that combined qualitative and quantitative techniques, the researchers examined the extent to which LOTS are fostered within the integrated CLIL framework. Their findings revealed that most of the cognitive practices promoted by CLIL teachers focussed on enhancing students' comprehension. The authors argue that CLIL can significantly support the development of LOTS, contributing to learners' cognitive progression, a conclusion that is consistent with previous research in the field (Alonso-Belmonte & Fernández-Agüero, 2018).

More broadly, CLIL is regarded as a pedagogical approach capable of fostering both LOTS and HOTS, thereby enhancing overall cognitive development through the simultaneous teaching of foreign language and subject content using diverse techniques and activities (Coyle et al., 2010; Tarabar & Neslanović, 2021). However, it is important to note that despite the widespread recognition of Bloom's Taxonomy, recent research highlights that the transition from LOTS to HOTS is often inadequately addressed or misunderstood in classroom practice (Prakash & Litoriya, 2021).

Research suggests that cognitive development lies at the core of CLIL learning (Marsh, Díaz-Pérez, Frigols Martín, Langé, Pavón Vázquez, & Trindade, 2020) and that CLIL can enhance human cognition by explicitly engaging with concepts and promoting active participation

(Hietaranta, 2015), sometimes even in comparison to learners taught in their L1. For example, Jäppinen (2005) conducted a study in Finnish CLIL programmes demonstrating statistically significant differences in cognitive development between learners taught through an FL and those taught through their L1. The study involved 669 Finnish mainstream L1 learners aged 7–15 in a public comprehensive school. The experimental group (335 learners) received instruction in English, French, or Swedish, while the control group (334 learners) was taught in Finnish. Results indicated that CLIL instruction had a positive impact on cognitive development. Specifically, Jäppinen found that learners in the CLIL group were guided to construct complex concepts and cognitive schemata, which ultimately enabled them to outperform their peers in the control group.

Against this backdrop of cognitive development, Systemic Functional Linguistics (SFL) (Halliday & Matthiessen, 2014; Martin & Rose, 2007) has increasingly been applied to CLIL. SFL is a language theory centred around the notion of language function, prioritising the use of language in real-world contexts over purely structural analyses. SFL supports understanding how language operates across different subject areas, thereby facilitating the integration of language and content in CLIL classrooms (Llinares & McCabe, 2023). Additionally, SFL contributes to CLIL by addressing motivation, task design, pragmatic development, speech functions, and evaluative language in writing (Llinares & Morton, 2017). It is also effective for identifying lexico-grammatical features in CLIL students' productions, including defining cognitive discourse functions (Llinares & Nashaat-Sobhy, 2021).

Contributing to this discussion, Evnitskaya and Dalton-Puffer (2023) addressed a critical concern in CLIL: the potential mismatch between students' cognitive level and their L2 proficiency. Using a systemic functional approach, they developed a conceptual map based on an exploratory, data-driven analysis of an oral learner corpus in both L2 English and L1 Spanish, focussing on science and history topics in primary bilingual schools in Madrid. Their analysis revealed conceptual and linguistic difficulties in forming complete and appropriate categorisations in both languages, with subject-specific tendencies in categorising. These findings suggest that challenges in CLIL are not solely attributable to limited L2 proficiency but also arise from the inherent complexity of subject matter itself, highlighting the need for effective scaffolding that supports both thinking and language development.

Further evidence of the interplay between language and cognition in CLIL is provided by Whittaker and McCabe (2023), who analysed

evaluative language in a longitudinal corpus of students' texts written in L2 English across different disciplines (natural science, history, art). The texts were collected from the same students at the end of primary school (aged 11+) and at both the beginning and end of secondary year 2 (aged 13–14). The results showed how students' cognitive discourse competence (i.e. learners' ability to process and produce subject-specific language) improved as they developed appropriate field-evaluation couplings in CLIL writing across these disciplines.

Banegas (2021) further argued that systemic functional grammar can positively affect both content knowledge and pedagogical content knowledge, that is, not only understanding the subject matter itself but also knowing how to teach it effectively by integrating content and language instruction. It may also have implications for curriculum development, pedagogy, and assessment in multilingual education programmes (Lo & Fung, 2020).

Theoretical frameworks like Cummins' (2008) distinction between BICS and CALP has had a significant impact on L2 acquisition and educational practices, particularly within the context of CLIL. BICS, Basic Interpersonal Communication Skills, refers to everyday language used in casual conversations, while CALP, Cognitive Academic Language Proficiency, involves more advanced language skills needed for academic tasks, such as understanding lessons or writing essays. In the CLIL context, both BICS and CALP play important roles: BICS, which is social and communicative language, is acquired more easily but may not be sufficient for academic demands. CALP, on the other hand, requires sustained, targeted instruction. CLIL aims to develop CALP by immersing students in academic content taught through the medium of the FL, thus enhancing their ability to use the language in cognitively demanding contexts.

Based on this distinction, Ranney (2012) examined the pedagogical implications of the BICS/CALP framework over three decades, drawing on linguistic approaches such as corpus linguistics and SFL. Her findings suggest that while BICS is acquired fairly quickly through interaction, CALP development benefits greatly from explicit instruction and extensive practice in both oral and written modalities.

Wakabayashi's (2002) study on high school students attending an international school in Japan adds further support through Cummins' Common Underlying Proficiency (CUP) model, which posits that cognitive and academic skills developed in one language can transfer across languages, enabling bilingual learners to draw on a shared cognitive foundation. Her research demonstrated that cognitive and academic skills

developed in one language can transfer to another, supporting bilingual learners across both languages. The study also found that early academic instruction in Japanese helped students' CALP development in English. Consistent with this, Lorenzo and Rodríguez (2014) observed that CALP in CLIL environments tends to evolve gradually, with complex syntax and textual cohesion improving over time.

Taken together, these studies and theoretical perspectives highlight how language learning and content mastery are deeply interconnected, requiring careful attention to both cognitive and linguistic developments. Effective scaffolding, understanding the difference between everyday and academic language, and transferring skills between languages all help learners succeed. This shows the importance of providing focussed support that tackles both the difficulty of the subject and language skills.

2.3 Key Concepts and Principles of CLIL

There is no doubt that any discussion of the principles underpinning CLIL methodology must first and foremost refer to the 4Cs framework (Bower, Cross, & Coyle, 2020; Coyle, 2007; Coyle et al., 2010), due to its outstanding relevance and usefulness over the years.

The 4Cs framework comprises four 'building blocks' (Coyle et al., 2010, p. 41), which are essential to understanding CLIL:

- *Content*: the subject matter to be taught and learned
- *Communication*: the process of language learning and use
- *Cognition*: the growth of thinking and learning processes
- *Culture*: the development of intercultural awareness and global citizenship

The 4Cs framework was developed by Coyle (2007), who conceptualised *content*, *communication*, *cognition*, and *culture* as key components of CLIL. Mehisto, Frigols, and Marsh (2008) proposed a similar model, replacing *culture* with *community*, which they defined as the learner's participation in both local and global contexts. Other researchers have further adapted this model. For example, Hemmi and Banegas (2021) incorporated both *community* and *culture*, highlighting the interrelationship between these two dimensions. Signalling the vitality of the framework, Sakamoto (2022) retained the original 4Cs but proposed a fifth C, *criticality* (i.e. the capacity for critical thinking and reflection), to enhance the robustness of the approach, particularly in the Japanese educational context.

Together with the 4Cs framework, Coyle et al. (2010) outlined seven pedagogical principles. They are personalised learning, linking

content–cognition–language, recognising cognitive language demands, providing transparent and contextualised language, emphasising interaction, promoting intercultural awareness, and ensuring context-sensitive implementation. These principles promote the dual aim of learning to use language effectively and using language to learn meaningfully. As Bower et al. (2020, p. 8) assert ‘without being prescriptive, these seven principles provide guidance for teachers on the kinds of teaching and learning experiences best suited to CLIL contexts, when working with the 4Cs in practice as a framework for bringing language and content together’.

More recently, these authors (see, for example, Coyle & Meyer 2021; Coyle, Meyer & Staschen-Dielmann, 2023; and Meyer & Coyle, 2017) have developed their work into what is now known as Pluriliteracies Teaching for Deeper Learning approach. While the 4Cs framework emphasises the integration of content, cognition, culture, and communication, the pluriliteracies approach focusses on learners’ progression in subject-specific literacies across languages. This involves using appropriate academic genres and styles to express content knowledge, thereby fostering deeper conceptual understanding. Their approach focusses on guiding learners along structured pathways of knowledge to enhance deeper learning within subject disciplines, reaffirming the idea that the objective is ‘to offer opportunities for deeper learning through a focus on subject-specific literacies’ (Coyle et al., 2023, p. 12). Although this new model adopts a more holistic and multimodal approach, the 4Cs framework remains highly relevant to CLIL research and practice.

Closely linked to the communication dimension of the 4Cs is another key model: the Language Triptych (Banegas & Mearns, 2023; Banegas, Montgomery, & Raud, 2024; Bower et al., 2020; Coyle et al., 2010). This model separates the language dimension into three interrelated constructs:

- Language *of* learning: the subject-specific language needed to access concepts and skills related to a given topic.
- Language *for* learning: the language required for classroom interaction, collaboration, and learning management.
- Language *through* learning: the language that emerges as learners process content, reflect on meaning, and engage in deeper cognitive activity.

