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Content and Language Integrated Learning (CLIL) in European Higher Education (pp. 251–273)

Abstract

The following article discusses Content and Language Integrated Learning (CLIL) in European higher education, which has become popular in recent years due to the status of English as a foreign language. Firstly, the difference between CLIL and English Medium Instruction (EMI) is explained, then CLIL modules in higher education are presented. Furthermore, CLIL special pedagogy in higher education is described. The subsequent section is devoted to the benefits and challenges of CLIL in higher education as listed in the literature; finally, insight into research on language in the CLIL higher education context is addressed. The data presented in the article is based on an in-depth literature review and research conducted in higher education institutions in Europe. The findings show that even though CLIL has become a popular approach in higher education in recent years, adapting this concept has been a great challenge due to the very little preparation, proper methodological training and complex linguistic learning situations.

Keywords: Content and Language Integrated Learning, higher education, pedagogy, language, content, benefits, drawbacks

1. Introduction

The requirements of 21st-century higher education, created within the framework of the Bologna Process, and the importance of the English language in the global market have led to the internationalisation of higher education. In recent years, universities have been introducing English as the language of teaching and learning, stressing the importance of quality teaching and effective practice. Content and Language Integrated Learning (CLIL) is a perfect example of an approach which meets the requirements of 21st-century higher education, as its aims are consistent with the CLIL dimensions proposed by Marsh et al. (2001), namely Culture, Environment, Language, Content and Learning.

Even though CLIL has become a very popular approach in higher education in recent years, adapting this concept has been one of the greatest challenges due to the very little preparation, proper methodological training and complex linguistic learning situations (Fürstenberg & Kletzenbauer, 2015). Therefore, the aim of the article is to discuss the CLIL modules present in higher education. Moreover, the aim is to focus on the special pedagogy for CLIL in European higher education institutions (Fortanet-Gómez, 2013) and methodological approaches related to content and language learning in CLIL (Almagro & Pérez Cañado, 2004; García, 2009). Additionally, the benefits and challenges that higher education institutions face when introducing CLIL in higher education are highlighted (Ball & Lindsay, 2013; Bruton, 2013) and, finally, the most relevant research in the context of language learning in CLIL is discussed.

2. CLIL and EMI

Before focussing on CLIL in particular, it is worth explaining the difference between CLIL and English Medium Instruction (EMI), as the two might be easily confused. Content and Language Integrated Learning (CLIL) is 'a dual-focused educational approach in which an additional language is used for learning and teaching of content and language with the

objective of promoting both content and language mastery to pre-defined levels' (Marsh et al., 2001, p. 11). Unlike EMI, CLIL is used to teach both content and language. In CLIL, all four language skills – speaking, writing, listening and reading – are the focal point, while the content is not simply topics of general interest or current affairs, but something that reinforces mainstream curricular subject learning outcomes (Brown & Bradford, 2017). In other words, CLIL students study the content they would typically study in their mother tongue. Content and language are integrated through the '4 Cs' of CLIL (Coyle, 2005): content, communication, cognition and culture. Content is connected with the subject matter (e.g., maths, biology, geography, etc.); communication concerns language learning and language use; cognition is connected with the learning and thinking processes; and culture deals with developing intercultural understanding and global citizenship. Another very important factor is the context, which integrates communication, content, cognition and culture (Coyle, 2005).

The rationale behind CLIL, as stated by the European Commission, is to promote EU citizens in gaining mastery of a second language or native language and two other EU member languages (Llinares et al., 2012). Moreover, it is also believed that employers and society should gain language competence, especially in communication, in order to succeed in their future profession (Fortanet-Gómez, 2013). Nevertheless, apart from the advantages that CLIL provides, one of the disadvantages, as in the case of EMI, is the lack of properly qualified teachers who would have double qualifications.

EMI is described as 'an umbrella term for academic subjects taught through English' because it makes 'no direct reference to the aim of improving students' English' (Dearden & Macaro, 2016, p. 456). The EMI approach mainly focusses on subject matter in English, which means that the language is used as a tool for transmitting subject content. The extent to which content and language learning are included as implicit or incidental aims of EMI courses is context-driven and might depend on the EMI teacher or the discipline itself (Brown & Bradford, 2017).

