Ten Fundamentals for Novice CLIL Teachers

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Abstract | The main aim of this paper is to provide novice CLIL teachers with advice on key areas related to the implementation of this approach. This is done through the presentation of 'ten fundamentals' with their corresponding literature review, activities and suggestions contextualised within the framework of a defined Teaching and Learning Unit, and a final tip, all of which, it is hoped will empower future CLIL teachers in their classroom practice. Materials have been designed by the authors according to the Spanish National Curriculum and the textbook selected to use as an example is: *Natural Science 6. In Focus* for 6th year at Primary School Level with content designed by Spencer and published by Anaya.

Key words | CLIL, Bilingual Education, Teacher Training, Didactics, EFL

1. Introduction

The implementation of plurilingual policies in many schools in across Europe is a quite recent practice which was originally encouraged by the publication of the Common European Framework of Reference for Languages (CEFRL). The immediate consequence has been that teachers who become involved in Content and Language Integrated Learning (CLIL), whose institutions become part of plurilingual school networks, are neither sufficiently competent L2 users nor possess basic training in CLIL principles. This article has been driven by our experience with teachers in the context of Galicia, Spain, who are facing this new challenge of introducing Science, Maths, Music and many other subjects through English. It should also be useful for pre-service teachers, because in the face of the linguistic policies promoted by the Council of Europe, it is very likely that in their future profession they will be asked to teach through CLIL.[1]

In order to design and put into practice a CLIL Teaching and Learning Unit[2] (henceforth TLU) without becoming too despondent, it is important to be guided and to have some structured ideas about what exactly needs to be done. Moreover, in our teacher training faculties and in international conferences about CLIL, it is very common to hear pre-service teachers, and even in-service teachers, asking for the miraculous recipe to create CLIL TLUs and wanting to know exactly how to implement this approach. Copious articles which draw on the complexity of Content and Language Integrated Learning and the need for teacher education have been written (see Coyle in "CLIL: Motivating Learners and Teachers"; Marsh; Mehisto; Ellison), as well as others which focus on specific national contexts (see Pérez Cañado; Lasagabaster; Cenoz; Bobadilla--Pérez; Couto-Cantero; Pavón; Huertas Abril & Gómez Parra for discussion on this in the Spanish context). Despite this, some teachers remain hesitant about implementing this approach, and continue to ask the same questions: *Yes, I know the principles, I have read the theory... but now, what can I do in my classroom? How do I start?*

Therefore, the idea for this article was conceived within the framework of a workshop implemented by the authors at the Working CLIL 2018 Colloquium at the University of Porto with

the purpose of answering these questions in a practical and clearly structured way. To this end, ten key suggestions with contextualised examples are presented in order to help teachers know how, when and where to start with CLIL. Finally, some conclusions and further information are included which may contribute to their lifelong learning and professional development.

2. Ten CLIL Fundamentals

It is important to highlight that first-time implementation of any educational approach requires great effort and prior study. From the many pieces of advice which could be given to enrich CLIL teachers' first experiences in the classroom, we have selected ten 'key fundamentals' which we consider of paramount consideration. These are framed within the following areas: Basics – the 4Cs, Teacher roles, *Curriculum*, Materials, Languages, Management, 21st Century Skills, Online resources, Cooperative Learning, and Assessment.

In order to contextualise and give real shape to our ten CLIL fundamentals, some specific examples taken from Unit 1: "Living beings: cells and functions" from the textbook *Natural Science 6. In Focus.* (Primary 6, 11-12 years old) with content designed by Spencer are offered after each one. A tip which encompasses the main idea of each section is also provided (4-13).

2.1. *CLIL Basics – the 4 Cs*

One of the most important considerations when preparing for CLIL is its multiple focus on four interrelated principles: Content, Cognition, Communication and Culture. These can be viewed as a useful framework for planning lessons (Coyle, Hood and Marsh). Regarding the first, when planning for Content in CLIL it is important to allow for knowledge acquisition while simultaneously fostering personalised learning (Meyer et al.) by helping students build their own knowledge as will be explained below.

