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CLIL – A European approach to bilingual education

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Abstract:

Content and language integrated learning (CLIL) is a term used especially in Europe for forms of bilingual education where an additional language, in most cases English, is used as the language of instruction in non-language school subjects. This chapter outlines the development of CLIL, embedded both in European level policies and in growing awareness of the new orientations to language learning introduced, for example, in language immersion research. Because of its potential to serve as a context for meaningful language use and situated language learning, CLIL has been regarded by EU institutions as an important instrument to foster European citizens' bi- and multilingualism, to be offered alongside regular foreign language teaching for students in mainstream education. This chapter introduces the main strands of CLIL research that have revealed a great deal of the possibilities and challenges that CLIL as an educational approach entails, for both students and teachers. Overall, there has been a shift in emphasis in research from studies orienting to effects of CLIL on language learning outcomes to studies that point towards the need to adopt a truly integrated view on language and content, and to explore the potential that CLIL has in supporting the development of subject literacies.

Keywords:

content and language integration; language learning; content learning; subject-specific language; bilingual education; EU policy

Introduction

Content and language integrated learning (CLIL) refers to using an additional language as the means of instruction in non-language school subjects. The term was established in mid 1990s in Europe where it received political support from the European Union as a key element in its multilingualism policy: CLIL was seen as an important means with which mainstream schools could foster their students' bi- and multilingual skills. As the term implies, attention to both content and language learning forms the core of CLIL. Yet, as Dalton-Puffer (2011: 184) notes, CLIL is content-driven in that lessons are scheduled as content lessons (history, biology, chemistry etc.), with subject curricula defining their learning goals. From the outset, CLIL definitions have been broad, allowing for a range of implementations. According to Marsh (2002: 58), for example, CLIL is "any activity in which a foreign language is used as a tool in the learning of a non-language subject in which both language and subject have a joint role". The broadness of the definitions has caused some debate and discussion regarding the relationship of CLIL to other forms of bilingual education, especially immersion (e.g. Cenoz et al., 2014, Lasagabaster and Sierra, 2010; Nikula and Mård-Miettinen, 2014). There are also obvious parallels between CLIL and content-based instruction, CBI, a curriculum model that has been applied in the North-American context since the 1980s to support L2 learners (e.g. Brinton,

Snow and Wesche, 1989; Snow and Brinton, 1997). While points of convergence exist, such as the basic emphasis on the importance of integrating language and content, there are also different emphases between the approaches, deriving from their different sociocultural contexts. While both immersion and CBI involve teaching through learners' L2 – in a typical CBI scenario the society's majority language for students with migrant/minority backgrounds and in a typical immersion setting the L2 of a bilingual society for majority language students – in CLIL the language of instruction is usually English or another lingua franca rather than a second language in the surrounding society. Another difference is that it is more common in CLIL than in immersion and CBI that teachers, who are content rather than foreign-language specialists, are non-native speakers of the language they teach in, and that the target language continues to be offered as a foreign language subject in its own right alongside CLIL lessons (Dalton-Puffer and Smit 2013: 256). As this reference to lessons suggests, the term CLIL usually refers to content-based teaching in primary and secondary education and the following discussion will also concentrate on these levels. Teaching through languages other than learners' first language is, of course, widespread in tertiary education as well, in English-taught and international programs in particular, but whether to call this CLIL is open for debate (but see Fortanez-Coméz, 2013). A point of contention, for example, concerns the extent to which English-medium university programmes are explicitly geared towards the double focus of simultaneous learning of target language and content, a core concern in CLIL (for discussion, see Smit and Dafouz, 2012; Dafouz and Smit, 2014). (See also Fredricka L. Stoller: Content-based instruction, Volume 4; Yolanda Ruiz de Zarobe: Language awareness in CLIL, Volume 6.)

