

TOWARDS A REAL INTEGRATION OF CONTENT AND LANGUAGE IN CLIL

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Abstract: Over the last decades, content and language integrated learning (CLIL) research has largely focused on the analysis of the implementation and potential linguistic benefits and drawbacks of this approach. More recently, however, research studies are taking a step back and focusing on the key term integration in CLIL. This article aims at making a proposal for classroom practices that may help us turn this integration into a reality by bringing the language and the content paradigms closer together. In so doing, we will try to provide an answer to some of the challenges that CLIL raises by targeting the often forgotten element in the CLIL equation, namely subject content, and the possible detrimental effects of CLIL on studying a subject matter through a foreign language.

Resumen: Durante las últimas décadas, la investigación sobre el aprendizaje integrado de contenidos y lengua (AICLE) se ha centrado principalmente en el análisis de la implementación de este enfoque, así como sus potenciales beneficios lingüísticos y desventajas. Sin embargo, recientemente, los estudios han dado un paso atrás y empiezan a centrarse en el término clave integrado de AICLE. Este artículo tiene como objetivo presentar una propuesta de prácticas en el aula que puedan ayudarnos a convertir esta integración en una realidad al acercar los paradigmas de lengua y contenidos. Al hacerlo, intentaremos dar respuesta a algunos de los desafíos que plantea AICLE a través del elemento más frecuentemente olvidado en este enfoque, el contenido no lingüístico, junto con los posibles efectos adversos de AICLE sobre el estudio de una asignatura no lingüística en un idioma extranjero.

Keywords: CLIL, subject content, integration, classroom practices.

Palabras clave: AICLE, contenido no lingüístico, integración, prácticas en el aula, destrezas básicas de comunicación interpersonal y lenguaje académico.

CONTEXTUALISATION

In recent years, we have seen a proliferation of research studies on CLIL practices mostly analysing their implementation and linguistic outcomes from various angles. Overall, these reviews and analyses of the CLIL approach have revealed largely positive effects on foreign language (FL) competence (see, e.g., Dalton-Puffer et al., 2010; Lasagabaster and Ruiz de Zarobe, 2010; Cenoz et al., 2013; Juan-Garau and Salazar-Noguera, 2015). Scant attention, however, has been paid to subject content learning. Existing findings in this regard show that no major detrimental effects are seen to derive from such an approach when properly implemented (see, e.g., Admiraal et al., 2006; Stohler, 2006; Grisaleña et al., 2009). Based on the conclusions drawn from the aforementioned studies, it may be assumed that learners in a CLIL programme can reach the end of their compulsory education having consolidated all of the basic and necessary content and language knowledge (see, e.g., Alonso et al., 2009), and that they might even do so with high standards, performing at times better than their non-CLIL counterparts (see, e.g., Lorenzo et al., 2011), possibly owing to a greater development of their high-processing skills and cognitive abilities (see, e.g., Jäppinen, 2005; 2006; Lorenzo et al., 2010). These beneficial outcomes come hand in hand with other gains such as students' motivation, confidence to use the FL or a heightened awareness of the world that surrounds them (Coyle, 2011). The suggestion has often been made that CLIL goes beyond the integration of content and language, as its methodology has the potential to elicit mental construction activities (see, e.g., Vollmer et al., 2006; Dalton-Puffer, 2008).

One of the factors that has been frequently considered to play a crucial role in these favourable outcomes is the greater attention paid to students' needs (Harrop, 2012). Thus, Coonan (2007: 643) highlights that "*in CLIL [...]*

care is taken to nurture language growth through the content and the L1 is used as an instrument if needed to overcome learning difficulties". According to Ruiz de Zarobe and Lasagabaster (2010), if a different methodology is used, disparate results between CLIL and non-CLIL students are to be expected as well.

However, despite the positive outcomes outlined, the question remains whether the students' linguistic skills are going to be insufficient to tackle content learning unless there is a prior simplification of materials or an addition of language teaching hours in order to cater for a more scaffolded teaching (see Hajer, 2000; Dalton-Puffer, 2011). Grisaleña et al. (2009) identify a series of weaknesses in CLIL implementation that include the lack of appropriate teaching materials, the difficulties associated with the acquisition of specific vocabulary, and the extra effort and time burden that both students and teachers face, among others (see also Yip, 2003; Yip et al., 2003; Airey and Linder, 2006).