As far as Cognition is concerned, the progressive development of cognitive skills is central in the CLIL classroom (Coyle, Hood and Marsh). These skills based on Blooms' Taxonomy of

thinking skills and later revision by Anderson & Krathwohl are: Lower Order Thinking (LOTS): remembering, understanding, and applying, and Higher Order Thinking (HOTS): analysing, evaluating and creating. The idea in CLIL is to progressively promote a learning environment where students, from early childhood stages, are challenged to use all thinking skills. The level at which they are practised at any learning stage will be defined by the complexity of the activities implemented.

The C for Communication encourages students to participate in meaningful interactions aiming to increase Student Talking Time (STT) while reducing Teacher Talking Time (TTT). When planning CLIL lessons, it is helpful to organise linguistic objectives following Coyle, Hood and Marsh's *Language Triptych* which "supports learners in language using through the analysis of the CLIL vehicular language" (36). This Triptych is composed of three elements: The Language *of* learning, related to the content and structures related to the topic; the Language *for* learning, which is the language needed to operate in any learning environment such as asking and answering questions or language for cooperative work, and the Language *through* learning, which refers to all the language which has not been planned for, but emerges during the teaching and learning process.

The CLIL teacher must always plan for the language *of* learning and the language *for* learning. Just as a CLIL lesson should aim to challenge students and all thinking skills, students should also have access to "unknown language" (Coyle, Hood and Marsh 63) that might come up, for example, while researching for a particular project where students might need the help of a dictionary, or the teacher´s support.

'Culture is at the core of CLIL' as Coyle states in "CLIL: Motivating Learners and Teachers". The role of Culture as a means of understanding ourselves and other cultures is an important element of CLIL as well as for the development of intercultural competence. The development of intercultural competence is also discussed in the *Common European Framework of Reference for Languages* document (CEFRL) where the relationship of language and culture is addressed:

Language is not only a major aspect of culture, but also a means of access to cultural manifestations. Much of what is said above applies equally in the more general field: in a person's cultural competence, the various cultures (national, regional, social) to which that person has gained access do not simply co-exist side by side; they are compared, contrasted and actively interact to produce an enriched, integrated pluricultural competence, of which plurilingual competence is one component, again interacting with other components. (4)

The promotion of intercultural awareness in the CLIL classroom should not aim to address other cultures exclusively; it should prepare students to succeed in the globalised world. It is also important to acknowledge that "factual knowledge about other countries and cultures is not enough for successful intercultural communication; neither are foreign language skills alone. Cultures differ in many aspects including view of self, perceptions of time, and verbal and non-verbal communication styles, which need to be taken into account also" (Meyer 19). Therefore, all of these elements should be introduced in any CLIL learning environment.

If the teacher chooses to use a particular textbook, the following questions might be helpful to check if the CLIL approach is effectively implemented in the TLU: Which topics are students going to learn about? (Content); what language is needed and what new language might come up? It could be helpful to plan language using the above mentioned Language Triptych (Communication); are LOTS and HOTS developed in the different activities included in the textbook? (Cognition); and how is culture integrated in the Unit? (Culture).

Tip 1. Do not forget to plan according to the 4Cs. All are equally important and should be adapted to the context of the classroom.

2.2. *The CLIL Teacher's Role*

Most recent studies have based the teaching and learning process on a student-centred approach or curriculum (Nunan), and even though this is an important aspect to bear in mind, the teachers' role in CLIL settings has become a more and more concerning issue. According to Pavón and Ellison:

> CLIL is above all else ´thinking-centred´. As it is participatory and dialogic, it involves teachers and learners in thinking about ways of 'reaching' content and the means of expressing an understanding of it. It demands self-awareness and self-regulation as it involves conscious thinking about learning processes. (63)

Although it may be agreed that the learning process requires conscious thinking by both parties, teachers play the most important role in ensuring a successful experience (Couto-Cantero & Bobadilla-Pérez). As learners are guided by teachers, it is the teacher's responsibility to conduct the learning experience from the beginning to the end to reach the expected outcomes. Moreover, Pérez Cañado insists on the fact that there must be a "reconfiguration of the teacher´s roles" due to the relative novelty of the CLIL approach:

> This reconfiguration of teacher roles is an initial demand which CLIL places on the practitioner. Concomitantly, there are other potential barriers which they may encounter in CLIL implementation. A first of them is the relative novelty of the project: teachers who embark on this difficult enterprise can apply little of others' navigational knowledge. A further issue which is highlighted as a possible pitfall is the increased workload which CLIL entails for instructors: it requires a great deal of initiative and effort on their part, as well as learning to collaborate and liaise with other content and/or language colleagues in order to guarantee integration. (203)

This fact makes teachers feel insecure and therefore need to learn how to prevent anxiety and negative feelings or emotions (Arnaiz). Teachers must be capable of creating a positive atmosphere using techniques or strategies to connect with learners and build up mindful settings which help them to focus on the tasks and avoid stress, anxiety and lack of motivation (Gámez). The perfect balance lies in the CLIL teacher's ability to do this and engage students' participation at the same time.

The teacher's role as the leader guiding a successful CLIL learning experience can be illustrated briefly by the following practical example entitled: "What are living beings?" from the coursebook designed by Spencer entitled *Natural Science 6. In Focus.*

There are certain scientific conditions that differentiate a living being from a non-living being. Living beings are made up of cells and complete the three vital functions of nutrition, interaction and reproduction.[3]

Figure 1. What are living beings? (Source: *Natural Science 6. In Focus* (Spencer 4))

In order to be prepared to explain the difference between living beings and non-living beings in Unit 1, the CLIL teacher must make a lot of prior decisions. First, check if the 4Cs are applied and decide if the concepts are clear. What exactly does the translation from *materia inerte* (in the Spanish textbook) to 'non-living beings' mean? Can a `being' be 'non-living'? Wouldn't it be better to find another word in English to clarify the difference? Second, should the teacher play the audio track or not? If so, how many times? Would it be better to read it? Third, is it possible to change this sentence into an active task to be done by students so that they internalise the concept and the meaning of both terms? Our suggestions give answer to these questions. Perhaps we could use the word "objects or things" instead of "living beings". We could play the audio track two or three times, or read the sentence first and ask students to read it after. Finally, learners could do one or more of the following: prepare a drawing including both concepts, a list including the main characteristics of each concept, play roles (a cell, a rock, etc.).

Tip 2. CLIL teachers must make decisions when comparing textbooks with the corresponding Curriculum in order to ensure that tasks presented allow for meaningful learning.

2.3. *CLIL & Curriculum*

Teaching through CLIL should not imply a reduction in the coverage of subject-specific content. This is actually one of the biggest concerns of many teachers attempting to implement CLIL in their classrooms. Some instructors seem to be afraid that teaching through a foreign language will make it difficult to cover all the specific content for a particular year, while simultaneously attempting to foster communication in a foreign language and promote cooperative learning.

Several actions or strategies should be taken when implementing plurilingual methodologies in the classroom in order to properly address and apply the guidelines required in the Curriculum. Scaffolding language and content learning is one of them. Scaffolding is temporary support in the present, for what students will be able to do alone in the future. It is linked to Vygotsky's Zone of Proximal Development which, according to Coyle, Hood and Marsh refers to "the kind of learning which is always challenging yet potentially within reach of each individual learner on condition that appropriate support, scaffolding and guidance are provided" (29).

Regarding the scaffolding of language without reducing subject-specific content, language support can be provided using different strategies: using glossaries; speaking slowly and clearly; using body language; using the L1[4] (which shall be discussed later); modifying the presentation of task outcomes by the students; for example, instead of writing an essay; drawing a picture, a diagram, etc. Communication does not always have to be verbal; non-verbal communication can be used and it is strongly recommended.

Content scaffolding can be provided using multi-modal input such as "ways of presenting subject specific matters visually (through maps, diagrams, etc.) which not only allow for diversified teaching and promote visual literacy, but also enable a deeper understanding of the specific subject content and serve to illustrate and clarify complex matters presented in a foreign language" (Meyer 14). It would be advisable to diversify the way content is presented as much as possible, avoiding the exclusive use of written texts to explain or define new concepts.