One of the aims of introducing EMI, as stated by universities, is to enhance the employability of their graduates in domestic or global markets

(Björkman, 2008; Pecorari et al., 2011) and to attract more international students; language learning is of secondary importance (Smit & Dafouz, 2012). This approach is often adopted in the sciences at both postgraduate and undergraduate levels, as the majority of important and influential research is published in English (Macaro et al., 2018). Therefore, students who decide to enrol in an EMI programme are expected to read a lot in English and have a very good command of English (B2 or C1 level according to the CEFR). Even though the popularity of EMI programmes is increasing across Europe due to national government policies, which consider it a significant strategy to enhance national competitiveness in innovation and knowledge production (European Higher Education Area and Bologna Process, 2016), one of the most significant issues needing to be addressed is connected with subject teacher qualifications. Implementing the EMI approach requires not only students who are well prepared from the linguistic point of view, but also subject teachers whose subject knowledge in English is very good.

Both these approaches are very beneficial to language learners, allowing them to develop their foreign language proficiency. However, research indicates that even though there are positive results in terms of language learning (Dalton-Puffer, 2007; Mehisto et. al., 2008; Lasagabaster, 2008; San Isidro, 2010), the results are not very obvious in the case of content learning (Ní Chróinín et al., 2016; Sylvén, 2013; Yip et al., 2003). Therefore, it is very important for both content and language teachers to understand the roles that content and language play in these approaches.

3. CLIL modules in higher education

The CLIL approach has become very popular in European higher education and is often adopted in the fields of law, business, humanities, medicine, economics and engineering. However, one of the major difficulties when researching CLIL education is the great variety of modules existing in particular institutions across Europe (Dafouz, 2018). CLIL is usually offered at the MA level, and the classes are either fully or partially

delivered in a foreign language (most frequently in English). At the BA level, higher education institutions usually offer some content modules or individual lectures in a foreign language. By *module* I mean a way of teaching that contains a set of planned learning experiences and is designed to help students master specific learning goals (Butcher et al., 2006). The CLIL modules offered by higher education institutions vary from university to university and often depend on the availability of teachers and the number and distribution of hours. The following CLIL modules were described as part of the LANQUA project (2007–2010), in which 60 partner institutions took part. The CLIL subgroup consisted of teachers from 10 different countries. Even though the data is not very recent, not many changes have been observed in the area of CLIL modules at higher education institutions since then (Meyer & Coyle, 2017; Sisti, 2009; Vega & Moscoso, 2019).

The main aims of different CLIL modules vary. Partial CLIL/discipline-based language teaching (LT) and Partial CLIL (language-LAP) mainly focus on language and study skills, Partial CLIL (content focus in L2) mainly on content, Adjunct CLIL on both content and L2 instruction and Dual-focus CLIL on both on content and language. All the modules are aimed at non-native learners, with the exception of Partial CLIL and Adjunct CLIL, which also include native speakers. When it comes to teachers, the first two modules are taught by language specialists; the other two are taught by content specialists, sometimes with the assistance of a language specialist. The pedagogical approach differs within the modules, as do the learning outcomes, which go in tandem with the pedagogical approach. In Partial CLIL/discipline-based LT and Partial CLIL (language LAP focus), the learning tasks are modified depending on the main focus. Thus the learning outcomes are either LSP competence or LAP competence. Language is viewed as a subject and a mediator. Partial CLIL and Adjunct CLIL support lecture-type classes depending on the skills required in a particular discipline. The learning outcomes are similar to those provided in content-based instruction. However, in the former language is viewed as a tool, while in the latter it is a mediator. Dual-focus CLIL, on the other hand, focusses on multimodal and interactive classes with the aim

of providing the learners with integrated content and language skills. Language is viewed from multiple perspectives. Finally, in the first two modules (Partial CLIL/discipline-based LT and Partial CLIL language LAP focus), language and communication skills are assessed. In Partial CLIL content mastery is assessed, and in the other two modules both content and language are assessed according to the criteria established by the teachers.

