CHAPTER TWELVE

CLIL CLASSROOM INTERACTION CHALLENGES: TRANSLANGLUAGING AND GENRE AS PEDAGOGIC TOOLS?

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Abstract

This chapter focuses on teachers’ interaction challenges in the Content and Language Integrated Learning (CLIL) classroom, an area which has not been extensively researched. Six content teachers from three subject areas (mathematics, biology and civics) were interviewed about their experiences of teaching their subject through a foreign/second language. The study was two-pronged: first, it aimed to investigate the challenges perceived by the teachers, and, second, outline the strategies developed by the teachers to meet perceived challenges. Informed by second language acquisition, CLIL and teacher cognition research, an interview guide was created, and interviews were undertaken over a two-year period. The material was coded and analysed in several stages by means of qualitative content analysis. In the analysis, two themes related to teachers’ experiences of CLIL classroom interaction dilemmas emerged: linguistic unpredictability and socio-affective barrier. In the analysis of the strategies that teachers developed to meet the CLIL classroom challenges, two themes emerged: translanguaging and genre. The findings resonate with results from studies of similar kind. The results of the analyses of the interviews, and how they could inform CLIL teacher education, are presented and discussed in the final sections of the chapter.
Introduction

Traditionally, subject content teachers have not studied the linguistic dimension of the school subjects they teach. Interestingly, as a result of a new curriculum for the Swedish upper secondary school (LGY2011), school subjects, e.g., mathematics, science and civics, include course core content and intended learning outcomes more explicitly involving the language dimension of the subject. The new curriculum is genre-based, and there is a requirement for teachers and learners to view learning of content and language as an integrated process (Skolverket, 2011).

For Content and Language Integrated Learning (CLIL) teachers in Sweden, teaching their subject through a second/foreign (L2) language (in this case, English) rather than in their first (L1) language (in this case Swedish), this new conceptualization of syllabi could prove to be extra challenging, as more classroom interaction on the part of the students is required in the new content syllabi. With requirements for students to ‘learn by doing’ (e.g., involve themselves in tasks where they have to ‘explain’, ‘discuss’, ‘analyse’ and ‘reflect’), there is pressure on subject content teachers to design learning environments that make possible, and, indeed, enhance the use of activities whereby students take active part in classroom interaction.

What are the challenges L1 upper secondary CLIL teachers face in the L2 genre-oriented content classroom? What practices and strategies have they developed to meet the perceived challenges? These two research questions have guided the procedures of the project described in this chapter. By applying an ethnography-inspired approach, this study aims to bring forward the voices of upper secondary teachers’ reflections on how to best use L2 as a resource in the interactive CLIL classroom. The outcomes of the study can be useful to other CLIL teachers and researchers, as well as in CLIL teacher education.

Background

Classroom interaction in CLIL contexts has long been identified as a challenge (Lightbown & Spada, 2006; Ortega, 2009). Research studies in second language acquisition (SLA) areas such as immersion education, content-based instruction, content-based language education, CLIL, and bilingual education, have reported on challenges in interaction and offered various models for meeting these challenges (Burns, 2013; Coyle, Hood, & Marsh, 2010; García, 2009; Lindberg, 2011; Swain, 1985; Swain & Lapkin, 1998). In terms of interaction design (Selander & Kress, 2010) in
CLIL and in other forms of content-based L2 contexts, there is much to be gained from pooling resources and bringing together long-term research and experience acquired in educational contexts across the globe (Cenosz, Genese, & Gorter, 2014).

CLIL researchers in Spain showed how teachers’ awareness of language as part of different registers can facilitate the teaching of content in L2 (Llinares, Morton, & Whitaker, 2012). In the analysis of the challenges of interaction in the L2 content classroom, the researchers found that “studying subject matter in L2 requires handling of both horizontal (everyday talk) and vertical (scientific, technical) types of concepts” and it is being acknowledged that “opening up the classroom to more dialogic communication will place a heavier linguistic load on all concerned” (Llinares, et al., 2012, p. 64).

