

See discussions, stats, and author profiles for this publication at:
<https://www.researchgate.net/publication/254242336>

CLIL research in Europe: Past, present, and future

Article *in* International Journal of Bilingual Education and Bilingualism · January 2011

DOI: 10.1080/13670050.2011.630064

CITATIONS

97

READS

1,350

1 author:



María Luisa Pérez Cañado

Universidad de Jaén

51 PUBLICATIONS **276** CITATIONS

SEE PROFILE

All content following this page was uploaded by **María Luisa Pérez Cañado** on 08 February 2016.

The user has requested enhancement of the downloaded file.

This article was downloaded by: [UJA University of Jaen]

On: 23 October 2014, At: 04:26

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



International Journal of Bilingual Education and Bilingualism

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rbeb20>

CLIL research in Europe: past, present, and future

María Luisa Pérez-Cañado ^a

^a Department of English Philology , University of Jaén , Jaén , Spain

Published online: 05 Dec 2011.

To cite this article: María Luisa Pérez-Cañado (2012) CLIL research in Europe: past, present, and future, International Journal of Bilingual Education and Bilingualism, 15:3, 315-341, DOI: [10.1080/13670050.2011.630064](http://dx.doi.org/10.1080/13670050.2011.630064)

To link to this article: <http://dx.doi.org/10.1080/13670050.2011.630064>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

CLIL research in Europe: past, present, and future

María Luisa Pérez-Cañado*

Department of English Philology, University of Jaén, Jaén, Spain

(Received 16 March 2011; final version received 3 October 2011)

This article provides a comprehensive, updated, and critical approximation to the sizeable literature which has been produced on the increasingly acknowledged European approach to bilingual education: content and language integrated learning (CLIL). It begins by tracing the origins of CLIL, framing it against the backdrop of its predecessors: North American immersion and bilingual education programs, and European international schools. It then provides a synthesis of the research which has been conducted on our continent into the effects of CLIL programs. It transpires from this review that, while at first blush it might seem that outcome-oriented investigations into CLIL effects abound throughout our continent, there is still a well-documented paucity of research in this area. The article concludes by identifying future research agendas to continue mapping the CLIL terrain. The ultimate aim of this three-pronged examination of the past, present, and future of CLIL is to depart from the lessons learned from recent research and to signpost ways forward in order to guarantee a success-prone implementation of this timely solution to European plurilingual education.

Keywords: content and language integrated learning; research; quantitative; qualitative; Europe

1. Introduction

Although teaching content through language is nothing new and dates back some 5,000 years (cf. Mehisto et al. 2008; Tejada Molina, Pérez Cañado, and Luque Agulló 2005), the concept of content and language integrated learning (CLIL) emerged in the 1990s, and this decade has been considered that of ‘teaching and learning through a foreign language’ (Marsh 2002, 54). The term was coined in 1994 and launched in 1996 by UNICOM, the University of Jyväskylä (Finland) and the European Platform for Dutch education (Fortanet-Gómez and Ruiz-Garrido 2009; Marsh 2006). Since then and especially in the late 1990s, its usage has soared and it appears to continue accelerating as a ‘growth industry’ (Marsh 2002, 59). From 2003 onwards, as Dalton-Puffer and Nikula (2006) document, a truly international research scene focusing on CLIL has started to evolve.

Stemming from communicative methodologies (Graddol 2006; Lorenzo 2007), CLIL has been pushed forward by a series of driving forces (Coyle, Hood, and Marsh 2010): *reactive reasons* (responding to situations where there was a deficient foreign language competence which needed to be strengthened) and *proactive responses* (creating situations which would reinforce Europe’s levels of multilingualism). The

*Email: mlperez@ujaen.es

advancements in second language acquisition (SLA) research and language teaching have also substantially contributed to fueling the interest in CLIL (Järvinen 2005b).

Bolstered by the aforementioned circumstances, CLIL has had an exponential uptake across Europe over the past two decades, gradually becoming an established teaching approach (Järvinen 2006). Numerous authors testify to this rapid and widespread adoption of CLIL in the European arena (Coonan 2005; Coyle, Hood, and Marsh 2010; Dalton-Puffer and Nikula 2006; Marsh 2002; Lorenzo et al. 2007; Smit 2007), assimilating it to a veritable 'explosion of interest' (Coyle 2006, 2). It has furthermore embedded itself in mainstream education from preschool to vocational education (Marsh 2002, 2005) rather swiftly, no longer being the prerogative of the academic elite (Coyle 2009). In fact, several authors (Lorenzo 2007; Vez 2009) go as far as to claim that traditional non-CLIL 'drip-feed education' (Vez 2009, 8) involves moving on the slow track to language learning and that 'CLIL is bilingual education at a time when teaching through one single language is seen as second rate education' (Lorenzo 2007, 35). CLIL, it thus seems, is 'spreading fast and here to stay' (Deller 2005, 29).

However, the rapid spread of CLIL has outpaced measures of its impact, and research on CLIL is still very much in its infancy (Wolff 2005). Tudor (2008, 55) highlights this paucity of research: 'The significant expansion of CLIL ... in recent years has not been supported by a comparable level of research.' Indeed, the single most widely consensual affirmation with respect to CLIL in the specialized literature is the dire need for further research: 'What is certain is that despite the recent surge in evaluative reports, there is much, much more still to investigate' (Coyle, Hood, and Marsh 2010, 149). It is particularly relevant at this precise moment, as it appears that we are currently at a crucial crossroads: if CLIL initiatives are expected to come to fruition in 20 years (Hughes 2010b) and have now been running for approximately a decade in our continent, 'it would be possible to suggest that European CLIL/EMILE might reach its watershed around 2010' (Marsh 2002, 185). Thus, it is time to undertake the much-needed stocktaking, as practitioners themselves are asking for results to help defuse fears (De Graaff et al. 2007) and reinforce the connection between the academic world and classroom praxis (Infante et al. 2009).

This is precisely the aim of the present article: to carry out a comprehensive, updated, and critical review of the way in which this new educational approach is playing itself out on our continent in order to continue pushing forward a success-prone implementation of CLIL programs.¹ CLIL will initially be framed against the backdrop of North American immersion and bilingual education programs, and of European international schools, which are considered its antecedents. The main differences between the latter and CLIL will be foregrounded. The article will then canvass the research which has been conducted into its effects across Europe, from North to South. It will conclude by underscoring the most outstanding niches to be filled with future investigations and by providing concrete suggestions to overcome unresolved issues in research practice, given the potential which this type of program is currently held to have for European education (Lorenzo 2010).

2. The backdrop: Canadian immersion, North American bilingual education, and European international schools

CLIL is considered to be a descendent of French immersion programs and North American bilingual teaching models. Both Canada and the USA have an extensive

and well-acknowledged tradition of bilingual education, dating back to the late 1950s, when the impact of French immersion began to be investigated in the English-speaking community in Montréal. The effects of these programs have been vastly, rigorously, and systematically researched, yielding outcomes which, as Pérez-Vidal (2007, 44) underlines, 'are extremely revealing for the design and implementation of programmes in Europe.'

The numerous studies into North American bilingual education (Cummins and Swain 1986; Cummins 1989; Dulay, Burt, and Krashen 1982; Genesee 1987, 1994, 2004; Genesee and Jared 2008; Greene 1997, 1998; Krashen 1996, 1997, 1999; Lambert and Tucker 1972; Lapkin, Hart and Swain 1991; Lyster 1987; Swain and Cummins 1982; Wesche 2002; Willig 1985) attest to the success of these programs at the linguistic, subject content, cognitive, and attitudinal levels:

- To begin with, they have consistently demonstrated that children in immersion programs acquire impressive amounts of the second language, attain native-like receptive skills but not in oral or written production, and develop much higher levels of proficiency than nonimmersion students. In this sense, late immersion students have been found to attain the same level of L2 proficiency as early immersion students, despite having received significantly less exposure to the L2, perhaps due to their greater cognitive maturity and learning efficiency. Even children with limited proficiency end up performing better on standardized tests than children taught in a monolingual context.
- They also perform satisfactorily in the subject matter taught in the second language, assimilating this knowledge at the same high level as the monolingual control groups.
- The development of the native language is not at all curtailed, as these students do not evince significant problems in their first language skills.
- The children's cognitive growth is furthermore not impaired, providing – quite on the contrary – cognitive advantages for bilingual learners, with transfer across languages being documented.
- The attitudes they harbor towards the L2 and its native speakers are overwhelmingly positive.

However, less positive results have surfaced for productive skills (especially speaking), which, although functionally effective, are attained at lower levels of performance than receptive skills. Further weaknesses have been diagnosed for grammatical competence and vocabulary knowledge (Navés 2009), something which has led certain key figures in the field to posit that experiential learning approaches need to be balanced with more analytical approaches that focus on form (Pérez-Vidal 2007, 2011). Genesee (1994) is one such author, who calls for instructional plans in which language objectives are systematically integrated with academic objectives. Lyster (2006, 2007) also makes a strong case for some inclusion of focus on form, involving noticing activities, increase in metalinguistic awareness, and opportunities for production practice. Exposure and authentic communication, he maintains, are not sufficient to push interlanguage development forward.

Although not backed up by a comparable body of research, European international schools have also been object of empirical research, conducted primarily by Baetens Beardsmore and collaborators (Baetens Beardsmore and Swain 1985; Baetens Beardsmore and Kohls 1988; Baetens Beardsmore 1990; Housen and Baetens

Beardsmore 1987). In these schools, students have different L1s and more than 50 languages are spoken on the playground. The L2 is introduced in first grade and the L3, at the beginning of grade seven. The research outcomes have been exceedingly positive, as the L2 literacy, L1 development, and subject matter learning of these students have been found to be the same as those of monolingual control cohorts. Furthermore, as Wode (1999) points out, when Canadian early total immersion and Brussels European schools were compared, the latter outperformed the former.

Thus, the overriding conclusion which can be reached from the precursors of CLIL education is that L2 instruction which is integrated with content matter has proved to be more effective than L2 instruction in isolation (Genesee 1994). Research in North American and European contexts seems to substantiate Joshua Fishman's famous dictum 'bilingual education is good for education' (in Marsh 2002, 70).

However, despite the valuable lessons which can be learned from the research outcomes in these settings, they cannot be simply transferred or transposed to the European scenario, as they are highly context-specific (Marsh et al. 1998; Marsh 2002; Wolff 2002b) and their generalizability from one situation to another is thus severely limited: '[...] most of the immersion conditions [...] bear little resemblance to the study of English through CLIL programmes in Europe, particularly in terms of the sociolinguistic and sociocultural context in which the L2 is learned and the authenticity of the input' (Gallardo del Puerto, Gómez Lacabex, and García Lecumberri 2009, 65).

