CLIL in the primary school context

Maria Ellison

Introductions and definitions

As foreign languages are increasingly being introduced into pre-school education and have become compulsory in more primary school curricula, questions about what is appropriate and effective methodology for teaching them at this educational level naturally arise. This is particularly pertinent given the widely held belief that children best acquire language when they are immersed in contexts where there is natural exposure and opportunities for authentic use of it for other learning, rather than when it is taught as a separate and sometimes ‘isolated’ subject. This brings into question the role of a foreign language in primary education and is one of the reasons why Content and Language Integrated Learning (CLIL), ‘an educational approach in which an additional language is used for the learning and teaching of both content and language’ (Coyle et al 2010, p. 1), could be considered suitable, not only for enhancing the development of foreign languages in such contexts, but of fulfilling broader, more far-reaching educational goals. In this chapter, young learners (YLs) are those aged between 6 and 10 years.

Content and Language Integrated Learning (CLIL) is a complex phenomenon. This is in part due to the range of interpretations across contexts which have led to the acronym being considered something of a generic umbrella term under which may be included, somewhat controversially, ‘immersion’, ‘bilingual education’ and ‘content based instruction’ (for discussions on this, see Pérez Cánado 2016; Cenoz et al 2014; Dalton-Puffer et al 2014). CLIL is about teaching school curricular content through the use of an additional or vehicular language. This language may be a foreign language, other national language or minority or heritage language. Aims for introducing CLIL may relate to improving performance in, developing positive attitudes towards or ‘reviving’ this language. In this chapter, the additional language referred to is English, which is also taught as a foreign language in many primary school contexts. In CLIL, pupils are learning content and language in a dual-focused way. This normally requires methodological shifts in practice which go beyond simply changing the medium of instruction. In the primary school context, CLIL could involve learning about a science topic through English, for example, food chains, habitats or electrical circuits. The same content would not be pre-taught in the mother tongue. The
teacher would make the content as explicit and accessible as possible to learners using a range of means and resources to teach key terms, principles and processes. He or she would create opportunities for the learners to apply new knowledge and express their understanding using the additional language, providing them with appropriate support when necessary. In CLIL, the use of the additional language can make teaching and learning more engaging and cognitively challenging for both children and teachers, i.e., both have to think a lot more!

The amount of CLIL will depend on the school context—this could mean entire subject areas taught through English over one or more academic years or modules or topics within curricular areas amounting to short sequences of lessons. Teaching objectives for CLIL may be more content or language oriented. The former is often referred to as ‘hard’ or ‘strong’ CLIL, and the latter, ‘soft’ or ‘weak’. Hard/strong CLIL focuses on the development of the knowledge, skills and understanding of the content area (e.g., geography) and as such is ‘content-driven’. Soft/weak CLIL is ‘language-driven’ and is what foreign language teachers do when they bring content or techniques from other curricular areas such as maths and science into their lessons as in cross-curricular and theme/activity-based approaches to language teaching (see Halliwell 1992; Vale and Feunteun 1995; Cameron 2001; Brewster et al 2007). In most CLIL contexts, separate lessons in the additional language are also part of the school curriculum.

CLIL draws on second language acquisition theories relating to exposure to language through comprehensible input and opportunities for interpreting meaning and use in risk-free, naturalistic contexts (Krashen 1982; Coonan 2005), and socioconstructivist and sociocultural approaches to learning where children are supported by the teacher or their peers whilst they work together to construct knowledge and understanding mediated through the additional language (Vygotsky 1978; Lantolf 2002). The limited number of English language lessons for YLs in some contexts may mean that fewer opportunities are provided for activities involving learning by doing. Lessons may focus on vocabulary learning at the word level with little genuine communicative purpose in activities which are cognitively undemanding. Any teaching of YLs at school, whether using the mother tongue or foreign language, needs contextualised content from the ‘real’ context of school so that it becomes meaningful and relevant. If this is absent, there may be an abstraction of the language itself (Snow et al 1989, p. 202). CLIL for YLs provides opportunities to learn curricular content whilst capitalising on the inhibition, curiosity and appetite for discovery of many children, which provide the momentum for learning.

CLIL in the primary context can support holistic development and interdisciplinary learning when there is a combined focus on what have come to be known as the 4Cs of CLIL: content, communication, cognition and culture, all of which make it compatible with the default integrationist ethos of primary education. For CLIL to be CLIL there is a ‘planned pedagogic integration’ of the 4Cs (Coyle et al. 2010, p. 6). It is said that this gives CLIL its ‘added value’. The 4Cs may be viewed as a set of principles, a curriculum and a framework for lesson planning, as can be seen in Figure 16.1.