According to researchers the way to respond to these challenges is for teachers not to resort to a lecture mode. Instead, the researchers claim, content teachers’ meta-linguistic awareness of different registers and genres can be developed, for example in collaboration with language teachers or as part of teacher education courses. Modelling explanations of content both in scientific and everyday language is one example of linguistic content that can be prepared beforehand and applied. With multidimensional linguistic knowledge and appropriate meta-linguistic knowledge in their toolbox, content teachers can design classroom interaction strategically, preparing students for typical moves and expressions in the disciplinary communication and so enhancing their participation in the classroom.

In a similar vein, researchers in Swedish as a second language have defined language in three registers: colloquial language, academic language and subject-specific language (Lindberg, 2011). Approaching language learning and language use in this multidimensional way seems to provide a structure for vocabulary use in the L2 content classroom. To support learners of L2 content, teachers’ capability of seeing the language as an integrated part of their subject is crucial, as claimed by Axelsson and colleagues (Axelsson, Olofsson, Philipson, Rosander, & Sellgren, 2006). Potentially, these results from the research on Swedish as a second language could inform CLIL teaching and learning.

Moreover, genre-oriented approaches originating in the Australian educational context provide models for teaching spoken interaction (Burns, 2013). Similar to the genres of written language, which have been thoroughly studied over the years since the 1980s (Halliday, 1985) and widely acknowledged in research and practice (Hyland, 2007), researchers in education today argue that spoken language can also be studied
systematically and taught as genres (Lindberg, 2011). Examples of such genres are: personal recount, explanation and discussion. These spoken genres involve language use in a dialogic mode. Research on spoken interaction shows that turn-taking, use of typical phrases and language registers can be identified and successfully taught (Lindberg, 2011). Models built on the curriculum cycle (Knapp & Watkins, 2005), traditionally used in writing instruction, can be used for the development of spoken interaction instruction (Burns, 2013).

Previous research in CLIL in the Swedish upper secondary school context has identified classroom interaction in the L2 content classroom as a problematic area: for example, studies reported that few questions were posed by students, and interaction in general in these classrooms was limited (Lim Falk, 2008). More recent research undertaken in similar contexts has identified less problematic classroom interaction environments, especially when the ideology of the teacher has allowed for a bilingual mode to be used in the classroom (Yoxsimer Paulsrud, 2014). In these classrooms, bilingual language use has been acknowledged and put to use in various ways, depending on the actual situation. These practices have been conceptualised as pedagogic translanguaging (Yoxsimer Paulsrud, 2014).

With a bilingual or multilingual lens at hand, classroom interaction can be viewed in a new light (García, 2011, 2009). Instead of finding faults with the use of L1 in the CLIL classroom, the use of both the L1 and L2 can be experienced as positive and as a potential tool to encourage and enhance deep learning of the curriculum areas. However, although the use of two or more languages in the content classroom is increasingly encouraged in some educational contexts, there are also researchers who take a skeptical stand, claiming that extensive use of the L1 in L2 classrooms could instead be detrimental to successful learning (Swain & Lapkin, 2000).

As claimed in subject-content didactics and in teacher cognition research, reflection is essential in teachers’ daily practice (Tornberg, 2009, Schüllerqvist, 2012). Indeed, the teacher as a reflective practitioner (Tornberg, 2009) reflects on what is going to be taught, how this could be taught and why, taking into consideration, among other resources, the linguistic resources, and making decisions on the lesson design prior to the lesson, or adjusting the on-going lesson design on the basis of spontaneous issues arising in-practice. In teacher cognition research, this pedagogic reflection has been described as an on-going process of analytic reflection and normative reflection (Apelgren, 2001) and such reflective practices are
considered to be not only typical of a teacher’s practice, but integral to teaching (Borg, 2012).

Based on the available research about CLIL and the current changes in the Swedish school curriculum, the study described in this chapter attempted to investigate CLIL teacher perspectives. From a language education point of view, questions like ‘Is language awareness something CLIL teachers as practitioners develop over time?’, ‘What do CLIL teachers find challenging in the L2 content classroom?’ and ‘What do they do to meet perceived challenges?’ seemed worthwhile investigating. Indeed, practicing teachers are seldom being heard in research contexts. As teachers are known to be “drawing on context-sensitive networks of knowledge, thoughts and beliefs” (Borg, 2003, p. 81), they might have important pedagogic knowledge to share in a CLIL research context.