The reasons behind European higher education institutions' choice of a particular CLIL module vary depending on various factors. Firstly, universities want to attract international students, as education offered in English (considered a lingua franca) is prestigious and makes the university an innovator in both education and research. Secondly, offering CLIL courses in English universities achieves a significant pedagogical aim: improving the international competitiveness of the graduates (considered an advantage in both career and further education opportunities). Finally, many universities search for additional European funds, and offering CLIL courses in English increases the chance of receiving financial support (Blaj-Ward, 2017). Notwithstanding all these factors, before introducing a particular CLIL module, the universities carefully analyse the main aims, target group, qualifications of academic teachers and the expected learning outcomes. No matter which module is chosen, it is important that they all share the following aims: a) the multiple focus, b) the construction of safe and enriching learning environments, c) the use of authentic materials, d) the promotion of active learning, e) the use of macro- and micro-scaffolding and f) the promotion of cooperation among students and teachers (Macaro, 2015; Taillefer, 2013).

4. CLIL special pedagogy in higher education

Although CLIL has been mostly associated with primary, secondary and vocational education, there seems to be no reason to underestimate its potential in HE: "quite the reverse, it has been proved that one of the secrets of success for CLIL is continuity throughout the educational process' (Fortanet-Gómez, 2013). Nevertheless, CLIL goes beyond other

methodologies, as it focusses on content and language. Therefore, introducing CLIL in higher education has been one of the greatest challenges (Fortanet-Gómez, 2013).

CLIL combines various approaches and working methods of general education with those related to language learning; content should always be integrated with language. When talking about language in this context, both the first language (mother tongue) and the second/foreign language are taken into consideration. As CLIL is a type of bilingual education, the presence of the first language should not be avoided, but rather controlled. García (2009) claims that in order to provide our students with proper education and to broaden their future horizons, it is important to focus on content, the mother tongue and the second/foreign language in CLIL education.

CLIL pedagogy in higher education is based on a humanistic and constructivist approach to the acquisition of subject content and linguistic knowledge. Students gain new knowledge through experience by creating links between the knowledge and individual experience. In the constructivist approach, 'the process of acquiring the knowledge is more important than the final result' (Semadeni, 2016, p. 5). Therefore, the constructivist approach can be described as the process through which students create and develop their own knowledge (experiential learning).

Rogers (1969) listed five defining elements of experiential learning:

- *It has a quality of personal involvement.* Significant learning has a quality of personal involvement in which 'the whole person in both his feeling and cognitive aspects [is] in the learning event' (p. 5).
- *It is self-initiated.* 'Even when the impetus or stimulus comes from the outside, the sense of discovery, of reaching out, of grasping and comprehending, comes from within' (p. 5).
- *It is pervasive.* Significant learning 'makes a difference in the behaviour, the attitudes, perhaps even the personality of the learner' (p. 5).
- *It is evaluated by the learner.* The learner knows 'whether it is meeting his need, whether it leads toward what he *wants* to know,

whether it illuminates the dark area of ignorance he is experiencing' (p. 5).

- *Its essence is meaning.* 'When such learning takes place, the element of meaning to the learner is built into the whole experience' (p. 5).

The second approach that CLIL is based on, and one that is especially visible in the higher education context, is the cognitive approach, a combination of thinking processes concerning a particular subject and the two language systems. In this approach, language becomes an integral part of thinking and creating meaning. Students construct their own way of learning through the use of cognitive skills (Coyle et. al., 2010). Their intellectual challenge is to transform information in order to solve a problem or discover meaning through creative thinking. In order to create meaning, they use the following techniques: classifying, comparing, matching, guessing, differentiating, organising and assigning. This way of learning has a positive impact on the acquisition of linguistic and subject knowledge and on the development of their creative and critical thinking skills. Furthermore, the cognitive approach assumes that learning consists of constructing meanings by involving the student directly in the learning process. It is emphasised that the student's metacognitive strategies and the active use of metacognitive processes (the ability to control them) are necessary in order to learn effectively (EDUNews, 2008).