For example, in a CLIL science lesson on plant biology, students may use *language for learning* to ask the teacher clarifying questions or to work in pairs. They will need the *language of learning* to understand and use subject-specific terms such as *stomata*, *carbon dioxide*, and *glucose*. Through group

discussions or writings, students use and expand *language through learning* by connecting new content to prior knowledge, explaining processes in their own words, or drawing comparisons with other systems (e.g. human respiration). This triptych helps both learners and teachers to better understand and manage the linguistic demands of CLIL instruction. It also supports effective lesson planning and scaffolding, enabling learners to engage more fully with both language and content (Hemmi & Banegas, 2021).

2.4 Summary

CLIL has emerged as a timely and significant contribution to the promotion of L2 learning and teaching. Although the term was coined in Europe in the 1990s, the approach is shaped by diverse historical, political, and social factors, drawing inspiration from North American immersion programmes, with which it shares several commonalities. Indeed, CLIL can be viewed along a continuum from content-led to language-led instruction, depending on contextual and institutional priorities.

In this section, we have outlined the theoretical underpinnings and core concepts of the CLIL approach, supported by relevant research and educational models. These include cognitive and sociocultural perspectives, as well as systemic functional linguistics and pluriliteracies frameworks. At its foundation, CLIL is guided by the principle of integration (Ruiz de Zarobe & Cenoz, 2015), placing language, content, thinking, and communication at the centre of learning. This integrated approach supports deeper understanding, encourages higher-order thinking, and enhances academic language proficiency, while also contributing to learners' overall development.

3 CLIL Implementation

3.1 Origins of CLIL

Education in an L2 or FL has had a strong precedence in different parts of the world, such as in European educational institutions, which have a long tradition of teaching content through an additional language. What is probably new today is that these programmes now reach a much broader spectrum of learners (Tedick, 2020). CLIL has its roots in European multilingual policies, but there is no doubt that it was also influenced by earlier North American immersion and bilingual education programmes (Gabillon, 2020; Pérez Cañado, 2012). Much evidence from Canada and the United States (e.g. Cummins, 1989; Genesee, 1987, 1994, 2004; Genesee & Jared, 2008; Lyster, 1987; and Wesche, 2002) demonstrated

the success of such programmes in terms of linguistic, content, and motivational outcomes.

In Europe, CLIL emerged in connection with the growing emphasis on multilingualism, linguistic and cultural diversity, and globalisation. This explains why early developments in CLIL are often associated with the European Union's (EU) support for a multilingual Europe. This connection is clearly reflected in the EU's educational policies, which highlight the importance of teaching multiple subjects in non-native languages. As stated in a resolution by the European Parliament:

In its resolution of 12 June 2018 on modernisation of education in the EU, Parliament stressed the need to promote the teaching of at least two subjects through a non-native language at secondary school level and enhance language learning, so that students can successfully speak two languages in addition to their mother tongue (European Parliament, 2024, para. 14).

In fact, the 'mother tongue + 2' objective was already present in the EU Commission's 1995 White Paper on Education and Training, with its proposal that EU citizens should master three European languages: their L1, a language of international communication, and a personal adoptive language. Since then, language policies, implemented at different levels of commitment, have been based on institutional documents and recommendations for language learning, which address CLIL as an appropriate solution to achieve that objective (Nieto Moreno de Diezmas & Custodio Espinar, 2022; Ruiz de Zarobe, 2023).

Thus, CLIL as an educational approach was quickly adopted as a key instrument in education, supported by European institutions and language policy makers, and promoted by the European Commission as a method for improving language learning and the quality of teaching.

Learning through the medium of a foreign language has a major contribution to make to the Union's language learning goals. It can provide effective opportunities for pupils to use their new language skills now, rather than learn them now for use later. It opens doors on languages for a broader range of learners, nurturing self-confidence in young learners and those who have not responded well to formal language instruction in general education. It provides exposure to the language without requiring extra time in the curriculum (European Commission, Action Plan, 2003, p. 8).

Furthermore, it was recommended as a preferred educational approach because of its multiple benefits, which included the development of intercultural communication skills, improved language proficiency and oral

communication skills, opportunities to study content through different insights, and increased motivation and confidence of the learners. In addition, ‘linguistic and cultural competences lie at the heart of education. Proficiency in the first language may facilitate the learning of other languages, while early language learning, bilingual education and Content and Language Integrated Learning (CLIL) are effective means of improving language learning provision’ (Council of Europe, 2008, para. 21).

Following the European Commission’s recommendations to achieve multilingualism, most EU member states implemented CLIL in compulsory education, although responses to the approach varied from one member state to another. A number of parameters accounted for these differences, such as the population segments, age groups, types and language level of teachers involved, monolingual versus bilingual settings, and the role of assessment (Pérez Cañado, 2016a). Despite these differences, and considering this diversity, early developments of the CLIL approach were heavily policy driven. What is particularly interesting is that, alongside institutional interests, CLIL also gained momentum through a variety of individual projects led by school communities and stakeholders, all aimed at improving L2 learning. This two-fold trajectory, one driven by policy and the other by grassroots initiatives, helps explain the holistic nature of CLIL, contributing to its broader impact in international contexts.

3.2 CLIL around the Globe

Over the years, CLIL has gained ground beyond Europe, expanding to various countries around the world, including those in Latin America and Asia, where it adapts to local sociopolitical, historical, and cultural contexts as well as specific educational environments.

In South America, CLIL has been implemented mainly in private education sectors, in primary, secondary, and higher education settings (Banegas, Poole & Corrales, 2020). Research in the region has shown mixed results regarding the effectiveness of CLIL in supporting language learning and cognitive development (Banegas, 2021). However, research also shows promise in improving communicative competence, motivation, and even intercultural communication (Ruiz de Zarobe & Banegas, 2024). Although CLIL has been rapidly adopted in South American countries, and stakeholders show significant enthusiasm for its implementation, the approach requires specialised teacher training and the development of teacher-made CLIL materials. Additionally, more structured pre-service teacher training programmes are needed to prepare educators for CLIL (Banegas, 2021; Banegas & del Pozo Beamud, 2020).

In this regard, de Mejía and Garzón-Díaz (2024) highlight several key issues for CLIL implementation in South America. These include the need for a situated CLIL approach, ‘adapting rather than adopting CLIL methodologies developed in other countries, particularly in Europe’ (de Mejía & Garzón-Díaz, 2024, p. 19). Although the prospects for CLIL in countries such as Colombia appear very positive (Cuesta Medina & Ruiz de Zarobe, 2024; Garzón-Díaz, 2018), researchers in countries such as Brazil (Landau, Albuquerque Paraná, & Siqueira, 2021; Megale & Liberali, 2024) present a more critical view of the approach, advocating for language education that challenges monoglossic and monocultural perspectives and avoids perpetuating colonialism in the region. A situated CLIL approach also promotes situated language teacher education (Banegas & Ruiz de Zarobe, 2024), building stronger links between teacher education and school policy within a decolonising curriculum.

A second key issue raised by de Mejía and Garzón-Díaz (2024) concerns the (inter)cultural dimension of the approach. As Banegas and Sánchez (2023) argue, culture in CLIL can be enriched by adopting a social justice approach to prevent issues such as discrimination (Banegas and Ruiz de Zarobe, 2024; Porto, 2023). In practice, this could be addressed through projects involving all stakeholders in the school community.

In Asian school settings, research has shown significant potential for CLIL in improving both language proficiency and content knowledge. For example, Yamazaki (2019) demonstrated how CLIL, combined with collaborative learning, can enhance students’ competence in using content knowledge in everyday life in Japan, even among students of different proficiency levels. Similarly, the CLIL approach showed potential to improve content, communication, cognition, and community/culture awareness compared to regular EFL lessons in Japanese primary schools (Yamano, 2019).

Moreover, studies from other Asian countries provide further insights. In China, Zhu, Liu, Shu, and Wang (2024) compared two primary schools, one implementing a CLIL science programme and the other offering a conventional science programme. The results indicated no statistically significant differences in science achievement between CLIL and non-CLIL students, though the former achieved higher mean scores. Interestingly, receptive language skills correlated significantly with science scores, whereas productive language skills did not. Additionally, Beaudin (2021) showed that CLIL implementation improved students’ English proficiency and enjoyment in elementary schools in southern Taiwan. Students generally enjoyed CLIL and believed it enhanced their English skills. Similarly,

Rafi and Morgan (2023) found that a blended approach (i.e. integration of face-to-face and online learning) kept students engaged, improved knowledge acquisition, and created a dynamic learning space in a Bangladeshi school.

However, despite generally positive learner responses, challenges remain, particularly in balancing content and language learning and addressing the needs of learners with limited English proficiency (Yamazaki, 2019). For example, Karabassova (2018) showed how CLIL implementation in the trilingual context of Kazakhstan led teachers to prioritise content over language, focussing on teaching through another language but with limited pedagogical awareness. Mehisto, Winter, Kambatyrova, and Kurakbayev (2023) also revealed in a large-scale programme in Kazakhstan, the drawbacks of a centralised policy initiative, including a one-size-fits-all approach to teacher development and a mismatch between programme intentions and implementation.

Research conducted across diverse geographical contexts demonstrates that the European CLIL model cannot be directly transferred to other regions due to differing educational traditions, linguistic landscapes, and policy environments. In countries such as Japan, CLIL has emerged as a response to the need to reform traditional grammar-focussed English as a Foreign Language (EFL) instruction, promoting more communicative and contextually meaningful pedagogies. In Mainland China, the adoption of CLIL has been largely driven by efforts to internationalise education and enhance English proficiency in preparation for global competitiveness. In parts of South America, CLIL has been integrated into broader educational reforms aimed at modernising curricula, improving foreign language outcomes, and fostering stronger links with international academic and economic spheres. These varied motivations illustrate CLIL's adaptability to region-specific educational goals and challenges.