Content consists of the main concepts, knowledge and skills of the subject area, so from the science topic electricity, this could be understanding how a battery-powered electrical circuit works. Children may be involved in constructing one in small groups and then predicting and testing which materials conduct electricity. The content determines the language which will be used both to transmit and construct knowledge and express understanding i.e., Communication. This may be categorised in terms of key subject terminology, language of learning or content obligatory language, and the language with which this combines within any given curricular area, language for learning or content compatible language, such
as functional exponents for defining, predicting and explaining, which may be common, though not exclusive to the subject. So for electrical circuits this would be the language for the parts of the circuit, the principles behind how the circuit works and the language for experimenting with materials within it. This is language required of the topic/subject area. It is not ‘graded’ nor does it follow a pre-set order as in a grammatical hierarchy, which is often the procedure in teaching English as a foreign language. However, language of and for learning are predictable, and support for them can be planned and provided during lessons. In addition, there is the language learners use when interacting with each other and the teacher to express their learning – language through learning. This is less predictable; it is the language that emerges when learners are immersed in tasks in which they apply new understandings which challenge their thinking. Cognition plays a key role in CLIL. Learners should be given opportunities to think about content in different ways so that they may exercise both lower and higher order thinking skills in order to achieve a deeper level of understanding. This will be enhanced if their thoughts and ideas are shared with others in the additional language. This implies collaboration and cooperation with their peers in group tasks within and sometimes beyond the classroom. Culture embraces the classroom as a community for learning and supports intercultural dynamics, which nurtures an appreciation of oneself and the potential for understanding and appreciating others. In sum, CLIL may be considered a unique ‘multidimensional approach connecting different goals within the same conceptualization’ (Ruiz de Zarobe 2013, p. 234). Table 16.1 illustrates a teacher’s planning of the 4Cs for a lesson about food chains for a class of eight- and nine-year-olds. It is the third in a sequence of lessons which follows on from ones about animal habitats.

CLIL may be taught by primary generalist teachers who have a high degree of functional competence in English or English language teachers who have a very good knowledge of the curricular content. It requires methodological shifts from both types of teacher in order to accommodate the dual focus so that they become content- and language-sensitive. Ideally, within any given CLIL context, both types of teacher should plan CLIL lessons and design materials together, since each offers a necessary high degree of expertise in their

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**Figure 16.1 CLIL: the 4Cs Principles, curriculum and framework for planning (drawing on Coyle 2002; Coyle et al. 2009; Coyle et al. 2010)**
Table 16.1 A teacher’s 4Cs planning based on the framework of Coyle et al (2010, pp. 80–81)

**Unit:** ‘Animal world’ – **LESSON 3**  
**LEVEL:** Third Grade  
**TIMING:** 60 minutes

**Teaching Aims**
- To recall previous knowledge (revision of what a habitat is)
- To introduce vocabulary related to food and animals
- To make students aware of what they already know about animals’ food
- To teach how we classify animals according to their eating habits (carnivores, herbivores . . .)
- To introduce the notion of food chain, producers, consumers and predators
- To develop Ss’ listening and speaking skills

**Learning Outcomes**
By the end of this lesson learners will be able to:
- classify animals according to what they eat (herbivore, carnivore, insectivore, omnivore)
- understand the concept of a food chain
- create their own food chain
- use familiar and new language for learning

**Assessment Criteria**
Teacher and learner assessment of learning to:
- identify what animals eat
- classify animals according to what they eat
- match definitions with words
- understand what a food chain is by building one on their own
- co-operate with his/her colleague
- participate in all tasks and activities

**4Cs Objectives**

<table>
<thead>
<tr>
<th>Content</th>
<th>Cognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>The concept of food chain</td>
<td>Classifying animals according to their eating habits</td>
</tr>
<tr>
<td>Animal eating habits</td>
<td>Comparing animals</td>
</tr>
<tr>
<td>What producers, consumers and predators are in a food chain</td>
<td>Understanding what a food chain is</td>
</tr>
<tr>
<td></td>
<td>Applying their knowledge to construct a food chain</td>
</tr>
</tbody>
</table>

**Frogs eat insects.**  
I think **lions** eat **meat.**
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4Cs Objectives

Content
• The concept of food chain
• Animal eating habits
• What producers, consumers and predators are in a food chain

Cognition
• Classifying animals according to their eating habits
• Comparing animals
• Understanding what a food chain is
• Applying their knowledge to construct a food chain

Culture/Community
• To understand that animals have their own way of life as we do
• To respect animals and the differences between them
• To understand that animals need to eat each other to survive
• To appreciate that we can learn from and with each other in class

Communication

Language of Learning

Key Vocabulary:
Animals: spider, grasshopper, hawk, frog, rabbit, fox, goat, kangaroo, snake, pig, penguin, parrot, fish, whale, lion, bird, elephant, horse, zebra, polar bear, shark, camel, giraffe
Food: meat, fish, grass, plants, insects
Categories of animal eating habits
carnivore, herbivore, insectivore, omnivore, food chain, consumer, producer, predator

Language for Learning
Frogs eat insects.
They are insectivores.
I think lions eat meat.
Asking/answering questions
What do lions eat?

Language through Learning
Making statements
Asking questions
Understanding and applying new language with already known language
Using language from their own and other resources

Can a carrot eat a rabbit? No
subject area which is essential to integrated learning in CLIL. All primary CLIL teachers need a good understanding of the theories of child development, how children acquire languages and the objectives of curricular areas.

**Historical perspectives**

The use of additional languages as tools for other learning is not a recent phenomenon. In fact, it can be traced back to ancient civilizations as empires expanded and the privileged sections of society were educated in these languages in order to reap the benefits of newly acquired territories (Mehisto et al. 2008, p. 9; Coyle et al. 2010, p. 2).

In more recent times, learning through additional languages has been propelled by a number of factors related mainly to social and economic change brought about by globalization which have made them decidedly less a luxury and commodity of the elite, and more an entitlement of the mainstream (Coyle et al. 2010, pp. 6–9; Pérez-Cañado 2012, p. 315).