Finally, CLIL is based on a communicative approach, which focusses on interaction and communication. As mentioned above, communication has become the priority in higher education due to globalisation and the increasing popularity of foreign languages, especially English. The political, technological, economic and social realities of the modern world have led and are leading to more contact between people of different linguistic and cultural backgrounds. Therefore, the role of communication in CLIL is significant. The approach assumes that effective learning of a foreign language occurs when the student experiences real communicative situations (Wolff, 2005). Moreover, Mortimer and Scott (2003) identify the following dimensions of the communicative approach, which can often be observed in higher education: interactive/non-interactive

and dialogic/authoritative. When an activity is interactive, students participate in it more; when it is non-interactive, it is mainly the teacher who provides students with knowledge (e.g. lecturing). The dialogic/authoritative dimension refers to ideas that are discussed in the class. If the approach is dialogic, the students feel encouraged to share their ideas and points of view on the topic. In an authoritative conversation, only the teacher shares their point of view with the students and does not ask for their opinions. Mortimer and Scott (2003) claim that

the type of interaction and communication in the class depends on the type of content and the choice of the teacher. Communication might change from dialogic to authoritative, i.e., firstly, the students get engaged in a conversation about their ideas and experiences (dialogic/interactive) and secondly the teacher presents the content in a more formal way (non-interactive/authoritative). (p. 35)

The type of communication and interaction is of particular importance in CLIL, especially in higher education. The students should participate in all four types of communication so that they can acquire communicative knowledge of a foreign language while learning the material. The teachers, on the other hand, should take decisions about the types of communication and interaction in order to help the students acquire the knowledge in a foreign language. However, 'if one of the above-mentioned types of communication is overused, it may have a negative effect on the development and understanding of both content and language' (Llinares, et al., 2012, p. 63).

Research on CLIL practices reveals that the programme models used in CLIL in higher education can vary considerably, depending on the context and outcome expectations (Banegas et al., 2020; Gabillon & Ailincăi, 2015; Nikula & Moore, 2019; Tardieu & Dolitsky, 2012). Nevertheless, the integrated nature of cognition, social interaction and language use is the core idea in CLIL, which aims to

(a) respect plurilingual teaching philosophies, (b) consider language, content, communication, context and cognition as an inseparable unified entity, (c) create naturalistic learning environments, (d) provide tasks that promote cognitive engagement and creativity, (e) allow collaborative knowledge building, (f) promote dialogical interaction and (g) develop awareness of self and others. (Gabillon, 2020, pp. 106–107)

5. Benefits and challenges of CLIL in higher education

Notwithstanding the challenges that higher education institutions face when introducing CLIL, there is considerable evidence of the positive impact of CLIL on students, teachers and higher education institutions (Apsel, 2012; Banegas, 2012; Wilkinson, 2018).

Benefits for students

The use of a foreign language during classes helps the students use the language purposefully, process formation in the target language, negotiate the meaning of words and build their knowledge in the target language. Furthermore, learning an additional language in the context of CLIL contributes to the development of their cognitive, creative and critical thinking skills. By learning the content through the target language, students develop unique conceptualisation and meta-cognition skills (Carlioni, 2013; Dalton-Puffer et al., 2010; Meyer, 2010). CLIL is naturally related to knowledge about other cultures and intercultural communication. Therefore, students have the opportunity to learn about other cultures and to understand intercultural differences. Moreover, they become more tolerant of and open to other cultures, and they can see a strong link between language, culture and society. Other significant benefits for students at higher education institutions are the promotion of active learning and the development of autonomy. CLIL involves activating learning methods that generate knowledge through independent research in a foreign language and taking actions that foster problem-solving learning.

Additionally, the interactive and cooperative nature of CLIL has a positive effect on the students' self-esteem, self-confidence, independence and organisational skills.