Indeed, numerous authors distill those traits which differentiate content and language learning from bilingual education. CLIL is considered 'the European label for bilingual education' (Lorenzo 2007, 28), as it is deeply rooted in the linguistic needs of the EU (Muñoz 2007) and thus strongly European-oriented (Wolff 2005). Its distinctiveness lies in that it integrates language and content along a continuum, in a flexible and dynamic way, without an implied preference for either (Coyle 2006, 2007). Language *is* taught in CLIL, as it holds a central place (Wolff 2003), although not as much contact is offered with it as in immersion settings, where the language of instruction is often an official language (Dalton-Puffer 2008; Pérez Vidal 2011). In this sense, it aims at achieving a functional as opposed to a (near) native-like competence (Muñoz 2002, forthcoming). It is conceived for the majority group of any European country learning content through another European language to increase mobility and achieve higher standards of the L2 without altering national curricula (Jáimez Muñoz 2007). Further differences between CLIL and immersion education reside in the lesser command of the language of instruction which CLIL teachers evince in general, in the later starting age and lower amount of exposure to the target language in this type of program, in its use of abridged rather than authentic materials, in the fact that the content taught is taken from academic subjects or disciplines rather than from everyday life or the target language culture, in the greater absence of immigrant students within them, and in the comparatively meager amount of research into its effects, as opposed to those of immersion (Dalton-Puffer, Nikula, and Smit 2010a; Lasagabaster and Sierra 2010).

Hence, CLIL is clearly distinct from its predecessors: it is '[...] not just a new expression of educational bilingualism. The time when it has appeared, the places where it has been adopted and the learning theory behind it turns CLIL into a successful attempt at language and social change in 21st century Europe' (Lorenzo 2007, 27). It thus merits attention in its own right, as it is no longer considered

a mere offshoot of other types of bilingual programs, but an increasingly acknowledged trend in foreign language (FL) teaching.

3. The present: CLIL research in Europe

3.1. Introduction

Having traced the origins of CLIL, it becomes necessary to canvass the research which has been conducted into its effects and the attitudes it is generating in stakeholders. The main strands around which CLIL investigations have been articulated, according to Wolff (2005), involve its effects on the acquisition of the FL, the L1, and content subject competence, and the evaluation of dual-focused education by teachers and students.

In Europe, priority is currently given to foreign language education in the curriculum (Madrid and Hughes 2011a, 2011b). At present, considerable strides have been taken with regard to FL education and it is compulsory to offer a second foreign language in almost all EU countries, albeit optionally for students. Bilingual education and European sections have also increasingly begun to come to the fore across the continent to teach one or more subjects. As Wolff (2002b) documents, CLIL is being implemented in almost all the educational systems of Europe; it is already much 'more than a trendy acronym' (Ullmann 1999, 104). CLIL practice has spread rapidly in the past 10 years (Marsh 2002), currently spanning the continent from North (Finland) to South (Italy), and from East (Bulgaria) to West (Spain). The 2006 Eurydice survey *CLIL at School in Europe* provides data on CLIL provision in 30 European countries. Most have some involvement in this educational approach as either part of mainstream education (the vast majority) or within pilot studies. Only six (Portugal, Liechtenstein, Cyprus, Denmark, Greece, and Iceland) are not applying CLIL in any way. Although space precludes the detailed description of CLIL implementation in each of these European countries, a broad overview will be provided of the general traits of CLIL provision across the continent (cf. Eurydice 2006; Maljers, Marsh, and Wolff 2007; Marsh 2002; or Fortanet-Gómez and Ruiz-Garrido 2009 for a fine-grained portrayal).

3.2. Characterization

The first conspicuous feature which transpires is, unsurprisingly, that CLIL implementation in Europe is highly variegated: '[...] CLIL approaches vary considerably in different European countries and [...] this variation is due, among other things, to the educational and linguistic background of each specific country' (Wolff 2002b, 48). Coyle (2007) documents 216 different types of CLIL programs based on such variables as compulsory status, intensity, age of onset, starting linguistic level, or duration. As Lasagabaster (2008) rightly claims, the CLIL situation in one European country cannot be extrapolated to another, given the very different circumstances surrounding language teaching across the continent.

However, despite this heterogeneous panorama, certain common characteristics can be identified in European CLIL application (Fortanet-Gómez and Ruiz-Garrido 2009; Marsh 2002). Practically all CLIL models involve stepping up the presence of the target language in the curriculum, as well as incorporating a number of subjects taught through it for at least four years. The number of subjects can be

increased in Primary Education and decreased at Secondary level or the other way round, although dual-focused education is frequently discontinued in the upper grades owing to the washback effect of university entrance exams.

The most common CLIL provision is by means of combining foreign languages with regional and/or minority languages, and English comes across as the most widely taught language, along with French and German. Trilingual CLIL instruction is also provided in some countries, such as Spain, Latvia, Estonia, the Netherlands, Austria, or Sweden.

Whereas some countries have no admission criteria for CLIL in mainstream education (e.g., Spain or Germany), others take into account students' subject knowledge (e.g., the Czech Republic or Bulgaria), the target language level (e.g. France or Romania), or both (e.g., The Netherlands or Hungary). While some have centralized CLIL measures (e.g., Austria or France), others present more de-centralized systems (e.g., Spain or Finland).

Although a vast gamut of subjects can be taught through CLIL (primarily depending on teacher qualifications), the scope tends to narrow down and focus on History, Geography, Science and Social Sciences, particularly in Secondary Education. Materials are primarily adapted from authentic ones or originally designed with the invaluable support of information and communication technology (ICT). The evaluation of CLIL application in schools is practically nonexistent.

Finally, at Tertiary level, the lack of research into CLIL programs is also prominent: no studies quantify the influence of CLIL approaches in European universities (Fortanet-Gómez and Ruiz-Garrido 2009). Here, English is again the most widely employed target language across a variety of disciplines: Business, Engineering, Law, and Humanities. Isolated experiences of CLIL in Higher Education have thus far been reported in Finland, Norway, Sweden, Denmark, Austria, Belgium, Germany, Italy, Spain, the UK, Lithuania, Ukraine, Poland, and Bulgaria.

3.3. Research outcomes

What effects has this CLIL provision exerted? An overview of the main studies conducted at all educational levels is now provided, together with the main figures who have contributed to moving CLIL implementation forward. They are grouped by areas into Northern, Central, Eastern, and Southern Europe.²

In *Northern Europe* (Finland, Sweden, Norway, Estonia), CLIL programs have been vastly employed. In these countries, research has been carried out primarily into the effects of CLIL on foreign language and mother tongue competence, on subject matter learning, and into stakeholder perspectives. In *Finland*, Marsh comes to the fore as possibly the most renowned figure. He has amply extolled on the virtues of CLIL and characterized it from a chiefly theoretical perspective. His leadership has also been pivotal for the establishment of networks across Europe at all educational levels, the creation of the CLIL Consortium, the development of materials, and the organization of conferences (Fortanet-Gómez and Ruiz-Garrido 2009). However, it is other authors (Merisuo-Storm, Jäppinen, Södergard, Bergroth, or Järvinen) who conduct and report on actual research, addressing all the major questions recurrent in CLIL debates (Mehisto and Asser 2007): L1 and L2 development, subject learning, and participants' attitudes.

Indeed, scholars such as Bergroth (2006) target all these dimensions except stakeholder attitudes via a quantitative study into the effects of Swedish CLIL on

L1 (Finnish), L2 (Swedish), L3 (English), and content learning (Mathematics) with pupils taking the Finnish matriculation examination after Secondary schooling. The outcomes reveal that the mother tongue and content knowledge are not threatened by dual-focused education, as the CLIL students perform as well as their monolingual peers. Languages (L2 and L3) are, however, positively affected, as the CLIL stream outstrips its traditional counterpart.

L2 development – in this case, English – is the focus of Järvinen's research, which specifically centers on syntax via the acquisition of subordination and relativization (1999, 2005a) by English Medium Instruction (EMI) and monolingual students in grades 1 through 6. Although the homogeneity of the groups is not guaranteed in either of the two studies, the author claims that there are statistically significant differences in favor of the bilingual group in the acquisition of relativization, as it produced significantly longer, more complex, and more accurate sentences than the control group.

Merisuo-Storm (2006, 2007), in turn, compares the L1 literacy skills of CLIL tracks and regular students at the outset of Primary Education, and this research is particularly interesting on two counts: it is longitudinal (the tests were administered at the beginning of first grade and at the end of second grade) and it considers school readiness and gender as intervening variables. No statistically significant differences were detected between both cohorts in terms of mother tongue literacy skills or when considering school readiness, but the CLIL strands were found to harbor more positive attitudes towards language learning than the mainstream group. However, these differences were not sustained when the genders were factored in: they leveled out in CLIL groups, as opposed to monolingual ones, where statistically significant differences continued to surface in favor of girls. This finding is consistent with those of other studies (Marsh 2002; Schmidt, Boraie, and Kassagby 2007), where CLIL programs have been found to cancel out gender differences, thereby being more beneficial for male students.

The final curricular aspect central to CLIL evaluation is explored by Jäppinen (2006): this author examines the effects of CLIL environments on thinking and content-learning processes with more than 600 7- to 15-year-old learners from 2001 to 2003. The data indicate that such environments succeed in creating favorable conditions for the development of both processes. CLIL thus seems to have positive repercussions on subject matter acquisition.

Finally, two Finnish scholars have approached the evaluation of CLIL programs from a qualitative perspective, probing the students' points of view at Primary level (Romu and Sjöberg-Heino 1999; Södergard 2006). On both counts, the results have been extremely encouraging: positive attitudes, satisfaction, and increased confidence have emerged on the part of pupils involved in these programs.

Turning now to *Sweden*, Airey (2004) reports a lack of significant differences between monolingual classes and CLIL branches with regard to general FL competence. He points to two investigations by Knight (1990) and Washburn (1997) (cited in Airey 2004) which measured such linguistic competence and matched students for intelligence, motivation, and sociocultural variables but detected no statistically significant differences between both groups. When it is on reading proficiency (*Norway*, Hellekjaer 2004) and incidental vocabulary acquisition (*Sweden*, Sylvén 2004) that the effects of CLIL are gauged, however, such differences do emerge. In the latter study, it was found that Swedish upper Secondary school CLIL learners outstripped their peers in all the vocabulary areas tested over the course of

two years with three separate test rounds. The author attributes this difference to heightened extramural reading exposure on the part of the bilingual stream, but since she does not consider intervening variables or employ discriminant analysis, her claim remains empirically unsubstantiated. Nevertheless, she continues exploring this issue in a subsequent study (Sylvén 2006), where she compares the extracurricular exposure of CLIL and non-CLIL students again at upper Secondary level, only to find that her initial hypothesis is refuted: similar extramural exposure is detected for both groups, with the CLIL section being, if anything, more exposed to Swedish (their mother tongue). In a subsequent investigation, however, Sundqvist and Sylvén (forthcoming) document the significant impact of extramural exposure (especially via computer games, television, music, films, and the Internet) on the English language proficiency of Swedish fifth-grade CLIL students, something which leads the authors to conclude that 'extramural English activities must be acknowledged in research as well as in education.'

