# Functions of language in CLIL secondary classes: a systemic functional approach

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## 1. Introduction

Like many other countries in Europe, Spain has begun CLIL projects mainly to improve the level of foreign language competence, in part to try to rectify the generally poor results garnered after many hours invested in formal instruction, and in part to fulfil the linguistic aims for European citizenship: to be able to function in two foreign languages other than the mother tongue (European Commission 2008. Key Data on Teaching Languages at School in Europe.)

The teaching/learning of content subjects through a foreign language has been embraced by most autonomous communities in Spain as a way to increase the amount of foreign language input and to provide real communicative contexts in which to use that language. Madrid is one of the communities in Spain where CLIL (Content and Language Integrated Learning) has been adopted on a large scale and at a very fast rate. There are two programmes under way at present. One is the result of the British Council and Ministry of Education agreement signed in 1996, which started at primary school and reached the secondary level in 2004. The second, more recent, programme was started in 2004 by the Madrid Autonomous Community (CAM), with more than 200 primary schools becoming involved over the course of five years. The first cohort of this second programme reaches secondary education in 2010-11. Hence, a large number of high schools (Institutos de Enseñanza Secundaria or IES) are about to become involved in the challenge of teaching their disciplines in English, and secondary school teachers are following training courses to prepare their institutions and classes for this new situation.

This new and growing teaching/learning scenario all over Europe has led to a large amount of research in the area – as shown in this volume, and others (Dalton-Puffer & Smit 2007; Lorenzo *et al.* 2007; Marsh & Wolff 2007; Escobar 2009; Ruiz de Zarobe & Jiménez Catalán 2009; among others). Among the projects focusing on language, some have been designed to look at the product or result – the linguistic achievement of CLIL students in comparison to learners from traditional foreign language classes (eg. Ruiz de Zarobe 2008), or the

learning of content together with subject-specific discourse (Coetze 2007), while others have set out to investigate the process and the use of language in interaction in the class or in classroom tasks. Following Dalton-Puffer and Smit's (2007) classification of types of CLIL research, the UAM-CLIL project described in this chapter is a study at the micro level, which focuses on both product and process in the spoken and written registers of CLIL secondary school students of social science.

This chapter presents an overview of the project, with a selection of results of the analyses of the linguistic performance of students in two CLIL classes as they move through the four years of junior secondary school. Its aim is to provide snapshots of the spoken and written language of the classroom, seen through the prism of Systemic-Functional Linguistics, a theory which has been used successfully in educational research in first and second language contexts for several decades, and which, more recently, is being used to study foreign language classroom discourse.

## 2. The UAM-CLIL research project

The CLIL research project at the Madrid Universidad Autónoma (UAM) has been designed to respond to the need for information on this new teaching/learning situation, as it is being implemented in our local state secondary schools, where, as mentioned before, it is growing rapidly as the CAM programme reaches secondary level and expands to semi-private subsidised schools. Many of the teachers involved are subject specialists without linguistic training, and while they are very competent in the use of the foreign language, they usually lack the metalinguistic awareness which would allow them to help their students with the language of the disciplines they are teaching. Thus, in order to provide CLIL secondary school teachers and teacher trainers with the necessary tools for this area of their work, we wanted to identify CLIL secondary school learners' needs. This is because to intervene in the learning process, as Leung (2005: 250) argues, we need to know more about "the ways languages are actually used in classroom interaction and activities, and the demands and affordances of language learning in the context of curriculum subject learning". We believe researchers and teachers should also pay attention to a third area, which is especially important in secondary school: the written language of the disciplinary area. It is in writing that students are usually evaluated, and writing can play an important part in learning a foreign language (Manchón *et al.* 2009; Heine 2010).

By recording examples of classroom interaction on topics from the social science syllabus (Geography and History), and analysing students' spoken and written production, as well as the teachers' language as they organized and ran the sessions, our aim was, then, to identify the linguistic needs of learners at this level

in this subject area.[1] We wanted, then, to find out how students and teachers dealt with the language of the discipline, what sort of interpersonal language was used and needed, and what sort of evidence of school macrogenres appeared. That is, using Coyle's terms (2007), we wanted to know the characteristics of both the students' "language of learning" and "language for learning".