Indeed, as research in higher education focusing on teachers has been shown to contribute to the development of L2 content teaching in higher education (Airey, 2011; Westbrook & Henriksen, 2011), similar research approaches seemed relevant also in the secondary education context. As more knowledge of study contexts using a bilingual approach have long been asked for (Leung, 2005), a focus on secondary teachers’ accounts of challenges, practices and strategies developed on the basis of reflection, appeared to be highly relevant for this investigation.

In the present study, teachers from three school subject disciplines (mathematics, biology and civics) were involved. They all reflected on interaction challenges in the CLIL classroom and the strategies they developed to cope with the challenges. The following sections report on the study and the results of the analyses undertaken.

**The Study**

The study involved six content teachers working in CLIL study programmes in the Swedish upper secondary schools. Two teachers taught mathematics (ma1 and ma2), two teachers taught biology (bi1 and bi2) and two teachers taught civics (ci1 and ci2). For reasons of anonymity and identity protection, the gender of the teachers is not being accounted for in the reporting of the results. The mathematics teachers had taught mathematics in upper secondary schools for fifteen years or more and they were experienced both in terms of teaching in general and in terms of CLIL. The biology and civics teachers were new in the profession with no more than three years of teaching experience.

The teachers worked at three different schools, in upper secondary CLIL study programmes founded in the mid- or late-1990s. All six
teachers were native speakers of Swedish. None of the teachers was enrolled in training or professional development courses on how to teach their subject in a L2 context.

The teachers were interviewed over a two-year period using a semi-structured interview format (Bryman, 2013). The total amount of data for the present study amounts to approximately 70 minutes with each teacher (a total of 6.5 hours for all six teachers). The interviews were transcribed shortly after each interview session. The transcription format allowed for access to the spoken material at the word level with pauses (…), emphasis (bold type) and other emphatic sounds (e.g., ‘sigh’ or ‘laughter’) made visible in the transcript.

As is typical of qualitative content analysis, the interview material was constructed and analysed in several stages over a period of time (Bryman, 2013; Dörniey, 2007). The purpose of the analyses in different constellations has been to arrive at ‘data saturation’ and to find the ‘inner consistency’ of the material (Kvale & Brinkmann, 2009). The interview material presented in this chapter is part of a larger on-going study that included lesson observations, further teacher interviews and focus group interviews with students (Sandberg, forthcoming), which due to limitations of space, are not discussed in this chapter.

Results

In the analysis of the interview data, two themes emerged as classroom interaction challenges: linguistic unpredictability and socio-affective barrier. In the study of teachers’ response to perceived challenges, translanguaging and genre orientation were identified as teacher strategies. The following sections present and discuss each of these challenges and strategies.

Linguistic Unpredictability

The first theme that emerged from the interviews with the teachers was linguistic unpredictability. This theme refers to the content teachers’ feelings of uncertainty in dialogic classroom situations whereby while they are teaching content in the L2 classroom, all of a sudden, for example triggered by a student question, they are getting into a discussion of subject content area involving specific vocabulary that they had not prepared before the lesson. In Barab and Roth’s (2006) terminology, a situation of this kind could be referred to as a transactional conversation dilemma (Barab & Roth, 2006). However, as the content teachers emphasize the linguistic dimension of the content area as being the
challenge, the term *linguistic unpredictability* is used in the context of this study.