It is also important to carefully review the national curriculum which the teacher must follow. Therefore, when creating one´s own material or using textbooks, one needs to always make sure that the content and concepts specified in the curriculum are presented. For example, when using a textbook from any publisher, it is a good idea to review and compare the contents discussed in a particular TLU with those required for the year it is intended as textbooks might sometimes provide more information than needed.

Pavón and Rubio emphasise the importance of an open integrated Curriculum in CLIL where "teachers involved in plurilingual teaching contribute to the goals and common contents of their linguistic and non-linguistic subjects" (59). Within the frame of an integrated curriculum, foreign language teachers should coordinate with content teachers to support communication in the CLIL classroom. We agree with Pavón and Rubio when they argue that "the selection and organisation of the contents of the Foreign Language should be subject to the needs of the non-linguistic subjects, but that an effort should be made to adapt the sequence of those contents" (52).

Full coordination between a foreign language subject and non-linguistic subjects is in fact very difficult, but language can be given in the foreign language classroom. For instance, the passive voice as in the example "…living beings are made up of…" (6) is a very common structure in Primary Science books, but it is not grammatical content included in the FL Curriculum for that level. These grammar structures that arise in CLIL lessons and that are not included in the FL Curriculum might be practised in communicative activities or games in the English classroom, so that students become familiar with them naturally.

Tip 3. CLIL teachers must not reduce curricular content when implementing the CLIL approach.

2.4. *CLIL & Materials*

It is common to find CLIL teachers adapting or designing their own materials in order to focus on attention to both language points and subject content, whilst adhering to the corresponding

Curriculum in which the context of the teaching and learning process is going to take place. Moreover, special attention to different learning styles (Massler et al. 66-95) is also needed, and students with Special Educational Needs (SEN) have to be taken into consideration in materials design. Educators may think that this is a very hard, time-consuming process which indeed it is, but, as a starting point, we suggest first selecting a small section of the TLU in the recommended textbook in order not to be overwhelmed.

Once this has been done, the next step would be to transform any complex content into feasible tasks through an active learning methodology, so that learners are aware and conscious of their own learning process. The following questions could help to accomplish this: Does the textbook require any supplementary resources to support learning? Are authentic materials or *realia* needed to help learners to understand non-linguistic concepts? To what extent does the use of hand-made materials made by teachers or the students motivate learners in a CLIL classroom? (See Figure 2 and the example below).

Cells can obtain and use nutrients, respire and release their waste.

- Cells that use **autotrophic nutrition** make their own nutrients by combining water, carbon dioxide and solar energy. Cells that use **heterotrophic nutrition** take nutrients from other living beings.

- Most cells use oxygen from their environment to respire.

- Cells use nutrients and oxygen to obtain energy, to grow and to regenerate. While doing this, they produce waste material.

- Cells release waste material to the exterior of the cells through the cell membrane.[5]

Figure 2. Cells and vital functions. (Source: *Natural Science 6. In Focus* (Spencer 5))

In this particular example, CLIL teachers could transform the "cells and the nutrition function" paragraph into easily accessible tasks for students. According to Ting and Martínez, this needs to be done in order for learners to nurture the concept of ownership of their own learning. For instance, in a consolidation stage, learners in groups could be asked to create a concept map or drawing with the functions and key concepts, or, again in groups, a live representation of the two possibilities of nutrition: autotrophic (self-nutrition) and heterotrophic (learners representing other living things).

Tip 4. Always consider checking the National Curriculum's guidelines on the TLU and how the textbook supports this learning. Be prepared to adapt materials and tasks accordingly.

2.5. *Code-Switching and Translanguaging in CLIL Settings*

Despite previous debate on whether using the L1 in CLIL lessons would be counterproductive or not, research has proved that CLIL may benefit from a certain coexistence of both languages (Méndez García & Pavón Vázquez). The use of the L1 can provide communicative support in the CLIL classroom. Besides, "studies seem to confirm that L1 use decreases at the same time as L2 proficiency increases" (Lasagabaster 4). Contrary to the idea that L1 usage is due to poor language proficiency, the appearance of both languages in students' and CLIL teachers' speech may point to a deeper understanding of both languages. In this discussion, the concept of 'translanguaging' has become a key element to support the use of the L1 in the CLIL classroom. On the contrary, in the foreign language classroom the trend has been to avoid the use of the L1 as a reaction against traditional methodologies. Nevertheless, other researchers acknowledge that "in the 1990s there was a shift in the pendulum and more importance was once again attached to the mother tongue in the foreign language classroom" and that current "practices such as codeswitching and translanguaging are still controversial" (Lasagabaster 3). On the one hand, the use of the L1 may help students to feel confident in a foreign language learning environment; but on the other, there is still a fear that the L1 might interfere with the L2.