## 3. The UAM-CLIL corpus

The project focuses on the school subject which all schools with a bilingual section teach in English, social science. This is a subject in which the role of language is paramount, and we believe our study may be useful to a number of practitioners. We have collected spoken and written data every year from the same two classes in two state secondary schools (identified as Schools A and B) in different areas of Madrid throughout the four years of obligatory secondary education (ESO). The schools are representative of upper and lower middle-class state schools. The project started in the academic year 2005-06, and the data collection was completed in 2008-09. In each school, the majority of the students who finished the project, aged 15-16, are those with whom we started when they were 12-13. Table 1 shows the years of data collection and age of the participants

| | |
|---|---|
| 2005/2006 | 1st year ESO students (12/13 year-olds) |
| 2006/2007 | 2nd year ESO students (13/14 year-olds) |
| 2007/2008 | 3rd year ESO students (14/15 year-olds) |
| 2008/2009 | 4th year ESO students (15/16 year-olds) |

Table 1. Participants

The main corpus of the UAM-CLIL project, collected from recording these participants, is structured as shown in Table 2. Section 4 below gives details of the tasks which elicited this data.

1 Thus we would support teachers setting up CLIL programmes, as in other projects like the University of Nottingham's CLIP project (see Wiesemes 2009).

| | | Class discussions (30 minutes) | Written texts (20 minutes) | Interviews 6 students per class (about 10 minutes each) |
|---|---|---|---|---|
| Feb 2006 | Geography: Natural Disasters. ESO 1 | A 4,967words | A 2531 words/ 26 texts | A 1,665 words |
| | | B 3,549 words | B 1375 words/ 17 texts | B 2,012 words |
| April-May 2006 | History: Ancient Civilizations. ESO 1 | A 3,946 words | A 3951 words/ 26 texts | A 2,214 words |
| | | B 1,952 words | B 2639/ 25 texts | B 2,316 words |
| April-May 2007 | History: Feudal Europe ESO 2 | A 3,588 words | A 2980 words/ 24 texts | A 3.802 words |
| | | B 2,808 words | B 3338 words/ 23 texts | B 5,139 words |
| April-May 2008 | History: Philip II ESO 3 | A 2,041 words | A 3994 words/ 22 texts | A 4,166 words |
| | | B 1,645 words | B 4043 words/ 17 texts | B 3,794 words |
| March 2009 | History: The First World War ESO 4 | A1 3,088 words A2 2,688 words | A 3951 words/ 22 texts | A 5,372 words |
| | | B 4,063 words | B 1578 words/ 15 texts | B 4,580 words |

Table 2. The UAM-CLIL corpus: main subsections

As Table 2 shows, in the first year two collections were made, one on geography, the other on a history unit. For the following years, we decided to make one collection a year, allowing time for development; and always on a history topic, in order to focus the register analysis more narrowly. In year four, school A (CA) split the students we were following into two classes, so for the whole-class session we had to do two recordings (A1 and A2). Besides the data from the CLIL classes, other sections of the corpus include the basic written input for the topic, that is, extracts from textbooks, some data from parallel classes in the same two schools studying the same topics in their native language (Spanish), and some texts on similar topics written by native speakers of English of the same age.

## 4. The tasks

The tasks for the data collection were based on the syllabus requirements, as described in the provisional integrated curriculum developed by the British Council/ MEC Bilingual Project (analysed in Llinares & Whittaker 2009), and on our belief

in the need for input for both written and spoken production (Bereiter & Scardamelia 1987; Takimoto 2009), as well as the need for production – output – for language learning (Swain 1996). We were especially interested in the development of academic language, both spoken and written, so the data collection involved a series of activities: class discussion, composition and personal interview on the same topic. Each year, the classes under analysis carried out the following tasks. First, the teachers agreed on a topic, selected for the interest it usually aroused in their students, and the researchers designed the prompt. When the content of the unit had been covered, the teachers organised a whole-class revision session in which the students worked in groups on a series of questions on the main points in the unit, after which the teacher elicited students' spoken production following these points. The next time the class met, the students wrote a short composition on the topic, following the same prompt. After this, a small number of students (six from each class, selected by their teachers to represent different proficiency levels) were interviewed by the researchers on the topic, in order to obtain longitudinal data from individual students.