In order to cope with these hardships and try to compensate for them, several authors underscore the essential "*co-operation and skills exchange between language and content teachers*" (Ravelo, 2014: 79). In fact, Lorenzo et al. (2010) pinpoint some additional positive effects of CLIL programmes acknowledging their potential to stimulate greater interdepartmental collaboration, cohesion in the school community and a creative environment that promotes the blossoming of new initiatives. What seems undeniable is that further efforts are required from both teachers and students, as well as from the whole teaching body behind the programme both at top-down (curricular planning) and bottom-up (in-class) levels, for CLIL prospects to come true (see, e.g., Elorza and Muñoz, 2008; Hüttner et al., 2013). Among other initiatives, language and content teachers need to adopt a series of teaching strategies, including thorough lesson co-planning, using classroom language,

matching learners' knowledge and capacities, and providing additional scaffolding through, for example, visual support. These strategies, which might be disregarded if the content subject is taught in the students' L1, are at the core of CLIL and, without their application, favourable results could hardly be achieved. All in all, in order to attain additional benefits, the adoption of appropriate CLIL teaching strategies is imperative. The problem that arises with such practices is that they might be too time-consuming and their application might prevent teachers from meeting the curricular requirements of the programme.

In this vein, our proposal aims at coping with the complexities of CLIL through embracing experts' recommendations (see, e.g., Lorenzo et al., 2010). We contend that by making the integration of the two components in CLIL –language and content– a reality, the possible subject content flaws mentioned above could be avoided (de Graaff, 2016: xv-xvi). Since the FL subject already benefits from CLIL in the sense that students practise the FL in the content subject, it would seem fair that, in return, some non-linguistic content could also be present in the FL subject to hone content knowledge. In fact, this is a practice acknowledged by Lyster and Ballinger (2011: 280) –based on Met (1991)– who present a continuum of content-based language teaching settings ranging from content-driven programmes, such as immersion, to language-driven options such as “language classes with thematic units” and “language classes with content used for language practice”. The latter options focus on the development of target language proficiency through subject content. We, therefore, suggest the adoption of a series of classroom practices in the FL subject that complement and help to facilitate the acquisition of the subject contents of a chosen subject delivered through a FL as part of a CLIL programme. In order to do so, we will first present in more detail what we believe is a plausible approach to overrule possible deficiencies in content learning, with teacher cooperation at the core. After that, some

further cognitive advantages derived from the forthcoming proposal will be outlined, which will then lead to the presentation of a practical application of our proposal to a content subject, Natural Sciences, to lastly finish with some conclusions and final reflections.

PROPOSAL

When a CLIL approach is adopted, the language of instruction of the content subject is assumed to be a FL, and the sole use of this FL as a tool for communication in the content subject is expected to lead to an upgrade in learners' linguistic command of it. Along with this, there might be an increase in their intrinsic motivation to learn the language, thus lifting some weight from the FL subject. Therefore, what the FL subject should do in exchange is to lighten the weight of the content subject. This could be accomplished by having the FL sessions provide more scaffolded support through thematically oriented activities, directing the topics of the FL subject towards the content subject syllabus. In this sense, the FL subject would assume the role of a crutch for the content subject, strengthening students' learning and dealing especially with the more language-related aspects, while simultaneously facilitating the consolidation of contents.

Moreover, one of the main concerns of FL teachers would find its own solution in such a practice. Among the difficulties they face in the design of class activities, there is often a lack of original and meaningful materials, and, as a result, they end up presenting topics as distant and diverse as *fashion*, *endangered species* or *the future of technologies* that lack solid ground, the goal being simply to be able to take part in a variety of written and spoken interactions, as well as using the language for a handful of purposes (see, e.g., *Conselleria d'Educació i Cultura*, 2008, for a comprehensive description of the FL curriculum in the Balearic Islands), without necessarily leading to any reflexive practice whatsoever.