In CLIL, with a dual focus on content and language, the use of the L1 is not such a controversial topic. Codeswitching practices, broadly defined as "the use of two or more linguistic varieties within the same conversation" (Myers-Scotton) have actually proven to be effective both for teachers and students. Studies carried out in bilingual and multilingual communities have shown that codeswitching is a highly structured practice. In fact, its effectiveness in the classroom can also be proved because "Bilingual and multilingual children learn the rules of codeswitching from a very young age, and are capable of assessing the appropriate language choice of the situation, the topic and the language preference of the listener" (Wei 399).

The use of the L1 in the CLIL classroom becomes relevant as a scaffolding strategy to support complex issues. Research such as that conducted by Lasagabaster reports that it is important that teachers become aware of learners' codeswitching practices "to reflect on the reasons for their choices" (17). But in order to be effective, it must be pedagogically planned and "if judicious, can serve to scaffold language and content learning in CLIL contexts, as long as learning is maintained primarily through the L2" (Lasagabaster 18). Nevertheless, teachers should not use the L1 when it is not strictly needed. In Figure 3 below, a large number of cognates can be found, e.g.: algae, protozoa, unicellular, etc. If learners are aware of these terms in L1, (which is the case), those cognates make the text clear enough to be understood in the L2 without the L1 interfering.

The **Protoctista** Kingdom contains **unicellular** and **multicellular organisms** that can live in water or in **humid** earth. They can also live inside **other** living beings. **Protozoa** belong to this kingdom and so do **algae**.

Protozoa

Protozoa are **unicellular**, have got a **nucleus** and are **heterotrophic** (they feed on **other** living beings). Some **protozoa** can cause **serious** diseases.[6]

Figure 3. The Protoctista Kingdom. (Source: *Natural Science 6. In Focus* (Spencer 9))

Tip 5. Do not be afraid to use the L1, but do so strategically.

2.6. *CLIL & Classroom Management*

According to (Kelly et al.), classroom management can be defined as the "management of learners' behaviour and activities to help structure relationships that support learning" (117). It is important for CLIL teachers to help to develop and be able to control students' behaviour. This involves negotiating codes of conduct and emotional issues which are not usually learnt or taught on teacher training programmes. Advice regarding these issues is therefore necessary.

How to organise space, manage the classroom as well as select the modality to give CLIL lessons is very important particularly for group work involving problem-solving tasks which are a feature of CLIL lessons. Regarding classroom management, case study methodology whereby teachers analyse what has happened in particular scenarios can be very useful to learn how to react. Imagine this situation arising from the textbook section on: "How cells are organised". Learners have to explain in their own words how unicellular living beings are organised, but they shout and use their L1.

Living beings have different levels of complexity. Their complexity depends on the number of cells they are made up of and how organised their cells are. There are unicellular living beings and multicellular living beings.[7]

Figure 4. How cells are organised. (Source: *Natural Science 6. In Focus* (Spencer 6))

How can you as a CLIL teacher manage this situation? What can you do or say in order to revert to the learning process? How can you get the learners to speak in the L2? For novice teachers, in our opinion, it is very important to start building up your own "CLIL Problem Solving Toolkit" in which you include enough resources and strategies to manage (un)expected difficulties and consolidate your teaching styles for the future.

We suggest recording reflections on practice using the following question prompts: What happened to trigger the incident? How did students react? What did *I* do? Did my actions work or not? Why? How can this be avoided in the future? Teachers can share different incidents with

other CLIL teachers, thus building up a repertoire of tried and tested techniques and strategies for their Toolkit.

Tip 6. Prevention is better than cure, but be prepared by building up your own "CLIL Problem Solving Toolkit".