In Figure 1, we include an example of a prompt for the writing task, with the points covered in the whole-class discussion session. Rather than just name a topic, the prompts gave considerable guidance to the students. We felt this was necessary to activate their knowledge and encourage production in the foreign language, especially in writing, as writing an extended text is not an activity found in classes at this level, according to the teachers we worked with. At the same time, the role of writing in the construction of knowledge is widely recognized, and the students are evaluated mainly through writing – especially those who sit for the ICGSE.

**World War I**

Write a composition about the First World War. Try to include the following ideas.
Explain why WWI broke out and in what ways it was different from previous wars. Explain what happened during the war and why it came to an end. Refer to the consequences of the Treaty of Versailles and justify whether you agree with its terms or not.
(Twenty minutes.)

Fig.1. Example of a prompt for spoken and written tasks

As this prompt shows, while following the aims of the integrated curriculum, the researchers made sure that the questions elicited responses to cover the main history genres: recount, account, explanation and argumentation (Coffin 2000, 2006a).

## 5. The theoretical framework: genre and register in the Systemic-Functional model

Our study of the language of the CLIL classes is inspired by Systemic-Functional work on genre and register in educational contexts (Rothery 1994; Christie & Martin 1997; Christie 2002a; Christie 2002b; Martin & Rose 2003; Schleppegrell 2004; Veel 2006; Christie and Derewianka 2008). The Systemic-Functional Linguistic (SFL) model (Halliday 2004) aims to explain language use in context – that is, why texts have the linguistic features they do, as well as why some are more successful than others in the situation in which they are used. It is a model which developed during years of collaboration with practising teachers (since early work in Halliday *et al.* 1966), and which was extended during research into writing in school and at the workplace (see Veel 2006 for an overview of this work). This linguistic theory has been widely and successfully used in educational planning, in teaching different school subjects, and in evaluation of native and non-native English (Cope & Kalentzis 1993; Polias 2003; Whittaker *et al*. 2006). Thus, it is a model which does not stay on the desk of the researcher, but moves into the classroom with the teacher – not only the language teacher, but also the subject teacher (see, for example, Custance 2006).

Researchers and practitioners using SFL are aware of the key role of language in education, and of the linguistic differences found in the different disciplines. In our project in CLIL contexts, we have used the SFL register and genre analysis of the language of history (Coffin 2000; Coffin 2006a; Coffin 2006b; Veel & Coffin 1996) to guide us in the design of the study, to predict and select the linguistic features which would be important in the tasks the students carried out. So far, we have analysed features necessary for the expression of content (the *ideational metafunction* in SFL), including the semantic classes of verbs used, since different aspects of experience are realized by these different process types, and the types of circumstances the students select to elaborate on that content. We have also looked at the nature of the logical relations between clauses and their linguistic expression.

In addition, the subject of history requires that part of the information encoded has to do with the attitude of the speaker or writer with respect to the message, differentiating between facts and opinions, telling the audience the probability of the truth of what has been said, as well as marking ability and obligation. Here, then, we have focused on the use of modality, expressing the relation between the interlocutors or reader-writer (part of the *interpersonal metafunction*). As the students produce language in context – discourse – we have included in the study features which participate in the creation of cohesion, identifying participants as newly introduced into discourse, or recoverable, by analysing the systems signal-

ling co-reference, or new participants (part of the *textual metafunction*). The structure of the nominal groups realizing the participants has also been analysed, since this syntagm plays an important role in the creation of academic register (Halliday 1989).

## 6. Some results: learner language

In different studies (Llinares & Whittaker 2009; Whittaker & Llinares 2009; Llinares & Whittaker, 2010), we have analysed features of the spoken and written production by students in CLIL classes and in parallel mother-tongue classes. We have also looked at teachers' language in their interaction with students on the different topics. For this, all the clauses in the corpus were coded, and Wordsmith, Word or Excel were used to record and recover the features analysed in the specific study. In general, given the aims and focus of this research, we have looked for patterns in the data which might reveal interesting information about the development of the register of the discipline, or students' participation in classroom interaction, as shown in the frequency or infrequency of selected features. The selection of features was, of course, guided by the theory.