In line with this, Banegas (2021) suggests that CLIL implementation should be grounded in context-responsive models that reflect local needs. Similarly, Tsuchiya (2019) argues that CLIL has the potential to revolutionise language education in Japan by prioritising the development of generic competences over traditional language acquisition goals. In Japan, CLIL is often framed as 'soft CLIL' within EFL contexts (Ikeda, Izumi, Watanabe, Pinner, & Davis, 2023), while in Hong Kong, it is more commonly referred to as English-medium instruction (EMI) (Cheng, 2020; Wannagat, 2007). In each setting, the complex interplay of linguistic diversity and educational priorities gives rise to distinct challenges and opportunities for CLIL implementation.

Across these contexts, as has also frequently been noted in Europe, there remains a pressing need for more teacher-designed CLIL materials (for example, Penny & Ruiz de Zarobe, 2024; Ting, 2024) and professional development to support educators in delivering CLIL programmes effectively. This global picture points to a broader requirement for ongoing research and locally adapted approaches, which, as in Europe, call for a reconceptualisation of language learning and the adoption of innovative pedagogical perspectives (San Isidro, 2018).

CLIL has evolved from a European initiative into a global educational approach, adapting to different contexts and needs. While it holds considerable promise for integrating content and language learning, significant challenges remain due to the varying conditions of language education across regions (Mehisto et al., 2023; Siqueira, Landau & Albuquerque Paraná, 2018). In many of these settings, CLIL initiatives often rely on the local efforts of teachers and educational personnel. However, ensuring its long-term sustainability requires broader political support and greater coordination among key stakeholders.

3.3 Summary

CLIL has been widely adopted in Europe since the mid-1990s as part of a European multilingual policy aimed at enabling citizens to use several languages functionally. It has gained prominence in Europe and has also spread globally to regions such as Asia and Latin America, with each adapting the approach to its unique context and educational needs. Continued research and context-specific adaptation are essential for the effective implementation and ongoing development of CLIL worldwide.

4 The Effectiveness of CLIL

This section presents evidence based on research about the effectiveness of CLIL. We begin by reviewing studies on language learning outcomes, followed by an examination of its effects on content learning and the mother tongue. We then analyse research on attitudes and motivation, concluding with attention to diversity.

4.1 The Effects of CLIL on Language Learning

Research into the effectiveness of CLIL for language learning has been a central focus over recent decades. Much of this interest has revolved around whether CLIL can foster effective language acquisition or serve as an innovative approach to enhancing language performance

(Pérez Cañado, 2016b). Since much of this research has been conducted by applied linguists, early studies predominantly concentrated on language learning outcomes.

Early studies (see, for example, Dalton-Puffer, 2011 and Ruiz de Zarobe, 2011, for overviews) highlighted both the benefits of the approach and its problematic areas. On the basis of this earlier work, Ruiz de Zarobe (2015) expanded the research by identifying the competences, areas, or sub-skills where clear gains were observed:

- Listening
- Reading
- Receptive vocabulary
- Speaking (fluency, risk-taking associated with low affective filter)
- Writing (fluency and lexical and syntactic complexity)
- Some morphological phenomena
- Emotive/affective outcomes

and those areas which seemed unaffected or yielded indefinite results:

- Syntax
- Productive vocabulary
- Informal/non-technical language
- Writing (accuracy, discourse skills)
- Pronunciation (degree of foreign accent)

It should be noted that many of these studies compared CLIL learners with non-CLIL learners in mainstream classes (i.e. EFL learners). In some cases, CLIL learners received a number of CLIL lessons (e.g. science) in addition to traditional EFL instruction. As a result, the total number of hours of English exposure differed between the two groups. This led to calls for comparisons between CLIL learners and non-CLIL learners with an equivalent number of English hours, even if the latter were from higher year groups (see, for instance, Lasagabaster, 2008 and Ruiz de Zarobe, 2010).

As pointed out by Ruiz de Zarobe (2015), some of the outcomes were inconclusive due to the limited research available at the time on certain skills or competences, such as listening. In addition, the small sample sizes in some studies, along with the scarcity of longitudinal research and the need for more robust statistical analyses, were noted as limitations (Pérez Cañado, 2012).

More up-to-date research has tried to overcome some of these limitations. Notably, Pérez Cañado (2018a) reported on a longitudinal study

carried out with 1,033 CLIL students and 991 EFL learners in 53 public, private, and charter schools across 12 Spanish provinces into the effects of CLIL on FL achievement (grammar, vocabulary, reading, listening, and speaking) from primary education to compulsory secondary education and baccalaureate. Controlling for the homogeneity of both strands (bilingual/CLIL and non-bilingual/EFL), intergroup and intragroup evolution was examined. Results revealed that the CLIL group showed significant differences in overall proficiency already in primary education, with a positive and more marked difference in secondary education. Discriminant analyses demonstrated that the CLIL approach explained these differences better than other factors such as verbal intelligence, extramural exposure to English, or socioeconomic status (SES).

These positive results have been supported by other studies. For example, Merino and Lasagabaster (2018) showed how CLIL learners obtained significantly higher scores in English as a third language (L3) compared to non-CLIL groups in a one-year longitudinal study of secondary school students, although similar development was observed in both rounds of testing between CLIL and non-CLIL groups. No significant differences were found in the students' L1 and L2 (Spanish and Basque) developments, despite the fact that CLIL students were less exposed to Basque in the school context. In a rural context in Galicia, another region in northern Spain, San Isidro and Lasagabaster (2019) revealed how CLIL students showed greater improvement than their non-CLIL counterparts over the two years of the project, both in general proficiency and in the four language skills (listening, speaking, reading, and writing), in secondary education. Interestingly, the CLIL group's improvement in Galician and Spanish was higher than that of the non-CLIL group, and there seemed to be no negative effect resulting from minimising the exposure to Galician in the CLIL group.

Comparing CLIL and non-CLIL groups in public schools, Martínez Agudo (2020) found that CLIL students in public schools had significant advantages in English language proficiency at the end of secondary education, which was even more marked at the end of the first year of baccalaureate. On the other hand, non-CLIL learners in public schools showed significantly lower performance on all measures at all levels compared with non-CLIL learners in charter schools. However, when comparing public school CLIL students with charter school non-CLIL students, no statistically significant differences were found in the language skills assessed, which seemed to indicate that CLIL compensated for the advantage that charter schools tend to have in overall academic performance and English language proficiency.

Some of these studies, despite addressing limitations identified in earlier research, produced results that remained largely consistent with previous findings. As Nieto Moreno de Diezmas and Custodio Espinar (2022, p. 62) observe, ‘interestingly enough, most of the findings of these longitudinal studies using meticulous statistical analyses backed up results and trends already found in previous cross-sectional investigations’.

Apart from recent studies on language outcomes, another wave of research has undertaken several meta-analyses to investigate the effects of CLIL. These include Goris, Denessen, and Verhoeven (2019), who conducted a review of longitudinal studies on the effects of CLIL on various language skills in EFL. The findings provided clear indications of the contexts in which CLIL led to significantly better outcomes in L2. CLIL was best profiled in contexts such as Spain, with strong support for the introduction of CLIL, although the country remained a ‘low EFL proficiency country’ in the EU and, according to the authors, is still at less advanced stages of EFL skills. Countries such as the Netherlands and Germany, with a high level of EFL proficiency and an elitist and highly selective CLIL, have gained little on the assessment scales.

Lee, Lee, and Lo (2023) extended the earlier meta-analysis by Lo and Lo (2014) regarding the effectiveness of English-medium instruction on secondary-level students’ English learning in Hong Kong, incorporating 44 samples from 38 primary studies. Their findings revealed the effectiveness of CLIL for improving English language competence compared to mainstream education. However, greater benefits were observed for learners whose first language was linguistically closer to English and in studies measuring vocabulary acquisition. In contrast, lower effectiveness was reported in studies assessing productive skills rather than receptive or overall proficiency. Building on this work, Lee, Lee, and Lo (2025) conducted a multi-level meta-analysis focussed specifically on primary education. The results indicated that CLIL significantly enhances foreign language learning, particularly speaking skills, without adversely affecting content knowledge. Nevertheless, the effectiveness varied depending on the research design, and a slight decline in impact over time highlighted the need for more robust and context-responsive research approaches.

In brief, these studies suggest that CLIL is often effective in improving FL skills, particularly in English. However, the effectiveness of CLIL may be influenced by factors such as the skill analysed or the linguistic relationship between the learners’ L1 and the target language. Since CLIL addresses the balance between content and language instruction,

the following section will discuss the outcomes in terms of content of the approach, as well as the effect on the L1.

4.2 The Effects of CLIL on Content and L1 Learning

The effectiveness of CLIL in the school environment shows a complex picture. Although, as seen in the previous section, many CLIL programmes systematically improve L2 acquisition, their impact on content learning and their effect on the L1 varies. While the earlier discussion focussed specifically on L2 outcomes, the central aim of CLIL and the most commonly assessed domain, this section considers content and L1 learning together, as both reflect core aspects of students' academic development in their familiar languages. Examining them jointly provides a fuller understanding of whether CLIL supports or compromises students' broader educational progress beyond the target language.

