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Thinking Allowed

Content and Language Integrated Learning: A research agenda

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While Content and Language Integrated Learning (CLIL) has received a considerable amount of research interest lately, its increasing popularity as an approach to teaching content subjects in a foreign language requires concerted investigation that reflects and recognises its fundamentally contextualised nature. In this contribution, we sketch various tasks that require localised, often action research, covering a range of areas highly relevant to CLIL realities, but so far underrepresented in the literature. These are, firstly, policy issues, comprising policy statements as well as stakeholders' perceptions of CLIL and its success; secondly, classroom discourse as the prime site for the investigation of CLIL practices and their implications for the learning process; and, thirdly, classroom pedagogy, with the focus on potential differences between CLIL and non-CLIL settings.

1. Introduction

School-based teaching and learning in a language that is not the students' first has become a prominent topic in educational planning and research over the last 20 years. The body of internationally accessible CLIL research is continuously growing; this growth has been most marked since around 2005 (for an overview see Dalton-Puffer 2011). As coordinators of the AILA Research Network *CLIL and Immersion Classrooms* since 2006 we have gained insights into the dynamics of, and research on, content-based foreign language education in many countries and we are thus grateful for the opportunity to discuss this research area and make suggestions for its future development. One thing that is clear from our activities is the immense diversity of what is regarded as CLIL (for some specifications, see section 2); we must take account of this diversity and a high degree of contextualisation is something we will foreground throughout.

The purpose of this article, then, is to identify what we consider to be central concerns for CLIL, concerns that need more attention from the research community as well as from practitioners. These combine prototypical areas of classroom-based research with less obvious but equally relevant aspects of language policy in the widest sense. Before we turn to reflection, exploration and the needs for further development we see within these broad areas, we will

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briefly outline our understanding of CLIL, in order to clarify the scope of this paper. This is followed by three sections dealing with future directions and perspectives, where we have formulated reflection and research tasks that are directed at individual researchers, project groups and, importantly, at CLIL teachers. We believe that many of the questions raised would be useful starting points for action research projects and are convinced that action research provides a powerful complement to externally directed research, especially in terms of its chances of having an impact on practice (cf. Norton 2009; Burns 2010).

2. What we mean by CLIL

Learning through a second or foreign language is a historically and geographically widespread phenomenon. In the world today such situations are common in postcolonial societies, multilingual nation states and societies with high rates of immigration. Applied linguistics has been responding to these challenges, and the research literature on bilingual education, immersion and content-based-instruction is well developed (e.g. Stoller 2004; Lyster 2007; Brinton, Snow & Wesche 2008; Hornberger 2008; García 2009). Given that CLIL can profit and has profited greatly from existing research on other forms of bilingual education, we wish to clarify how far CLIL actually differs from these (see also Lasagabaster & Sierra 2009; Dalton-Puffer 2011), so that important parameters are not overlooked when generalisations are made.

- CLIL is about using a foreign language or a lingua franca, not a second language. Students will encounter the language of instruction mainly in the classroom, since it is not regularly used in the wider society they live in. The dominant CLIL language is English, reflecting the fact that a command of English as an additional language is increasingly regarded as a key literacy feature world-wide.
- CLIL is usually implemented once learners have already acquired literacy skills in their mother tongue.
- CLIL teachers are normally non-native speakers of the target language and are typically content rather than foreign-language specialists.
- CLIL lessons are usually timetabled as content lessons (biology, music, geography, mechanical engineering etc.) while the target language normally continues as a subject in its own right in the shape of foreign language lessons taught by language specialists.

In short, CLIL can be seen as a foreign language enrichment measure packaged into content teaching.

3. Policy

We would like to start our discussion from the vantage point of language policy. We consider this fundamental because policy provides both a framework and a basis for everyday CLIL practices, as these practices are intricately connected to the structures in which they are carried out as well as to the perceptions of stakeholders. The interconnectedness of structures, perceptions and practices is reflected in recent understandings of language policy. Put briefly,

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policy is conceptualised as a dynamic interplay of three components: language management, language beliefs and language practices (e.g. Spolsky 2004, 2009; Shohamy 2006). This section will deal with the first two in relation to CLIL; language practices will be addressed in sections 4 and 5.