In Sweden (Airey and Linder 2006) and Norway (Hellekjaer 2010), interesting studies have also been conducted into CLIL at tertiary level. The investigations in both countries concur in finding problems with lecture comprehension in English-medium instruction. The former worked with 23 Swedish university-level Physics students and primarily employed lecture observation to ascertain that the learners experienced difficulty in note-taking, were reluctant to ask and answer questions, developed compensatory strategies, increasingly relied on preparatory reading, and engaged in follow-up reading and discussions to ensure comprehension of lectures in English. More recently, the latter investigation has polled 391 students from three Norwegian Higher Education institutions via questionnaires to find that 42% of the respondents – both domestic and exchange students – experienced English-medium lectures as more challenging than those in their L1. The chief areas of difficulty diagnosed included unclear pronunciation, unfamiliar vocabulary, problems following lectures' lines of thought, and note-taking. These outcomes bear potentially revealing insights into the issues which should be addressed in course design and which affect honing the language skills of these students and ensuring effective lecturing behavior on the part of professors.

The qualitative counterpoint to these studies is provided by Mehisto and Asser (2007) in *Estonia*. They conduct research into stakeholder perspectives in CLIL programs, using questionnaires, semi-structured interviews, and lesson observation with principals, experienced and inexperienced teachers (two years of teaching being the cut-off point to differentiate between them), and parents of grade 4 and 5 CLIL pupils. The results attest to the success of CLIL programs, as high levels of satisfaction, commitment, and engagement are registered for all the stakeholders. The parents, however, consider there is room for improving home-school cooperation; the teachers request increased dialog with parents, more support, and heightened training; and school managers admit to requiring a greater knowledge base and more collaboration with other stakeholders.

Moving West from Scandinavia, the *UK*, while being a Northern European country, merits separate attention, given its peculiar situation with respect to CLIL. It is startling, on the one hand, to note that a country with a figure who has become a beacon in guiding good CLIL practice – Do Coyle – has once again consistently failed to produce substantial empirical research. And, on the other, it is no less surprising to observe that the nation whose language is by far the most widely adopted in CLIL programs – English – is lagging so far behind in its

implementation. As Ullmann (1999, 104) puts it, 'Britain has been slow off the mark.' Despite not being monolingual (Coyle 2009 alludes to Welsh and Scottish Gaelic), the UK is experiencing marked disincentives to learn languages (owing to the 'island mentality,' as Coyle 2009, 174 terms it) which are causing language learning in the UK to be 'in crisis' (Coyle 2009, 173). A by-product of this situation is the scarcity of CLIL initiatives: 'Though interest in bilingual education is increasing across Europe, bilingual sections are rare to find at the best of times and are almost unheard of in the United Kingdom' (Ullmann 1999, 96).

What CLIL provision there is, is evaluated via basic interviews and classroom observation (Ullmann 1999; Wiesemes 2009). The first of these authors interviewed ninth-, tenth-, and eleventh-grade pupils involved in a French CLIL program at a Hockerill state comprehensive school. Her results were exceedingly positive: the students reported increased concentration, enhanced subject matter learning, and a preference to take exams in French. The outcomes obtained by Wiesemes (2009) also lend credence to the success of CLIL. In this case, the Content and Language Integration Project (CLIP) was being assessed, an initiative funded by the National Languages Center, in partnership with the University of Nottingham, and which recruited eight successful Secondary schools to teach certain subjects through the medium of French, German, or Spanish (Coyle 2006). Using interviews and observation, the author concludes that CLIL comes across as an example of good teaching and learning practices. For teachers and learners alike, it enhances motivation and fosters a reconceptualization of classroom pedagogy, as well as the breaking of traditional departmental barriers. This scholar goes on to make a series of strong claims which unfortunately are not substantiated by the research methodology employed (a quantitative control/experimental group design with cohort matching would be called for here): CLIL raises standards in language teaching, has no negative effects on subject learning, and develops better thinking, strategic, comprehension, and speaking skills. It also increases learner achievement, according to Wiesemes (2009), even in less able pupils.

Central European countries (The Netherlands, Germany, Switzerland, and Austria) have been no less active in investigating the way in which CLIL is playing itself out. Both exploratory and experimental studies have been developed across these nations in order to gauge the effects of CLIL.

The Netherlands stands out particularly prominently as an example of remarkable CLIL investigation. In addition to the Maastricht-based research group led by Wilkinson which has focused primarily on Higher Education, another set of scholars at the University of Utrecht (Admiraal, Westhoff, De Graaff) have conducted some of the most empirically solid studies into the topic to date in Europe. Admiraal et al. (2006) carried out a longitudinal study with Secondary Education students who had received four years of CLIL education through English in five Dutch schools. They measured receptive vocabulary knowledge, reading comprehension, and oral proficiency and considered gender, entry ability level, home language, language contact outside school, and motivation as covariates. A total of 1,305 students were comprised in the sample, subdivided into experimental and control groups. Higher scores were obtained for the oral and reading components of the study, but no differences emerged for receptive word knowledge. No negative effects were found for subject matter achievement and the L1 either. The only flaws presented by this otherwise stalwart piece of research concern the lack of initial matching of the

cohorts and of statistical analyses which would allow the outcomes to be attributed to CLIL instructional practices, as the authors themselves acknowledge (2006, 91).

A year later (De Graaff, Koopman, and Westhoff 2007; De Graaff et al. 2007), these same researchers complement their previous study with a qualitative investigation aimed at identifying effective L2 pedagogy in CLIL settings via an originally designed observation tool. The latter comprises five basic assumptions related to effective language teaching performance and gives rise to what these scholars term the 'SLA penta-pie': the teacher facilitates exposure to input at a challenging level, both meaning-focused and form-focused processing, opportunities for output production, and strategy use. After observing, videotaping, and analyzing nine lessons across six different CLIL subjects employing this instrument, they arrive at the conclusion that the whole range of teaching performance indicators can be observed in Dutch teaching practice, thereby resulting in what they consider effective CLIL pedagogy.

In the remaining three Central European countries, research is not as robust as in the Netherlands. In *Germany*, Wolff (2002a) already points to the need for more empirically based program evaluation, particularly in terms of language outcomes, as existing research on CLIL in his country is mainly action research which sheds light on the difficulties which teachers are experiencing. What quantitative studies there are, however, once more report statistically significant target language gains for CLIL groups in terms of vocabulary (Wode 1999) and general communicative competence (Vázquez 2007). Wode (1999) also notes that CLIL cohorts perform as well as – if not better than – monolingual groups in subject matter (History and Geography) learning. Without doubt, however, the most statistically solid investigation in this country is conducted by Zydariß (2007) with 180 16-year-old students in Berlin. It tested grammatical, lexical, and communicative competences, as well as subject-matter literacy, and its results attested to a significantly higher overall language competence of CLIL students by a substantial difference. The CLIL stream was at an advantage particularly on lexical and grammatical range, accuracy, propositional richness, and syntactic maturity.

Switzerland, in turn, has mainly seen the proliferation of exploratory studies based on lesson excerpts, observation, and the analysis of narratives. The focus has fundamentally been on the effects of CLIL on oral competence. Stotz and Meuter (2003), for example, developed a study into the English listening and speaking skills of Primary school CLIL students in the Canton of Zurich. They also complemented it with questionnaires and classroom observation which revealed that teachers largely followed implicit, embedded use of English in CLIL sequences and that few productive opportunities for classroom discourse were provided for the learners, with interaction patterns largely resembling those of most frontal classrooms. In turn, the results obtained on the two oral competence tests they administered support the decision of introducing English at Secondary level as well, as the CLIL strand outperformed the nonimmersion stream. The outcomes for language production and interaction were, however, more inconclusive.

These results do not tally with those reported by Gassner and Maillat (2006), who, working with 11th-grade students in a French CLIL program in Geneva and using three excerpts from a Biology course, counter the claim that immersion education does not improve productive skills, arguing that, in their study, CLIL led to considerable advances in terms of pragmatic and discursive competence. Yet, other outcomes are obtained by Serra (2007): in the longitudinal study which this author

conducted with three public Swiss schools from grades 1 through 6, the experimental and control groups performed equally well on the Italian and Romansch languages, although the CLIL stream outperformed their mainstream peers in Mathematics. However, no statistically significant differences were found between CLIL and non-CLIL students on the acquisition of subject content knowledge in Stehler's (2006) research. Working with an extremely heterogeneous – and, hence, questionable – sample (French and German learners, six different grades and subjects, diverse areas of Switzerland, private and state-financed schools, with different conventions for nonlinguistic subject teaching, and with diverse ages of onset) and basing himself on videotaped subject classes, this scholar concludes that CLIL has neither a positive nor a negative influence on the acquisition of knowledge.

Finally, in *Austria*, interest has chiefly centered on narrative competence and lexical proficiency, with some qualitative appraisal as well. All the studies presented here, while valuable approaches to the study of CLIL and its effects, share common flaws: they do not guarantee the homogeneity of the experimental and control cohorts, they do not perform statistical operations to account for the possible causes of the superior performance ascertained, and, on some occasions, they do not even calculate the existence of statistically significant differences between the groups considered.

Ackerl (2007) analyzed a total of 10 essays in the Austrian university entrance exam (5 from Vienna Bilingual Schooling students and 5 from mainstream education pupils) and found that CLIL learners did not make fewer mistakes but did produce more complex sentences, a greater variety of tenses, and more diversified vocabulary. These outcomes are in keeping with those obtained by Hüttner and Rieder-Bünemann (2007, 2010), who studied the effects of CLIL on seventh-grade Austrian students through the use of a picture story, concluding that these pupils had a more advanced command over micro-level features (linguistic cohesion) and some macro-level features (thematic coherence) of the narrative. Seregély's (2008) results also concur with those of Ackerl (2007) in terms of lexical competence. This author administered 4 types of lexical tests to 11th-grade control and experimental groups of students in Vienna, as well as questionnaires to teachers and learners involved in CLIL experiences. It transpired that CLIL students had a vaster and more complex English vocabulary than traditional students, that male learners outstripped their female counterparts, and that extramural exposure and time spent in English-speaking countries significantly impacted both groups' lexical competence. The greater intrinsic motivation of the CLIL branch also surfaced, together with the teachers' satisfaction with the CLIL method in their school, which they hoped would become standard practice across Austria. Finally, Jexenflicker and Dalton-Puffer (2010) have more recently examined the effects of CLIL on English language skills in upper-secondary engineering schools in Austria. The CLIL branch was invariably found to outstrip its EFL counterparts on general language ability and writing skills both for the total sample and when the two schools were analyzed separately. The effects of CLIL were more clearly felt on accuracy, vocabulary range, spelling, and task fulfillment, but were less marked in the field of organization and structure.

In *Eastern Europe* (Czech Republic, Poland, Hungary), mainly descriptive accounts can be found in the literature available in English, geared at identifying the most outstanding models being applied in CLIL education across each country. This is done by Novotná and Hofmannová (2007) in *The Czech Republic*, by Luczywek (2009) in *Poland*, and by Kovács (2005) in *Hungary*. In addition to

describing the chief prototypes of CLIL implementation in Poland, Czura, Papaja, and Urbaniak (2009) also report on the outcomes of a qualitative project coordinated by the National Center for Teacher Training and the British Council (known as the Profile Report), whose aim was to probe bilingual scheme results throughout the country. It provided an overview of CLIL practice in 19 schools, using classroom observation and interviews with students and staff. Teachers came across as involved, committed, and eager, and saw CLIL as a challenge and a source of professional satisfaction. Greater networking with schools abroad, increased teamwork, external support, and teacher training were called for. Students regarded it as prestigious and as a purveyor of enhanced learning conditions. They complained, however, about the lower standard of content subjects, the use of traditional methodology, and the unsystematic code-switching in class. Finally, the lack of curriculum and ICT availability and the poor access to materials in English were all documented. The only other qualitative appraisal of CLIL programs is provided by Bognár (1999) in Hungary, who highlights the dearth of actual research but documents that 65%–100% of CLIL students are accepted by Higher Education Institutions and that the most prestigious universities have recognized the value of bilingual projects by awarding extra exam points.