Positive outcomes have been found in different geographical contexts, mainly in European settings. Some of the earliest studies on content performance include countries such as Finland, where Jäppinen (2005) found that CLIL environments provided favourable conditions for content learning, with no statistically significant differences between students learning mathematics and science in their mother tongue and those learning through English in secondary education. Similarly, Admiraal, Westhoff, and de Bot (2006) in the Netherlands found no differences in subject outcomes in their longitudinal study of school-leaving examinations, despite some content subjects (history and geography) having been taught through English. In Switzerland, Stohler (2006) examined several schools where German or French were used as a foreign language and found no significant differences in knowledge acquisition when students were taught in their L1 or through the FL.

Moving forward in time, Surmont, Struys, Noort, and Craen (2016) examined first-year secondary school pupils in a school in Flanders, the Dutch-speaking part of Belgium. The results showed how CLIL seemed to positively impact pupils' mathematical performance, even after a short period (3 months). A few years later, in their longitudinal study, Bulté, Surmont, and Martens (2021) investigated the effect of learning content subjects in French on secondary school students' listening comprehension and speaking in French, as well as their reading comprehension in Dutch. The results showed that following a CLIL programme positively affected listening comprehension and speaking in French, while it did not impact reading comprehension in Dutch, their L1. These results suggest that even

a limited amount of CLIL (one to five hours per week) may positively influence learners' proficiency in the target language without detrimental effects on the L1.

In Spain, as mentioned in the previous section, Merino and Lasagabaster (2018) and San Isidro and Lasagabaster (2019) showed how CLIL students outperformed their non-CLIL counterparts in two bilingual communities in Spain (Basque Country and Galicia), without negatively affecting the official languages of the community, despite a reduction in time allocated to those languages. These findings corroborated earlier research in the Basque Country (e.g. Grisaleña, Alonso, & Campo, 2009).

Also in Spain, particularly in Andalusia, Pérez Cañado (2018a), in the large longitudinal study discussed earlier, showed that CLIL had a beneficial impact on content learning, with a significant positive effect over time (from primary to secondary education), without negatively affecting L1 proficiency. These results were further supported by Hughes and Madrid (2019), whose findings indicated that CLIL instruction had no detrimental effects, and even positive ones, on secondary students' science learning. Similarly, Navarro-Pablo and López Gándara (2020) found that students in CLIL programmes performed better in end-of-year Spanish language and literature assessments than their non-CLIL peers, regardless of whether they were in rural or urban settings. The amount, distribution, and type of L1 and FL input in CLIL classes could explain these positive results in the L1.

In addition, Barrios (2021), also working within the same Andalusian project, showed that curricular competence in Spanish as L1 was not negatively affected, as L1 school grades of CLIL students were comparable to those of students in regular classes. However, intervening variables such as setting, gender, parents' education level, and extramural exposure to English seemed to have different effects on the grades of CLIL and non-CLIL groups.

More recently, in French-speaking Belgium, Szmalec et al. (2024) examined official end-of-year external evaluations of a large number of primary and secondary school students in both CLIL and non-CLIL programmes. For primary students, external assessments focussed on mathematics, history and geography, science, and French, while for secondary students, they assessed history and French. The results showed that CLIL students, like their non-CLIL peers, achieved the curriculum goals and acquired the necessary subject matter, even when taught through an FL (English or Dutch). These findings held even when controlling for cognitive and demographic variables. Notably, these evaluations are identical

for all schools in French-speaking Belgium and are conducted in the main school language, French, which makes the results especially significant.

However, some research has shown negative or limiting effects of CLIL on content learning. In Germany, Dallinger, Jonkmann, Holm, and Fiege (2016) compared CLIL and non-CLIL learners of English, controlling for a range of learner, classroom, and teacher characteristics. While the CLIL group showed greater improvement in listening comprehension, this was not the case for general English skills. Moreover, in history, both groups achieved comparable knowledge gains over the school year, even though CLIL students received more hours of instruction (three hours per week versus two). These outcomes suggest that CLIL programmes may need additional instructional time to achieve equivalent content learning outcomes.

Three studies in Spain also reported disappointing results. In the Community of Madrid, Sotoca (2014) analysed students in third to sixth grade across twelve public schools. Academic performance was measured via grade point average (GPA) and external examinations. External tests showed significant differences in favour of bilingual schools in language and mathematics in year 6, but not in year 4. However, school grades revealed significant differences in favour of non-bilingual schools in environmental knowledge and English. Also in Madrid, Anghel, Cabrales, and Carro (2016) evaluated a bilingual programme in which at least science, history, and geography were taught in English. Their findings showed a clear negative effect on test scores in subjects taught in English, especially among children whose parents had not completed upper secondary education. This negative effect was not present for students taught in Spanish.

Similarly, Fernández-Sanjurjo, Arias Blanco, and Fernández-Costales (2017), also in Spain, confirmed similar results, finding that students taught in Spanish performed slightly better in science at the end of primary education than those taught in English. These findings align with earlier studies (Bergroth, 2006; Seikkula-Leino, 2007), which suggest that non-CLIL programmes produce a higher number of overachieving students. Fernández-Sanjurjo et al. also point to socioeconomic factors: students from lower SES backgrounds tend to obtain lower scores in CLIL programmes.

As this sample of studies shows, the effects of CLIL on content and L1 learning are less conclusive than those on L2 acquisition. Overall, research suggests that CLIL programmes do not hinder L1 development and may even support it. Similarly, some studies report positive outcomes in content learning, though the degree of benefit appears to depend on

contextual factors such as programme intensity and implementation. As Morton notes, ‘content has been something of a poor relation in CLIL research and practice’ (Morton, 2023, p. 523), with relatively few studies addressing this domain. While some findings suggest that CLIL learners outperform their non-CLIL peers in content subjects, others point to neutral or even negative effects. Ultimately, other variables likely influence the success of CLIL implementation. In the following section, we focus on motivation and attitudes towards CLIL.

4.3 Attitudes and Motivation in CLIL

Motivation is widely regarded as one of the most influential factors in L2 acquisition. As in other L2 learning contexts, learner attitudes and motivation have been the focus of extensive research in CLIL settings. This field has evolved considerably over time: early studies often relied on small-scale or cross-sectional data, but recent years have seen an increase in longitudinal research, the use of more representative samples, and more sophisticated statistical analyses. This shift reflects a growing effort to better understand the dynamic and multifaceted nature of motivation in CLIL contexts and to produce more reliable findings.

Research consistently shows that students and families involved in CLIL develop more positive attitudes and higher motivation towards language learning compared to non-CLIL settings (Amengual-Pizarro & Prieto-Arra, 2015; Merisuo-Strom, 2007; Pérez Cañado, 2021; Sylvén & Thompson, 2015). Motivational variables also positively affect language achievement (Navarro-Pablo, 2018; Pfenninger, 2016) and are closely related to strategy use (Gutiérrez & Ruiz de Zarobe, 2019; Ruiz de Zarobe & Smala, 2020) in CLIL contexts. Although most studies focus on English as an FL, positive outcomes have also been found with other languages, such as French. Bower (2019), for instance, revealed favourable perceptions of CLIL methodology and high levels of concentration, effort, enjoyment, and progress, particularly in the Partial Immersion Model, where the depth of cooperation and enhanced linguistic competence promoted greater engagement and motivation.

Several longitudinal studies have sought to analyse the effect of CLIL on motivation. For example, Lasagabaster and Doiz (2017) compared CLIL and non-CLIL learners in secondary schools in the Basque Country. They found that CLIL students were initially more intrinsically and instrumentally motivated and showed a greater interest in foreign languages and cultures. However, their motivation declined over time, likely because the programme lost its novelty.

In another two-year longitudinal study in Spain, Pladevall-Ballester (2019) examined fifth and sixth graders' motivation in CLIL and non-CLIL contexts with low FL exposure. She found that CLIL learners increased their motivation over time, even in low-exposure settings, maintaining positive language attitudes. While the subject type had some influence, arts and crafts learners showed a greater increase than science learners, these differences were not statistically significant. The study suggests that CLIL can enhance primary learners' motivation towards the FL even in contexts with limited exposure.

The intensity of CLIL instruction has also been explored. Somers and Llinares (2018) compared first-year secondary students in two strands of CLIL in the Community of Madrid: a high-intensity 'Sección Bilingüe' and a low-intensity 'Programa Bilingüe'. Although students were generally highly motivated, an instrumental orientation predominated, reflecting awareness of the practical value of bilingual education. Students in the low-intensity strand showed lower levels of both intrinsic and instrumental motivation.

Also in the Community of Madrid, Fernández-Agüero and Hidalgo-McCabe (2020) looked into the affective factors influencing students' experiences in CLIL at the beginning of bilingual secondary education in both high-intensity and low-intensity strands. Findings indicated that instrumental motivation played an important role in these students' views, with variations depending on the strand, that is, students in the high-intensity strand seemed to see themselves more at ease and in control of their choices, whereas low-intensity strand students experienced more ambivalence over the transition. It needs to be remembered here that students from bilingual schools in the Community of Madrid may have significant differences in their views on education, teachers, and schooling, which may be influenced by their motivation and school characteristics (Buckingham, Álvarez, & Halbach, 2022; Chaieberras & Rascón-Moreno, 2018).

In their endeavour to analyse the effect of intensity in CLIL, Azpilicueta-Martínez and Lázaro-Ibarrola (2023) explored the effect of different levels of CLIL exposure on L2 motivation with primary school children. Their results showed that high-CLIL exposure led to significantly higher motivation levels compared to low-CLIL and non-CLIL exposure in all five measures analysed: L2 learning experience, integrativeness, instrumentality-promotion, degree of difficulty of learning languages (including English), and L2 self-appraisal.