The term ‘CLIL’ was first used in 1994 to describe what was considered to be a distinctly European phenomenon which responded to the need to support languages education and enhance plurilingualism in the continent where its increasingly mobile populations, hugely diverse in cultures and languages, need to communicate more effectively in more than one language. The drive towards this was manifest in European policy statements including the Commission’s white paper of 1995, ‘Teaching and Learning: Towards the Learning Society’ followed by the announcement at the Barcelona European Council that ‘every European citizen should have meaningful communicative competence in at least two other languages in addition to his or her mother tongue’ (MT + 2) from an early age which was to become part of the Action Plan 2004–2006, ‘Promoting Language Learning and Linguistic Diversity’ (for an in-depth account of European policy initiatives relating to CLIL, see Marsh 2013). Realising the MT + 2 ideal in schools was an operational challenge. Some member states increased the number of foreign language lessons at higher levels of schooling and others lowered the onset of learning to primary school. CLIL was seen as a pragmatic solution to this essentially language problem. Teaching subjects through additional languages would provide more exposure and raise motivation in them through immediate application and authentic use, hence the subsequent and oft-cited mantra ‘learn now, use now’. This is summed up well by Coyle et al. (2006, p. 26) who state that ‘CLIL is not only a pragmatic solution to curriculum delivery but also an essential feature of an entitlement to plurilingual, pluricultural learning, offering cohesion and progression in the language learning apprenticeship.’

Some advocates of CLIL have drawn parallels with French immersion programmes such as those set up during the 1960s in Canada. The positive results of scholarly research into these programmes has often been used to justify implementing CLIL in European contexts. However, comparisons have also been dismissed on the grounds of very distinctive contextual and pedagogic differences (for discussions on this topic, see Zarobe and Cenoz 2015; Cenoz et al 2014; Dalton-Puffer et al 2014).

Many projects implementing and developing CLIL in Europe have been endorsed as have publications disseminating CLIL activity, such as the Eurydice report ‘Content and Language Integrated Learning at School in Europe’ (2006), which documented the variation in CLIL practices across the continent. In the survey report, ‘Key Data on Teaching Languages at School in Europe 2017’ (Eurydice 2017), CLIL is described as part of mainstream provision in nearly all European countries across educational levels although it is not widespread.
Even though considered a European construct, CLIL is practised in its many guises around the world. In South America there is reported CLIL activity in Argentina (Bandegas 2011) and also in Colombia (McDougald 2015) from where the *Latin American Journal of Content and Language Integrated Learning* (LACLIL) emerged. As English language education for YLs continues to expand in East Asia (see Marsh and Hood 2008; Butler 2015), interest in CLIL is growing across educational levels as is evident from studies in Japan (Yamano 2013; Pinner 2013), China (Wei and Feng 2015) and the challenges of pilot projects such as that in Thailand (Suwannoppharat and Chinokul 2015; MacKenzie 2008), the Philippines (Miciano 2008) and Malaysia (Yassin et al. 2009), where it is increasingly becoming part of ministry of education initiatives to develop English language proficiency.

**Critical issues and topics**

**Language development and cognitive maturity**

Concerns regarding CLIL with young learners relate to understanding key concepts in the curricular area and the parallel development of these with the mother tongue.

In school contexts, children need to develop language to express their understanding of specific academic content. Their ability to do this may be referred to as Cognitive Academic Language Proficiency (CALP). This runs alongside the development of language for general communication known as Basic Interpersonal Communicative Skills (BICS). These terms were coined by Cummins (1979; see also Cummins 2008), who also stated that CALP is part of a ‘common underlying proficiency’ of skills which once learned in one language should be transferable to any other. This theory has consequences in relation to ‘cognitive maturity’ to learn through another language, with older children considered to be more advantaged as CALP would have had more time to develop in their first language (Pinter 2011, p. 75). Since it is thought that CALP takes five or more years to develop in the child’s mother tongue, there are concerns as to whether it is appropriate to introduce CLIL at a very young age before such proficiency has had time to develop.

However, there are scholars who believe that such a rigid dichotomy between BICS and CALP is not helpful as ‘language relates to the situation, context and purpose of use’ and that with age-appropriate support for the understanding of content, learners may ‘move from academic to colloquial and vice versa’ until content is processed and conceptualised (Meyer et al 2015, pp. 50–51). Ball et al. (2015, p. 62) put it in a similar way stating that ‘[e]ffective CLIL harnesses CALP, makes it salient, then practices and balances it through the calming influence of BICS’. The simple fact is that ‘CLIL involves learning to use language appropriately while using language to learn effectively’ (Coyle 2006, p. 9) which is a clear endorsement for CLIL at any age.

As a plurilingual approach, CLIL is accepting of the mother tongue in the classroom. Used strategically, this can be a useful tool and resource. It is quite common for there to be codeswitching within and between utterances and translanguaging with the child’s own language and the additional language of CLIL, particularly at the beginning of a CLIL programme. Language-sensitive CLIL teachers will be aware of this, and actively accommodate it in their classes. They need to be aware of how they may employ effective scaffolding to support the development of both whilst not compromising either. Progress in CLIL may be slower than when content is taught in the mother tongue as teachers find that they need to provide for more varied, strategic input and opportunities for practical expressions of understanding. Modular CLIL, in which a part of a subject or topic is taught through English which
alternates with other parts taught through the mother tongue allows for content knowledge to be recycled in the mother tongue, thus allaying fears of any detriment to either.

**Scaffolding learning**

The term ‘scaffolding’ is frequently used in education to describe the temporary support given to learners in order to help them develop understanding of key concepts and reach learning outcomes. It is part of 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. This scaffolding consists essentially of the adult ‘controlling’ those elements of the task that are initially beyond the learner’s capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence

(Wood et al. 1976, p. 90).