Early developments

Europe has a long history of forms of bilingual education. However, in the Europe of the 1990s, accelerated by the processes of political and economic integration, a need was felt for a unified orientation to bilingual education, strongly influenced by the various policy initiatives that urged the educational institutions to meet the demands of diversifying societies in the multilingual continent and in the rapidly globalising era. This led to the establishment and adoption of the terms CLIL (Content and Language Integrated Learning) and EMILE (Enseignement d'une Matière par l'Intégration d'une Langue Etrangère) in 1994 to mark a specifically European approach to bilingual education. CLIL draws on and acknowledges other forms of bilingual education, especially immersion, yet a new label was opted for to highlight the vision of CLIL as a mainstream European undertaking and as an initiative to introduce bilingual education also in areas where such concerns had not earlier been on the political agenda and where L1 instruction had been the norm. Especially influential in steering the educational policies was the 1995 *White Paper on Education* by the European Commission which outlined that European citizens should be able to communicate in three languages, the

local/national language and two other European languages (European Commission 1995; see also Coyle, 2008 for an overview of early developments). Apart from EU policies, CLIL was from the start also supported by the Council of Europe, in particular through the activities of its *European Centre for Modern Languages*, as well as promoted by the many cross-national expert groups formed to develop and define CLIL. The pan-European nature of CLIL was also visible in the establishment of many EU-funded networks for CLIL stakeholders such as *CLIL Compendium* or *CLIL Cascade Network (CCN)* which provided freely accessible models and guidelines for practitioners.

Due to these developments, CLIL started to spread across the continent right from the start. The 2006 Eurydice report indicated only a handful of countries with no CLIL provision. It also showed that CLIL provision was mostly small-scale and that it tended to concentrate in (upper) secondary levels (Eurydice, 2006). Reasons for introducing CLIL seem to vary across Europe. In countries such as Spain and more recently Italy, dissatisfaction with the results of foreign language teaching has led to top-down initiatives by educational authorities who have made CLIL provision (usually in certain specified subjects only) a compulsory part of the school system (see Lasagabaster and Ruiz de Zarobe, 2010; Di Martino and Di Sabato, 2012). In other countries, the competitive edge gained by CLIL, for schools or for society at large, has been a driving force. In the Netherlands, for example, CLIL originates from a few schools for International Education and has resulted in a growing number of secondary level CLIL schools, with up to 50 % of the school curriculum taught in English (Admiraal et al., 2006). Breidbach and Viebrock (2012: 6) argue that in Germany, CLIL tends to be geared towards “‘upgrading’ top level schools”, the spread of CLIL supported by the political agendas of local governments. In countries such as Austria and Finland CLIL has been offered since the 1990s but usually as rather small-scale realizations, perhaps due to the lack of strict nation-level policy guidelines and perceived lack of concerted support from educational authorities (Nikula and Järvinen, 2013; Dalton-Puffer et al., 2011).

The early publications on CLIL include general introductions to this form of education (e.g. Fruhauf et al. 1996; Marsh and Langé, 1999). Given its context-dependency, the main emphasis tended to be on publications that described forms of implementation and instances of good practice in different countries, such pooling of experiences being an important step towards coherent views of CLIL. One of the first major European reports on CLIL was *CLIL/EMILE The European Dimension*, edited by David Marsh in 2002. It consisted of reports by key European experts on the relevance and potential of CLIL, descriptive accounts of forms of implementation in different countries and educational contexts, as well as recommendations for good practice.

Because CLIL represented a completely new educational approach in many areas where L1 had traditionally been in use, there was a need to describe CLIL pedagogy to help teachers in their new undertaking of teaching subjects through a foreign language. An influential early contribution in this area was the 4Cs Framework by Coyle (1999). It highlights the importance of content as the starting point in CLIL, and the necessity to relate Content learning to Communication (language), Cognition (thinking) and Culture (awareness of self and others). This model and its further developments (Coyle, 2007) also elucidate the role of language in learning as the means and objective of learning as well as the prerequisite for engaging in higher order thinking skills, framed as a distinction between language *of* learning, *for* learning and *through* learning. In Coyle's (2007: 552) words, this represents a view of language that "combines learning to use the language and using language to learn".

From the outset, questions concerning learning outcomes have been prominent within the CLIL research agenda. At first, the effects on language learning tended to be discussed mainly in terms of the possibilities that content-based teaching offers (e.g. contributions in Marsh, 2002). Järvinen's (1999) study is an early example of empirical research on language learning in CLIL, with a focus on primary school students and syntactic development. The proliferation of studies in this research area started to gain full momentum around mid 2000s (see below). As regards studies on content learning outcomes, research in the early phases provided insights in conceptual and cognitive development (Bonnet, 2004; Jäppinen 2005). The studies suggested that learning of content is not adversely affected by the use of a foreign language, bearing in mind the factors relating to students' general cognitive development.