3.1. Managing CLIL

Language management relates to the rules and regulations within which CLIL is practised, such as published national and international documents. There is the vertical dimension of the various political levels at play – institution, district, region, state and supranational region – and, extending Spolsky's (2009) model of language management, there is also the horizontal, discursive dimension of how the regulations are made accessible, ranging from legal documents to advertising slogans. The layers along the vertical/political and horizontal/discursive dimensions must be considered in their entirety in order to capture comprehensively how CLIL is managed in a specific institution.

Research task 1

Examine the goal(s) of a specific CLIL programme.

The fact that CLIL is still increasing in popularity as an educational measure suggests that its aims must be important to many people around the globe. The exact nature of these aims, however, tends to remain somewhat vague. Within Europe, the EU Commission has set out CLIL-related learning goals in various declarations (European Commission 1995, 2003, 2008) which specify that 'upon completing initial training every [European] should be proficient in two Community foreign languages'; as a way of achieving this, the Commission proposes that 'secondary school pupils should study certain subjects in the first foreign language learned' (1995: 47). While no-one would disagree with the general CLIL goal of improving institutional language learning, a closer specification of those aspects of language learning that CLIL, in particular, might serve is to a large extent missing. Rather, CLIL education experts have formulated an array of additional goals that CLIL is presumed to support: cultural awareness, cognitive advantages, deeper content learning, internationalisation, self-confidence, motivation, pluriliteracy, learner autonomy and others (compare www.clilcompendium.com; www.ccn-clil.eu; www.clilviu.es; European Framework for CLIL Teacher Education; Coyle, Hood & Marsh 2010).

These supranational declarations and provisions have been taken up in different ways at the national level (cf. Eurydice 2006), ranging from explicit policy documents and relatively structured CLIL provisions such as in the Netherlands (www.europeesplatform.nl) and Spain (e.g. Comunidad de Madrid 2010) to a highly *laissez-faire* approach, such as in Austria, where the national CLIL regulations are encapsulated in a brief general provision for education in languages other than German (BMBWK 2003). The resulting diversity of managerial rigour – or lack thereof – is intensified by the CLIL regulations and provisions that each school adds to its real-world CLIL management. The latter is usually a combination of, on the one hand,

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explicit statements and, if available, structural provisions such as dedicated CLIL strands or periods, and on the other, ad hoc regulations, best inferred from CLIL practices, which reflect the institutional specifics of which languages are used when, by whom, and for what purposes.

In view of the complex nature of policy decisions, this research task entails a detailed and multi-layered process of brainstorming, reflection and, if possible and intended, drafting a CLIL policy document. The route taken by such a process will depend on the researcher's status as an insider or an outsider to the educational setting under investigation. We recommend that insiders – teachers or administrators – begin this undertaking by brainstorming individually on the goals of the CLIL programme in question, before asking colleagues and, ideally, the school principal to join in the brainstorming phase. The next step would be to review the CLIL management statements that are available in printed or online form and compare their aims and claims with your brainstorming outcome. This sequence of steps will allow the researcher to take the status quo as a point of reference, instead of any official goal statements that might have been formulated some time earlier. In an attempt to compare the view from within the school with external views on CLIL goals, it would make sense to use goal catalogues from sources like the CLIL Compendium (www.clilcompendium.com) or Coyle et al. (2010: 49–51). Such setting-independent descriptions will either confirm the comprehensiveness of the local CLIL goals, thus supporting the programme in question, or offer new, realistic goals for CLIL education, thereby offering new incentives to the reflection process.

If part of the plan, the considerations gathered so far can then be used for drafting a CLIL policy document, or for re-drafting an old one, which should state the aims of the specific CLIL programme and can also be made available to the public. You might also wish to discuss with colleagues and the school/section head what indicators could show that a specific goal has been reached, and develop action research projects to verify your claims.

When approaching this research task as an outsider to a CLIL setting, the same steps can be followed, but will require somewhat different research methods in order to achieve a situation-sensitive description of the CLIL goals. Lacking insider knowledge of the site, external researchers need to gather such information by observing the CLIL realities on-site, such as how CLIL is structured in the school and in class and how far teachers are supported with in-service teacher education, teacher collaboration or CLIL materials development and management. Once a situation-sensitive picture emerges, it will be fruitful for the non-participant observer to focus more on the local goals that are pursued by CLIL, for example by carrying out interviews with the stakeholders and decision-takers in the school, such as the school or section heads and selected teachers (for some information on interviewing, see research task 2).