Scaffolding is frequently associated with Vygostky’s Zone of Proximal Development, the distance between what a child can do alone and what they can do with the help of a capable other (Vygotsky 1978, p. 86). Inherent in this is the concept of learning as part of a socially constructed process in which children learn from and with each other, to understand, develop skills, create new knowledge or ‘transform understandings’ for themselves (Hammond and Gibbons 2001, pp. 12–13).

In CLIL, scaffolding is a complex process for the teacher given the need to achieve the right balance of cognitive and linguistic demands when creating materials and during lesson delivery without compromising on the content concepts. It requires planned action at ‘macro-level’ and flexibility in practice or ‘micro-level’ ‘moment-to-moment’ support (Walqui 2006, p. 159). A range of strategies should be considered so that support is given to all areas of development. Strategies which come from both content teaching and language teaching can be drawn upon. For young learners these should be concrete, multisensory and multimodal so as to take account of cognitive development, how children experience the world and their natural desire to be active meaning makers. Language teaching strategies include modifying language, use of cognates, repetition, recasts, stressing key words during spoken discourse and providing visual stimuli and graphic organisers to support understanding of written texts (see Massler et al. 2011, for a range of techniques related to verbal, content and learning process scaffolding). Children’s thinking can be scaffolded through, for example, strategic use of graded questions which support different types of thinking demanded by school curricula, from checking knowledge through closed questions to gradually using more open-ended questions which engage children in applying, analyzing and evaluating as associated with taxonomies of cognitive processes (see Bloom 1956; Anderson and Krathwohl 2001). Teachers may encourage children to use a range of means to express their knowledge and understanding; these may be verbal and non-verbal and could include the use of mime, gestures and drawings. Table 16.2 presents an accumulative taxonomy of scaffolding strategies compiled from observations of CLIL lessons in primary contexts and studies of the literature. It is intended for use by CLIL teacher educators for observation of CLIL lessons and may be used by teachers as a checklist in the planning stage in order to raise consciousness of the need for scaffolding before and during lesson delivery.
Table 16.2 Taxonomy of scaffolding strategies for CLIL lessons (Ellison 2014, p. 414)

<table>
<thead>
<tr>
<th>Planning</th>
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<tbody>
<tr>
<td>• aims for 4Cs (content, communication, cognition, culture)</td>
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<tr>
<td>• anticipates language demands: language for/of/through learning</td>
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<tr>
<td>• builds on prior learning</td>
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<tr>
<td>• anticipates learning demands: appropriate sequencing of tasks from lower to higher order thinking skills; linguistic and content demands balanced</td>
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<tr>
<td>• considers a variety of interaction patterns</td>
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<table>
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<tr>
<th>Materials</th>
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<tbody>
<tr>
<td>• makes appropriate choices for developmental level (content and language)</td>
</tr>
<tr>
<td>• uses visuals, realia, technology, film to support learning</td>
</tr>
<tr>
<td>• language is supported (e.g., simplified, key words highlighted/underlined)</td>
</tr>
<tr>
<td>• cognition is supported (e.g., use of diagrams, pictures which show relationships between key ideas)</td>
</tr>
<tr>
<td>• materials are balanced in terms of language and cognitive demands</td>
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<table>
<thead>
<tr>
<th>Delivery of lesson</th>
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**Teacher’s language**

<table>
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<th>Teacher talk: modifying language</th>
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<tbody>
<tr>
<td>• modifies delivery</td>
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<tr>
<td>• lengthens sounds</td>
</tr>
<tr>
<td>• stresses key words</td>
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<tr>
<td>• uses repetition</td>
</tr>
<tr>
<td>• modifies vocabulary (e.g., use of synonyms/antonyms)</td>
</tr>
<tr>
<td>• organises input (e.g., signals/use of discourse markers)</td>
</tr>
<tr>
<td>• uses variety of questions to guide/develop understanding, support and check learning, promote thinking from lower order to higher order, e.g., guided display/convergent questions; declarative with rising intonation; tag questions; referential</td>
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**Communicative functions to support learning**

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<tr>
<td>• gives clear instructions</td>
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<td>• monitors and repairs</td>
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<tr>
<td>• backtracks when problems are encountered</td>
</tr>
<tr>
<td>• uses functional exponents appropriately for explaining, describing, emphasizing, exemplifying, comparing, paraphrasing, summarizing, consolidating – demonstrating again, reminding, repeating, reviewing</td>
</tr>
<tr>
<td>• uses comprehension checks for students to demonstrate understanding of meaning and form</td>
</tr>
<tr>
<td>• uses variety of feedback techniques to check content message and language</td>
</tr>
<tr>
<td>• applies corrective strategies which support learning, e.g., facial expression, questions, auto/peer correction</td>
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<tr>
<td>• praises students’ efforts</td>
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(Continued)
Supporting content and cognition

- establishes ‘route’ for the lesson, e.g., tells learners about the ‘topic’ at beginning of the lesson
- establishes patterns of input/systematic routine in presentation and feedback
- exposes students to input at a challenging level
- explains concepts and processes in ways appropriate to the level of the class, using simple language and familiar/concrete examples
- breaks complex information into smaller simpler parts and tasks into clear steps
- pauses to enable thinking time
- uses body language, visuals, diagrams, gestures, realia to support understanding
- provides demonstrations with accompanying language
- elicits/draws on prior knowledge/experience
- supports lower order and higher order thinking skills such as remembering, understanding, applying, analyzing, evaluating, creating
- provides opportunity to negotiate meaning
- provides opportunities for students to learn from and with each other

Supporting language/communication

- provides language of and for learning
- raises awareness of language form in speech and writing
- hints using initial letter or sound
- models key words in isolation and context
- echoes correct examples
- raises awareness of pronunciation and provides opportunities for practice, e.g., in mini-drills
- encourages students’ productive use of language in class, pair and groupwork
- provides written models of language (key words/structures), e.g., in substitution tables
- allows children to use L1 to communicate when their L2 productive language is limited.