A very similar research panorama can be detected in *Italy*, the first *Southern European* country considered here. As Infante et al. (2008) note, no centralized CLIL actions have been enforced and no systematic monitoring of its implementation has been conducted, something which has led to its slow flourishing, most conspicuously, in Northern Italy. Again, the types of studies carried out are qualitative attempts at checking the pulse, in this case, of teacher attitudes to CLIL programs. Coonan (2007) uses interviews, focus group sessions, questionnaires, and teacher logs to scrutinize the perceptions of 33 secondary school teachers enrolled in a postgraduate training program. The indirect information they provide indicates that CLIL positively affects the way students learn content, their motivation, and their degree of attention in lessons. The interviewees consider that this educational approach increases cognitive complexity and flexibility in content and language integration, but does not result in the simplification of learning objectives. It fosters a greater awareness of the student on the part of the teacher, who is no longer a mere information provider, but a key figure in actively involving and engaging the learner.

In turn, Infante et al. (2009) interview 11 experienced CLIL teachers through questionnaires and follow-up telephone conversations on their trajectory with dual-focused education. The overall results which emerge are once again positive, with CLIL impacting methodological innovation and level of reflection. In hindsight, the participating instructors regard their experience as extremely satisfactory, as, despite the notable number obstacles they have had to overcome, they believe in the effectiveness of this approach and consider it improves their teaching and allows them to view the subject in a different light. They acknowledge the increased workload it has involved and the lack of materials as two of the main hurdles they have had to face. Methodologically, however, the benefits have been manifold: more attention is now devoted to oral communication and fluency rather than accuracy; activities which develop thinking skills are favored; cooperative learning techniques are adopted; and active participation is fostered. The result is more motivated students.

The situation of *Spain* starkly contrasts with that of Italy in terms of CLIL provision and research. This country particularly stands out within the European

landscape, since, as Coyle (2010, viii) contends, 'Spain is rapidly becoming one of the European leaders in CLIL practice and research.' As had been the case with the broader continental ambit, this educational approach has blossomed particularly over the course of the past ten years (Ruiz de Zarobe and Lasagabaster 2010a: ix). Indeed, all regional education authorities are now endorsing plurilingual policies, as Fortanet-Gómez and Ruiz-Garrido (2009) or Fernández Fontecha (2009) document.

In Spain, CLIL is distinctive on two counts. First, it encompasses a diversity of models practically tantamount to the number of regions where it is applied, given the decentralization of our educational system, which transfers educational powers to each autonomous community. Thus, in our context, the gap between EU policy and CLIL grassroots action (Dalton-Puffer 2008) is bridged via regional rather than national educational initiatives and no single blueprint exists. And second, dual-focused education has been developed in Spain with both second (co-official) and foreign (other European) languages, and in both bilingual communities where English is a third language taught through CLIL (The Basque Country, Catalonia, Valencia, the Balearic Islands, Galicia) and in monolingual communities conspicuous for their lack of tradition in foreign language teaching (e.g. Extremadura, Castilla-La Mancha, or Andalusia). For these reasons, Spain could well serve as a model for the multiple possibilities offered by the broader CLIL spectrum and thus for other countries seeking to implement it (Coyle 2010; Ruiz de Zarobe and Lasagabaster 2010a).

Thus, 'drawing an uncomplicated, homogeneous picture of CLIL policy in Spain is an impossibility' (Lasagabaster and Ruiz de Zarobe 2010, 284). As these authors underscore, it is difficult to narrow down the exact number of schools which are implementing it, as a large number of teaching institutions in the private sector are also running CLIL programs. The only trait common to the entire national panorama seems to be that English holds the hegemonic position and that CLIL is no longer an elitist approach in our country. However, discrepancies abound and vast outnumber possible similarities. Differences can be discerned in the minimum and maximum amount of FL content teaching established in each community, in terms of the number of subjects taught through CLIL, in the language level established for teachers and/or students to partake in a bilingual stream, or regarding the amount of CLIL experience, as bilingual communities have been working with it for more than 25 years.

In this sense, *the Basque Autonomous Community* (henceforth, BAC) is prominently positioned within the Spanish CLIL scenario, given its long and entrenched tradition in bilingual teaching and research. A large body of research literature has developed in the Basque country, with landmark studies being conducted by prominent figures like García Mayo, García Lecumberri, Cenoz Iragui, Lasagabaster, Sierra, or Ruiz de Zarobe within the REAL research group (Research in English Applied Linguistics). In the BAC, studies have proliferated on the impact of CLIL on general language competence, on the numerous aspects which make up this general faculty (oral skills, pronunciation, receptive and productive vocabulary, written production, tense and agreement morphology, and syntax), and on subject knowledge. Overall, research results in this context again attest to the success of CLIL programs, as they positively affect vehicular language learning, are not detrimental for content mastery, and foster favorable attitudes towards trilingualism (cf. Alonso, Grisaleña, and Campo 2008; Gallardo del Puerto, Gómez Lacabex, and García Lecumberri 2009; Lasagabaster 2008, 2009; Lasagabaster and

Sierra 2009; Ruiz de Zarobe 2007, 2008, 2010; Villarreal Olaizola and García Mayo 2009).

Catalonia is, alongside the BAC, the other major exponent of CLIL implementation and research in a multilingual setting. However, the lack of continuity of these programs in general has caused Catalonia to be far from having a sound CLIL policy (Navés and Victori 2010). This occurs much the same way with research which monitors performance and investigates possible language and content gains: it is nowhere near that of the Basque country. The work carried out by the GRAL Language Acquisition Research Group in Barcelona, led by Carmen Muñoz, has been particularly prominent, but has especially focused on the effects of age of onset on the acquisition of English as a Foreign Language (through the BAF – Barcelona Age Factor – Project).

Carmen Pérez-Vidal, head researcher of the ALLENCAM (Language Acquisition from Multilingual Catalonia) Group, Cristina Escobar Urmeneta, coordinator of the ArtICLE (for the evaluation of collaborative learning in CLIL classrooms) and MFP (Model de Formació del Professorat) Projects, and Teresa Navés, co-coordinator of the AICLE-CLIL BCN European Project, all come to the fore as outstanding figures in the Catalanian research panorama, but only two outcome-related studies in this context are registered by this last author (Navés and Victori 2010; Navés 2011), both conducted by the GRAL group: one on the effects of CLIL on general language proficiency and the other on writing competence. The former worked with a total of 837 students in 5th to 9th grade and the latter, with 695 learners from 5th to 12th grade. In the first of them, CLIL learners in all four grades surpassed their non-CLIL counterparts. In the second, the CLIL strand obtained statistically significant differences in its favor on fluency, syntactic and lexical complexity, and accuracy. Furthermore, when compared to superior grades, 7th- and 9th-grade CLIL learners tended to obtain similar results to those of foreign language students one or two grades ahead.

Research diminishes in monolingual communities, where the CLIL tradition is much more recent and thus not as firmly ingrained as in bilingual ones (Fernández Fontecha 2009; Fortanet-Gómez and Ruiz-Garrido 2009): there is ‘a shortage of research on CLIL and related practices in Spanish monolingual communities’ (Fernández Fontecha 2009, 15). This is perhaps due to the fact that attaining bilingualism in monolingual settings poses much more of a challenge, as Luque Agulló (2009) highlights, since there is little or no extramural exposure to the target language, which is ultimately confined to the CLIL classroom.

Within this bleak panorama, the autonomous community of *Madrid* stands out among other monolingual areas of our country. Here, more than in any other autonomous community, research has been guided by and channeled through certain research groups based at the local universities. Three particularly come to the fore in the dissemination of the research they have conducted: the CLIL project led by Ana Halbach at the University of Alcalá de Henares (UAH) (cf. Pena Díaz and Porto Requejo 2008); the UAM-CLIL Project at the Universidad Autónoma de Madrid, with Llinares and Whittaker at the forefront (cf. Llinares and Whittaker 2006, Llinares and Whittaker 2010; Whittaker and Llinares 2009); and the UCM-CLUE Project (Content and Language in University Education) at the Universidad Complutense de Madrid, directed by Emma Dafouz Milne (cf. Dafouz Milne 2006, 2007, 2011; Dafouz Milne and Llinares 2008; Dafouz Milne et al. 2007; Dafouz

Milne, Núñez, and Sancho 2007; Dafouz Milne and Núñez Perucha 2010; Núñez and Dafouz Milne 2007).

In *La Rioja*, the GLAUR research group (*Grupo de Lingüística Aplicada de la Universidad de La Rioja*), with Jiménez Catalán, Ojeda Alba, or Agustín Llach, has conducted interesting joint research with the Basque Country, particularly into vocabulary acquisition (cf. Agustín Llach 2009; Jiménez Catalán, Ruiz De Zarobe, and Cenoz Iragui 2006; Jiménez Catalán and Ruiz de Zarobe 2009; Ojeda Alba 2009). Finally, *Andalusia* has also recently produced interesting quantitative research via two projects led by Lorenzo in Sevilla (Casal and Moore 2008; Lorenzo, Casal, and Moore 2009; Lorenzo et al. 2009) and Madrid Fernández in Granada (cf. Roa, Madrid and Sanz 2011 for the description of the study; Ramos García, Ortega Martín, and Madrid 2011 for the effects of CLIL on L1 competence; Villoria, Hughes and Madrid 2011 for the effects of CLIL on L2 competence; Madrid 2011 for the effects of CLIL on subject-content learning; and Ramos García 2011 for the effects of CLIL on cultural aspects). Both have again evinced the supremacy of CLIL over language-driven instruction, as Primary and Secondary students outperform their mainstream peers at statistically significant levels in terms of both linguistic outcomes and competence levels. In the remaining communities where CLIL publications can be located, there is a total absence of results. What meager publications there are simply provide descriptive accounts of CLIL implementation in that particular region.

3.4. Conclusion

In sum, a personal yet unbiased reading of the literature on CLIL in Europe allows us to extract several overriding conclusions. A first of them is the fact that CLIL has engendered widespread discussion on the continent and spawned an inordinate – almost infinite – amount of publications on the topic. A series of key figures have spurred the latter on (e.g. Coyle in the UK, Marsh in Finland, Mehisto in Estonia, Wolff in Germany, Dalton-Puffer in Austria, Langé in Italy) and have engaged in extensive theorizing on CLIL, its principles and models, recommendations for its implementation, or reviews of the research conducted on it. However, solid empirical studies have been sparse. As Navés (2010) underscores, in the last two decades, whereas North America has been busy researching the features and effects of successful bilingual programs, Europe has merely been occupied in describing their benefits. This is in fact another significant conclusion which can be reached regarding European CLIL: although the number of studies tapping into the implementation and effects of CLIL has been growing steadily (Seregély 2008), few are robust accounts of outcome-oriented research where pertinent variables are factored in and controlled for. The unfortunate consequence of this is that ‘seriously flawed studies bias the results in ways it is impossible to predict or correct’ (Genesee 1998, 10).