In the following sub-sections, we present and comment on a selection of results and examples of the analyses of the students' language. Section 7 presents information on that of their teachers.

### 6.1. Expression of content: ideational meaning

As pointed out above, different content areas are constructed by different types of meanings, and these depend to a large extent on the semantic classes of verbs found in the clauses of their texts. This means that, in order to represent the content of their subjects, learners need to select the typical combinations of verb types required. Also, clauses are often expanded with information about time, place, manner, etc, that is, with circumstances, and again, different disciplines typically use certain classes.

In our analyses of the two subject areas studied in social science at secondary level in the first year corpus, we found the distributions of process types and circumstances for history and geography to be different, both in the students' production and in the textbook (Whittaker & Llinares 2009). Interestingly, there was a similarity between the way the learners used the process types and circumstances and those found in the texts they studied.

At this stage (ESO 1), early in the students' initiation to the discipline we find that school geography is constructed using a lot of actions, as in example (1) from the first whole-class session, in which students were asked to describe natural disasters:

(1) ST: … floods are when it ***rains*** a lot and snow ***melts***, and that *cause* the river ***overflew.*** (CB-Discussion 1[2])

Research on the language of school history has shown a number of developmental stages, in which there is a move away from the recounting of actions carried out by individuals towards texts in which concepts are put into relation with each other. This change is achieved in part by using fewer action verbs and more of those expressing states. In our first history collection, on the topic of ancient civilizations, we already find a higher proportion of state verbs. Example (2) is from a student's written text at the end of the first year:

(2) The civilizations ***were*** so important because the most powerful people ***stood*** there and because they ***were*** the main sources of work and culture. (CA-Text 2-21)

In general, in the whole corpus, the analysis showed that the students also use quite a high proportion of circumstances, which add a lot of content to their clauses. The types most frequently found are place, time and manner. Example (3), in which the student is explaining about the origin of the Plague, is from a second year whole-class session:

(3) ST: a sailor brought it ***to Europe in the… middle of the fourteenth century from Genoa***. (CA- Discussion 3)

Here the student has introduced two place and one time circumstance in the clause. Example (4) is from a first year written text:

(4) … now we can go ***from place to place faster with the car*** (CA-Text 2-6)

Interestingly, the appearance of manner, illustrated in (4), with two different types of realization, has been found to be a signal of development in writing (Christie *et al.* 2007).

2 As in Table 2, the schools are identified as CA and CB. "Discussion" refers to the whole class sessions recorded; the number of the discussion coincides with that of Table 2 (Discussions 1 and 2 took place in the first year, Discussion 3 in the second year, etc.; for the topic of the session, see Table 2); when the example is from a written text, the final number identifies the student (the same number was used for a student throughout the four years); the texts are reproduced with the original spelling etc.

## 6.2. Interpersonal meaning

While our main focus in the research project is on the way students communicate the content of their subject, the language of the disciplines also requires the use of modality. Students need to be able to express probability, usuality, ability and obligation or permission as they generalise or reflect on the information they are producing. As already pointed out, for the data collection in the project, the prompts were designed to elicit some expression of the student's point of view, as well as ability and obligation. The analyses showed a very limited repertoire to express this type of meanings, with students relying heavily on a multifunctional form: "can". Some adverbial expressions are also used, though. Example (5) belongs to the first collection of written texts:

(5) The consequences ***can*** be that: the houses ***could*** float and the people ***could*** die. We ***can*** cut less trees but that means produce less wood. I ***can't*** do anything … but, well I ***could*** think it and teach my sons and ***maybe*** they ***can*** say something, but is no ***probably***. (CB-Text 1-1)

This short paragraph shows a student struggling with different types of modality in order to produce hypotheses and propose ways to prevent natural disasters, quite an advanced academic function and, according to other studies, not often found in CLIL classrooms (Dalton-Puffer 2007).