One example of teachers’ perception of linguistic unpredictability in the CLIL classroom is described here: one of the biology teachers was concerned about allowing for a dialogic mode to be used during lessons. Although the lesson format was often organized around a power point presentation, the teacher made efforts of various kinds to encourage students to ask questions. As the topics studied often interested or provoked students, on-going discussion in the classroom was common. According to the teacher, there were repeated occurrences where there was an instant need for subject-specific vocabulary. As these occurrences were the result of spontaneous dialogue in the classroom, it was not always easy for the teacher to be fully prepared. In these cases, as reported by the teacher, the lengthy search for words often made the tempo of the lesson slow down, and, according to the teacher, the flow of the discussion as well as the pace of the lesson were affected in a negative way:

“This is where a vast amount of time is spent. The pace of the lesson can be so slow, having to search for these words, you know.” (bio1)

Although the biology teacher prepared meticulously prior to the lessons by looking up words in advance, there was always an instant need for additional vocabulary as part of the discussion occurring in the biology classroom:

“I have to check these [words] in advance… And then there might come up new [concepts and terms] that we start to talk about in the lesson, you know…” (bio1)

The biology teacher found these situations challenging as the linguistic repertoire was not always available in the immediate moment. It took time and effort to try to remember all the words in the L2 or having to quickly look up these words, on the spot, while the students were waiting impatiently.

The biology teacher’s response to the perceived language use dilemma in the CLIL interactive classroom was to acknowledge the dialogic nature of the discussion mode, and invite students to take active part in finding the subject-specific vocabulary needed to continue the activity:

“As long as you dare to confess that you do not know all the words … there is always a student who is quick to look up the word … they have smartphones these days.” (bio1)
In inviting the students to participate in the spontaneous search for adequate vocabulary, the biology teacher opened up for shared knowledge-building, i.e., the students were invited to take an active role in facilitating and enhancing the CLIL classroom dialogue.

The second example comes from the civics classroom. The civics teacher, who was new in the profession and new to teaching in a CLIL environment, commented on the students’ limited spoken interaction in the civics L2 classroom, and tried to interpret the students’ actions:

“They are afraid of making mistakes and losing face in the classroom.”
(civ1)

Speaking of the interaction challenge as a matter of linguistic unpredictability, the civics teacher explained that the dilemma could be solved by better preparing the students for the classroom interaction in advance. Consequently, after, collaboration with language teachers in the work team, the teacher started to design the lessons somewhat differently:

“Before I did not give them [the students] so many tools, because I thought they would create the tools themselves. Now I give them more tools because I can see that they are doing better this way. It’s difficult enough anyway.” (civ1)

The tools mentioned by the teacher included for example the teaching of linguistic and meta-linguistic knowledge, such as study of content area vocabulary in formal and informal contexts. The tools also included tasks designed for student output in different genres and languages in a sequenced way, e.g. student presentations in L2, preceded by written manuscripts in L2 and group preparation in L2 or L1, i.e., genre-orientation and translanguaging practices. The teacher could see that the students were doing better this way.

The third example of linguistic unpredictability came from the second civics teacher. This teacher did not speak so much about the challenge, but more about the practices and strategies that, according to the teacher, have been developed to meet challenges of linguistic unpredictability:

“First of all it’s about vocabulary. Of course, you have to work with this; I mean translations…. Then I try to imagine … this is likely to come up [in the discussion]” (civ2)

In the above extract, the teacher accounted for an attempt to visualize the unfolding of the lesson, what is going to be presented, what the students
might have questions about, what might be the topics of discussion. If the content area is perceived to be complex, the teacher would usually rehearse the lecture beforehand. Although the teacher reported on putting much effort into preparing for the presentation and discussion of a new content area, or in-depth study of a well-known topic, the teacher would know by experience that it is not possible to prepare for every situation. In reality, the sequence of the lesson would unfold in a way different to how it had been rehearsed:

“In reality, what you have prepared will turn out differently.” (civ2)

With genres of analysis and discussion being emphasized in the new syllabus for civics, students would often be required to contribute with questions, with their own views, or with examples from areas previously studied, or be asked to bring in news or relate to current issues being debated in the media. Therefore, trying to prepare a civics lesson in L2 can a challenging task, both for the teacher and the students, as accounted for by the teacher.