What studies have been conducted provide unequivocal support for a CLIL route, as a recurrent outcome reported in them is the supremacy of CLIL tuition over language-driven instruction. According to Dalton-Puffer (2008, 2009) and Ruiz de Zarobe (2011), research unquestionably indicates that CLIL clearly affects L2/FL language learning outcomes. Significantly higher TL levels have been reported for CLIL tracks than for conventional language classes. The positive effect is felt on global communicative competence, on receptive skills, speaking (a greater fluency is

displayed), morphology (with increased automatization and appropriacy of use being found), vocabulary (particularly technical and semi-technical terms), writing (fluency and lexical and syntactic complexity), creativity, risk-taking, and emotive/affective outcomes (learner motivation). Furthermore, students with average FL talents and interest have also been shown to benefit from CLIL instruction, so that this sort of program seems to make language learning more accessible to all types of achievers. However, pronunciation, syntax, writing (accuracy and discourse skills), informal and nontechnical language, and pragmatics remain largely unaffected, perhaps owing to an insufficient focus on form in CLIL classrooms. Finally, content outcomes have been equally positive: CLIL learners possess the same amount of content knowledge as peers taught in the L1, sometimes even outstripping them.

Thus, in the light of these results, it is not surprising that CLIL has been championed across Europe. These success stories seem to provide a real rebuff to critics and to encourage embarking on bilingual education in order to make it the norm and not the exception. However, these outcomes should be interpreted with caution, given their methodological flaws: '[...] the unfortunate reality is that the vast majority of evaluations of bilingual programs are so methodologically flawed in their design that their results offer more noise than signal' (Genesee 1998, 10). As has been ascertained throughout the course of this section, most of them are stand-alone qualitative pieces and what quantitative investigation there is rarely guarantees the homogeneity of the treatment and comparison groups, factors in moderating variables, or performs statistical analyses to determine whether the gains observed are truly ascribable to CLIL practice. On occasions, it does not even determine the existence of statistically significant differences between cohorts. We clearly stand in need of solid empirical research which builds in rigorous assessment of the variables under scrutiny: '[...] there remains insufficient empirical evidence of the impact of differing types of CLIL/EMILE across Europe' (Marsh 2002, 185). The final verdict, thus, is not yet in (Marsh 2002): 'There is not yet solid empirical evidence from EU countries on which to base definitive claims about the educational (or other) advantages of multilingual education' (Vez 2009, 18).

4. The future: pushing CLIL forward

Thus, further research is clearly called for in painting a comprehensive and empirically valid picture of where CLIL schemes stand in our continent. This final section expounds on the salient features which future studies into CLIL should have in order to ensure a sufficient evidence base to make secure judgments in this field.

To begin with, future research avenues should address the major questions recurrent in all CLIL debates (Mehisto and Asser 2007) and which the specialized literature considers should figure prominently on current research agendas. These are the effects of CLIL on L1 and L2 development (Jiménez Catalán and Ruiz de Zarobe 2009), content-related results (Coyle, Hood, and Marsh 2010; Lasagabaster and Ruiz de Zarobe 2010), a longitudinal perspective (Björklund 2006; Lasagabaster and Ruiz de Zarobe 2010; Lasagabaster and Sierra 2010), the causes behind the differences between CLIL and non-CLIL strands (Fernández Fontecha 2009; Muñoz, forthcoming), and attitudinal and affective factors, together with the main needs and problems stakeholders face in their daily practice (Fernández Fontecha 2009; Pérez-Vidal 2007). All in all, they should attempt to respond to the long-acknowledged need expressed by Marsh (2002, 186) as 'A single major [...] study on primary and

secondary level, medium and low exposure – with key variables controlled – could be of fundamental importance in terms of showing evidence to satisfy the question *does it work?*

In this sense, the recent specialized literature has identified key areas in urgent need of research within this field, which should be addressed in future studies:

- To begin with, research-based empirical studies into the linguistic outcomes of CLIL education are considered a major niche to be filled, according to a plethora of authors (Junta de Andalucía 2005; Madrid Fernández 2006; Langé 2007; Lasagabaster 2008; Lyster 2007; Pérez-Vidal 2007; Ruiz de Zarobe 2008; Ruiz de Zarobe and Lasagabaster 2010a).
- Longitudinal studies are also thin on the ground and should be given top priority, in Lasagabaster and Ruiz de Zarobe's (2010), Jexenflcker and Dalton-Puffer's (2010), Lasagabaster and Sierra's (2010), and Ruiz de Zarobe's (2011) opinion.
- Assessment concerning both language and content knowledge should become a preferential objective (Hüttner and Rieder-Bünemann 2010; Lasagabaster and Ruiz de Zarobe 2010; Sierra, Gallardo del Puerto, and Ruiz de Zarobe 2011).
- Analyses of the methodology used and CLIL teacher observation should equally be factored in, as Admiraal et al. (2006), Lasagabaster (2008), and Lasagabaster and Ruiz de Zarobe (2010) endorse.
- Canvassing teachers' language training, linguistic command, the support they receive, the methods and assessment procedures they employ, and their collaboration and coordination strategies is another major challenge which Lasagabaster and Ruiz de Zarobe (2010) consider should figure prominently on researchers' agendas.

In doing all this, future studies should attempt to remedy the most outstanding shortcomings and flaws of previous research, pinpointed throughout our critical appraisal of the literature review as regards variables, research design, or statistical methodology. In terms of *variables*:

- The homogeneity of the sample should be guaranteed, matching students within and across schools for verbal intelligence, motivation, level of English, and sociocultural studies, thereby overcoming a limitation which all other similar studies have thus far presented and which could skew or invalidate their results. This is particularly necessary given the well-documented level of self-selection normally found in CLIL streams (Dalton-Puffer, Nikula, and Smit 2010b; Hughes 2010a, 2010b).
- An important amount of moderating variables should be factored in (verbal intelligence, motivation, sociocultural status, gender, type of school (public – private – semi-private), setting (urban – rural), province, performance in the English as a Foreign Language subject, exposure to English outside school, time of exposure to English a formal school context, linguistic competence of the teacher).
- The L1 and content knowledge of the subjects taught through CLIL should be worked in as dependent variables.

Vis-à-vis the *research design*:

- Longitudinal, as opposed to cross-sectional, studies are required, where a follow-up testing phase is incorporated alongside pretesting and posttesting ones.
- An eclectic or mixed research design (Madrid and Bueno 2005) should be favored, combining both quantitative and qualitative research methods.
- Within the qualitative part of the study, multiple triangulation is highly advisable (Denzin 1970). For example, questionnaires should be administered alongside interviews and observation to foster methodological triangulation.

Finally, concerning statistical methodology:

- Statements should be made on the basis of statistical confirmation. For example, the effects of CLIL on the L1 or subject content acquisition should not be based, as has previously been the case, on teacher's appreciations, but on an empirical analysis with three different types of variables.
- Inter-rater reliability and inter-coder agreement should be calculated among correctors and interviewers.
- ANOVA and the t test should be employed, together with multivariate procedures (factor analysis and discriminant analysis) and not merely descriptive statistics. The causes of the possible linguistic gains will thereby be identified, not merely assuming they are due to CLIL.

Large-scale investigations of this nature will provide additional relevant research findings about the effects of CLIL instructional practices which will contribute to the sustainability and future development of dual-focused programs. They will also supply researchers, practitioners, and policy-makers with a set of valid and reliable quantitative and qualitative instruments which will allow replication globally, thereby fostering comparability and cross-disciplinary application, something which Björklund (2006) underscores as a central area for CLIL advancement in the future. They will furthermore set the basis for further replications and establish models of program evaluation disseminable in future studies. The ultimate aim is to address an area in dire need of research and to ascertain whether the considerable financial allocation of resources which many European countries are making to incorporate CLIL is cost-effective and worthwhile in terms of the linguistic gains it is generating. By making the necessary readjustments and curricular reorientations in line with their results, such studies will hopefully be instrumental in keeping the process on track and in paving the way for a success-prone implementation of CLIL schemes in Europe, something crucial as CLIL could well become the lynchpin to tackle the current language deficit on our continent.

Notes

1. Given the amply documented predominance of English as a CLIL language (cf. Dalton-Puffer, Nikula, and Smit 2010a; Hüttner and Rider-Bünemann 2010; Madrid and Hughes 2011a; Sierra, Gallardo del Puerto, and Ruiz de Zarobe 2011) and the preference for this language on the research scene (to the extent that Dalton-Puffer, Nikula, and Smit 2010b speak of CEIL – Content and English Integrated Learning), this article will focus on studies in which English is the CLIL L2 or L3.

2. The grouping of European countries is a personal one, based both on geographical proximity and on the affinity of the research conducted into the effects of CLIL.

References

- Ackerl, C. 2007. Lexico-grammar in the essays of CLIL and non-CLIL students: Error analysis of written production. *Vienna English Working Papers* 16, no. 3: 6–11.
- Admiraal, W., G. Westhoff, and K. de Bot. 2006. Evaluation of bilingual secondary education in The Netherlands: Students' language proficiency. *English Educational Research and Evaluation* 12, no. 1: 75–93.
- Agustín Llach, M.P. 2009. The role of Spanish L1 in the vocabulary of CLIL and non-CLIL EFL learners. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 112–29. Bristol: Multilingual Matters.
- Airey, J. 2004. Can you teach it in English? Aspects of the language choice debate in Swedish higher education. In *Integrating content and language. Meeting the challenge of a multilingual higher education*, ed. R. Wilkinson, 97–108. Maastricht: Maastricht University.
- Airey, J., and C. Linder. 2006. Language and the experience of learning university physics in Sweden. *European Journal of Physics* 27, no. 3: 553–60.
- Alonso, E., J. Grisaleña, and A. Campo. 2008. Plurilingual education in secondary schools: Analysis of results. *International CLIL Research Journal* 1, no. 1: 36–49.
- Baetens Beardsmore, H. 1990. Multilingual education in Europe: Theory and practice. In *Korean language education in China*, 107–29. Seoul: The Korean Society of Bilingualism.
- Baetens Beardsmore, H., and J. Kohls. 1988. Immediate pertinence in the acquisition of multilingual proficiency. *Canadian Modern Languages Review* 44: 241–61.
- Baetens Beardsmore, H., and M. Swain. 1985. Designing bilingual education: Aspects of immersion and European school models. *Journal of Multilingual and Multicultural Development* 6: 1–15.
- Bergroth, M. 2006. Immersion students in the matriculation examination three years after immersion. In *Exploring dual-focussed education. Integrating language and content for individual and societal needs*, ed. S. Björklund, K. Mård-Miettinen, M. Bergström and M. Södergård, http://www.uwasa.fi/materiaali/pdf/isbn_952-476-149-1.pdf. (accessed July 9, 2010).
- Björklund, S. 2006. Content and language integrated approaches: What lies ahead? In *Exploring dual-focussed education. Integrating language and content for individual and societal needs*, ed. S. Björklund, K. Mård-Miettinen, M. Bergström and M. Södergård, http://www.uwasa.fi/materiaali/pdf/isbn_952-476-149-1.pdf (accessed July 9, 2010).
- Bognár, A. 1999. School subjects in a foreign language: A decade of success in Hungary. In *Learning through a foreign language. Models, methods and outcomes*, ed. J. Masih, 106–16. London: Centre for Information on Language Teaching and Research.
- Casal, S., and P. Moore 2008. The Andalusian bilingual sections scheme: Evaluation and consultancy. *International CLIL Research Journal* 1, no. 1: 36–46. <http://www.icrj.eu/12-743> (accessed July 9, 2010).
- Coonan, C.M. 2005. The natural learning of a foreign language. CLIL as a possible partial solution for the primary school. *Scuola e Lingue Moderne* 4–5. <http://primaryclil.org/project%20outcomes/WP2/The%20natural%20learning%20of%20a%20foreign%20language.pdf>.
- Coonan, C.M. 2007. Insider views of the CLIL class through teacher self-observation-introspection. *International Journal of Bilingual Education and Bilingualism* 10, no. 5: 625–46.
- Coyle, D. 2006. *Content and language integrated learning. Motivating learners and teachers*. blocs.xtec.cat/clilpractiques1/files/2008/11/slrcoyle.pdf (accessed July 9, 2010).
- Coyle, D. 2007. Content and language integrated learning: Towards a connected research agenda for CLIL pedagogies. *International Journal of Bilingual Education and Bilingualism* 10, no. 5: 543–62.