Furthermore, the goal of this mutual commitment between language and content goes beyond what we commonly know as *everyday* language, which Cummins (1979) labelled as Basic Interpersonal Communicative Skills (BICS), and targets students' formal academic language competence, which is referred to as Cognitive Academic Language Proficiency (CALP). A series of research studies in Canada have proved that, in second language acquisition contexts, immigrant children often acquire everyday conversational fluency in English within about two years of instruction, but require longer periods to develop academic English skills (Cummins, 1984; Collier, 1987; Cummins, 2008), due to their direct link with learners' cognitive development.

The difficulties that students have in the use of content area vocabulary in academic contexts (CALP) is a concern that has often been voiced by CLIL researchers. In this regard, in her 2010 article, Várkuti reports on the initial conclusions of a large scale empirical study that attempts to compare the conversational and academic language achievements of CLIL and non-CLIL secondary education pupils. The study looks into three main areas, revealing that: (1) CLIL students have significantly greater linguistic competence in comparison to their peers; (2) social or conversational language skills are acquired comparatively faster than more academically demanding linguistic competences; and (3) CLIL pupils do perform better in academic language tests than their non-CLIL counterparts. In fact, they have "a larger and more sophisticated vocabulary, better skills in applying grammar rules, as well as a greater confidence in and awareness of language use" (2010: 76).

Therefore, it appears that CLIL, particularly in combination with FL instruction enhanced with content-based activities, can provide an ideal blend between BICS and CALP: on the one hand, the acquisition of social language (BICS) for everyday interaction, which is

inherent to the very nature of the CLIL approach and of the FL subject, and, on the other hand, the development of academic language (CALP), not only in the content subject, the scope of which may be too vast, but also in the FL subject, which does not settle for simply acquiring the language and taps into higher-order cognitive processes through thematically oriented work.

In this line, our proposal benefits from a redefinition of the concept of knowledge. The acquisition of academic language does not only involve the understanding and use of scientific terminology. It encompasses other cognitively demanding skills, such as identifying criteria, justifying opinions, forming hypotheses and interpreting evidence, all of which tend to be present in a CLIL lesson, but are often lacking in FL sessions. In the 1950s, Benjamin S. Bloom developed what is known today as Bloom's Taxonomy (see Bloom et al., 1956), a framework that provided a classification of learning and thinking into six major categories in the cognitive domain (see Figure 1).

As Krathwohl (2002: 213) claimed, it is necessary to reconsider the objectives of learning as

[a]lmost always, these analyses have shown a heavy emphasis on objectives requiring only recognition or recall of information, objectives that fall in the Knowledge category. But, it is objectives that involve the understanding and use of knowledge [...] that are usually considered the most important goals of education.

As we can see in Figure 1, falling into the category of *Remembering* limits our potentialities severely. For long, FL teachers have worked on the lowest levels with activities enhancing memory and repetition, among others, and not even trying to scratch the surface of higher-order thinking skills. Instead, Bloom claimed that our final goal should always lie in reaching the top

of levels of thinking and intellectual behaviour. Taking on board his view, what teachers need to ensure is that CLIL helps students climb this stairway with questions, activities and tasks that challenge their thinking behaviour. This is where the FL subject can play a relevant role. The cooperation between different curricular subjects allows students to reach a deeper

understanding of the contents and go further in their learning. Due to the possible limitations of content subjects in CLIL previously mentioned, it may be difficult at times to reach the highest levels in Bloom's Taxonomy, but, thanks to additional exposure to content matter in the FL subject, these hardships may find a release.