As a strategy to enhance participation in these situations, the teacher mentioned the use of two languages in the classroom:

“So the students might ask in Swedish, although I may have put forward a question in English.” (civ2)

These practices might change over time, the teacher reflected, claiming that teaching practices were not static. On the contrary, as reflective practitioners, teachers would reflect on their teaching and adjust their practices and strategies on a continuous basis:

“I have not done this before. If there is a follow-up on this research in five years or so, I might have other dimensions to bring, view things differently. I might do this better, simply more skillfully… teaching in English.” (civ2)

Looking ahead, in a few years in time, the teacher acknowledged the benefit of experience. With experience, the teaching situations will be better known to the teacher. The teacher will have taught the course content of the new syllabus a few times, and will know what kind of issues the students might find difficult to conceptualise.

In the present study, the teachers reported using the two languages (L1 and L2) in a dynamic way as a strategy to remedy linguistic unpredictability and to maintain the flow of the lesson. It would be interesting to see whether tailor-made courses for CLIL civics teachers
could make a difference for the better. In addition to a new syllabus and their own socio-cognitive ability, perhaps teachers could benefit from access to research results from their field of education.

The fourth example of linguistic unpredictability came from the mathematics classroom. The mathematics teacher did not talk about linguistic unpredictability as being a dilemma or a challenge. Instead, the teacher spoke of the psychological side of the learning and teaching of mathematics, and that “subject content is no. 1” (ma1). The teacher mentioned the strategy of not requiring students to explain mathematical problem solving in the L2, and how mathematical explanation was considered something that the students were initially allowed to do in Swedish:

“From my point of view, it is never a requirement that students have to carry out long explanations in English.” (ma1)

According to the mathematics teacher, this strategy facilitated student learning. In the teacher’s opinion, it was the learning of mathematics that was of paramount importance. Initially asking students to provide explanations in the L2, was not considered high priority, as this ability could be developed in the CLIL classroom over time. With meta-linguistic knowledge on the genre explanation in mathematics, its purpose, structure and typical language, perhaps CLIL teachers could enhance student participation in the L2 content classroom dialogue.

**Socio-Affective Barrier**

The second theme that emerged from the teacher interviews was socio-affective barrier. The teachers mentioned feelings of not getting across to the students in the L2 and not being able to communicate adequately in the CLIL content classroom. Two civics teachers, working at different schools, mentioned the feeling of a linguistic ‘barrier’ between them and the students.

Barab and Roth (2006) refer to situations where the main content of the communication has to do with the building of a social relation, as dilemmas in relational communication. Westbrook and Henriksen (2011) use the term affective gap. In the present study I use the term socio-affective barrier, as part of the term has been formulated by one of the teachers in the study, and as it is suitable to the context of this study.
The first example of socio-affective barrier comes from the biology teacher who was relatively new to the CLIL teaching situation. The teacher’s concern was that students do not dare to ask questions in the L2:

“If you are standing there, giving your lecture/.../You are not going to notice who is understanding and who is not understanding what you are talking about. Unfortunately, students are not always prone to asking questions. Actually, I think they find it embarrassing to ask.” (bio1)

The teacher’s strategies involved allowing time for individual students to ask for explanations of content at the end of the lesson on a 1:1 basis. Even if this teacher worked at a school where L2 was being taught to a great extent, explanations were sometimes provided in Swedish by the teacher:

“If there is a student coming to ask… and the student would prefer the explanation to be in Swedish, I do not refuse to explain in Swedish.” (bio1)

Applying this strategy, the teacher is prioritizing students’ learning of content over their exposure to the L2, i.e., the communication of content is in focus, however with the aspect of social relation taken into consideration. The strategy is genre-oriented, sensitive to the transactional and the relational communication.

With regard to explanation, the second biology teacher applied a similar strategy of bilingual teaching:

“There are many words in biology they have not come into contact with before…In these cases, you sort of have to be explicit from the start. There’s no need for the students sitting there not knowing what I am talking about.” (bio2)