Addressing different target languages and instruction levels, de Smet, Mettwie, Hiligsmann, Galand, and Mensel (2019) investigated

language attitudes and motivation in CLIL on a large scale across two target languages (English and Dutch) and two instruction levels (primary and secondary). Questionnaire data were collected in French-speaking Belgium, measuring the students' language attitudes in terms of perceived easiness and attractiveness of the target language, and their motivation in terms of expectancy for success, task value, and cost. The outcomes showed that pupils reported more positive attitudes and higher motivation in CLIL compared to non-CLIL and in English compared to Dutch, especially at secondary level. The target language (English vs. Dutch) seemed to play a more crucial role than CLIL vs. non-CLIL regarding language attitudes and motivation.

Differences related to the role of the target language were also identified by Lázaro-Ibarrola and Azpilicueta-Martínez (2024), who compared motivation in CLIL and non-CLIL primary school learners within a Basque-immersion context. Using Dörnyei's (2009) L2 Motivational Self System (L2MSS) framework, they reported a significantly positive impact of CLIL on motivation towards English in the 'ideal L2 self', that is, the learner's imagined future self as a competent L2 user, and in the 'L2 learning experience' dimensions. However, they also found a negative impact of CLIL on participants' instrumental motivation to learn Basque. These findings suggest that increasing exposure to the FL through CLIL lessons may enhance motivation towards English, while potentially diminishing instrumental motivation towards the minority language, Basque.

Based in the Netherlands, the study by Mearns, de Graaff, and Coyle (2020) examined motivational differences between learners in Dutch-English bilingual and mainstream education during the first three years of general secondary education. The results showed that learners in the bilingual education programme demonstrated greater motivation in nearly all areas examined, although there was a decline in positivity between the first and third years within the bilingual strand regarding their experience of English lessons. As the authors argue, the key issue is whether there is 'motivation for or from bilingual education', that is, whether the learners' choice to enrol in the bilingual programme influenced the results, as they may have been more inherently motivated from the outset. These findings align with previous research in which students exhibited high motivation before entering such programmes, a phenomenon referred to as the 'creaming effect' of selection procedures (San Isidro & Pérez Cañado, 2023, p. 273; Surmont et al., 2016, p. 324). Other factors, such as past experience, personality, and personal interests, may also help increase motivation and improve attitudes (Sylvén & Thompson, 2015).

Bringing a different perspective, Rumlich (2017), in a large-scale study of CLIL streams in German secondary schools, where up to three content subjects were taught in English, found that after two years, CLIL showed no benefits for overall EFL proficiency or interest in EFL classes, though there was a small increase in EFL self-concept. These results suggest that not all language competences and affective-motivational dispositions benefit equally from CLIL in the German context.

Overall, research indicates that CLIL instruction generally fosters higher motivation and more positive attitudes towards language learning compared to traditional non-CLIL settings. These benefits are observed across various educational levels and subjects, although the stability of motivation may change over time. CLIL may also enhance language proficiency, yet its impact on overall proficiency and interest in EFL appears limited and context dependent. As San Isidro and Pérez Cañado (2023, p. 279) point out, these ‘mixed results give rise to the question as to whether it is only the CLIL approach that leads to improved attitudes and motivations, or the pedagogy used, the type of subject or the target language (mainly English)’. As research continues to evolve with more robust designs and longitudinal data, it becomes clear that motivation in CLIL depends on a mix of teaching practices, context, and personal factors, leading to more reflection on how CLIL is used and who benefits most from it.

4.4 Attention to Diversity in CLIL

Diversity in CLIL refers to the various ways in which CLIL programmes address the different needs, backgrounds, and abilities of students. This encompasses a wide range of factors, including cultural backgrounds, SES, gender, abilities, and ethnicities. This approach is visually represented in Figure 2, which illustrates how the DIDI theoretical framework (Pérez Cañado, 2023) conceptualises diversity as an umbrella term that supports inclusive education for all students, regardless of their SES, educational background, or level of attainment. This notion of diversity is

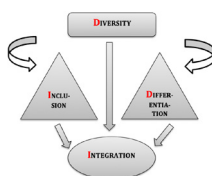


Figure 2 The DIDI framework (based on Pérez Cañado, 2023)

underpinned by the principles of inclusion and differentiation: inclusion of learners at risk of marginalisation and differentiation for learners with varying abilities and backgrounds. Ultimately, this fosters the integration of students from diverse realities, which has the potential to transform educational systems and models.

Inclusion in education is also closely linked to social justice (Artiles, Harris-Murri, & Rostenberg, 2006; DeMatthews & Mawhinney, 2014; Polat, 2011). The intersection between CLIL and social justice has attracted increasing attention, particularly regarding its potential to promote equity and inclusion in education. As CLIL programmes have become more widespread, attention to diversity within these classrooms has emerged as a critical area of research. This is especially relevant given that CLIL has sometimes been viewed as elitist or segregationist (Broca, 2016; Bruton, 2011, 2013, 2015, 2019; Paran, 2013). For instance, in her survey, Broca (2016) reports that CLIL students believe their programmes are selective and tend to exclude students with lower academic abilities. Other authors, such as Bruton (2013), argue that the selective nature of CLIL programmes may exacerbate educational inequalities, as less privileged students may not have equal access to these opportunities, thereby widening the gap between socioeconomic groups.

CLIL programmes are therefore sometimes perceived as elitist due to selection biases, with SES being a significant predictor of participation, often favouring socially privileged learners. Indeed, several studies indicate that SES is an important factor influencing learners' participation in CLIL programmes. In some cases, students from higher SES backgrounds are more likely to enrol in CLIL, suggesting a selection bias towards more advantaged learners. For example, Van Mensel, Hiligsmann, Mettewie, and Galand (2020) show that CLIL programmes in French-speaking Belgium are particularly attractive to socially privileged audiences, with SES being the main predictor of selection, compared to other variables such as non-verbal intelligence. Moreover, Dutch CLIL programmes appear to be more selective than English CLIL programmes in this context. Caira, Surmont, and Struys (2024) further present evidence that SES and school size are strong predictors of the presence of English CLIL programmes in Belgium, contributing to concerns about educational equity.

However, other authors (e.g. Ainsworth & Shepherd, 2017; Lorenzo, Granados, & Rico, 2021; Pérez Cañado, 2020; Rascón Moreno & Bretones, 2018) suggest that while certain socioeconomic variables influence language instruction in both CLIL and non-CLIL contexts, the effect may be

less pronounced in CLIL settings. The ‘levelling effect’ of CLIL is evident in its capacity to reduce educational disparities related to SES (Iwaniec & Halbach, 2021; Rascón Moreno & Bretones, 2018), as well as other factors such as rural-urban divides (Pavón Vázquez, 2018) and gender differences (Martínez Agudo, 2021).

Notably, Halbach and Iwaniec (2020) and Iwaniec and Halbach (2021) confirm that CLIL helps reduce SES differences among students and promotes high levels of motivation overall by creating a learning environment that supports autonomy, competence, and relatedness. This suggests that CLIL can be effective in disadvantaged contexts or less academic educational tracks (Denman, Schooten & Graaff, 2022; Grandinetti, Langellotti, & Ting, 2013), although this is not always the case.

Consequently, the contribution of CLIL to inclusion and equity has been both questioned and explored through conceptual and empirical studies across different contexts and educational levels (Llinares & Cross, 2022). The central question remains whether this educational model can genuinely contribute to, or hinder, equitable and inclusive education. For example, in their study on diversity, Nikula, Skinnari, and Mård-Miettinen (2022) report that Finnish CLIL teachers and students emphasise equality (i.e. the same for all) in teaching and assessment, while equity (i.e. personalised support) receives less attention, leading to tensions between maintaining equality and addressing individual needs.

In a comparable vein, research from the German context by Siepmann, Rumlich, Matz, and Römhild (2021) shows through multi-perspective studies that although diversity is often acknowledged in CLIL classrooms, challenges persist in effectively addressing a diverse student population. A similar picture emerges from studies conducted in Spain (Casas Pedrosa & Rascón Moreno, 2021; McClintic, 2022), where addressing diversity in CLIL is considered important in areas such as linguistic aspects, methodology, materials and resources, assessment, and teacher coordination and development. However, Spanish CLIL teachers still face significant obstacles and limitations in this regard.

In all cases, CLIL provision must be redesigned to accommodate educational differentiation (Madrid & Pérez Cañado, 2018; Pérez Cañado, 2021), by addressing special needs and ensuring it is genuinely inclusive for all learners. Research further underscores the importance of developing and implementing diversity-sensitive pedagogical practices, such as scaffolding and learner-centred designs, to foster academic success for all students (Bauer-Marschallinger, Dalton-Puffer, Heaney, Katzinger, & Smit, 2021; Pérez Cañado, 2024).

This synthesis of the role of CLIL in promoting equity and inclusion reveals mixed results, highlighting both the opportunities and the challenges of ensuring fair access to quality education through CLIL. While CLIL programmes strive to address diversity through various pedagogical strategies, significant challenges remain in effectively meeting the diverse needs of learners. More effective differentiation, improved teacher training, and a better balance between equality and equity are essential to ensure that all learners benefit from CLIL. Furthermore, greater (inter) cultural and multilingual awareness is crucial to making CLIL provision more inclusive (Garcia, 2012; Porto, 2023).

As this remains a relatively new area of research, further studies are needed to explore the challenges and strategies involved in ensuring that CLIL is inclusive and equitable for all learners. Some of these strategies include differentiation techniques, inclusive pedagogical approaches, multimodal communication, and collaborative professional learning. For example, as Liu and Lin (2021) argue, reconceptualising language in CLIL as a multimodal dimension and adopting a pedagogy of multiliteracies can help address diversity and foster a more equitable classroom and school culture.