3.2. Stakeholders' beliefs

In addition to managerial regulations, another important force in educational innovation is the stakeholders themselves. What do students, teachers and parents think about using an additional language for subjects such as geography, sport or mathematics? Given that social

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changes are intricately linked to how they are constructed by those concerned, educationalists as well as CLIL practitioners should find out how their target groupings perceive their educational activities and how they view their success – or lack of it. Furthermore, perceptions or beliefs are intrinsically psychological, cognitive and/or emotive in nature and thus neither easily identifiable nor directly observable. Like language competence, they need an operationalisable working definition in order to be investigated. One way of doing this is via the recent literature into lay beliefs, which also encompasses beliefs about language learning (e.g. Barcelos & Kalaja 2011). In brief, beliefs comprise the participants' intuitive and subjective knowledge of their teaching and learning (cf. Barcelos 2003: 8) or, more generally, the 'categories of meaning' (Barcelos & Kalaja 2011: 285) they use 'in the activity of understanding' (Negueruela-Azarola 2011: 362) their CLIL realities.

When it comes to CLIL, the small numbers of studies into beliefs have found respondents displaying generally positive views on some aspects of teaching and learning in an additional language (Dafouz et al. 2007; Lasagabaster 2009; Lasagabaster & Sierra 2009; Hüttner, Dalton-Puffer & Smit 2013). Given their high degree of contextualisation, however, such findings mainly serve as indications of certain groups' beliefs about their own CLIL realities; generalisation to other settings is difficult, if not impossible. At the same time, and perhaps more importantly, such studies as there have been provide valuable examples of how such research interests can be pursued in methodological terms. In what follows, two different research concerns will be traced in some more detail.

Research task 2

Investigate lay beliefs about the perceived success (or lack of it) of CLIL at your educational institution.

Let us begin with a fundamental dilemma CLIL research has to face: it is heralded as a non-elitist way of involving learners in bilingual education, while at the same time usually attracting learners who are either academically more gifted or whose parents show high levels of interest in education, particularly bilingual education. Given this pre-selection, the stakeholders' fairly positive evaluations of CLIL should not come as a surprise. What is arguably needed is to counterbalance these pre-selected views with the views of learners with a less positive predisposition to learning and using foreign languages. Hüttner, Dalton-Puffer & Smit (2013), for instance, report on beliefs about the CLIL realities at Austrian colleges of technology and crafts (grades 9–13). At these schools, arts and humanities traditionally play a secondary role, which is generally reflected in the low levels of interest students show in foreign language learning. The 48 in-depth interviews undertaken with students and teachers (Dalton-Puffer et al. 2008) have revealed that the rather unstructured and unorganised CLIL typical of these schools is generally perceived as a positive experience and as helpful for the learners' content and language learning, though this, however, is never tested. More precisely, stakeholders' beliefs in the success – as they see it – of their day-to-day sporadic teaching and learning in English arise mainly from their strong positive feeling that they are incidentally 'picking up the language' while learning other subjects. While such an interpretation of

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success might be a self-fulfilling prophesy, it reveals that CLIL at these colleges relies largely on its lack of structure and low-stakes character/educational consequences for learners and teachers.

In an attempt to unveil the beliefs of parents, students and teachers about their CLIL programme, its practices and how successful it is, we must, of course, let the stakeholders speak for themselves. This is true in all instances, even when the researchers are stakeholders themselves. A prototypical research method for this is semi-structured interviewing (cf. e.g. Dörnyei 2007: 136–143; Cohen, Manion & Morrison 2011: 412–415). Using an interview guide that includes all the topics and questions, the interviewer ensures that all the relevant subjects are covered while at the same time allowing the interviewees and their thoughts, ideas and views to emerge. The resulting wealth of statements and comments, usually audio-recorded, forms a base of the interviewee's beliefs about the CLIL programme, its educational aims and practices, and the kinds of success achieved. Given that beliefs are by nature intricately contingent on the setting, its purposes and participants, interviews can provide exactly the kind of contextualisation required.

Research task 3

Examine stakeholders' views on CLIL programmes in various languages.