Benefits for teachers

Communicative language teaching puts the student in the spotlight. Students' communication needs provide a framework for developing curriculum goals in higher education. Students gain knowledge through the discovery process. In CLIL, students often work on projects, which requires negotiation and cooperation in the target language. The role of the teacher is to use various techniques for teaching content and language, using authentic materials and communicative exercises that require students to interact in order to exchange information or solve problems. Therefore, the teachers have a chance to develop their creativity and teaching techniques. Furthermore, Coyle et al. (2010) claim that due to the 4 Cs model (Content, Communication, Culture/Community), teachers' work becomes more effective. As a result, students can develop their skills, gain knowledge and build their identity. In the 4 Cs model, teachers need to focus on the *language of learning*, the language that is acquired in terms of linguistic functions. They also need to focus on the *language for learning*, the rules that are applied to the language itself, and *language through learning*, the language that is used to develop communication (Coyle, 2007). The next significant benefit of CLIL is cooperation with other teachers and institutions. The aim of such cooperation is for teachers to exchange their experiences. Those teachers who have subject knowledge in a foreign language have much greater opportunities to cooperate with teachers and institutions from other countries, for example, by participating in various research programmes for joint implementation of international projects between universities. This type of collaboration leads to the development of a good practice that can be applied in a variety of educational contexts around the world. Moreover, CLIL teachers also have an opportunity to develop teamwork skills between language and subject teachers, which is of great importance when creating CLIL programmes for higher education. Through teamwork,

teachers can exchange their knowledge and professional experience in both the language and the subject. Finally, the collaboration between CLIL teachers and other teachers and institutions has a significant impact on teachers' motivation and self-confidence. In addition, they have greater opportunities for professional development. In many countries, CLIL teachers can benefit from exchange programmes and receive additional financial benefits. International CLIL conferences are organised every year, where teachers can meet many other CLIL specialists, gain valuable knowledge and establish new contacts.

Benefits for higher education institutions

The implementation of CLIL raises the profile of the university and attracts more students. It can also contribute to the development of the university and help it respond better to local needs. Secondly, society will benefit from highly educated students who are motivated to continue thriving in a world where professional requirements are constantly changing. This has a considerable impact on the development of international companies and multicultural environments, in which linguistic and subject knowledge are the key to success. Graduates will be more attractive to future employers who care about employees with skills that enable them to work in an international environment (Aguilar & Muñoz, 2014; Fitriani, 2016; Margado & Coelho, 2013; Muszyńska & Papaja, 2019; Vilkanciene, 2011).

Challenges

Even though there are many advantages of CLIL, there are also a few drawbacks to or rather challenges in applying CLIL in higher education. Firstly, the content subject teachers who are specialists in their field do not always have enough linguistic competence in the target language; therefore, many teachers mainly focus on teaching the material, leaving the students' linguistic development behind (Hellekjaer, 2010). Moreover, if teachers have problems teaching the subject in the target language, the students are likely to have problems understanding the content. As a result, students' knowledge of the content might not be sufficient

(Várkuti, 2010). It is still little understood how well a student can transfer knowledge from the target language into their first language. There are some doubts concerning the conceptual and linguistic correctness in the CLIL context (Meyer & Coyle, 2017; Reitbauer et al., 2018). Another main concern is undeniably the lack of CLIL materials to be used in higher education. Teachers often adapt materials for the students and simplify the language. As a result, the language of content classes may not be relevant elsewhere and vice versa. Another problem is the time the teachers need to spend creating these materials. Adapting materials and creating new ones is time-consuming and overloading for teachers (Moore & Lorenzo, 2007). As for the students, research indicates that there are signs that CLIL students, especially in higher education, are increasingly unwilling to learn *now for use later*, but prefer to *learn as you use and use as you learn* (Costa-Rau, 2016; De la Barra et al., 2018). Therefore, there would seem to be no particularly logical reason for a student to prefer to study a subject in a foreign language when the mere ability to communicate in a foreign language is the most important skill. Finally, many higher education institutions might find themselves under pressure to offer subjects in English, and the teaching might not be carefully selected (Lasagabaster & Doiz, 2021). This is one of the most problematic issues, O'Dowd (2018) concluded after conducting a study of 70 European universities.

6. Insight into research on language in a CLIL higher education context

Research on CLIL has mainly focussed on primary and secondary education. However, the recent implementation of CLIL in higher education provides a considerable domain for language research. Since my prior interest concerns language development in CLIL, the current chapter is devoted to language research rather than content research.

CLIL programmes in higher education have been popular mainly in European countries, but today they are spreading all over the world and

are being introduced in both Asia and Latin America (Marsh et al., 2015; Pérez Cañado, 2012; Smit & Dafouz, 2012). Research on CLIL in higher education shows that it mainly focusses on language learning, language proficiency and the students' perceptions. Other studies focus on language teaching, CLIL methodology, teacher training and CLIL programmes.