Major contributions

Although CLIL is a relatively young research area, the research on language learning has accumulated particularly quickly, probably powered by questions concerning its suitability and functionality as a method to teach and learn foreign languages. There are a number of research overviews addressing language learning in CLIL (e.g. Dalton-Puffer, 2011; Nikula and Mård-Miettinen, 2014; Ruiz de Zarobe, 2011). These suggest that the most obvious advantages of CLIL for language learning concern vocabulary expansion, which is understandable as content-based teaching brings along the specialised sets of lexicon in different subject areas. CLIL learners have also been found to display greater sensitivity to syntactic complexity and text structuring, even if findings in these areas are somewhat contradictory. Findings of a large-scale DESI-project in Germany that investigated spoken and written language competences in the school subjects German and English, and which also included a subset of CLIL students, are along similar lines: CLIL students were found to score higher than their non-CLIL counterparts in all competence areas measured: text production, listening comprehension, reading

comprehension, grammar, sociopragmatics, writing and language awareness (DESI-Konsortium, 2008). CLIL thus clearly has the potential to support language learning. However, research to date has not to a sufficient degree explored to what extent positive language learning outcomes depend on greater exposure to L2 and motivational variables and to what extent they derive from CLIL pedagogies. As regards research evidence on the impact of CLIL on learners' communicative skills and courage to use the language, the results are two-pronged, either suggesting benefits (Nikula, 2005) or pointing to the inherent similarity of CLIL classrooms to any classroom in their tendency towards restricted opportunities for student communication (e.g. Dalton-Puffer, 2007). This difference probably relates to pedagogies and classroom practices: mere switching of the instructional language will not turn CLIL classrooms into communicatively enriched environments for language use and learning unless proper attention is also paid to pedagogical solutions that support learner participation.

Content learning has received less comprehensive treatment in CLIL research. Dalton-Puffer (2011: 188) notes that this may be due to the lack of ready-made constructs of subject-specific competence which would allow for CLIL and non-CLIL comparisons as few countries conduct standardised testing for science and social studies subjects. However, the usual message conveyed by the studies that exist is that CLIL students' academic performance is on par with their non-CLIL peers, as suggested for example by Bonnet (2004) on scientific literacy and by Badertscher and Bieri (2009) on the development of conceptual knowledge. This suggests that even if the pace of learning may be slower in the beginning, the eventual learning and understanding of the subject does not seem to be adversely affected by the use of a foreign language. On the other hand, there are also studies pointing to negative effects of CLIL on content learning. For example, Lim Falk's (2008) study on CLIL in science program classes in upper secondary level Swedish schools suggested that CLIL students used less relevant subject based language in both speech and writing than their peers taught in L1 Swedish.

Classroom discourse has also grown into an important area of CLIL research. Different strands of research can be identified depending on the varied theoretical and methodological perspectives and on whether classroom discourse is studied to explore language learning or whether the focus lies on the examination of social-interactive and communicative aspects of talk and the nature of CLIL classrooms as contexts for language use (for a research overview, see Nikula et al. 2013). A seminal work on CLIL classroom discourse is Dalton-Puffer's (2007) book-length coverage of Austrian secondary school level CLIL classrooms which addressed language learning by exploring content knowledge construction, interactional features such as repair work and directives and academic language functions. Her study points to the importance of discourse structures in either facilitating or inhibiting the possibilities for language use and learning: excessive focus on students delivering facts can result in

impoverished opportunities to engage in meaningful interaction. One research orientation in studies on language use in CLIL classrooms has been to compare it with regular foreign language classrooms. For example, Nikula's (2005) study on secondary level CLIL and EFL classrooms focused on patterns of interaction and showed that CLIL classrooms provided learners with more space for interaction than EFL classrooms. This was indicated, for example, by more extensive student contributions to elaborate on the topics at hand; short, one-word responses to teacher questions were far less common in CLIL than in EFL classrooms. Unlike in EFL classrooms, students were also found to act as initiators of talk through questions addressed either to the teacher or other students.