Assessment

Assessment of young learners in primary education is multifaceted. This is due to the range of subject areas which primary education includes and the integration of their multiple literacies, as well as the development of positive behaviours and attitudes to learning, all of which are the responsibility, in many contexts, of a single generalist teacher. Such teachers will likely be adept at integration-enhanced assessment, and good practice may well include formative or learning-oriented techniques, which allow for regular monitoring of the various facets within this holistic development.

CLIL brings another layer of complexity to assessment because of the dual focus attributed to the approach where content and language are often envisaged as equally weighted, separately assessable subjects (Ball et al. 2015, p. 214). Another issue is the extent of integration at any one time in CLIL; there may be times where there is more of a focus on language and others which focus more on content, which may also depend on the model of CLIL adopted (whether soft or hard). Commonly voiced questions are: ‘What should I assess here – just the content; content and language?’ As Genesse and Hamayan (2016, p. 100) state when planning content and language objectives for CLIL lessons:

you can rarely focus on one without the other. Because students are learning new concepts through a language in which they are not fully proficient, it is necessary to make
sure that they are familiar with the language that is needed to learn about academic content topics or themes.

Knowing the technical terms to label an electrical circuit, for example, is important language in primary science which children need to know in order to explain how the circuit works. An added difficulty is how to interpret learner responses. Does an incomplete or inaccurate answer reveal a lack of content knowledge, language or lack of understanding of the rubric itself? Good practice in assessment aligns itself with specific learning outcomes, which in CLIL should reflect the 4Cs: content, communication (language), cognition (thinking skills) and culture (also community/cultures of learning which incorporate attitudes to learning, learning to learn and working with others).

What is important is that there is compatibility between learning objectives and methods with the what and how of assessment. It would be unfair, for example, to assess children’s knowledge of the water cycle in L1 if they had been introduced to it in English. Methods of assessment therefore, should mirror classroom practices, i.e., the typical tasks and activities planned by the teacher in order to reach the desired learning outcomes. To this end, for young learners a blend of diagram completion, gap-fills, matching sentences and opportunities for more extended written or verbal answers may be employed. Assessment should not only be of a product of learning, but the process itself (Massler 2011, p. 120). Therefore, it should include group activities where children can be observed working cooperatively with each other. Learner engagement should be closely monitored as events unfold in acts of learning in the classroom. This may be done through focused observation using grids with specific criteria related to learning outcomes, which may function as checklists where progress is ongoing, recorded and dated. The use of individual or small group ‘think alouds’ may be considered where children can be observed verbalizing their thoughts or prompted to do so in L1 or L2. This, for instance, would afford the teacher the opportunity to identify instances of codeswitching – where there may be gaps in language knowledge and use.

Managing such assessment is not easy, especially where class sizes are large. A key here would be to focus assessment on smaller groups of children in turn. Where it is possible, other teachers, or language assistants who are familiar to the children, may also be involved in this procedure. Teachers may collaborate to assess children where there are parallel foreign language lessons, for example. Each teacher could assess separate foci. Children’s engagement in dialogue with the teacher about their work and progress should be a regular part of primary practice as it enhances metacognitive awareness. This may be done in L1 or L2. A common practice involving all the class is the use of KWL charts (what I know, what I want to know, what I learned) or WALT and WILF statements (We are learning to . . . What I’m looking for . . .). Another is through written ‘can do’ statements which take into consideration the 4Cs. These may also be in L1.

The examples below are related to the digestive system and food chains:

For the digestive system:
I can label the organs of the digestive system.
I can identify the route within the digestive tract.
I can explain the function of the large intestine to my partner and my teacher.

For food chains:
I can categorise living things into omnivores, herbivores, carnivores and insectivores.
I can label elements in a food chain.
I can create a food chain on my own and explain how it works to my friends.
Scholars are in agreement that language should not be an obstacle for learners expressing their understanding of content knowledge (Ball et al. 2015, pp. 214–215; Coyle et al. 2010, p. 123). Teachers may attempt to get around the latter by offering a range of scaffolds, which may include rubrics in L1, or teacher reading aloud of rubrics or translating them into L1, visual representations and allowing children to respond through gesture, drawing, or even to choose the language they want to answer in if the focus is on content knowledge in summative tests (Massler 2011, pp. 119–121). As Coyle et al. (2010, p. 131) put it, ‘we need to assess what students can do with support before we can assess what they can do without it’. The example in Table 16.3 below taken from a teacher’s log illustrates the negotiation between teacher and learners before and during a mini-test (see Figure 16.2) intended to

### Table 16.3 Teacher-learner negotiation of test procedure

<table>
<thead>
<tr>
<th>The instructions given</th>
<th>Their reactions</th>
</tr>
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<tbody>
<tr>
<td>– Write your name and class, and date</td>
<td>They agreed with their heads (nodded)</td>
</tr>
<tr>
<td>– Silence, concentrate</td>
<td>I used gestures</td>
</tr>
<tr>
<td>– If you have questions, raise your hands</td>
<td></td>
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</tbody>
</table>

They spoke in Portuguese.