By ‘explicit’ the biology teacher referred to the use of corresponding terminology and expression in L1 Swedish. The biology teacher reported on the blended use of the two languages in the CLIL classroom as a common strategy, as this would facilitate students’ understanding, and in this way, cater for more in-depth discussion of content area. Similar to the other teachers participating in this study, this biology teacher regarded students’ development of content knowledge as paramount. To further encourage student output in this context, it is possible that a bilingual genre-based approach in biology could be applied. By this means, the students would possibly not only understand the content area better, but they would also be able to produce structured output in two languages.
Both civics teachers in this study, teaching at different schools in different parts of the country, reflected on the L2 as causing an affective barrier in the classroom interaction. In the interviews, the civics teachers, both new to the profession and to teaching CLIL, kept coming back to reflecting on the problematic effect the use of L2 had on the classroom interaction in the civics classroom. The first teacher reported:

“When I started here, I was very strict with using 100% English in the classroom. To begin with I only spoke English with them [the students], and I always felt there was like a barrier between us… the students were very tense.” (civ1)

The civics teacher was encouraged to plan for more use of Swedish in the classroom. This choice was made in collaboration with colleagues and with regard to the viewpoint that the students’ opportunities to study and learn civics is first priority, and the additional school language, English, should not interfere with this priority.

The mathematics teachers expressed their view of, and concern for, a safe learning environment, where the students feel that they can ask for advice and explanation when there is something about a mathematical problem they do not understand. The mathematics teachers, teachers at different schools, spoke of the importance of confidence in the learning process:

“Something I have come to understand over the years is that confidence precedes learning.” (ma1)

“Of course… the more they get to know you, that it is okay to ask… It takes some time to build [this relation]. Some throw a question right away. They dare to expose themselves, because that is what you do when you ask. Even on a 1:1 basis, some students find it difficult.” (ma2)

The strategies that the teachers developed involved translanguaging in the way that students were given the opportunity to ask questions through their L1, Swedish:

“If they prefer to ask me in Swedish they can do this. I never want to force them to speak English with me [even though] I always speak English.” (ma2).

The view of the mathematics teachers was that English may not hinder students’ learning of mathematical content. Therefore, the teacher speaks English, but the students can feel free to ask questions in Swedish.
Gradually, the students can be encouraged to make use of English in whole class discussions, also in situations involving new or more complex mathematical content.

In the mathematics teachers’ view, if the students can be brave enough to ask questions, their chances of learning mathematics increase. Thus, according to the CLIL mathematics teachers interviewed in this study, the task for mathematics teachers is to build a social learning climate, in which the students feel free to ask questions. Seemingly, the experienced mathematics teachers appear aware of the classroom interaction challenge in the L2 mathematics classroom. They spoke of the relational communication as a pre-requisite for successful transactional communication.

**Conclusion**

The focus of this study has been CLIL content teachers’ perceived classroom interaction challenges in three school subjects (mathematics, biology and civics) and the strategies developed by the teachers to meet these challenges. The six teachers managed well, according to their own reports. As has been indicated in this study, there is much to be learned from a synthesis of research on content-based L2 instruction and practices and strategies developed by the teachers in these classrooms.

Indeed, CLIL teacher education courses could benefit from being informed by both strategies developed by practicing teachers and research on CLIL. As suggested in this chapter, raising teachers’ awareness of different genres of spoken interaction could form an important part of such courses. Meta-knowledge of the structure and typical linguistic expressions of spoken interaction genres could function as scaffolding, providing a safe pedagogical tool to rely on bridging the gap of linguistic unpredictability.

Since discussion and analysis in both formal and informal contexts are required in the new curriculum for upper secondary schools in Sweden, content study in the L2 can be a highly challenging task. In an effort to develop their own and their students’ language proficiency in both informal and formal registers, CLIL teachers can use translanguaging as a pedagogical tool. Translanguaging can lower the socio-affective barrier, allowing for dynamic language use, with a focus on the quality of the content and the aim of the communicative situation.

With pedagogic tools and strategies of translanguaging and genre at their disposal, CLIL teachers and learners could more easily and thoroughly engage in spoken discourse about subject-specific topics, as has been shown in this study. Further meta-linguistic knowledge of
language as part of different registers could assist CLIL teachers in lesson design and reflection. In-service courses could be helpful in this respect. Balancing the flexibility of translangaging with the structure of spoken genres, CLIL teachers together with their students could enhance the development of successful classroom interaction.

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**References**