- Coyle, D. 2009. Language pedagogies revisited: Alternative approaches for integrating language learning, language using and intercultural understanding. In *Culturally and linguistically diverse classrooms: New dilemmas for teachers*, ed. J. Miller, A. Kostogriz, and M. Gearon, 172–95. Bristol: Multilingual Matters.
- Coyle, D. 2010. Foreword. In *CLIL in Spain: Implementation, results and teacher training*, ed. D. Lasagabaster and Y. Ruiz de Zarobe, vii–viii. Newcastle upon Tyne: Cambridge Scholars.
- Coyle, D., P. Hood, and D. Marsh. 2010. *CLIL. Content and language integrated learning*. Cambridge: Cambridge University Press.
- Cummins, J. 1989. *Empowering minority students*. Sacramento, CA: California Association for Bilingual Education.
- Cummins, J., and M. Swain. 1986. *Bilingualism in education: Aspects of theory, research and practice*. London: Longman.
- Czura, A., K. Papaja, and M. Urbaniak. 2009. Bilingual education and the emergence of CLIL in Poland. In *CLIL practice: Perspectives from the field*, ed. D. Marsh, P. Mehisto, D. Wolff, R. Aliaga, T. Asikainen, M.J. Frigols-Martin, S. Hughes, and G. Langé, 172–8. Finland: University of Jyväskylä.
- Dafouz Milne, E. 2006. Solidarity strategies in CLIL university lectures: Teachers' use of pronouns and modal verbs. *Vienna English Working Papers* 15, no. 3: 9–14.
- Dafouz Milne, E. 2007. On content and language integrated learning: The case of university lectures. *RESLA* 1: 67–82.
- Dafouz Milne, E. 2011. English as the medium of instruction in Spanish contexts: A look at teacher discourses. In *Content and foreign language integrated learning. Contributions to multilingualism in European contexts*, ed. Y. Ruiz de Zarobe, J.M. Sierra, and F. Gallardo del Puerto, 189–209. Frankfurt-am-Main: Peter Lang.
- Dafouz Milne, E., and A. Llinares. 2008. The role of repetition in CLIL teacher discourse: A comparative study at secondary and tertiary levels. *International CLIL Research Journal* 1, no. 1: 50–9.
- Dafouz Milne, E., and B. Núñez Perucha. 2010. Metadiscursive devices in university lectures: A contrastive analysis of L1 and L2 performance. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 213–31. Amsterdam: John Benjamins.
- Dafouz Milne, E., B. Núñez, and C. Sancho. 2007. Analysing stance in a CLIL university context: Nonnative speaker use of personal pronouns and modal verbs. *International Journal of Bilingual Education and Bilingualism* 10, no. 5: 647–62.
- Dafouz Milne, E., B. Núñez, C. Sancho, and D. Foran. 2007. Integrating CLIL at the tertiary level: Teachers' and students' reactions. In *Diverse contexts, converging goals: Content and language integrated learning in Europe*, ed. D. Wolff and D. Marsh, 91–102. Frankfurt-am-Main: Peter Lang.
- Dalton-Puffer, C. 2008. Outcomes and processes in content and language integrated learning (CLIL): Current research from Europe. In *Future perspectives for English language teaching*, ed. W. Delanoy and L. Volkman, 139–57. Heidelberg: Carl Winter.
- Dalton-Puffer, C. 2009. Communicative competence and the CLIL lesson. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 197–214. Bristol: Multilingual Matters.
- Dalton-Puffer, C., and T. Nikula. 2006. Introduction. *Vienna English Working Papers* 15, no. 3: 4–7.
- Dalton-Puffer, C., T. Nikula, and U. Smit. 2010a. Charting policies, premises and research on content and language integrated learning. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 1–19. Amsterdam: John Benjamins.
- Dalton-Puffer, C., T. Nikula, and U. Smit. 2010b. Language use and language learning in CLIL: Current findings and contentious issues. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 279–91. Amsterdam: John Benjamins.
- De Graaff, R., G.J. Koopman, Y. Anikina, and G. Westhoff. 2007. An observation tool for effective L2 pedagogy in content and language integrated learning (CLIL). *International Journal of Bilingual Education and Bilingualism* 10, no. 5: 603–24.

- De Graaff, R., G.J. Koopman, and G. Westhoff. 2007. Identifying effective L2 pedagogy in content and language integrated learning (CLIL). *Vienna English Working Papers* 16, no. 3: 12–9.
- Deller, S. 2005. Teaching other subjects in English (CLIL). *English!* Spring: 29–31.
- Denzin, N.K., ed. 1970. *Sociological methods: A source book*. Chicago: Aldine.
- Dulay, H., M. Burt, and S. Krashen. 1982. *Language two*. New York: OUP.
- Eurydice. 2006. *Content and language integrated learning (CLIL) at school in Europe*. Brussels: Eurydice.
- Fernández Fontecha, A. 2009. Spanish CLIL: Research and official actions. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 3–21. Bristol: Multilingual Matters.
- Fortanet-Gómez, I., and M.F. Ruiz-Garrido. 2009. Sharing CLIL in Europe. In *Content and language integrated learning: Cultural diversity*, ed. M.L. Carrió-Pastor, 47–75. Frankfurt-am-Main: Peter Lang.
- Gallardo del Puerto, F., E. Gómez Lacabex, and M.L. García Lecumberri. 2009. Testing the effectiveness of content and language integrated learning in foreign language contexts: The assessment of English pronunciation. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 63–80. Bristol: Multilingual Matters.
- Gassner, D., and D. Maillat. 2006. Spoken competence in CLIL: A pragmatic take on recent Swiss data. *Vienna English Working Papers* 15, no. 3: 15–22.
- Genesee, F. 1987. *Learning through two languages: Studies of immersion and bilingual education*. Rowley, MA: Newbury House.
- Genesee, F. 1994. *Integrating language and content: Lessons from immersion*. Santa Cruz: National Center for Research on Cultural Diversity and Second Language Learning.
- Genesee, F. 1998. A case study of multilingual education in Canada. In *Beyond bilingualism: Multilingualism and multilingual education*, ed. J. Cenoz and F. Genesee, 243–58. Clevedon: Multilingual Matters.
- Genesee, F. 2004. What do we know about bilingual education for majority language students? In *Handbook of bilingualism and multiculturalism*, ed. T.K. Bhatia and W. Ritchie, 547–76. Malden, MA: Blackwell.
- Genesee, F., and D. Jared. 2008. Literacy development in early French immersion programs. *Canadian Psychology* 49, no. 2: 140–7.
- Graddol, O. 2006. *English next*. London: British Council.
- Greene, J. 1997. A meta-analysis of the Rossell and Baker review of bilingual education research. *Bilingual Research Journal* 2, no. 3: 103–22.
- Greene, J.P. 1998. A meta-analysis of the effectiveness of bilingual education. <http://www.hks.harvard.edu/pepg/PDF/Papers/biling.pdf> (accessed July 9, 2010).
- Hellekjaer, G. 2004. Unprepared for English-medium instruction: A critical look at beginner students. In *Integrating content and language. Meeting the challenge of a multilingual higher education*, ed. R. Wilkinson, 147–71. Maastricht: Maastricht University.
- Hellekjaer, G.O. 2010. Language matters: Assessing lecture comprehension in Norwegian English-medium higher education. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 233–58. Amsterdam: John Benjamins.
- Housen, A., and H. Baetens Beardsmore. 1987. Curricular and extra-curricular factors in multilingual education. *Studies in Second Language Acquisition* 9: 83–102.
- Hughes, S. 2010a. Bilingual competence: Preliminary results in an ongoing research project. Paper presented at the 30th TESOL-Spain Conference, March 12–14, in Universitat de Lleida, Lleida.
- Hughes, S. 2010b. The effectiveness of bilingual education: A case study. Paper presented at the 25th GRETA convention: Celebrating 25 years of teacher inspiration, September 9–11, in Universidad de Granada, Granada.
- Hüttner, J., and A. Rieder-Bünemann. 2007. The effect of CLIL instruction on children's narrative competence. *Vienna English Working Papers* 16, no. 3: 20–7.
- Hüttner, J., and A. Rieder-Bünemann. 2010. A cross-sectional analysis of oral narratives by children with CLIL and non-CLIL instruction. In *Language use and language learning in*