Additionally, an integrated approach that involves teachers as researchers, working in partnership with learners, can empower diverse students to participate meaningfully and feel valued, thereby promoting social justice and inclusion (Banegas & Ruiz de Zarobe, 2024; Coyle, Bower, Foley, & Hancock, 2021). Pérez Cañado (2024) also identifies several critical factors for achieving inclusion in CLIL programmes. These include aligning teacher and student perspectives to develop effective inclusive strategies, as well as addressing persistent challenges such as allocating time for coordination and adequately preparing language assistants.

CLIL research thus highlights a complex interplay between elitism and diversity. While concerns remain about socioeconomic selection biases contributing to an elitist model, significant efforts are being made to render CLIL more inclusive. Both teachers and learners acknowledge the need for more personalised support and effective differentiation techniques to accommodate diverse student populations. Ongoing research and the development of inclusive practices and resources are essential to ensure that CLIL can meet the needs of all learners.

4.5 Summary

Early research on CLIL focussed primarily on language learning outcomes, while more recent studies emphasise CLIL's unique educational approach, which aims to integrate content and language acquisition.

Findings indicate that CLIL enhances second language learning, student motivation, and engagement. Other aspects, such as attention to diversity, have also gained importance. Overall, CLIL appears to be an effective method for integrating language and content learning without compromising students' content knowledge or L1 development. As the next section will show, the potential role of the L1 in CLIL settings is increasingly acknowledged, challenging traditional monolingual immersion ideologies and encouraging a more flexible and balanced approach.

5 Pedagogical Approaches to CLIL

In this section, we examine two emerging CLIL pedagogical approaches that aim to enhance both language and content learning by harnessing multiple languages and semiotic resources to create a dynamic, inclusive environment. These approaches, translanguageing and multimodality, have gained significant attention in recent years for their potential to address the complexities of multilingual classrooms and to support diverse learners more effectively.

5.1 Translanguageing and CLIL

The concept of translanguageing originates in the Welsh notion of *trawsieithu* (Williams, 1996) and traces back to English–Welsh bilingual education in the 1980s (Lewis, Jones, & Baker, 2012). Translanguageing can refer both to the spontaneous alternation between languages and to a pedagogical approach in which teachers deliberately support this practice (see Section 5.2 for a more comprehensive definition of the concept).

This approach has gained traction in multilingual education settings worldwide, though it has also sparked some controversy regarding the differences between translanguageing and more traditional concepts such as codeswitching. Both concepts are central to the study of multilingualism, but according to some authors (see, for example, Anderson, 2024 and Treffers-Daller, 2024, for alternative views), they differ in their theoretical underpinnings and practical applications. Codeswitching is traditionally understood as alternating between two distinct language systems, often marked by clear boundaries between the languages used, whereas translanguageing is seen as a holistic practice in which bilinguals draw from a single, integrated linguistic repertoire without strict boundaries between languages (Cenoz, 2017; Lin, 2020).

Translanguageing research emphasises the dynamic and fluid nature of bilingual communication, viewing it as a natural and integrated part of bilingual speakers' linguistic competence. Additionally, there are two

approaches to translanguaging: one advocates softening boundaries in bilingual education, while a second ‘strong’ version postulates a single linguistic repertoire for bilingual speakers (Garcia & Lin, 2016). Beyond these considerations, translanguaging implies ‘the deployment of a speaker’s full linguistic repertoire without regard for watchful adherence to the socially and politically defined boundaries of named (and usually national and state) languages’ (Otheguy, Garcia, & Reid, 2015, p. 284).

Setting aside the dichotomy between codeswitching and translanguaging (and related concepts, see, for instance, Marshall & Moore, 2018 and Li, 2018), we can appreciate how translanguaging is rooted in the so-called ‘multilingual turn’ (Canagarajah, 2013; May, 2013), which refers to a significant shift in language education that challenges traditional monolingual norms and embraces multilingualism as a resource, focussing on the dynamic and complex nature of language learning and use.

In CLIL settings, translanguaging has mainly been developed for instructional purposes as a way to create an engaging learning environment that enhances students’ acquisition of content knowledge and language skills. In CLIL research, the field has evolved from an initial phase where studies focussed on the use and role of the L1 (for example, Lasagabaster, 2013; Lin, 2015; Méndez García & Pavón Vázquez, 2012) to a later phase with a clear focus on translanguaging itself. In this second group, studies report students using their full linguistic repertoire, either spontaneously or pedagogically, which leads to better understanding and retention of subject matter. Spontaneous translanguaging refers to learners’ natural use of all their languages to make meaning or communicate with peers, often emerging informally during classroom interactions. In contrast, pedagogical translanguaging is deliberately planned and facilitated by teachers as part of instruction, involving structured opportunities for students to draw on their whole linguistic repertoires to support learning objectives.

Among studies investigating translanguaging, Bieri (2018) conducted a qualitative analysis of transcripts from CLIL (English) and non-CLIL (German) biology lessons in Switzerland. The findings revealed that using students’ source languages to explain technical vocabulary was particularly effective for negotiating meaning. Interestingly, the teacher who most strongly advocated for an English-only policy in the classroom engaged in translanguaging more frequently than others, suggesting that teachers may be unaware of their own translanguaging practices, or that their beliefs do not always align with their classroom practices (see also, for instance, Arocena, 2017 and Gorter & Arocena, 2020). In the Basque Country,

Leonet, Cenoz, and Gorter (2020) reported on a study of cognate identification and cognate awareness conducted in a multilingual primary school (Basque, Spanish, and English). The results indicated that pedagogical translanguaging positively influenced morphological awareness and the multilingual learners' perception of their multilingual repertoire.

Nikula and Moore (2019), in their exploratory study in Austria, Finland, and Spain, highlighted that translanguaging in CLIL contexts can be a valuable tool for bilingual learning, with pedagogical and interpersonal motivations influencing language choices in CLIL classrooms. The study suggests that L1 should be appreciated as a valuable tool in bilingual learning situations, advocating for increased awareness of its benefits. Other authors, such as Pavón Vázquez and Ramos Ordoñez (2019), argue that the use of the L1 in CLIL classes does not negatively affect content learning, but it reduces the time students devote to using the L2.

Several researchers in Asia have reported on the beneficial use of translanguaging. Lin and He (2017) showed how translanguaging occurred naturally in CLIL classrooms despite dominant monolingual instruction policies, as students and teachers engaged in meaning-making about lesson topics. Wu and Lin (2019) also demonstrated how translanguaging and trans-semiotising practices (i.e. the process of making meaning by shifting between or combining different modes of communication, such as language, images, gestures, and symbols) in a CLIL biology class in Hong Kong positively impacted students' ongoing co-construction of knowledge and understanding of biology concepts. Liu (2020) applied the same theory of translanguaging and trans-semiotising in CLIL classrooms to challenge the dominance of English and contest cultural patterns by orchestrating Cantonese and English, formal and social languages, visual elements, and physical items. Finally, Sohn, dos Santos, and Lin (2022) asserted that translanguaging pedagogies in CLIL involve a critical integration of content and language learning in multilingual settings, challenging English-only pedagogies. It appears that CLIL can differentiate itself from monolingual L2 immersion education models by being more flexible and balanced in incorporating L1 in CLIL lessons.

Beyond the benefits of these multilingual practices, another research strand has examined student and teacher attitudes towards this instructional approach. Most studies show that students tend to have positive attitudes towards translanguaging, appreciating the flexibility and support it provides in learning both language and content (Rafi & Morgan, 2023;

Wu & Lin, 2019), even at a very early age (Aleksić & Garcia, 2022; Vega Pérez & Ruiz de Zarobe, 2024).

However, teachers may hold contradictory or negative perceptions of translanguaging due to ideological and sociopolitical factors, such as the prestige of the target language and institutional policies. For example, Karabassova and San Isidro (2023) found that Kazakhstani CLIL teachers use translanguaging as scaffolding, transitional practice, and to compensate for their own language proficiency limits in teaching trilingual learners. Rafi and Morgan (2023) showed how combining translanguaging and CLIL in Bangladeshi classrooms improved student engagement and content knowledge but faced ideological challenges stemming from sociopolitical realities. In other studies (e.g. Haukås, 2016; Portolés & Martí, 2018; Tarnanen & Palviainen, 2018), teachers view multilingualism as a potentially positive asset but are reluctant to use it in the classroom or require time to become familiar with the approach (Galante, 2020).

Overall, translanguaging as a theoretical and instructional approach involves strategies that integrate multiple languages to develop multilingual repertoires and metalinguistic awareness. It promotes support for and development of all languages used by learners (Cenoz & Gorter, 2021). The research presented here shows that translanguaging in CLIL offers both pedagogical and interpersonal benefits that improve student engagement and comprehension. Translanguaging is learner-centred and, as such, should tap into the entire multilingual and multimodal linguistic repertoires of learners, allowing them to benefit from their multilingualism. However, translanguaging also faces challenges related to ideological complexities and monolingual viewpoints; teachers' perceptions may vary, highlighting the need for awareness and training (Cenoz & Santos, 2020).