2.7. *Fostering 21st Century Learning and Innovations Skills in the CLIL Classroom*

Apart from the 4Cs mentioned in previous sections, there is another set of 4Cs which must undoubtedly be considered by CLIL teachers. These are: Creativity, Critical Thinking, Communication and Collaboration which are synonymous with learning and innovation skills recognised as those that make the difference between students who are prepared for their life and work environments in the 21st century and those who are not. According to the research team involved in the P21 – the Partnership for the 21st Century Learning[8], it is a crucial to empower our learners with a focus on these 4Cs for the future. It is important to point out that all of them are key concepts to be developed in CLIL settings for the teaching and learning process to be successful. A clear example based on the textbook and TLU selected for this purpose follows Figure 5 below:

The Monera Kingdom contains mainly bacteria. Bacteria are unicellular and they haven´t got a nucleus. Bacteria can be found on land, in water, air and inside other living organisms. There are about a million bacterial cells in just one millilitre of fresh water!

You need a microscope to see bacteria because they are so tiny.[9]

Figure 5. The Monera Kingdom. (Source: *Natural Science 6. In Focus* (Spencer 8))

Think about the importance of using the P21 4Cs: Creativity, Critical Thinking, Communication and Collaboration to present the Monera Kingdom in an active, hands-on way. Consider creativity as a tool to help learners to understand concepts (bacteria, nucleus, etc.) or language learning (write a definition of the meaning of bacteria). How can we promote critical

thinking throughout this activity? Is it possible for students to collaborate with each other to find creative explanations for the different shapes of bacteria cells? And finally, how can learners communicate their findings, not only in the classroom, but to the whole teaching and learning community? A possible answer to all of these questions is Project Based Learning (PBL), so learners could learn the Monera Kingdom by doing a project in which creativity, critical thinking, collaboration and communication are included.

Tip 7. There are no limits when exploring and promoting 21st century skills in CLIL settings.

2.8. *CLIL & Online Resources for Novice Teachers*

Despite the efforts made by publishers to design CLIL textbooks for many content subjects, teachers still feel that not enough resources are provided for them. On the one hand, these textbooks, regardless of their pedagogic quality, are not intended for the needs of any single group of students, which is also true for non-CLIL textbooks. On the other hand, as previously mentioned, the CLIL approach fosters interdisciplinary learning through the implementation of cooperative learning practices. CLIL textbooks mainly focus on just one particular subject, although some cross-curricular topics might be introduced. In order to compensate for the lack of resources, many websites offer a great number of activities and other materials adapted for use in CLIL classrooms (see for example, the British Council links, Isabelperez.com and CLIL4teachers site) and there are also online resources from English medium schools around the world.[10]

The Internet also provides an inexhaustible supply of authentic materials or *realia,* from news stories, You Tube videos to Ted Talks. Coyle, Hood and Marsh suggest teachers consider the following questions before using real texts from the Internet that might fit the purpose of a particular topic. Regarding the "message" – Is that what the teacher wants? Is it expressed in an accessible way? The mix of textual styles for presentation – Does it have visuals, graphics? Can it be read or heard? The level of subject-specific vocabulary – Does it provide the right amount of content vocabulary? The level of general vocabulary – Are there many complex words? The

level of grammatical/syntactical complexity – Are the sentences too complicated? The clarity of the line of thinking – Is the text overt? (93).

Furthermore, the Internet is useful for teachers to become part of CLIL networks. CLIL teachers all over the world should use the Internet as a platform to share and discuss experiences and challenges in their practices as Ellison suggests:

> Engaging in dialogue about new pedagogic interventions is an essential part of professional practice. Where there are other similar institutions within the same local/national context, coordinators should actively engage in sharing experience of practice, ideas and materials. Not only will this provide an important supporting network, but also potentially help to save time spent on materials production where materials are produced with national curricula in mind. (51)

Educators should search and find the network which better suits their teaching needs or research interests according to their socio-geographical contexts.[11]

Tip 8. Share your own resources and ideas with the CLIL teaching community.