As far as the target language is concerned, it must be acknowledged that the choice of languages is in reality much narrower than the first 'L' of the CLIL acronym implies. Only a handful of widely-used and learned foreign languages feature in CLIL programmes (cf. Eurydice 2006) and in the vast majority, the 'L' stands for English. As discussed elsewhere (Dalton-Puffer, Nikula & Smit 2010: 286–288), the subjectively experienced success of CLIL and the positive beliefs held about it are strongly linked to, and may depend on, the fact that the target language is English. English is unique in its high degree of functionality in domains as diverse as international politics, business, academia, pop culture and social media. This unparalleled relevance of English for a whole range of work and leisure communities, many of them imagined and aspired to (Pavlenko & Norton 2007), has resulted in the widely held view that proficiency in English is a necessary part of education in the twenty-first century; that it is an element of present-day literacies (Grin 2001). Students are therefore usually willing to invest effort in English language learning (Norton & Toohey 2011), which is clearly beneficial to CLIL in English, but this cannot be assumed to apply equally to other foreign languages. We therefore need to expand the research literature by investigating stakeholders' beliefs about CLIL in languages other than English. Special attention should be given to the basis on which comparisons are made, such as the learner groups involved and the criteria by which they have been selected.

This research task is concerned with educational practices in three (or more) medium languages, thus giving CLIL research a truly multilingual scope. In a school or a school district which offers comparable CLIL programmes in various languages, the task could be pursued by a survey of stakeholders' views on their own CLIL programme, with a special focus on its perceived type and degree of success. One appropriate and at the same time relatively time-efficient research method for such a comparison is a questionnaire that can

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be completed by the various groups of stakeholders and later analysed for similarities and differences within and across target groups. Clearly, this method falls into the quantitative or mixed-method category of applied linguistic research, and presupposes a well-developed and piloted questionnaire and, at least to some extent, requires statistical analysis. While such methodological steps might sound daunting, especially for inexperienced researchers, the large and informative body of practice-oriented literature on research methodology can be highly recommended and has proved successful in helping the novice along (Dörnyei 2007; Cohen et al. 2011). Equally important is the growing base of previous CLIL studies whose questionnaires and methodological steps can and should be applied in different contexts and settings (e.g. Massler 2012; Wegner 2012).

4. Classroom discourse

Classroom discourse is here taken to include all the processes of constructing meaning within particular educational events. Such processes rely on spoken interactional exchanges between learners and/or teachers as well as written and ICT materials used or produced by the participants. The processes take place between specific social players in their specific educational settings, thus relating to specific contexts of situation as well as of culture. In other words, 'classroom discourse' is a phenomenon with a high degree of contextualisation and complexity. In the ecological approach to language learning advocated by van Lier (2004), the classroom constitutes a nested micro-system in the overall undertaking of CLIL education. At the same time, a focus on classroom discourse allows for a thorough-going, non-idealised approach to specific CLIL practices, thus offering researchers and practitioners a complex basis for analysis and reflection on CLIL 'in the making'. Given this comprehensiveness, classroom discourse can be, and has been, used as an investigative basis for CLIL research interests of various kinds (e.g. Dalton-Puffer 2007a; Nikula 2010; Smit 2010; Llinares, Morton & Whittaker 2012). The research tasks we suggest in this section are a personal focus on issues we find particularly timely, but the array of interesting and worthwhile themes is of course much wider. For instance, the designs of all of the above studies could be applied to different contexts, considerably widening the database of available material.

Research Task 4

Investigate the occurrence and use of the five language skills of reading, writing, listening, monologic speech and spoken interaction in CLIL and FL lessons.

CLIL has been praised for its effectiveness in improving foreign language proficiency levels. Apart from classic outcome studies carried out via independent tests, which we have deliberately excluded from this article, CLIL classroom discourse should be seen as the prime site for investigating learners' target language use, especially their deployment of the five language skills of the Common European Framework of Reference (CEFR, cf. Little 2006). This is important for obvious reasons: given the apparently uncontested success story of CLIL and the immense amounts of money put into foreign language teaching, a future

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policy measure could be to reduce foreign language (FL) teaching of the CLIL language and use the time freed up for another foreign language; this would support young Europeans in becoming multilingual, as envisaged by the European Commission's White Paper almost 20 years ago (European Commission 1995). Many CLIL researchers, as well as learners and teachers, disagree, explicitly arguing for a combination of FL and CLIL teaching (e.g. Pérez Vidal 2011), but the question of whether additional FL teaching is necessary is at heart an empirical one and requires more, and more detailed, studies of the classroom discourse of CLIL and FL classes embedded in specific educational contexts.