Another concern relates to the difficulty of pedagogically developing some principles and strategies of translanguaging. Beyond the strategic use of the L1 by teachers and students to reinforce content learning, deepen understanding, and engage students more effectively, alternating between input and output languages within the same lesson can promote metalinguistic awareness and help students cope with complex academic language (Cenoz & Gorter, 2022). Another possibility is the incorporation of multimodal and semiotic resources, such as gestures, visual aids, and other semiotic tools alongside translanguaging practices, to support meaning-making and enhance comprehension (He & Lin, 2021; Wu & Lin, 2019). In the next section, we will address multimodality and CLIL in more detail.

5.2 CLIL and Multimodality

Multimodal approaches in CLIL involve integrating various semiotic resources to support both content and language learning. These resources include visual aids, gestures, and digital tools, which help make complex concepts more accessible to students. In the previous section, we already mentioned research focussing on multimodality, as several studies on translanguaging also incorporate the concept of trans-semiotising (He & Lin, 2021; Lin & He, 2017; Liu, 2020; Wu & Lin, 2019). While translanguaging involves the fluid use of multiple languages beyond traditional linguistic boundaries, trans-semiotising specifically refers to the use of various semiotic resources, such as visual, gestural, or other multimodal elements, alongside linguistic ones to collaboratively co-construct meaning. This combination enriches the learning process, allowing students to express and understand content in diverse and dynamic ways.

Some authors (Li, 2018; Li & Garcia, 2022; Tai, 2023; Tai & Li, 2024) even argue that the very concept of translanguaging encompasses both constructs: ‘Translanguaging offers a practical theory of language that sees the latter as a multilingual, multisemiotic, multisensory, and multimodal resource that human beings use for thinking and for communicating thought’ (Li, 2018, p. 26). According to these scholars, translanguaging as a theory (i.e. translanguaging pedagogy, rather than pedagogical translanguaging) highlights the multimodal and multisensory nature of multilingual users’ social interactions, going beyond named languages and acknowledging the diverse linguistic and cultural practices of multilingual students (Li & Garcia, 2022). In any case, multimodal approaches have been shown to positively impact students’ comprehension and engagement in CLIL classrooms, where semiotic resources facilitate understanding of content delivered in the additional language.

Drawing on various theoretical perspectives, some research on CLIL has examined classroom interaction, focussing on both the use of multimodal resources and the teacher’s role in fostering participation and comprehension. Among these approaches is Multimodal Conversation Analysis, a research framework that explores how modalities such as gestures and written texts are employed as resources for interaction in CLIL settings. This approach underscores the importance of multimodal resources in ensuring understanding and encouraging student participation (Evnitskaya & Jakonen, 2017).

In Finland, Kääntä, Kasper, and Piirainen-Marsh (2018) applied Multimodal Conversation Analysis to investigate how a science teacher in a

CLIL programme employed various definitional practices in an English-medium physics class. Their study highlights the value of coordinating multilingual and multimodal practices to effectively define and contextualise physical phenomena. Similarly, in an exploratory study, Evnitskaya and Morton (2011) demonstrated how students' willingness to participate in classroom interaction fluctuated, influenced by factors such as attentiveness, turn-taking, and participation roles.

Within the Systemic Functional Multimodal Discourse Approach, Fernández-Fontecha, O'Halloran, Wignell, and Tan (2020) showed that visual thinking methodologies can be effective in science education. Moreover, incorporating visual and other semiotic resources can scaffold both language and content learning, making complex concepts more accessible and supporting translanguaging practices in the classroom. Teachers' use of multimodal resources in dialogic discussions can also mediate and remediate content, offering students opportunities to appropriate both language and content.

In this vein, Amondarain-Garrido and Ruiz de Zarobe (2024) analysed the multimodal discourse of three primary school CLIL teachers in science classes. Using multimodal interaction analysis, they demonstrated how teachers used multimodal resources to support language, assist students with various discourse functions, and construct a multimodal system of meaning to aid learning in the CLIL science classroom.

In Hong Kong, Wu and Lin (2019) demonstrated how translanguaging and trans-semiotising practices in a CLIL biology class positively impacted students' construction of knowledge and understanding of biology concepts. He and Lin (2021) further explored how these practices facilitate the expansion of students' communicative repertoires, enabling them to adapt to and internalise unfamiliar registers, which in turn supports mastery of both the target language and subject content. Their research also highlighted how teachers can design learning environments that incorporate translanguaging and trans-semiotising while also providing space for the use of the target language. These findings offer valuable insights for CLIL curriculum design and teacher professional development.

Additionally, Liu and Lin (2024) investigated how co-teachers employed translanguaging and trans-semiotising strategies in CLIL lessons for primary students with dyslexia in Hong Kong. Their study underscored the potential of translanguaging to support learners with special needs, particularly in facilitating their use of the target language, thereby emphasising the value of inclusive and flexible teaching practices in CLIL classrooms.

These studies demonstrate that translanguaging and trans-semiotising practices enable students to draw on a wide range of linguistic and semiotic resources to construct and express their understanding. Such practices align with Lin's Multimodality Entextualisation Cycle (MEC) (2015, 2016), which offers a framework for analysing how multiple modes of communication, verbal, visual, and gestural, interact to create meaning. In CLIL settings, where content and language are integrated, these multimodal practices allow students to engage with subject matter in diverse ways, thereby enhancing both comprehension and participation. The MEC's concept of entextualisation emphasises how knowledge is conveyed not through a single language, but through a dynamic combination of semiotic modes. This process enables students to expand their communicative repertoires and participate in more flexible, context-sensitive learning experiences.

In sum, research on multimodality in CLIL highlights its positive impact on student engagement and understanding, supporting more interactive and inclusive classroom practices (see Ruiz de Zarobe & Querol-Julián, 2025). These findings call for reconceptualising 'language' in CLIL as a multimodal construct that integrates various semiotic modes beyond verbal language (Liu & Lin, 2021; Lo, 2024). Consequently, providing educators with specialised training in multimodal resources is important to enhance classroom interaction. Additionally, curricula should incorporate translanguaging spaces (He & Li, 2021), where students can draw on their full multimodal repertoires, as well as 'breathing spaces', intentional pauses that allow learners to utilise their complete linguistic resources to deepen understanding and support multilingual development while prioritising the additional language (Cenoz & Gorter, 2021). Integrating such teacher training and curriculum designs can better support the benefits of multimodal practices in CLIL classrooms.

5.3 Summary

This section has examined the role of translanguaging and multimodality in CLIL contexts. After defining both concepts, which are often closely intertwined, we reviewed research highlighting how these pedagogical practices function as scaffolding tools to help students make sense of complex content through a range of semiotic modes and multilingual resources. These approaches contribute to the development of more inclusive, engaging, and interactive classroom environments. As CLIL continues to evolve, translanguaging and multimodality offer valuable strategies for addressing the diverse needs of learners in multilingual educational settings.

6 Assessment and Teacher Education in CLIL

This section addresses assessment and teacher education in CLIL, two closely related areas that are essential for effective implementation. Understanding how to evaluate both content and language, and how to prepare teachers for this dual focus, is key to supporting successful CLIL practices.

As an integral and fundamental component of education, assessment has a broad interpretation that involves the process of gathering, analysing, and interpreting information about student learning. In the case of the CLIL classroom, the desirable balance between academic content and language can pose unique challenges for assessment. Teachers need to know not only how to assess content knowledge, but also be aware of the type of language they want to assess, which brings us back to the language triptych with the three languages: language of, for, and through learning (Coyle et al., 2010), discussed in [Section 2.3](#). It also resonates with the construct of ‘language knowledge for content teaching’ (Morton, 2018), with its two sub-domains: common language knowledge for content teaching and specialised language knowledge for content teaching.

Most of the proposals presented for CLIL assessment advocate some form of effective formative assessment (assessment for learning), designed as a pedagogical tool to promote learning, as opposed to more summative models of testing (Black & Wiliam, 1998). Among them is Lin (2016), who devotes a chapter to balancing content and language in CLIL assessment, presenting various grids (i.e. tables used to organise and track student performance) for formative assessment tasks that provide practical solutions for both teachers and students. DeBoer and Leontjev (2021) can also be highlighted for their edited volume, which brings together chapters from various countries that explore classroom assessment with the aim of enhancing the quality of CLIL instruction.

These proposals are often accompanied by specific tools for assessment. For example, Massler, Stotz, and Queisser (2014) developed an assessment tool to measure the ability of primary school students in CLIL lessons, based on the Common European Framework of Reference, with the description of competences in subject content areas. Leal (2016) conducted a study in Colombia in which assessment grids were used to evaluate the validity of test items in CLIL settings. These grids helped to distinguish between language and content achievement, thus aligning assessments with teaching objectives and improving teachers’ understanding of test item demands. Otto (2017, 2018, 2020) advocated performance-based assessment in CLIL to evaluate students’ knowledge by measuring competences

or skills. This type of assessment focusses on evaluating students' ability to apply knowledge and skills in practical tasks, which can provide a more complete picture of their learning.

Rubrics (i.e. a specific type of grid used for grading with defined performance levels) and portfolios are also effective tools in CLIL for promoting assessment for learning (Short, 1993). These tools make assessment criteria transparent, support learning, facilitate feedback, and enhance students' self-assessment and self-regulation (Jonsson & Svingby, 2007). Additionally, they help teachers to develop content and language integration skills, mediate the learning process, and enhance mentoring and supervising practices (Tedick & Mathieu, 2024).

Such tools need to be specific to each educational level due to their cognitive and linguistic differences. For instance, in Hong Kong, Lo and Fung (2020) examined the interaction between cognitive and linguistic demands in secondary education and found clear differences: there were lower-level cognitive and linguistic demands in lower secondary assessments, higher-order thinking skills in upper secondary assessments, and, in general, some limitation of linguistic demands for student performance in CLIL assessments. This also points to the difficulties of assessing both aspects, content and language, across different CLIL programmes (Leontjev & deBoer, 2020).