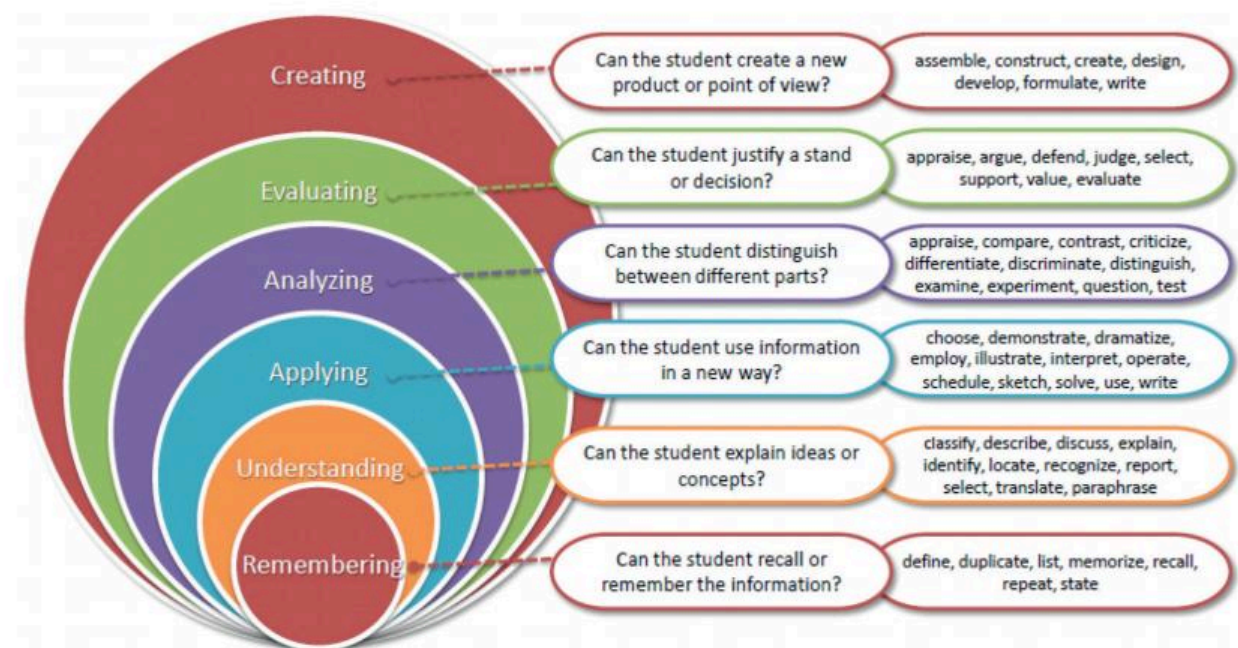


Figure 1. Bloom's revised Taxonomy (adapted from Anderson et al., 2001)

SAMPLE CLASSROOM ACTIVITIES

A series of activities will be presented next so as to bring the present proposal closer to actual classroom practice. The sample activities included were first tested and then put into practice by the first author of this article during a three-month period spent as an English teacher in a state-run high school with a third-level Compulsory Secondary Education class, i.e. 15- and 16-year-old students. More specifically, they were part of the Natural Sciences subject and, in particular, of the unit entitled *Health and Disease*, which covered the subtopics of *diseases and types of infectious diseases*, *the immune system*, *antibiotics* and *vaccination*. Contents were first presented in the Natural Sciences class and, afterwards, English as a FL (EFL) lessons

incorporated the topic while integrating the different linguistic skills. Next, we display a sample of these EFL in-class activities.

Remembering and Understanding. *Going to the doctor I – Vocabulary and structures on the topic of health.* As an introduction to the topic, the students watch a short health-related video, do an activity to check comprehension, and then brainstorm on the different stages that we follow when we feel pain and need to go to the doctor. First, in groups of four, they think of the possible minor ailments that a person may feel (e.g. *to have a rash*, *a sprained ankle*, etc.). The teacher has some visual aids prepared to facilitate the understanding of new words/phrases. After that, and in order to concentrate on the vocabulary provided, they play taboo:

each group is divided into two pairs playing against each other. Each pair is allotted three minutes and given a deck of flashcards. One of the members has to pick one card at a time and describe its contents to his/her partner, who will try and guess the word/phrase, e.g. *it's what happens to you when you spend too much time under the sun without applying any sunscreen –you get sunburnt*. At the end of the three minutes, they count how many words they guessed and the winners are those with more correct guesses. Finally, again in pairs, they choose an ailment and develop a dialogue on going to the doctor and explaining their symptoms in order to get a treatment, thus reviewing questions and answers.