## 6.3. Textual meaning

As we use language to communicate, we need to be aware not only of the information we want to put across but also what our listeners or readers know, and what they need to know. Successful communication, then, depends to quite an extent on awareness of audience. We carried out analyses to try to find evidence of the students' awareness that they are presenting information to an audience, looking at the resources they used to signal that the concept is new to the listener or reader, or should be known and so recoverable. Here we present some examples of successful and less successful information management. Examples (6) and (7) are from spoken data recorded in the second and third year:

(6) TCH: Ok. So, group number.. five should start, now
ST: Eh.. ***There were*** peasants or serfs and there were free peasants (CA- Discussion 3)
(7) ST: ***There was*** a price revolution (CA- Discussion 4)

Interestingly, presentative "there", one of the first items to be learnt in the foreign language classroom, and which marks new information, was hardly ever found in the first year data, but was quite frequent in the higher years.

Students also need to control the deictic and pronominal systems which allow them to make reference to participants as new, or recoverable and co-referential. We have studied this aspect of textual meaning in spoken and written texts using Martin and Rose's (2003) proposal. We found a certain development in this area from the first to the fourth year. Example (8), the first sentence of a text written at the end of the first year, shows no attempt to make the composition context-independent. The reader needs to have the prompt in order to interpret the pronominal and demonstrative reference:

(8) ***They*** start in ***that places*** because the population grow. (CB-Text 2-19)

Example (9), however, the first paragraph of a second year composition, shows successful information management in the use of deixis, the pronoun and later reintroduction of the full noun phrase:

(9) Many people lived in rural places. ***These people*** worked the lands. ***They*** lived in small houses in villages near to forests. ***These people*** were called peasants … (CA-Text 3-27)

When we move to the third year, some students' writing also reflects awareness of the conventions of text construction. Example (10) contextualises the topic for the reader before moving on to respond to the focus of the prompt:

(10) In The Modern State Monarchs were the people who ruled countries, so they were very important. Phillip II was an Spanish king who had ruled many years. When he began to rule… (CA-Text 4-1)

We were interested to see that, though the writing prompts provided a lot of support and could trigger a series of sentences rather than an independent text, many students seem to have gone through the process of composing text (Bereiter and Scardamelia 1987), moving to different levels of generality at appropriate points, and showing reader awareness, as in the example above.

### 6.4. Development of register

As students become familiar with the content of their subject, through contact with its written and spoken texts, they may also begin to become aware of the register of the discipline. Since Halliday's early work on spoken and written language (1989), in which he showed how spoken English develops through strings of clauses, while public written language expands the nominal group as the main means of including information in the clause, many studies of academic

language, including that of schooling, have found this to be a key to literacy. To understand and produce this register requires a period of transition from spoken to written features, a process of development which we can also see in our corpus of foreign language productions.

In their written production, our CLIL students, like EFL students (Barrio 2004; Martín Úriz & Whittaker 2005) and developing L1 writers (Schleppegrell 2004), tend to use devices that they have learnt for the spoken register. Example 11 below shows the students' dependence on linking clauses using "and":

(11) The black death transpasit because of the rats, because they may be go to the food ***and*** they infected ***and*** later the humane eat ***and*** they die ***and*** may be because of the dogs too because the rats go with the dogs ***and*** they …. (CB-Text 3-23)

At the same time, this example shows the use of a preposition phrase (because of the rats) to indicate cause. In general, preposition phrases are less frequently used by CLIL students than by their peers who wrote in their L1, as we show in Section 6.5.

However, example (12), below, from a class session also at the end of the second year, shows a student beginning to construct the register of the subject with the resources he/she had available: conversion of the adjective "dirty" to a noun by means of a determiner and post-modification using a preposition phrase:

(12) ST: The Black Death was caused by ***the dirty of the people***. They don't wash very much and they threw the, the rubbish and the things to the street. And that brings rats and other, other diseases. (CB- Discussion 3)

As the turn continues, by expanding the meaning of the first clause, we find a return to everyday language, both in the lexis and in the grammar. Grammatically, the content is organized in short coordinated clauses linked by "and".