- CLIL classrooms, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 61–79. Amsterdam: John Benjamins.
- Infante, D., G. Benvenuto, and E. Lastrucci. 2008. Integrating content and language at primary school in Italy: Ongoing experimental research. *International CLIL Research Journal* 1, no. 1: 74–82.
- Infante, D., G. Benvenuto, and E. Lastrucci. 2009. The effects of CLIL from the perspective of experienced teachers. In *CLIL practice: Perspectives from the field*, ed. D. Marsh, P. Mehisto, D. Wolff, R. Aliaga, T. Asikainen, and M.J. Frigols-Martín, 156–63. S. Hughes and G. Langé, Finland: University of Jyväskylä.
- Jáimez Muñoz, S. 2007. Glossary related to the Plurilingualism Promotion Plan: A language policy for Andalusia. GRETA. *Revista para Profesores de Inglés* 15, no. 1 and 2: 67–79.
- Jäppinen, A.K. 2006. CLIL and future learning. In *Exploring dual-focussed education. Integrating language and content for individual and societal needs*, ed. S. Björklund, K. Mård-Miettinen, M. Bergström and M. Södergård. http://www.uwasa.fi/materiaali/pdf/isbn_952-476-149-1.pdf (accessed July 9, 2010).
- Järvinen, H.M. 1999. Second language acquisition through CLIL at primary school level. In *Learning through a foreign language. Models, methods and outcomes*, ed. J. Masih, 72–80. London: Centre for Information on Language Teaching and Research.
- Järvinen, H.M. 2005a. CLIL in Finland. In *The CLIL quality matrix. Central workshop report*, coord. D. Marsh. http://www.ecml.at/mtp2/CLILmatrix/pdf/wsrepD3E2005_6.pdf (accessed July 10, 2010).
- Järvinen, H.M. 2005b. Language learning in content-based instruction. In *Investigations in second language acquisition*, ed. A. Housen and M. Pierrard, 433–56. Berlin: Mouton de Gruyter.
- Järvinen, H.M. 2006. Language in content instruction. Issues in promoting language and learning in CLIL type provision. http://www.lici.utu.fi/materials/article_jarvinen.pdf (accessed July 9, 2010).
- Jexenflicker, S., and C. Dalton-Puffer. 2010. The CLIL differential: Comparing the writing of CLIL and non-CLIL students in higher colleges of technology. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 169–89. Amsterdam: John Benjamins.
- Jiménez Catalán, R.M., and Y. Ruiz de Zarobe. 2009. The receptive vocabulary of EFL learners in two instructional contexts: CLIL versus non-CLIL instruction. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 81–92. Bristol: Multilingual Matters.
- Jiménez Catalán, R.M., Y. Ruiz De Zarobe, and J. Cenoz Iragui. 2006. Vocabulary profiles of English foreign language learners in English as a subject and as a vehicular language. *Vienna English Working Papers* 15, no. 3: 23–7.
- Junta de Andalucía. 2005. Plan de Fomento del Plurilingüismo en Andalucía. Sevilla: Junta de Andalucía. <http://www.juntadeandalucia.es/boja/boletines/2005/65/d/5.html> (accessed July 9, 2010).
- Kovács, J. 2005. CLIL in Hungary. In *The CLIL quality matrix. Central workshop report*, coord. D. Marsh. http://www.ecml.at/mtp2/CLILmatrix/pdf/wsrepD3E2005_6.pdf (accessed July 10, 2010).
- Krashen, S. 1996. *Under attack: The case against bilingual education*. Culver City, CA: Language Education Associates.
- Krashen, S. 1997. Why bilingual education? ED403101 1997-01-00ERIC Digest. <http://www.eric.ed.gov> (accessed July 9, 2010).
- Krashen, S.D. 1999. Bilingual education: Arguments for and (bogus) arguments against. In *Georgetown University round table on language and linguistics. Language in our time*, ed. J.E. Alatis and A.H. Tan, 111–27. Washington, DC: Georgetown University Press.
- Lambert, W.E., and G.R. Tucker. 1972. *Bilingual education of children: The St. Lambert experiment*. Rowley, MA: Newbury House Publishers.
- Langé, G. 2007. Postscript to CLIL 2006 and future action. In *Diverse contexts, converging goals: CLIL in Europe*, ed. D. Marsh and D. Wolff. Frankfurt am Main: Peter Lang.
- Lapkin, S., D. Hart, and M. Swain. 1991. Early and middle French immersion programs: French language outcomes. *Canadian Modern Language Review* 48: 11–40.

- Lasagabaster, D. 2008. Foreign language competence in content and language integrated courses. *The Open Applied Linguistics Journal* 1: 31–42.
- Lasagabaster, D. 2009. The implementation of CLIL and attitudes towards trilingualism. *ITL, International Journal of Applied Linguistics* 159: 23–45.
- Lasagabaster, D., and Y. Ruiz de Zarobe. 2010. Ways forward in CLIL: Provision issues and future planning. In *CLIL in Spain: Implementation, results and teacher training*, ed. D. Lasagabaster and Y. Ruiz de Zarobe, 278–95. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Lasagabaster, D., and J.M. Sierra. 2009. Language attitudes in CLIL and traditional EFL classes. *International CLIL Research Journal* 1, no. 2: 4–17.
- Lasagabaster, D., and J.M. Sierra. 2010. Immersion and CLIL in English: More differences than similarities. *ELT Journal* 64, no. 4: 367–75.
- Llinares, A., and R. Whittaker. 2006. Linguistic analysis of secondary school students' oral and written production in CLIL contexts: Studying social science in English. *Vienna English Working Papers* 15, no. 3: 28–32.
- Llinares, A., and R. Whittaker. 2010. Writing and speaking in the history class: A comparative analysis of CLIL and first language contexts. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 125–43. Amsterdam: John Benjamins.
- Lorenzo, F. 2007. The sociolinguistics of CLIL: Language planning and language change in 21st century Europe. *RESLA* 1: 27–38.
- Lorenzo, F. 2010. CLIL in Andalusia. In *CLIL in Spain: Implementation, results and teacher training*, ed. D. Lasagabaster and Y. Ruiz de Zarobe, 2–11. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Lorenzo Bergillos, F., S. Casal Madinabeitia, V. de Alba Quiñones, and P. Moore. 2007. Introduction. *RESLA* 1: 11–6.
- Lorenzo, F., S. Casal, and P. Moore. 2009. The effects of content and language integrated learning in European education: Key findings from the Andalusian Bilingual Sections Evaluation Project. *Applied Linguistics* 31, no. 3: 418–42.
- Lorenzo, F., S. Casal, P. Moore, and Y.M. Afonso. 2009. *Bilingüismo y educación. Situación de la red de centros bilingües en Andalucía* [Bilingualism and education. The situation of the network of bilingual schools in Andalusia]. Sevilla: Fundación Centro de Estudios Andaluces.
- Luczywek, I. 2009. Three models of integrating school subjects in Poland. In *CLIL practice: Perspectives from the field*, ed. D. Marsh, P. Mehisto, D. Wolff, R. Aliaga, T. Asikainen, M. J. Frigols-Martin, S. Hughes, and G. Langé, 44–54. Finland: University of Jyväskylä.
- Luque Agulló, G. 2009. Bilingüismo en comunidades monolingües y enseñanza basada en contenidos: Muchas preguntas y algunas respuestas. In *Atención a la diversidad en la enseñanza plurilingüe. I, II y III Jornadas Regionales de Formación del Profesorado* [Bilingualism in monolingual communities and content-based teaching: Many questions and some answers]. (CD-ROM), A. Bueno González, J.M. Nieto García, and D. Cobo López. Jaén: Delegación Provincial de Educación de Jaén y Universidad de Jaén.
- Lyster, R. 1987. Speaking immersion. *The Canadian Modern Language Review* 43, no. 4: 701–17.
- Lyster, R. 2006. Form-focussed instruction in immersion classrooms. In *Exploring dual-focused education. Integrating language and content for individual and societal needs*, ed. S. Björklund, K. Mård-Miettinen, M. Bergström and M. Södergård. http://www.uwasa.fi/materiaali/pdf/isbn_952-476-149-1.pdf (accessed July 9, 2010).
- Lyster, R. 2007. *Learning and teaching languages through content: A counterbalanced approach*. Amsterdam: John Benjamins.
- Madrid Fernández, D. 2006. Bilingual and plurilingual education in the European and Andalusian context. *International Journal of Learning* 12, no. 4: 177–85.
- Madrid, D. 2011. Monolingual and bilingual students' competence in Social Sciences. In *Studies in bilingual education*, ed. D. Madrid and S. Hughes, 195–222. Frankfurt-am-Main: Peter Lang.
- Madrid, D., and A. Bueno. 2005. Classroom research. In *TEFL in secondary education*, ed. N. McLaren, D. Madrid, and A. Bueno, 641–77. Granada: Universidad de Granada.

- Madrid, D., and S. Hughes. 2011a. Introduction to bilingual and plurilingual education. In *Studies in bilingual education*, ed. D. Madrid and S. Hughes, 17–50. Frankfurt-am-Main: Peter Lang.
- Madrid, D., and S. Hughes. 2011b. Synthesis of principles, practices and results. In *Studies in bilingual education*, ed. D. Madrid and S. Hughes, 351–63. Frankfurt-am-Main: Peter Lang.
- Maljers, A., D. Marsh, and D. Wolff, eds., 2007. *Windows on CLIL: Content and language integrated learning in the European spotlight*. Graz: ECML.
- Marsh, D., ed., 2002. *CLIL/EMILE. The European dimension. Actions, trends, and foresight potential*. Jyväskylä: University of Jyväskylä.
- Marsh, D., coord. 2005. *The CLIL quality matrix. Central workshop report*. http://www.ecml.at/mtp2/CLILmatrix/pdf/wsrepD3E2005_6.pdf (accessed July 10, 2010).
- Marsh, D. 2006. *English as medium of instruction in the new global linguistic order: Global characteristics, local consequences*. Finland: UNICOM, Continuing Education Centre, University of Jyväskylä. <http://www.metsmac.org./2007/proceedings/2006/Marsh-D-METSMaC-2006.pdf> (accessed July 9, 2010).
- Marsh, D., T. Nikula, S. Takala, U. Rohiola, and T. Koivisto. 1998. *Language teacher training and bilingual education in Finland. European language council national report*. <http://userpage.fu-berlin.de/elc/tnp1/SP6NatRepFI.pdf> (accessed July 9, 2010).
- Mehisto, P., and H. Asser. 2007. Stakeholder perspectives: CLIL programme management in Estonia. *International Journal of Bilingual Education and Bilingualism* 10, no. 5: 683–701.
- Mehisto, P., D. Marsh, and M.J. Frigols. 2008. *Uncovering CLIL. Content and language integrated learning in bilingual and multilingual education*. Oxford: MacMillan.
- Merisuo-Storm, T. 2006. Development of boys' and girls' literacy skills and learning attitudes in CLIL education. In *Exploring dual-focussed education. Integrating language and content for individual and societal needs*, ed. S. Björklund, K. Mård-Miettinen, M. Bergström and M. Södergård. http://www.uwasa.fi/materiaali/pdf/isbn_952-476-149-1.pdf (accessed July 9, 2010).
- Merisuo-Storm, T. 2007. Pupils' attitudes towards foreign-language learning and the development of literacy skills in bilingual education. *Teaching Teacher Education* 23: 226–35.
- Muñoz, C. 2002. Relevance and potential of CLIL. In *CLIL/EMILE. The European dimension. actions, trends, and foresight potential*, ed. D. Marsh. Jyväskylä: University of Jyväskylä.
- Muñoz, C. 2007. CLIL: Some thoughts on its psycholinguistic principles. *RESLA* 1: 17–26.
- Muñoz, C. Forthcoming. Challenges of bilingual education in Spain: CLIL from the perspective of language acquisition. In *Spanish CLIL in action: Voices from the classroom*, ed. M.L. Pérez Cañado. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Navés, T. 2009. Effective content and language integrated (CLIL) programmes. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 22–40. Bristol: Multilingual Matters.
- Navés, T. 2010. What makes good CLIL teaching and learning? Paper presented at the 25th GRETA Convention: Celebrating 25 years of teacher inspiration. Granada: University of Granada.
- Navés, T. 2011. How promising are the results of integrating content and language for EFL writing and overall EFL proficiency? In *Content and foreign language integrated learning. Contributions to multilingualism in European contexts*, ed. Y. Ruiz de Zarobe, J.M. Sierra, and F. Gallardo del Puerto, 155–86. Frankfurt-am-Main: Peter Lang.
- Navés, T., and M. Victori. 2010. CLIL in Catalonia: An overview of research studies. In *CLIL in Spain: Implementation, results and teacher training*, ed. D. Lasagabaster and Y. Ruiz de Zarobe, 30–54. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Novotná, J., and M. Hofmannová. 2007. Czech Republic. In *Windows on CLIL*, ed. A. Maljers, D. Marsh, and D. Wolff, 39–51. Graz: ECML.
- Núñez, B., and E. Dafouz. 2007. Lecturing through the foreign language in a CLIL university context: linguistic and pragmatic implications. *Vienna English Working Papers* 16, no. 3: 36–42.