Applying. *Going to the doctor II – Role play.* Now that they have the outline of a dialogue and have learnt the vocabulary related to minor ailments, every student is assigned a role, either patient or doctor, and is given a set of cards with either the treatments or symptoms for a series of ailments. The patient randomly chooses an ailment, explains the symptoms to the doctor, and the doctor has to locate them in his set of cards and prescribe the treatment indicated there.

Understanding and Creating. *Learning about epidemics in the world I – Epidemics in the media.* The teacher writes a series of terms on the blackboard related to epidemics and their spread (e.g. *epidemics, pandemics, outbreak, quarantine, vaccination, etc.*) and elicits their meaning. Then, students watch a trailer of the film *Contagion*, which presents them with an epidemic outbreak. After that, they need to draw a storyline of the film, focusing especially on anything they hear relating to the words on the blackboard.

For the following lesson, they have to look for a piece of news in the media on an outbreak of a disease in the world in the recent past, for instance *ebola*. They should take notes and write a summary (around 100 words) on that piece of news and post it on the blog of the

subject, making sure they provide an answer to the questions on the *what, who, when, where, how* and *why* of the story. Some suggestions on what to be mentioned include: the location where it started; the disease and an explanation of it; the number of people infected and, if any, the casualties it cost; what treatments were administered; whether it was eradicated; and whether any prevention plans have been developed afterwards.

Analysing and evaluating. *Learning about epidemics in the world II – An interactive tool to monitor diseases around the world.* In the English subject's blog learners find a very comprehensive report on diseases that have spread around the world in recent times. They are next presented with a tool: www.healthmap.org, which consists of "*an established global leader in utilizing online informal sources for disease outbreak monitoring and real-time surveillance of emerging public health threats*". After watching a presentation video and checking comprehension with a listening exercise, in pairs students become familiar with the interface of the website and start to explore the applications it offers. They have to choose either a location, and track down the diseases in the area, or a disease, and track down its spreading pattern, taking notes of their findings, to share them with the class by the end of the lesson.

Understanding. *Becoming experts on a disease I – Searching the net.* Students are presented with the final project of the unit. In groups of four, they choose a disease, either viral or bacterial, from a given list. They subdivide the groups in pairs to enter the Internet so as to gather as much information as possible regarding its *cause, transmission, symptoms, diagnosis, treatment* and *prevention*. The teacher suggests a series of sites to facilitate the task, such as the WHO organisation webpage.

Analysing and Evaluating. *Becoming experts on a disease II – Disease ID card.* With the information

previously collated, the students get together with their groups of four and put it all in common, making a schematic summary with the most relevant points, and fill in the Disease ID card

(see *Illustration 1*), which will then be uploaded in the English subject's blog so that everyone can access all of the Disease ID cards of the rest of their classmates.

DISEASE ID

NAME: *Tuberculosis (TB)*

- CAUSE:
 - ✓ Bacterial
 - *Mycobacterium tuberculosis*
- TRANSMISSION:
 - ✓ Through the air
- SYMPTOMS:
 - ✓ cough
 - ✓ weight loss
 - ✓ loss of appetite
 - ✓ fever
 - ✓ night sweats
 - ✓ lack of energy
- DIAGNOSIS:
 - ✓ Skin test
 - ✓ Blood test
- TREATMENT:
 - Medication:
 - ✓ Isoniazid
 - ✓ other antibiotics
- PREVENTION:
 - ✓ stay away from people who have the disease
 - If not possible...
 - ✓ Avoid long periods of time in enclosed rooms with someone who has TB
 - ✓ Air out those rooms regularly
 - ✓ Cover your face with a mask

DISEASE ID

NAME: *Hepatitis B (HBV)*

- CAUSE:
 - ✓ Viral
 - *Hepatitis virus type B*
- TRANSMISSION:
 - ✓ Blood or other body fluids of an infected person
- SYMPTOMS:
 - ✓ dark urine
 - ✓ loss of appetite
 - ✓ fever
 - ✓ abdominal pain
 - ✓ weakness
 - ✓ yellowing of eyes and skin
- DIAGNOSIS:
 - ✓ Blood test
- TREATMENT:
 - ✓ Antiviral medication (if chronic)
 - ✓ Immunoglobulin
 - ✓ Bed rest
 - ✓ Liver transplant (if severe)
- PREVENTION:
 - ✓ Hepatitis B vaccine
 - ✓ Avoid contact with blood of an infected person