Hewitt (2011) investigated the language proficiency of CLIL students. He examined 31 Spanish-speaking university students who were elective bilinguals and were asked to complete one background questionnaire and four psychometric tests. The study demonstrated that CLIL significantly improves language proficiency and supports content knowledge acquisition. Furthermore, Carloni (2012) and Watanabe (2013) examined the development of academic language and content-specific vocabulary, identifying them as key factors to achieve success in language and content learning. Jackson (2012) examined the effectiveness of CLIL combined with genre process writing at enhancing the writing skills of students. The results showed a greater reduction in the number and types of grammatical mistakes in the test group compared to the control group. The CLIL students were more successful in terms of writing. Another study conducted by Chostelidou and Griva (2014), with the aim of measuring the development of reading skills and the mastery of subject-specific content in L2, indicated that 'the performance of the experimental group in terms of both reading skills and content knowledge was higher than the performance of the control group' (p. 2173). Hellekjaer (2010), on the other hand, examined listening comprehension and the difficulties learners encounter when listening to lectures, both in English and in L1. The results showed that

students encountered more problems when listening to lectures in English; they had problems distinguishing the meaning of words, unfamiliar vocabulary and taking notes while listening to lectures. However, the difficulties the students experienced might not be connected with the language skills but with the teacher competence in a foreign language. (pp. 249–250)

Many studies explored the issues of pragmatic competence in the context of CLIL in higher education. CLIL researchers argue that when the target language is used as the medium of instruction, acquisition takes place naturally and the ability to communicate appropriately through that language develops more easily than in formal language teaching (Dalton-Puffer & Nikula, 2006; Llinares & Pastrana, 2013; Maillat, 2010; Naashat Sobhy, 2015; Nikula, 2008). Several studies focussed on the role that the first language plays in professors' and learner's discourse. Braga Riera and Dominguez Romero (2010) investigated the role of first language and translation as tools in CLIL lectures. The study showed that 'the university teachers, while teaching in English, use lexical items and grammatical structures which resemble the items existing in their L1 (language clagues)' (pp. 9–10). Moreover, Dafouz Milne and Núñez Perucha (2010) and Thogersen (2013) investigated the stylistic differences and metadiscursive devices that CLIL teachers used in their L1 and L2. The results in both cases showed that the lectures in English were more formal than the lectures in L1, and that the language used was not very natural. Additionally, Dafouz-Milne and Sánchez-García (2013) focussed on teacher discourse in general and investigated how teacher questions used in three different disciplines (business, physics and engineering) become tools for encouraging classroom discussion, promoting interaction and co-constructing meanings. The authors concluded that 'questions are indeed used in English medium instruction lectures and that the most recurrently used by all three teachers and disciplines are, in identical order, confirmation checks, followed by self-answered questions and display question' (Dafouz-Milne & Sánchez-García, 2013, p. 144).

The above-mentioned research shows that CLIL has potential and many benefits in terms of language learning. Moreover, it fosters the acquisition of foreign language competence and develops higher-order thinking skills. However, among the benefits of CLIL in higher education, it is very important to examine the challenges that teachers and higher education institutions face when implementing this approach (Fajardo Dack et al., 2020).

7. Conclusion

The main aim of the article was to provide a brief description of CLIL in higher education, starting from a clear explanation of the terms CLIL and EMI, which are often used when discussing bilingual education. An attempt was made to discuss various CLIL modules used in higher education and special CLIL pedagogy based on a constructivist, cognitive and communicative approach. Additionally, the numerous benefits and challenges of CLIL in higher education were presented. Finally, the article finished with a brief insight into research on language in CLIL higher education. At this point, it is essential to emphasise that the article represents only a summary of the research that I found to be most relevant, as the research on CLIL in higher education is diverse and difficult to describe within a few pages.

To conclude, research in higher education shows that CLIL is a successful approach (Aiello et al., 2015; McDougald & Álvarez, 2020; González & Andrés, 2018; Hashimoto & Glasgow, 2019; Klimová, 2012) and an efficient way of learning both content and language at the same time. Each approach has its drawbacks, which I strongly believe should be addressed, as there will be an inevitable increase in demand of high quality teaching in English, especially because it has become a lingua franca and is needed in most professions.

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