- Ojeda Alba, J. 2009. Themes and vocabulary in CLIL and non-CLIL instruction. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 130–56. Bristol: Multilingual Matters.
- Pena Díaz, C., and M.D. Porto Requejo. 2008. Teacher beliefs in a CLIL education Project. *Porta Linguarum* 10: 151–61.
- Pérez-Vidal, C. 2007. The need for focus on form (FoF) in Content and Language Integrated approaches: An exploratory study. *RESLA* 1: 39–54.
- Pérez-Vidal, C. 2011. Language acquisition in three different contexts of learning: Formal instruction, stay abroad, and semi-immersion (CLIL). In *Content and foreign language integrated learning. Contributions to multilingualism in European contexts*, ed. Y. Ruiz de Zarobe, J.M. Sierra, and F. Gallardo del Puerto, 103–27. Frankfurt-am-Main: Peter Lang.
- Ramos García, A.M. 2011. The cultural knowledge of monolingual and bilingual studies. In *Studies in bilingual education*, ed. D. Madrid and S. Hughes, 223–35. Frankfurt-am-Main: Peter Lang.
- Ramos García, A.M., J.L. Ortega Martín, and D. Madrid. 2011. Bilingualism and competence in the mother tongue. In *Studies in bilingual education*, ed. D. Madrid and S. Hughes, 135–56. Frankfurt-am-Main: Peter Lang.
- Roa, J., D. Madrid, and I. Sanz. 2011. A bilingual education research project in monolingual areas. In *Studies in bilingual education*, ed. D. Madrid and S. Hughes, 107–33. Frankfurt-am-Main: Peter Lang.
- Romu, A., and L. Sjöberg-Heino. 1999. A practitioner's perspective on bilingual teaching in Alhaisten Primary school. In *Learning through a foreign language. Models, methods and outcomes*, ed. J. Masih, 81–8. London: Centre for Information on Language Teaching and Research.
- Ruiz de Zarobe, Y. 2007. CLIL in a bilingual community: Similarities and differences with the learning of English as a foreign language. *Vienna English Working Papers* 16, no. 3: 47–52.
- Ruiz de Zarobe, Y. 2008. CLIL and foreign language learning: A longitudinal study in the Basque Country. *International CLIL Research Journal* 1, no. 1: 60–73. <http://www.icrj.eu/11-744#fn1> (accessed July 9, 2010).
- Ruiz de Zarobe, Y. 2010. Written production and CLIL: An empirical study. In *Language use and language learning in CLIL classrooms*, ed. C. Dalton-Puffer, T. Nikula, and U. Smit, 191–209. Amsterdam: John Benjamins.
- Ruiz de Zarobe, Y. 2011. Which language competencies benefit from CLIL? An insight into Applied Linguistics research. In *Content and foreign language integrated learning. Contributions to multilingualism in European contexts*, ed. Y. Ruiz de Zarobe, J.M. Sierra, and F. Gallardo del Puerto, 129–53. Frankfurt-am-Main: Peter Lang.
- Ruiz de Zarobe, Y. and D. Lasagabaster 2010a. Introduction. The emergence of CLIL in Spain: An educational challenge. In *CLIL in Spain: Implementation, results and teacher training*, ed. D. Lasagabaster and Y. Ruiz de Zarobe, ix–xvii. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Ruiz de Zarobe, Y., and D. Lasagabaster. 2010b. CLIL in a bilingual community: The Basque Autonomous Community. In *CLIL in Spain: Implementation, results and teacher training*, ed. D. Lasagabaster and Y. Ruiz de Zarobe, 12–29. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Schmidt, R., D. Boraie, and O. Kassagby. 2007. Foreign language motivation: International structure and external connections. In *Language learning motivation: Pathways to the new century*, ed. R.L. Oxford, 9–20. Hawaii: University of Hawaii.
- Seregély, E.M. 2008. *A comparison of lexical learning in CLIL and traditional EFL classrooms*. Vienna: Universität Wien.
- Serra, C. 2007. Assessing CLIL at primary school: A longitudinal study. *International Journal of Bilingual Education and Bilingualism* 10, no. 5: 582–602.
- Sierra, J.M., F. Gallardo del Puerto, and Y. Ruiz de Zarobe. 2011. Good practices and future actions in CLIL: Learning and pedagogy. In *Content and foreign language integrated learning. contributions to multilingualism in european contexts*, ed. Y. Ruiz de Zarobe, J.M. Sierra, and F. Gallardo del Puerto, 317–38. Frankfurt-am-Main: Peter Lang.
- Smit, U. 2007. Introduction. *Vienna English Working Papers* 16, no. 3: 3–5.
- Södergard, M. 2006. From Kindergarten to Grade 6. The immersion experience from the pupils' point of view. In *Exploring dual-focussed education. Integrating language and*

- content for individual and societal needs, ed. S. Björklund, K. Mård-Miettinen, M. Bergström and M. Södergård. http://www.uwasa.fi/materiaali/pdf/isbn_952-476-149-1.pdf (accessed July 9, 2010).
- Stehler, U. 2006. The acquisition of knowledge in bilingual learning: An empirical study on the role of language in content learning. *Vienna English Working Papers* 15, no. 3: 41–6.
- Stotz, D., and T. Meuter. 2003. Embedded English: Integrating content and language learning in a Swiss primary school project. *Le Bulletin Suisse de Linguistique Appliquée* 77: 83–101.
- Sundqvist, P. and Sylvén, L.K. Forthcoming. Young learners of English and the educational significance of extramural English activities. In *Spanish CLIL in action: Voices from the classroom*, ed. M.L. Pérez Cañado. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Swain, M., and J. Cummins. 1982. Bilingualism, cognitive functioning and education. In *Surveys 1: Eight state-of-the-art articles on key areas in language teaching*, ed. V. Kinsella, 23–37. Cambridge: Cambridge University Press.
- Sylvén, L.K. 2004. Teaching in English or English teaching? On the effects of content and language integrated learning on Swedish learners' incidental vocabulary acquisition. PhD dissertation, Göteborg University. <http://www.dissertations.se/dissertation/d976c8aa0c/> (accessed December 13, 2010).
- Sylvén, L.K. 2006. How is extramural exposure to English among Swedish school students used in the CLIL classroom? *Vienna English Working Papers* 15, no. 3: 47–53.
- Tejada Molina, G., M.L. Pérez Cañado, and G. Luque Agulló. 2005. Current approaches and teaching methods. In *TEFL in secondary education*, ed. N. McLaren, D. Madrid, and A. Bueno, 155–209. Granada: Universidad de Granada.
- Tudor, I. 2008. Higher education language policy: Why and how? In *Languages at work in Europe. Festschrift in honour of Professor Wolfgang Mackiewicz*, ed. K.M. Lauridsen and D. Toudic, 51–64. Göttingen: V and R Unipress.
- Ullmann, M. 1999. History and Geography through French: CLIL in a UK secondary school. In *Learning through a foreign language. Models, methods and outcomes*, ed. J. Masih, 96–105. London: Centre for Information on Language Teaching and Research.
- Vázquez, G. 2007. Models of CLIL: An evaluation of its status drawing on the German experience. A critical report on the limits of reality and perspectives. *RESLA* 1: 95–111.
- Vez, J.M. 2009. Multilingual education in Europe: Policy developments. *Porta Linguarum* 12: 7–24.
- Villarreal Olaizola, I., and M.P. García Mayo. 2009. Tense and agreement morphology in the interlanguage of Basque/Spanish bilinguals: CLIL versus non-CLIL. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 152–75. Bristol: Multilingual Matters.
- Villoria, J., S. Hughes, and D. Madrid. 2011. Learning English through English. In *Studies in Bilingual Education*, ed. D. Madrid and S. Hughes, 157–94. Frankfurt-am-Main: Peter Lang.
- Wesche, M. 2002. Early French immersion: How has the original Canadian model stood the test of time? In *An integrated view of language development: Papers in honour of Henning Wode*, ed. P. Burmeister, T. Piske, and A. Rohde, 357–79. Germany: Wissenschaftlicher Verlag Traer.
- Whittaker, R., and A. Llinares. 2009. CLIL in Social Science classrooms: Analysis of spoken and written productions. In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 215–34. Bristol: Multilingual Matters.
- Wiesemes, R. 2009. Developing theories of practices in CLIL: CLIL as post-method pedagogies? In *Content and language integrated learning. Evidence from research in Europe*, ed. Y. Ruiz de Zarobe and R.M. Jiménez Catalán, 41–59. Bristol: Multilingual Matters.
- Willig, A. 1985. A meta-analysis of selected studies on the effectiveness of bilingual education. *Review of Educational Research* 55: 269–316.
- Wode, H. 1999. Language learning in European immersion classes. In *Learning through a foreign language. Models, methods and outcomes*, ed. J. Masih, 16–25. London: Centre for Information on Language Teaching and Research.

- Wolff, D. 2002a. Content and language integrated learning: An evaluation of the German approach. In *Education and society in plurilingual contexts*, ed. D.W.C. So and G.M. Evans, 56–74. Brussels: VUB Brussels University Press.
- Wolff, D. 2002b. On the importance of CLIL in the context of the debate on plurilingual education in the European Union. In *CLIL/EMILE. The European dimension. Actions, trends, and foresight potential*, ed. D. Marsh, 47–8. Jyväskylä: University of Jyväskylä.
- Wolff, D. 2003. Integrating language and content in the language classroom: Are transfer of knowledge and of language ensured? *ASP: Pratiques et Recherches en Centres de Langues* 41–2: 35–46.
- Wolff, D. 2005. Approaching CLIL. In *The CLIL quality matrix. Central workshop report*, coord. D. Marsh. http://www.ecml.at/mtp2/CLILmatrix/pdf/wsrepD3E2005_6.pdf (accessed July 10, 2010).
- Zydatiś, W. 2007. *Deutsch-Englische Züge in Berlin: Eine evaluation des bilingualen sachfachunterrichts an gymnasien. Kontext, kompetenzen, konsequezen* [English-German courses in Berlin: An evaluation of bilingual teaching in secondary schools. Context, competencies, consequences]. Frankfurt-am-Main: Peter Lang.