Research questions which might be pursued in this task are when, what, how often and to what purpose do learners use the various FL skills during their CLIL lessons? And how does this compare to specific FL lessons? Researchers could focus on one skill at a time or on one modality (speaking/listening or reading/writing). Ultimately, however, only the full array of language skills will enable us to draw a complete picture of learner competences. The research questions formulated for this task call for a comparative design in which a cohort of students is observed in the two learning contexts over a certain period of time. By restricting itself to just one learning group, such a study can be kept small enough for a collaborative action research project that would involve foreign language and subject teachers.

The main research instrument for such an investigation would be an observation scheme that can be used by collaborating teachers or an external researcher for class visits. Such a scheme has been widely used in investigating communicative language teaching (Spada & Fröhlich 1995) and could serve as an inspiration. For the purposes of the present research task a purpose-built observation scheme is necessary for two reasons: firstly, the observation should focus specifically on the language activities of the learners (and not on what the teachers do); secondly, it should be designed with reference to the CEFR and its model of the five skills. An additional affordance of using the CEFR is that the observation scheme can be fine-tuned according to the competence level (A1–C2) of the learners; the relevant levels are likely to be A2–B2 for secondary education. In addition to the insights gained from observation, video footage would be useful for conducting reflective interviews with the teachers as well as small groups of students in order to tap into participants' views on the uses and purposes of the language skills required in their CLIL and FL lessons (cf. de Graaff et al. 2007; Airey 2009).

By comparing the foreign language skills practised and required in classroom discourse within the FL and CLIL classes with the proficiency targets set by their curricula, we will be able to tell which skills are integral to each educational setting. The findings regarding overlaps and differences in foreign language proficiency needs will allow researchers and educationalists to draw context-specific and pedagogically relevant conclusions for curriculum or syllabus development.

Research task 5

Investigate the presence and use of one academic language function in CLIL (and non-CLIL) lessons.

As users of the target language in an academic context, CLIL learners need to achieve certain communicational ends, which they do by drawing on recurring academic language

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functions, such as defining, hypothesising, predicting or explaining (cf. e.g. Dalton-Puffer 2007b: 129). Identified as micro-genres within Systemic Functional Linguistics (Kidd 1996), these academic functions help to fulfil communicative purposes across school subjects such as geography, history or biology. Interestingly, research into CLIL classroom discourse has so far revealed rather disparate findings on how much such functions are actively used by teachers and learners. A major factor in the type and degree of attention paid to academic language functions is the subject-teaching culture and how it positions learners and their practice. In Spain, for instance, subject-teaching in L1 and CLIL tends to require learners to actively produce spoken and written subject-specific texts (e.g. Lorenzo & Moore 2010; Llinares et al. 2012), which stands in clear contrast to the German-speaking countries, where, whatever the classroom language, subject teaching traditionally foregrounds factual knowledge rather than learners engaging in subject-specific discourse (Vollmer et al. 2006; Dalton-Puffer 2007b; Lose 2007).

As academic language functions are relevant across subjects, but can be expected to have subject-specific characteristics and relevance, this task can be structured incrementally. As a first step, it will be important to identify the language functions that are relevant to the subject of interest, which can be done by discussing with subject teachers the communicative purposes such functions fulfil. Depending on the size of the research team, one or more functions could then be chosen for further analysis. For an individual researcher the choice will be for one function, such as defining in biology (Lose 2007). Further discussions with expert teachers will provide some ideas about how this function is used in one or more modes (spoken, written, electronic) and whether there are differences that depend on the speaker roles (teacher vs. student) or the languages involved (L1 vs. target language).

Once a rough description of a particular academic language function is established for a subject, the second step in the research will be to examine its presence and use in the mode(s) in question. When this is written or electronic, we will need to consult and analyse teaching materials and student texts. In the case of the oral mode, classroom discourse can be observed with the help of a tailor-made observation grid that allows individual instances of the academic language function in question to be tracked, noting down the speakers involved and the linguistic formulations used. In view of the speed at which talk develops, it would also be wise to audio-record the lesson so that the researcher will be able to complement their observation notes later by inserting verbatim extracts of the academic language function in question.

In a third step – with a bigger research team – it would be interesting to compare the individual analyses of a language function across subjects. This would reveal the differences and similarities in terms of subject and, potentially, educational cultures as embedded in language use. At the same time, it would enable a description of the cross-curricular common core of the language function, thus providing information for CLIL-specific language teaching support.