2.9. *Criteria and Items for Assessment in CLIL Lessons*

Assessment for teachers is one of the most difficult elements in the CLIL planning process. What to assess becomes challenging when both language and content are introduced. According to Ellison, the answer to the question relies on the aim of the activity, task or project: "What to assess – content, language or both and how to do this will depend on the aims of the project. If these are mainly language-oriented, then there will necessarily be a firm focus on this. Both language and content teachers should be jointly involved in assessing learners in CLIL" (46).

Insofar as assessment is concerned, CLIL teachers and language teachers should, as much as possible, work in collaboration. If possible, language should be also addressed and assessed in the EFL classroom. However, the linguistic input in the CLIL classroom is very often higher than students' expected output and is frequently not included in the EFL curriculum. Language in the CLIL classroom can be assessed using a number of means, for example,

matching information, labelling diagrams, creating graphics or drawings. The CLIL teacher must bear in mind that it is not only about assessing productive skills – Speaking and Writing – but also receptive skills – Reading and Listening. If a text is understood, students should be able to organise key words in a graphic, or do a drawing about a specific topic.

Another key issue related to assessment is the acknowledgement that it is also a part of the learning process itself. Within the context of cooperative learning, assessment should be understood as something other than a set of tools used to gather information to give final grades. Assessment becomes a topic of conversation between students and teachers, as well as among classmates. In that sense, peer and self-assessment become crucial elements in the CLIL teaching and learning process as in non-CLIL subjects:

> Peer-assessment which refers to specific criteria and is carried out in discussion between two partners in class is valuable, because it centres a process where each student puts into words -and therefore rehearses- their individual understanding of the topic material. Self-assessment and self-evaluation are both likely to be better informed if they follow peer-assessment. (Coyle, Hood and Marsh 129)

In conclusion, what to assess in the CLIL classroom must be defined by the aims of a particular TLU in order to decide how to assess both content and language appropriately. Furthermore, it should be emphasised that peer and self-assessment play a highly relevant role in CLIL settings. Particular attention should be paid to the use of portfolios which are very useful for fostering autonomous learning and allowing space for creative thinking (Palacios). Depending on what methods are regularly used to teach, it is important to use diverse assessment tools such as rubrics, tests or systematic classroom observations.

Tip 9. Plan CLIL assessment according to the CLIL approach implemented.

2.10. *Cooperative Learning, Projects and CLIL*

From all of the well-known methodologies which may be considered when implementing a CLIL approach Cooperative Learning (CL) is, in our opinion, most worthy of consideration. The benefits

of CL have already been proven and this methodology seems ideal to help learners to work in CLIL settings in keeping with all the elements mentioned above including the 4Cs and P21 4Cs. CL is also strongly related to another possible means of learning which is based on the concept of "learning by doing" or a section that textbooks include at the end of each unit called "Projects".

Projects are being included more and more in textbooks so that students can benefit from more active methodologies instead of the traditional ways often perceived as 'boring' by students (listening to the teacher say: "Open your textbook and do exercises 1, 2 and 3 on page 49"). As we have previously mentioned, it is now common to find the so-called "project" at the end of the TLU. If we stop for a second and analyse these types of project, we may find that sometimes they are not "real" projects but reading comprehension activities, such as the one included in the following example in Figure 6 below. In this sense, teachers should ask if it really is a project, and if so, if it is useful for learners.

Project. Are viruses living beings?

Viruses are considered to be somewhere between living and non-living material. This is because they cannot perform vital functions on their own.

When they invade (or enter) the cell of a living being, they begin to multiply and produce more viruses. This destroys the healthy cell.

Because of this process, viruses cause many illnesses such as the flu, measles, polio and hepatitis.

Viruses are tiny and were only discovered long after the illnesses they caused. They can only be seen though a powerful electronic microscope.

On examination, it was found that they were not made up of cells, but are composed of a capsule, which contains geometric forms and genetic material with the information necessary for viruses to reproduce.

1) What is the difference between a bacteria and a virus?

2) Create a Hypothesis explaining why viruses are always harmful to cells they invade.