(Before the test)

– Teacher, will we write the name of the animals or will we have them in written form and is it only choosing the right option? I haven’t memorised all of them.

(During the test)

– Here do we have to draw arrows?
– What’s ‘monéki’?
– In Exercise 5 is it the Food Chain?
– In Exercise 6 is it just drawing or do we have to write the name of the animals?
– But I don’t know how to write in English . . .
– How do I write ‘couve’ in English? Can I write in Portuguese?
– In Exercise 6 do we have to draw the animals from Exercise 5?
– In Exercise 6 can I write the animal names in Portuguese, but if I know in English can I also write in English?
– In Exercise 6 is this eaten by this one or is it the other way around?
– In Exercise 4, what are the animals for?

Their reaction to the test

(They spoke in Portuguese)

<table>
<thead>
<tr>
<th>SPOKEN</th>
<th>NON – SPOKEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Just one sheet of paper</td>
<td>– Looking at the test puzzled by Exercise 6</td>
</tr>
<tr>
<td>– So easy, look!</td>
<td>– Some were saying words silently to remember them</td>
</tr>
<tr>
<td>– Oh, we have here the words.</td>
<td></td>
</tr>
<tr>
<td>– Oh, this exercise I don’t understand (Ex. 6)</td>
<td></td>
</tr>
</tbody>
</table>
4. Look at these animals.

- rabbit
- pig
- spider
- lion

4.1. Which animal is a carnivore? lion ✓
4.2. Which animal is a herbivore? rabbit ✓
4.3. Which animal is an insectivore? spider ✓
4.4. Which animal is an omnivore? pig

5. Complete this FOOD CHAIN.

- FOOD CHAIN
- lion → turtle → snake → rabbit → eagle

6. Draw your FOOD CHAIN.

- Lion
- Rabbit
- Eagle

Figure 16.2 Sample test
check understanding and application of knowledge about food chains administered to eight- and nine-year-olds in a primary school in Portugal. Only part of the test is included. The comments reveal children’s doubts about the test, which are mainly procedural and related to which language to use, and the degree and type of support given by the teacher.

Attempts have been made to provide supporting frameworks for assessment in CLIL. The CLIL A project (CLIL Learner Assessment) developed a tool for the measurement of content and language ability of primary school pupils in CLIL lessons in German and Swiss primary schools (see Massler et al 2014). It is a 3-D tool based on the Common European Framework of Reference, descriptions of subject area competences, curricula of the subjects and their thematic categories. Xavier’s (2015) framework for assessment in primary CLIL contexts is based on a learning-oriented approach which combines objectives for content, language, cognition (based on Bloom’s taxonomy), learning to learn and behaviour/attitudes towards learning. The work comprises an in-depth study of assessment types and examples from primary CLIL practice.

In primary CLIL it is important to include a range of assessment types so that an all-round picture of learning emerges which may be used in the evaluation of the CLIL programme as a whole. Ultimately, the focus of assessment in any given context will be determined by the main goals of the programme.

Current contributions and research

Despite the growth of CLIL around the world, its research agenda has largely focused on secondary and tertiary education. There is still little research on CLIL with young learners. What exists in Europe largely consists of stakeholder responses to implementation in national pilot projects or grassroots initiatives (see, for example, the evaluation reports of the British Council Bilingual Projects in Spain (Dobson et al 2010) and more recently in Portugal (Almeida et al 2014), which point to generally positive results for young learners; Infante et al 2009 – Italy; Massler 2014 – Germany; Pladevall-Ballester 2015 – Catalonia). However, the lack of a strong evidence base clearly leaves CLIL vulnerable to criticism, and calls for further rigorous studies (Pérez-Canado 2012; Bonnet 2012; Coyle 2013; Cenoz et al 2014; Murphy 2014) as well as more classroom-based research are frequent, not only about language development, but also ‘subject matter knowledge, attitudinal and motivational approaches, cognitive development and brain research’ Van de Craen et al (2007). More recent specialised studies that have emerged include comparative language use of EFL and CLIL learners (Garcia Mayo and Hidalgo 2017; Yamano 2013); assessment (Xavier 2015); dimensions of teacher reflection (Ellison 2014); affect and cognition (Otwinowska and Forys 2015); and vocabulary learning (Tragant et al 2016).

Other contributions to the area of CLIL for young learners have come from Europe-financed projects involving consortia from various national contexts in the development of teaching and learning tools, sets of guidelines for implementation, teacher education and dissemination of good practices. Examples of these include TIE CLIL Translanguage in Europe – Content and Language Integrated, an early example of a teacher training guide for implementing CLIL in schools; ‘EUCLID European CLIL in Development: A Primary Phase Consortium’ (2008), which amongst other things focused on developing a profile for the primary CLIL teacher; PROCLIL which led to a set of guidelines for the implementation of CLIL in Primary and Pre-primary education (2011); and more recently ‘CLIL for Children’, a consortium which is developing an online training programme and materials for primary CLIL. Academic interest in CLIL continues to grow across the world with an increasing number of Special Interest Groups (SIGs), journals (e.g., International CLIL
Recommendations for practice

Implementing CLIL

It goes without saying that any new pedagogic intervention in a school requires a great deal of prior reflection, teacher education and preparation of materials and tasks for lessons. CLIL is no exception. In fact, implementing CLIL needs the support of many stakeholders within and beyond the school community – parents, school directors, teachers (generalist and additional language), lower secondary schools in the area which the primary children will one day attend, faculty or governmental support agencies for external monitoring and teacher education, and other similar communities of practice in schools within the national context and further afield. This is because, as a ‘complex whole approach’ (Wolff 2002, p. 48), it will lead to change in the entire ethos of the school community.