This task is similar to the previous one, but we think that it could benefit from a comparative design, combining CLIL vs- non-CLIL lessons or CLIL lessons across various subjects; it can also be undertaken without the comparative element. A detailed examination of a specific academic language function in CLIL lessons of one subject will also offer valuable insights about how it is used, by whom, and for which communicative purposes.

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5. Classroom pedagogy

Apart from its obvious goal of improving foreign language competence, CLIL has been linked to some far-reaching educational goals which we can assume it supports (see section 3.1). Some of these concern the quality of learning (motivation, self-confidence, deeper processing, cognitive advantages); others the quality of teaching that goes on in CLIL classrooms (learner autonomy, inquiry based-teaching, interactivity). Such educational goals have been summarised in the claim that CLIL is 'learning by construction not learning by instruction' (Wolff 2007). While this and similar assertions have been made and are repeated for legitimate strategic purposes, we need to know whether CLIL practices actually bear them out. At the risk of stating the obvious, a learner-centred, inquiry-oriented approach, based on a constructivist learning theory, is what we need for an informed up-to-date pedagogy of any subject area taught in any language. Actual classrooms provide evidence of such pedagogies to varying and often limited degrees, despite the work of innovative educators (cf. Ting 2011).

Research task 6

Investigate the similarities and differences in the pedagogical design of CLIL lessons and non-CLIL lessons.

The substantial work done by applied linguists on CLIL classroom discourse (see section 4) has revealed many details of how teachers and learners co-construct lessons as they interact in the CLIL language. However, much less work has been done on the level of the overall pedagogical designs and teaching/learning arrangements which characterise these lessons. In short, we have little empirical evidence of how both CLIL and L1 subject teaching and CLIL and EFL teaching compare on this score. Nikula's (2010) comparison of one Finnish biology teacher's L1 and CLIL lessons showed him to have a wider repertoire in his L1 for the negotiation of power, distance and humour, but this affects pedagogical design, as such, only indirectly. Interviews with 28 teachers in upper secondary technology colleges revealed they saw no differences in how they plan L1 and L2 lessons (Dalton-Puffer et al. 2008). In a comprehensive study published in German (Badertscher & Bieri 2009), the researchers compared L1 and L2 content lessons (history, geography, biology) of six Swiss learning groups over a period of two school years. Videotaped lessons were analysed with respect to both their instructional structure and their didactic design. The results showed no difference between lessons conducted in the two languages: all lessons essentially followed a teacher- and knowledge-oriented philosophy and were characterised by triadic dialogue (IRF sequences) (Badertscher & Bieri 2009: 106).

We think that such comparisons should not only cover L1 content lessons but should also compare CLIL with FL lessons (though not necessarily in the same project). This is a research task that calls for an observational research methodology and can be conducted on the basis of live observation or video-recorded lessons. In order to gain a picture of participant organisation during the lessons, the categories for observation should include at least the following activity types: whole class interaction (triadic dialogue), group work

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(teacher-led), group or pair work (student-led), individual seat work, student monologue and teacher monologue (cf. Hatch 1992: 93). Additional levels of analysis might usefully include control of content (teacher/student/both), types of materials (textual, visual) and cognitive demands (as defined, for example, in terms of Bloom's taxonomy (Lilley 2011)). Further inspiration can be sought from observation schemes developed for specific subjects, such as COLT (Spada & Fröhlich 1995) for the communicative language classroom. Fazio & Lyster's study (1998), which also uses COLT, might be taken as a starting point here. However, the didactic traditions of individual subjects that are handed down within educational cultures of a national and/or language-based nature should not be underestimated: the pedagogy of chemistry and history will not be the same in Hungary as it is in the Netherlands or Argentina. Yet another dimension that needs attention is the age of students. So far, comparisons have been made almost exclusively at lower secondary level. At upper secondary level, where FL lessons are more advanced and less form-focused, comparisons might reveal fewer differences between CLIL lessons than at lower levels. In order to keep variables as constant as possible, studies should try to compare the same teachers teaching the same subject in L1 and in CLIL and/or the same teachers teaching (the same group of students) in CLIL and FL lessons.

Research task 7

Investigate the orientations to language learning that are expressed in teachers' CLIL pedagogy, the extent to which language is given explicit attention in CLIL lessons and how such episodes are co-constructed by teachers and learners.