As CLIL research has expanded, so has its orientation to language. Increasingly, research has emphasised that given the dual focus on language and content, it is not enough to address language learning outcomes solely from the perspective of language as a general, decontextualised set of skills. Instead, the varying roles that language plays in different subject areas and their processes of knowledge construction ought to be acknowledged when assessing language learning in CLIL. Research drawing on Systemic Functional Linguistics and genre-based thinking has been especially influential in developing this line of work. For example, Llinares and Whittaker (2010) analysed students' spoken and written productions in subject history in CLIL and non-CLIL secondary level classrooms and noted shortcomings in the mastery of genre-appropriate language in both. This suggests that the pivotal role that language plays in learning deserves more attention and this is the focus in the comprehensive account of the roles of language in CLIL by Llinares et al. (2012). They address the use of appropriate register in CLIL classroom interaction, the language of academic subjects, the notion of genre and its subject-specific grammatical and lexical features. They also discuss how students' subject-relevant language can be developed in CLIL, and how integrated assessment can be carried out. In the same vein, Lorenzo (2013) argues that genre-based thinking can help teachers identify the genre and register features in their subjects and recognise how these serve as a major organising principle of subject-specific discourse. (See also Frances Christie: *Genres and Institutions: Functional Perspectives on Educational Discourse*, Volume 3; Constant Leung: *Second Language Academic Literacies*, Volume 2).

From its inception, CLIL has been described as a flexible approach that can be adapted to different contexts according to their specific needs, i.e. there is no one model for CLIL. However, recently there have been calls for more conceptual work on CLIL and for theorisation that can help researchers to carve out the core features of CLIL and support practitioners in identifying areas that require attention in implementation. Examples of such conceptual work include the volume by Llinares et al. (2012) which, as discussed above, explores the multifaceted roles of language in CLIL. Another example of conceptualising content and language integration is Dalton-Puffer's (2013) work on cognitive discourse functions (CDFs) as a

point of convergence between subject and language pedagogies. According to Dalton-Puffer (2013: 232), CDFs constitute an inventory of discourse patterns that reflect cognitive processes; they are realised in different patterns in different subjects and have a fairly straightforward link to verbal realisations (such as 'describe', 'evaluate', 'hypothesise', for example). Each subject will thus have its own inventory of the key cognitive discourse functions essential for both teaching and learning. Another recent contribution in this area is by Dafouz and Smit (2014) who in their conceptual framework for English-medium education in multilingual university settings draw attention to six relevant, intersecting components, namely Roles of English (in relation to other languages), Academic Disciplines, (language) Management, Agents, Practices and Processes, and Internationalization and Globalization, the six-way conceptualisation making it possible to approach English-medium education as an inherently dynamic, contextually bound and discursively constrained and constructed phenomenon.

Work in progress

CLIL has grown into an active research field and, probably as a legacy to its pan-European ethos, has developed into an area involving a great deal of cross-national collaboration. As regards research topics, language learning continues to be a major area of interest. In this area, research based on large and/or longitudinal corpora is called for to complement the overall picture that has predominantly been based on relatively small-scale studies. An example of work in progress in this area is based on the project *CLISS: Content and language integration in Swedish schools* (2010-2014) at the University of Gothenburg, directed by professor Liss Kerstin Sylvén. CLISS is four-year project on the relationship between learning and the language of instruction. It focuses specifically on the development of academic writing of CLIL and non-CLIL students in Swedish upper secondary schools but also examines attitudinal and affective factors involved (e.g. Sylvén and Thompson, 2015).

It was pointed out that an important aspect of language learning in CLIL is the learners' socialisation into subject-specific literacies. The past and ongoing work conducted in CLIL research projects based at the Universidad Autónoma de Madrid has been important in this area. Based on extensive corpus of classroom data, the work by the UAM team has greatly advanced our understanding of how CLIL students' academic language develops and how CLIL classroom discourse is an arena for both learning content and engaging in interpersonal and social aspects of talk (e.g. Evnitskaya and Morton, 2011; Whittaker, Llinares and McCabe, 2011). The UAM projects have also furthered conceptual work on CLIL and explicated its theoretical and methodological development (e.g. Llinares et al., 2012; Llinares and Morton, forthcoming).