A realistic set of goals and a coherent model that fits the context are essential. It must therefore be made clear to the entire school community why and how CLIL will be implemented. Modular CLIL is advisable at the start of a programme. This gives both teachers and children time to adapt and gain confidence in new ways of working. Depending on how the primary day is organised, modules may amount to one to three hours of lessons in a sequence over a week or two so as to complete a topic. This could be increased for another topic in another term. If the children also have separate English language lessons in the school then these lessons may provide ‘language rehearsals’ of key content language of and for learning. Both teachers should be given time to observe each other in order to identify key techniques and strategies used in each area which may come together in the CLIL classroom. Thus, a spirit of collaboration should be nurtured so that CLIL becomes a fusion of best practices from both primary and English language teaching. Both teachers may work together towards developing a literacy rich, plurilingual classroom environment which through bilingual displays and use of language demonstrates the importance of learning and acceptance and appreciation of languages and culture.

Planning CLIL lessons

A major part of ensuring quality in CLIL programmes is in lesson preparation. This requires a great deal of time and effort given the need to focus on the integration of content and the additional language in a way that maintains linguistic and cognitive challenge without diluting the subject content. An additional problem is that many teachers cannot rely on a ready-made supply of CLIL materials which will fit their context and national curriculum objectives. More often than not, teachers will need to either adapt or create their own materials for use with their learners. They should also be wary of materials labelled as CLIL in ELT coursebooks (Bandegas 2014). Whilst these will likely support the use of curricular content in English language lessons, they will not necessarily be developing key concepts and learning skills in the curricular area to the same extent, as the main objective will be to use content to enhance language development. For example, curricular content may be used in an ELT coursebook with the main purpose of practising simple dialogues using basic structures such as do in an exchange about what magnets attract. Does the magnet attract the paper clip? Yes, it does. Does the magnet attract the piece of string? No it doesn’t.
The 4Cs may be used as a conceptual framework for planning lessons. A useful starting point is to identify the national curriculum targets for content in the specific area. Teachers should then formulate aims and learning outcomes based on these. Next, teachers may brainstorm the content area in light of each of the 4Cs. They must then decide on how best to sequence the elements of their schema into lessons which provide for a logical, coherent, cognitive route ensuring planned opportunities for the development of all 4Cs with appropriate scaffolding. This will involve planning for teacher input, and learner involvement. Activities, tasks and materials must be designed carefully so as to ensure that they are balanced in terms of cognitive and linguistic demands in accordance with the children’s stage of development.

Throughout the planning process and well into lesson delivery, teachers should be conscious of the strategies they may use to scaffold all 4Cs. The attention to each of the 4Cs may vary within a sequence of lessons depending on how much new content or language is introduced. It may be useful to think of this in terms of a ‘content and language familiarity and novelty continuum’ (Coyle et al. 2010, p. 95) which will help to ensure balance between known and new, prevent language from becoming an obstacle and content knowledge from being diluted and oversimplified. There should be a steady increase in challenge as the lesson proceeds. The lesson plan below (Table 16.4) intended for eight- to nine-year-olds who have parallel EFL lessons serves to illustrate the above. It is the third in a sequence and was preceded by lessons about animal habitats.

**Future directions**

All over the world, young children are growing up with increasing amounts of exposure to many languages and as a consequence bring more knowledge and even experience of using them to primary school. With this comes an enhanced awareness of language as a tool for communication in all aspects of life including classroom use. For CLIL to be the ‘added value’ that it is claimed to be, there must be more investment in research for it in primary education, as well as a serious commitment to providing quality teacher education, particularly within pre-service programmes for future primary teachers and English language teachers, which include both theoretical modules and practica in schools. This is because CLIL:

- makes teachers aware of their responsibility to educate the ‘whole’ child;
- forces language teachers to look beyond language and address other essential learner needs;
- improves teachers’ knowledge about the content of the primary curriculum;
- develops their understanding of the cognitive and linguistic demands of this level of education;
- develops awareness of the important role of language across the curriculum;
- unites language and primary generalist teachers in partnerships where they work together to achieve broad educational goals (adapted from Ellison 2015, p. 59).

Theoretical modules should contain an analysis of the knowledge bases of primary content areas and English language teaching for young learners focusing on the unique features and similarities of each as a basis for considering the fusion of these for CLIL. Applying the 4Cs to an analysis of the primary curriculum would be useful in determining demands in L1 medium instruction so that challenges may be realistic when planning for future CLIL lessons.
### Table 16.4 Primary CLIL lesson plan on food chains