Illustration 1. Disease ID cards: *Tuberculosis* and *Hepatitis B* examples

Applying and Creating. *Becoming experts on a disease III – Spoken production: oral presentation.* Students have to present the information gathered to their classmates as if they were researchers informing a body of doctors on a newly found disease and the treatments available in the market, together with the prevention measures that need to be adopted from now onwards. First, they watch a series of videos on real conferences to exemplify the task. After that, they develop a plan of the contents to be tackled, and once they have the teacher's approval, move on to develop their presentation with the help of some visual aids such as slideshows, to finally present it orally to the rest of the class.

Analysing, Evaluating and Creating. *Becoming experts on a disease IV – Diagnosing a disease.* In pairs, students are assigned a role: doctor or patient. They have to enter the English subject's blog where they have access to all of the Disease ID cards they developed in a previous

activity. The patient chooses one of the diseases randomly and simulates a visit to the doctor (practised earlier in the unit). From the patient's symptoms and by checking the cards, the doctor has to diagnose the disease and prescribe a treatment.

COMMENTS ON THE ACTIVITIES PROPOSED

As previously stated, we should not overlook the fact that since we are dealing with a linguistic subject, this proposal needs to combine language-related activities for everyday interaction with others more content-focused. Therefore, the first activities proposed serve the purpose of acquainting students with everyday vocabulary (BICS) on *Health and Disease*, and should include exercises that require the use of the different receptive and productive linguistic skills, as well as the use of the language through specific vocabulary and grammatical structures. After that, students retrieve the knowledge acquired in the

Natural Sciences sessions and put it into practice through a series of activities combining again receptive and productive skills while developing their academic language (CALP) further. Visual aids and collaborative tasks help make the content more cognitively accessible. The use of new technologies and, in particular, of a blog for the subject also contributes to engaging learners with the tasks and provides a space for them to share materials and comments, so that it is all stored and can be later retrieved to review the contents of the subject. A sample of this blog can be visited at: <https://englishclil3.wordpress.com>.

The activities presented herein have been named after the stages in Bloom's Taxonomy in order to reflect the suitability of this framework to accommodate the cognitive skills that the actual integration of content and language demands. Besides, they are designed in accordance with the 4Cs Conceptual Framework that encompasses the four essential categories presented by Coyle (1999), and intend to facilitate the integration of content learning (Content and Cognition) and language learning (Communication and Cultures) (see Coyle, 2006). New pedagogical approaches should have a sound theoretical basis and be always accompanied by reflective practice.

CONCLUDING REMARKS

The classroom practices outlined in this article are in line with the view that CLIL stands as a

possible solution to increase FL knowledge, thus contributing to learners' desirable multilingualism (Merino and Lasagabaster, in press), if properly combined with formal instruction. Juan-Garau (2012: 234) refers to these two learning contexts being complementary, "so that the skills and forms learnt in one setting may be transferred to a different setting". While CLIL contributes to the development of language competences such as receptive skills, vocabulary and morphology (Dalton-Puffer, 2008), formal instruction contexts, i.e. FL lessons, are especially beneficial to the development of communicative skills and grammar. Juan-Garau (2012) concludes that the acquisition of the FL and the development of multilingual skills are maximised when we take full advantage of the complementarity of the diverse contexts of instruction.

With the present proposal we intend to take the *integration* that CLIL proposes further. While the integration of language and content in a single subject may not suffice, having the FL and the content subject work together and complement each other could have a higher potential of success. This is, in fact, what new trends in teaching are aiming (see, e.g., Jing, 2006; Nunn, 2006): to present a holistic configuration of lessons as close as possible to real life, where different abilities and contents are blended and where there are no boundaries to the development of the students' cognitive skills.

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