Conceptualising content and language integration is another one of the ongoing research ventures. The work based on the research project *ConCLIL: Content and language integration, towards a conceptual framework* (2011-2014), based at the University of Jyväskylä, is an example. The team's work is showing that apart from language and content concerns, integration is always also a matter of curriculum and pedagogies, participants as well as classroom practices and hence needs to be addressed in a multidimensional manner (Llinares, 2015; Nikula et al., 2016). ConCLIL studies have called for a reorientation in approaching language and language competence in ways that acknowledge subject literacies as an inherent component of such competences. Similar ideas have been presented recently by Meyer et al. (2015) when they argue that it is important to map conceptual development and language development in CLIL within what they call a 'pluriliteracies approach'.

One aspect of CLIL that has received relatively little research attention so far but for which studies have recently started to emerge, concerns the role of bilingual practices in CLIL, whether under the name of L1 use, code-switching, language alternation or translanguaging (e.g. Lasagabaster, 2013; Moore and Nikula, 2016). These studies have started to unravel the various interactionally and pedagogically motivated purposes for which multilingual resources are employed, to counterbalance what could be described as the 'L1 as a problem' views that advocate strict adherence to the target language as a prerequisite for its learning (see also Ofelia García: *Translanguaging and Bilingual Education*, Volume 5).

Given that CLIL is a relatively new research area, an important purpose of the research has been to establish the core areas of the field and to explore integrated content and language learning and teaching from CLIL-specific perspectives. It seems that a next phase is to consider CLIL in relation to other forms of bilingual and content-based instruction (e.g. Cenoz, 2015). In particular, there have been calls to combine CLIL and immersion perspectives because despite the different labels and different emphases in their socio-political and research influences, the two fields share many similar concerns, especially at the level of classroom practices (e.g. Cammarata and Tedick, 2012). Examples of such collaboration already exist: Llinares and Lyster (2014) examined patterns of corrective feedback and learner uptake in CLIL classrooms in Spain, Japanese immersion classrooms in the US, and French immersion classrooms in Canada, finding differences that set CLIL and Japanese immersion apart from French immersion classrooms in the way recasts were handled, probably resulting from contextual features as well as teacher professional trajectories. Nikula and Mård-Miettinen (2014) combine immersion and CLIL insights to review the contribution of these areas to language learning research. They show how the two approaches, while sharing key assumptions concerning the benefits of meaningful and cognitively and academically challenging language use through language and content integration, partly draw on different research influences and tend to rely on different

assumptions regarding the points of reference when evaluating the level of skills attained. While immersion students have usually been compared to native speakers of the target language, the typical point of comparison for CLIL students has been formed by the non-CLIL peers learning the target language in regular foreign language classrooms.

Problems and difficulties

One of the strengths of CLIL at the same time constitutes a challenge for research: CLIL is contextual, variably adapted to specific institutions and localities, the broadness and flexibility of its definition allowing for versatile ways of implementation (see Cenoz, 2015 for similar variability in forms of immersion and content-based instruction). This means that it is difficult to provide overarching answers to questions concerning its overall effectiveness and impact. However, the discussion above has shown that the accumulating research base from specific contexts has grown big enough to warrant a relatively good overall understanding of the issues that any institution planning to offer CLIL should consider, ranging from student selection and pedagogical principles to teacher training and support. Perhaps the main message conveyed by the twenty years or so of CLIL research is the importance of ensuring that there is a shared understanding of the aims of CLIL at the institutional level to help those participating steer towards the same goal. In other words, rather than aiming at fit-for-all blueprints of CLIL, it is more important to produce well-elaborated local descriptions that extend beyond vague or generalised statements of the rationale for CLIL. There already exist research that can provide tools for such elaboration, for example studies on genre-based curricula, subject specific literacies and characteristics of academic language (e.g. Llinares et al., 2012; Lorenzo, 2013; Dalton-Puffer, 2013).

While research has provided a sound evidence base for the effects of CLIL on language learning, doubts remain whether CLIL fits all types of learners. The concerns are often based on the fact that despite the original aims of mainstreaming CLIL, student cohorts in many schools are selected, either through some type of language skill screening or, if CLIL is voluntary, due to possible self-selection driven by CLIL students' higher levels of interest and motivation (cf. the observations in the DESI project that the proportion of girls was noticeably higher in the CLIL subset than in the overall data). Another open question in relation to equity is whether CLIL is suitable for students with learning difficulties. An example of the uneasiness around CLIL comes from Finland where general education, based on the comprehensive school system, is explicitly built on values of equity and securing the same opportunities for all (Sahlberg, 2007). In this situation, the fact that availability of CLIL programs tends to concentrate in bigger towns and municipalities has raised concerns about CLIL compromising equity (Nikula & Järvinen, 2013).