#### TEACHING/LEARNING ACTIVITIES

<table>
<thead>
<tr>
<th>Time</th>
<th>Interaction</th>
<th>Stage – Procedures</th>
<th>Aims</th>
<th>Scaffolding strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 m</td>
<td>T-Ss</td>
<td>Lead-in</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T starts by asking where animals live. Ss recall the definition of a habitat.</td>
<td>To remind Ss of what they have previously learnt</td>
<td>Powerpoint with visuals and language</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T asks Ss how animals can survive. T waits for answers and then says that FOOD is very important.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 m</td>
<td>T-Ss</td>
<td></td>
<td>To involve Ss in the topic and remind them that they already know some information</td>
<td>Using visuals in the PowerPoint to make the vocabulary clear</td>
</tr>
<tr>
<td>10 m</td>
<td>T-Ss</td>
<td>Thinking Task</td>
<td>To engage Ss in discussion with each other</td>
<td>Provide language of/for learning in grid on the board</td>
</tr>
<tr>
<td></td>
<td>T divides class in small groups and tells them they are going to discuss what animals eat and gives them a worksheet of visuals of animals and food to prompt them</td>
<td>To make Ss think about what animals eat</td>
<td>Pause to enable students to think and speak</td>
<td></td>
</tr>
<tr>
<td></td>
<td>T asks groups to speak about this in the plenary by prompting them with questions such as, ‘Do you think snails eat meat?’</td>
<td>To give them time to speak and express their thoughts</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T asks: What do lions eat?</td>
<td>To consolidate understanding of concept and language</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T gives them a multiple choice task. Ss have to choose between plants, meat and insects.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 m</td>
<td>T-Ss</td>
<td>Thinking Task</td>
<td>To introduce categories of classifying animals according to food habits</td>
<td>Powerpoint Flashcards Worksheets</td>
</tr>
<tr>
<td></td>
<td>T says that animals can be classified into herbivores, insectivores, carnivores and omnivores</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pairs</td>
<td></td>
<td>To apply understanding of the categories and which animals belong to them</td>
<td></td>
</tr>
</tbody>
</table>
|      | T asks them to match these words with written definitions on flashcards on the board. T asks some students go to the board to match them. In pairs Ss complete a gap-fill of a diagram of the categories T provides feedback when checking the worksheet with Ss | To interpret the written form of words | | (Continued)
### Table 16.4 (Continued)

<table>
<thead>
<tr>
<th>Time Interaction</th>
<th>Stage – Procedures</th>
<th>Aims</th>
<th>Scaffolding strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10 m</strong></td>
<td><strong>Introducing FOOD CHAIN</strong></td>
<td>To make Ss think logically and apply what they already know.</td>
<td>Powerpoint Visuals and accompanying words to demonstrate the food chain</td>
</tr>
<tr>
<td>Individual work</td>
<td>T shows visuals of grass, a rabbit and a fox and asks <em>Who do you think eats who?</em></td>
<td>To apply what they have learnt</td>
<td>T points to the arrows in the food chain while explaining</td>
</tr>
<tr>
<td>T-Ss</td>
<td>T explains that this is a FOOD CHAIN. <em>The grass is food for the rabbit and the rabbit is food for the fox.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ss</td>
<td>T explains what a food chain is and gives an example</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ss shows a picture of several food chains and asks Ss to explain who eats who</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T gives them time to explain</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>T introduces the notion of <em>producers, consumers and predators</em> and explains what they are</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Producers are food. They don’t eat other plants or animals.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Consumers eat. And the predator is at the top of the food chain.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10m</strong></td>
<td><strong>Practice</strong></td>
<td>To apply what they have learnt</td>
<td>The pictures have words (e.g., producer) on them to help</td>
</tr>
<tr>
<td>Groups</td>
<td>T gives each group some pictures of animals. Ss construct their own food chain using the pictures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ss stick their food chains on the wall so that everyone can see them. They explain their food chain.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>10m</strong></td>
<td><strong>Further Practice</strong></td>
<td>To apply and demonstrate what they have learnt</td>
<td>A grid on the board with language to help them speak</td>
</tr>
<tr>
<td>Individual</td>
<td>Ss complete a worksheet, and now they have to draw arrows to make a food chain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pairs</td>
<td>Ss draw their own food chain and talk about it with each other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plenary</td>
<td>Ss show their food chains to the class and talk about them</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To reflect on their learning during the lesson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The framework may also be applied to English language lessons for young learners so that teachers may consider in what way these may be enriched in terms of content, cognition and culture. Practica should include observation of both generalist and English language teachers of young learners teaching within their areas, which would help develop an understanding of pedagogic content knowledge in practice.

CLIL can be a positive contribution to teachers’ personal and professional development as it makes them question their regular practice as either generalist or language teachers as illustrated in the extract below from a language teacher’s reflection on her experience:

The way I plan my lesson activities and materials has changed, because now I spend more time thinking of my scaffolding strategies and planning tasks that are cognitively more demanding. I keep asking them the ‘why’ question to make them think. Personally and professionally I think that this CLIL experience, and knowledge of what CLIL is, has helped me to become a better teacher.

CLIL can also be a valuable addition to a teacher’s profile as it opens up a realm of possibilities for new roles within schools, as well as employment opportunities within and outside national contexts. It is vital that communities and networks of primary CLIL practitioners are set up so that teachers may exchange ideas and materials as well as their practical theories which will help propel the evidence base for CLIL in new directions. Then primary CLIL will truly ‘come of age’ and be seen as providing a legitimate contribution to the education of primary-aged children.

Acknowledgement
The author would like to thank Cláudia Abreu for her assessment material and lesson plan.

Further reading
   A refreshing comprehensive handbook which challenges as well as adds new perspectives on some of the established principles and practices of CLIL.
   Essential core reading about CLIL from theory to practice by leading experts in the field which includes a useful ‘CLIL toolkit’ for practitioners initiating CLIL projects.
   A rare publication specifically related to CLIL for young learners that contains recommendations based on practical experiences of implementation at this level.
   This handbook was the first of its kind about CLIL. It is a very clear first guide into CLIL and includes practical examples from primary practice.

Related topics
Languages in the classroom, policy, projects, syllabus, materials
References