Another aspect of content-and-language integration that needs empirical work is the occurrence of explicit language-teaching episodes during CLIL lessons. Language education researchers such as Lyster (2007: 138) have presented a strong case 'for counterbalancing these various instructional options, rather than resorting to traditional de-contextualized grammar instruction on the one hand, and content instruction with only incidental mention of language on the other'. Interestingly, science educators (e.g. Pearson, Moje & Greenleaf 2010; Ting 2011) have recently proposed that explicit attention to language is of benefit to content learning. Studies with tertiary level students (Dalton-Puffer et al. 2008; Smit 2010; Hynninen 2012) have shown that explicit attention to language may also be given by the students themselves in episodes where they scaffold each other's, but sometimes also teachers', L2 production. In such episodes descriptive and normative orientations towards the target language may interact in interesting ways. Further empirical work along these lines is urgently needed.

The first part of this research task seeks to determine the extent to which actual CLIL lessons show design features that have been proposed by different approaches to L2 learning to foster language growth. Methodological inspiration can be found in the observation tool developed by de Graaff et al. (2007), which focuses on teachers' actions and the way they orchestrate students' interaction with the target language. Five dimensions, all facilitated by the teacher, are included in the observation tool: exposure to meaningful input, meaning-focussed processing, form-focussed processing, opportunities for output production,

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awareness and use of strategies. The authors argue that a mix of all dimensions is a sign of a language-rich CLIL classroom. They do not quantify their findings, so similar studies which add a quantitative dimension would be more than welcome.

One finding discussed by de Graaff et al. (2007) is that form-focussed activities are rare in their data. In order to investigate this aspect in more depth (the second part of the research task above), it is necessary to analyse transcripts of CLIL lessons in order to obtain a more fine-grained analysis instead of just an identification of language-oriented episodes which could be obtained by observation alone. Some ideas about how teachers incorporate student utterances into their own turns can be gleaned from COLT (Spada & Fröhlich 1995); however, studies of feedback in classroom interaction have developed more sophisticated frameworks for analysis that also incorporate the linguistic level that is attended to (pronunciation, lexicon, morphosyntax) as well as the different ways in which teachers attend to these language issues (e.g. by explicit correction, by recasts). Lyster's studies on feedback types (e.g. 2007) could serve as a model for this. Importantly, however, the latter type of study should be complemented by research incorporating planned language-focussed interventions (however short) and focussing on their effect on student awareness and student learning; again, Lyster (2007) provides examples.

6. Conclusions

The truly international level which CLIL has reached stimulates comparisons and generalisations of findings produced in different contexts in different parts of the world. This is quite a rare phenomenon in educational research outside standardised testing projects like the PISA studies (OECD PISA n.d.), but one which is certainly to be welcomed. However, the fact must not be overlooked that, like all social science and applied linguistic research, the investigation of CLIL deals with a highly contextualised research object. In our view this has important consequences for the further development of CLIL research so as to ensure a mutually profitable dialogue between CLIL researchers from different parts of the world as well as between researchers and practitioners, who have to act locally. We think that CLIL research should pursue two strategies: a) it should draw on previously used methodologies to ensure a continuity of conceptual-theoretical grounding and comparability of outcomes while establishing a broader database and b) it should make action-research an integral part of CLIL implementation in order to encourage the transfer of insights and knowledge from international academia to local professional contexts of education, and vice versa. In a similar vein, the applied linguistic weighting of CLIL research should be counterbalanced with more input from subject education specialists. That is, CLIL researchers from applied linguistics should actively seek collaboration with subject education specialists in order to encourage the transfer of insights and theoretical understandings (e.g. what are core genres, or what is regarded as student centredness within the traditions of a particular content subject and foreign language teaching). We hope this might improve the transportability, acceptance and impact of research findings among practitioners. On yet another dimension, increasing the number of multilateral and international projects using identical theoretical

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frameworks, research instruments, test materials and varied contexts would considerably enhance comparability.

Finally, more studies with longitudinal designs are needed despite the practical problems these present, because snapshots of steady states cannot tell the full story of the process of education (e.g. Ruiz de Zarobe 2008). Looking further into the future, it is time to think about doing delayed post-test and retrospective studies to find out whether the advantages of having studied certain subjects within a CLIL approach persist over time. For the moment, CLIL still has the flavour of being special, but will attitudes, practices and outcomes be the same once it has lost its aura of innovation and become 'normal practice'?

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