Nevertheless, as Lin (2016, p. 114) claims, it is necessary not to see content and language as two independent dimensions to be assessed but rather

as two sides of the same coin, i.e. content (or our hypothesising about and conceptualization of 'reality') cannot be separated from language or the kind of semiotic (i.e. meaning-making) resources we use to construe (i.e. construct and organize/classify) content [...] However, language is only one kind of semiotic resource (though often the main kind), and so it is possible to adjust the balance between the assessment of content and language with the incorporation of multimodalities (e.g. visuals, symbols, mind maps, and graphic organisers) into the design of assessment tasks.

This brings us back to the reconceptualisation of the 'language' dimension in CLIL as a multimodal one, integrating various semiotic modes beyond verbal language (Liu & Lin, 2021), as discussed in the previous section, this time with a focus on assessment.

In order to help content subject specialists assess in another language, Lo and Leung (2022) proposed a conceptual framework for CLIL teachers, which provides information on what to assess, how to assess it, and how to interpret the assessment. In this regard, Liu and Lo (2024) studied teachers' practices and perceptions of the use of multimodal resources in CLIL assessment. She found that the teachers in her research tended to

incorporate visual resources (e.g. pictures, diagrams, and graphs) in their assessments in order to scaffold students' expression of content comprehension. Some of the teachers, however, did not have clear criteria for assessing students' multimodal production or providing information about it. Although teachers expressed positive views about multimodal resources for assessment, they also noted the additional demands of incorporating multimodal literacy for both teachers and students.

While appropriate assessment practices are essential for supporting CLIL learners, they cannot stand alone. A key issue that consistently emerges in discussions on CLIL is the critical need for robust teacher education to ensure its successful implementation. In fact, teachers themselves perceive the need for training in linguistic and intercultural competence, CLIL, or teaching materials (Pérez Cañado, 2016a). In their investigation into stakeholders' perspectives on methodology, materials, resources, and assessment procedures, Barrios and Milla Lara (2020) highlighted the methodological strength of CLIL, particularly its use of innovative pedagogical practices. However, inadequate teacher training was also identified as a common weakness reported by teachers.

Moreover, Alas, Ljalikova, and Jung (2023) found that CLIL subject and language teachers working in tandem shared common beliefs, such as the dominance of subject learning goals over language goals, the importance of academic language proficiency, the use of authentic materials, and the value of cooperative tasks, as well as the need for appropriate assessment. Yet, they differed on aspects like the relevance of authentic learning materials and the range of tools available for scaffolding learning.

As Pérez Cañado (2018b) argues, CLIL teacher education faces challenges in linguistic competence, methodology, scientific knowledge, organisational, interpersonal, and collaborative competence, and ongoing professional development, competences that must be addressed to ensure successful bilingual education. Kim and Graham (2022) used the competences discussed by Pérez Cañado (2018b) to conduct a systematic review of more than 40 articles on teachers' self-reported needs and professional development. Their results showed that not all competences were covered equally in the literature, and some, if included, were considered in a very general way (e.g. interpersonal, collaborative, and reflective).

As expected, CLIL teachers expressed concern about their limited linguistic proficiency, a challenge frequently noted in the literature (e.g. Durán-Martínez & Beltrán-Llavador, 2020; Karabassova, 2020; Pérez Cañado, 2016a). This concern reflects the gap between teachers' perceived and actual proficiency (Aiello, Di Martino, & Di Sabato, 2015).

Nonetheless, being a native speaker does not always guarantee advantages in every context. For example, An, Macaro, and Childs (2021) analysed science teachers in EMI high school programmes in China, where English was their most proficient language. Their findings showed that classroom interaction was still teacher dominated, and students' responses lacked linguistic complexity, patterns similar to those observed in classrooms led by non-native teachers.

Importantly, the implementation of CLIL varies significantly from one context to another, which influences teacher education needs. Turner and Fielding (2020) explain how the term 'CLIL' has been in use in Australia for over a decade, and the approach has helped to invigorate language teaching at both primary and secondary levels. Yet, the flexibility of CLIL implementation in Australian schools has had mixed results, and context has played a significant role in teacher education and language use in the classroom. The success of the programmes is highly dependent on the specific educational context, including the level of commitment from schools and the availability of resources.

Supporting this view, Gorter and Arocena (2020) conducted a study with in-service teachers in the Basque Country and in Friesland during a continuing professional development course, where teachers received training on multilingual approaches. The study showed important changes in teachers' beliefs and practices about multilingualism on issues such as language separation or mutually supportive languages, and the application of those beliefs in the classroom. The authors assume there is a complex relationship between professional development and changes in teachers' beliefs and practices.

Similarly, Banegas and del Pozo Beamud (2020), comparing Argentina and Spain, found that CLIL pre-service teacher education in both countries involved planning and implementing CLIL input, making competences and reflective practice in interaction a priority. Teacher education also focussed on promoting motivation, cognitive skills development, and language awareness, with pedagogical implications.

More recently, Zhu, Liu, Yang, and Newton (2023) showed how a six-month collaborative teacher education programme in China improved teacher educators' knowledge of CLIL along two different trajectories: one focussed on the pedagogical application of CLIL principles and the other on implementing CLIL as an educational policy. The programme further encouraged diverse shared views and motives and offered a viable alternative to more traditional top-down approaches.

In sum, as highlighted earlier in relation to formative assessment and teacher preparation, these studies reinforce that ongoing professional

development is essential for the successful implementation of CLIL programmes. Regardless of context, targeted training is crucial to ensure teachers are well equipped to deliver high-quality CLIL instruction.

7 Conclusion and Future Perspectives

The exploration of CLIL in this Element has revealed insights into its origins, implementation, effectiveness, current practices, and assessment. We have seen how CLIL has evolved to become a prominent approach to multilingual education not only in Europe but also in other regions such as South America or Asia. Extensive research has tracked this evolution, shifting focus from language learning outcomes to recognising CLIL as a distinctive educational approach that promotes pedagogical practices aligned with broader educational goals. This growing body of knowledge has helped us to understand the many possibilities it offers, alongside some challenges in its development and practice.

Importantly, CLIL offers different insights depending on its implementation and the context in which it is developed. These perspectives are shaped by various educational, linguistic, and sociocultural factors. To illustrate this, Marshall and Moore's (2018, p. 12) quote on plurilingualism resonates well with CLIL: 'plurilingualism is a lens. If we look through a plurilingual lens, we bring certain features to the fore – agency, creativity, hybridity, learning, meaning-making – while at the same time recognising context, social factors, and institutional/structural constraint when we change the focus of the same plurilingual lens'. This lens metaphor captures how CLIL's impact can also vary depending on the focus and context.

There is strong evidence that CLIL significantly improves language proficiency and can positively influence content learning in certain contexts. However, its effectiveness may vary depending on learner characteristics and the specific educational context. Therefore, depending on how we 'focus our lens', progress on some of CLIL's core principles remains uneven. Careful implementation and consideration of contextual factors are essential to maximise CLIL benefits and enhance educational results.

In this Element we have highlighted, among other issues, the relevance of formative assessment and continuing professional development, which are central to providing a more effective teaching environment. Notably, formative assessment should also include assessment tools adapted to CLIL and designed to provide ongoing feedback and support to both students and teachers. In terms of stakeholder perspectives, the approach is generally regarded positively, with teachers, learners, and parents noting

its potential. Nonetheless, perceptions vary in other areas, especially concerning teacher education, the development of appropriate teaching materials, and the balance between language and content in assessment.

In addition, there are further steps to improve the implementation and effectiveness of CLIL. The first concerns the need for more research in some contexts, but above all, more research where it is still scarce. This research should not only focus on results but also on the development of pedagogical practices through theory-based interventions. It is essential to examine the implementation of CLIL and its effects in different contexts to obtain a fuller understanding of the approach and provide further insights into how it can be adapted to diverse cultural and educational settings. Moreover, research should also be longitudinal to evaluate the long-term effects of CLIL programmes.

This brings us to a second step forward, presented as a ‘provocation’ by Banegas and Ruiz de Zarobe (2024). It concerns the need to address intercultural citizenship in detail to broaden the theoretical vision and pedagogy of CLIL (Porto, 2018, 2023). In this Element, we have addressed topics related to diversity and equity in the classroom. We have shown how the pedagogical concept of translanguaging can be developed within and even outside the classroom to encompass a wider range of social justice issues.

In fact, this is related to the very *raison d’être* of CLIL in some contexts beyond the classroom itself: how interculturalism can provide a unique framework for multicultural education. The integration of theories such as intercultural citizenship can enhance theoretical and pedagogical approaches to CLIL, promoting social justice and equity in education. Furthermore, this aligns with the 4Cs framework of CLIL and can serve as a bridge with the plurilingual model, enhancing both theoretical and pedagogical aspects.

In the conceptualisation of CLIL, intercultural awareness needs to be central, and culture, language, content, and cognitive skills (i.e. critical thinking and problem solving) must be seen as inseparable (Coyle et al., 2010). In sum, emphasising multilingualism within CLIL can further involve intercultural understanding, fostering linguistic diversity and intercultural dialogue, which are crucial for social justice.

The future of CLIL lies in addressing current challenges, refining implementation strategies, and expanding research to ensure its effective integration into educational systems. By doing so, CLIL can continue to evolve as a dynamic and influential approach in multilingual education.

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