One of the contested issues in CLIL concerns the current strong connection to English: CLIL in Europe is predominantly offered through English, its role as a major international lingua franca associated with global competitiveness no doubt fuelling its success as the number one language choice. This has raised questions with respect to what extent the positive CLIL outcomes reflect the favourable attitudes and ideologies attached to English. Overall, there is a need for more research exploring the political and language ideological underpinnings of CLIL and the ways in which it carves its way into the educational systems and political landscapes in different countries. For example, Sylvén's (2013) observations indicate that nation-specific contextual factors relating to educational policy framework, teacher education, age of implementation and extramural exposure play a role in the eventual success of CLIL. Overall, the close affinity between CLIL and English has meant that the EU policy goals of promoting European multilingualism through CLIL have in most cases resulted in strengthening the skills in English in continental Europe; the role of CLIL in diversifying language teaching in the Anglophone countries has been less evident (Eurydice, 2006).

Future directions

As pointed out above, CLIL makes it necessary to reassess the relationship between content and language pedagogies, as well the nature of language skills aimed at (for recent discussions, see Llinares et al., 2012; Meyer et al. 2015; Nikula et al., 2016). These questions need to be addressed in the future CLIL research as well. Overall, as Morton and Leung (2016) point out, as the CLIL research field matures, it needs to seek a balance between increasingly articulated framing of expected outcomes without losing the sense of conviviality (Leung, 2005) and of co-learning and creativity, which can be regarded as key characteristics of successful realisations of CLIL as a learning and teaching approach.

Regarding more specific areas for future CLIL research, integrated assessment is among the most topical issues. CLIL teachers have been shown to be ambivalent about their role in teaching and assessing learners' language skills, framing content teaching as their main concern and also arguing for the lack of explicit attention to formal aspects of language as an important CLIL success factor (e.g. Hüttner et al., 2013). Hence, the role of language in assessment easily remains vague. While research on assessment in CLIL and suggestions for integrated assessment guidelines have started to emerge (e.g. Llinares et al., 2012; Massler et al., 2014), this is an area where more work is needed in the future.

There is also the need for longitudinal studies on CLIL. For example, we know relatively little of how the transition points between different levels of schooling affect CLIL outcomes and

experiences. Furthermore, outcome studies need to be accompanied by longitudinal process-oriented, in-situ explorations of classroom interaction to capture participants' orientation to content and language learning and how learning evolves and emerges over time (cf. Jakonen 2014). Finally, it is also important to investigate CLIL in ways that extend beyond classrooms and learning outcomes to the complexity of its socio-political and ideological underpinnings. As pointed out above, Dafouz and Smit (2014) have already taken an important step towards this direction in conceptualising the dimensions of English-medium instruction in university settings.

So far, a key purpose of CLIL research has been to identify and characterise features typical of CLIL and to come to an understanding of its possibilities and challenges as an educational approach. By now the research field has matured to the point where it is increasingly important to explore the opportunities offered by collaboration across fields and disciplines. An obvious point to strengthen is collaboration between applied linguists, scholars in the general field of education, and content specialists, because that can in significant ways further our understanding of CLIL as integration of language and subject pedagogies (see Dalton-Puffer, 2013; Morton and Leung, 2016). Another area where there is room for further study concerns combining CLIL research, multilingualism research, and research on sociolinguistics of globalisation in order to attain a more nuanced picture of how CLIL in the future can and should respond to the increasingly multilingual realities. It has been argued that CLIL in fact often operates in largely monolingual contexts and mindsets, with the typical case being the use of an international lingua franca in instruction among the teacher and students who share the same L1. However, as societies grow more diverse, so will CLIL classrooms, and a question to explore, then, is how this will influence the role and impact of CLIL. Finally, an important future direction concerns international cross-continent collaboration, as CLIL, originally a specifically European approach to bilingual education, is in the process of expanding to other geographical locations. The current contexts of implementation using the label CLIL include, for example, Latin America, Australia and Asia. No doubt the activities of the AILA research network on content and language integrated and immersion classrooms, in operation since 2006, can serve as a fertile ground to foster such collaboration (see <http://www.aila.info/en/research/list-of-research/content-language-integrated-learning.html>).

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