3) Some scientists call viruses 'obligate parasites'. Why do you think they are called this?[12]

Figure 6. Project. Are viruses living beings? (Source: *Natural Science.* (Spencer 12))

Projects are worth devoting a considerable amount of time to. A well-chosen, well-
-organised project can really motivate and engage both the teacher and learners. Teachers should consider planning real hands-on projects which involve learners working together throughout the process, making decisions, negotiating roles and 'owning' both the process and the product which may be presented to other groups. For this to be successful, the project has to be relevant, realistic and achievable. Should the project included in the textbook not meet your expectations, our suggestion is to elaborate your own instead so that learners actively participate, and you may use it as an alternative means of assessment.[13]

Tip 10. Consider using CL and PBL to get learners involved in working collaboratively in your CLIL lessons.

3. Conclusions

Being a "good" CLIL teacher requires more than being competent in a foreign language. Even though teachers are expected to be competent in the L2, if there is no appropriate training in the CLIL approach, they will not be prepared to present content through language effectively. The teaching profession is one of lifelong learning, so the CLIL teacher should never stop learning, through teacher training courses, from other teachers and from their own experiences.

Bearing this in mind, we have provided ten suggestions to become an effective CLIL teacher accompanied by contextualised examples. Our intention has been to present them in a practical way, making them easily understandable to those who are new to the approach. In doing so we have discussed a wide range of relevant topics, from CLIL basics, to dealing with the teacher's roles, resources and materials, classroom management, assessment, projects and cooperative learning.

We understand the teaching profession as a lifelong learning journey. Teachers in general should always try to improve their own practice, not only by learning about it through self-reflection, but also sharing their experiences and knowledge with the teaching community through active

participation in networks. Research in the field is also an important component in teachers' learning process since much can be gained from keeping up-to-date with the latest studies in the field. It is for that purpose that all of the works cited in this article are also intended to be a useful bibliographical selection for CLIL teachers.

Notes

[1] A previous article published by these authors (2017) has actually discussed the need to review teacher-training programmes at universities in order to introduce a compulsory CLIL subject.

[2] Teaching and Learning Unit (TLU) is the concept coined by one of the authors of this article, because it defines exactly the countable parts in which the teaching and learning process can be divided to elaborate learning sequences.

[3] Spencer, Deborah. "Unit 1", *Natural Science 6. In Focus*, edited by Denise Suárez, Anaya, 2015, www.blinklearning.com/course Player/librodigital_html.php?idclase=22082240&idcurso=497510. Accessed 4 March 2018.

[4] In this article, L1 is used as the learner's Mother Tongue or Initial Language, while L2 refers to the Foreign Language.

[5] See note 3.

[6] See note 3. Bold is ours.

[7] See note 3.

[8] P21 The Partnership for 21st Century Learning (formerly the Partnership for 21st Century Skills) "was founded in 2002 as a coalition bringing together the business community, education leaders, and policymakers to position 21st century readiness at the center of US K-12 education and to kick-start a national conversation on the importance of 21st century skills for all students". For more information access: http://www.p21.org/about-us/our-history.

[9] See note 3.

[10] The British Council links: "Learn English", "Learn English Teens" and "Learn English Kids" offers learners and teachers a great variety of free-of-charge activities which can be both used for the EFL, as well as the CLIL classroom. Among the ones specialised in CLIL, the "CLIL4teachers" site includes a very comprehensive resource bank with planning tools and templates, general resources as well as subject specific ones (Art, Design & Technology, Drama, Geography, History, Maths, Music, Science and Sports). Particular attention should also be paid to the CLIL section on the website "Isabelperez.com", where CLIL teachers can not only find guidelines and steps to design a CLIL lesson, but also a whole section of resources classified in three groups: 1. CLIL worksheets, texts, activities in PDF or Power Point format; 2. CLIL online projects; and 3. a selection of materials for plurilingual institutions in Spanish Schools.

[11] The following networks are suggested as an example: "CLIL network – CETAPS", "MLTAV- CLIL Language Teachers' Network", "UP2Europe - CLIL Cascade Network", "Playing CLIL".

[12] See note 3.

[13] Some criteria for a "good" CLIL Project: it must be active, follow the 4Cs, follow P21 4Cs, fulfil targets and be assessed according to objectives and methodology.

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