On the same topic, another student was advancing with the development of the nominal group, selecting the lexis which had been taught for the topic, "filth", and an abstraction, "expansion", presenting the same information as in (12) in one clause, but omitting the everyday explanation given there:

(13) ST: ***the filth of the cities*** promoted ***the expansion of it*** (CA-Discussion 3)

This process also appears in the written texts, showing development of the language of the discipline. In example (14), a student from the following year wrote this nominal group made up of eleven words:

(14) .. and rich people became richer ***with*** **the rise of taxes and prices during the Inflation after mercantilism**. (CA-Text 4-21)

Another feature of academic language in (14) is the use of the preposition phrase "with the rise of taxes…" to express cause.

A final example of the role of the complex nominal group in a student's text is presented in (15), from the end of the third year, in which the entire predicate is made up of abstract nouns with (mainly) postmodification, including specification:

(15) *Some important facts are* ***the discovery of America and the changes that brought to the world, the crisis of catholic religion (aparition of new religions: Lutheran and anglican), discovery of new routes*** ….(CA-Text 4-24)

We were interested to see that the students' written texts showed increasing complexity in the use of noun phrases, which mapped with an increase in the mean number of words per text. From the first to the third year, the written texts increased considerably: from an average of 97 to 182 words in school A and from 81 to 237 in school B. Fluency, measured in the number of words produced in a limited time, has been found to be an important indication of quality in writing (Wolfe-Quintero *et al* 1998).

### 6.5. Comparison of CLIL and Spanish L1 classes: register and modality

In order to see if CLIL students' production represented the language demands for the subject, we recorded two classes from the same schools, at the same level (ESO 2), and in the same subject (History), but in the mother tongue (Spanish). Analysis revealed an interesting difference in the register of the subject. While, as shown in Section 6.4., CLIL students are beginning to develop their academic language, we found that the L1 students seemed to be more proficient. They used more preposition phrases to express circumstances (time, place, cause), while the CLIL students were using mainly clause complexes, creating a more oral and less disciplinary register (Llinares & Whittaker, 2010). Academic language was also evident in the L1 students' use of abstractions, while CLIL students often had to turn to more everyday lexis. We can compare, then, example (16), with those in the previous section from the point of view of both lexis and the type of constituent used to express cause:

(16) TCH: ¿Por qué creéis que se propagó tan rápidamente la Peste Negra? A ver, J. (Why do you think the Black Death spread so rapidly. Let's see, J.)
ST: ***Por el hacinamiento*** (***Due to overcrowding***) (CB- Discussion 3-L1)

The student answers using a preposition phrase including an abstraction, instead of the frequent clauses expressing cause using "because" of the CLIL groups.

At the same time, data from the CLIL classes showed a higher use and wider variety of modal expressions than that from the L1 classes, mainly in compositions, though the written and spoken language was elicited with the same prompt. In the CLIL classes we have studied, there seems to be more space for individual students' views and interpretations – that is, for more genuine communication rather than the usual display questions demanding factual information. This may be an effect of the curriculum followed by our classes (from which the prompt was designed), as in other contexts this has not been reported (Dalton-Puffer 2005; Dalton-Puffer 2007).

### 6.6. Emergence of evaluation: a feature of history genres

As SFL work on history has shown (especially Coffin 2006a), the more advanced history genres do not only explain causes and consequences of historical events, but frequently evaluate the events and actions described. In order to do this, writers have to take on the role of the historian (Veel & Coffin 1996), and control the grammar and lexis of evaluation, the appraisal systems (Martin & White 2005). Naturally, we were interested to see if this appeared in CLIL students' spoken and written production and, thus, we made sure that the prompt for each topic contained at least one question that elicited this type of genre. Examples (17) and (18), on the time of Philip II, show a number of resources for evaluation being used by the students in their writing at the end of the third year:

(17) This ***amazing fact*** was ***really relevant*** to history, and mainly for economy and mercantilism (CA-Text 4-24)
(18) ***Unfortunately, for him,*** his empire ***suffered*** two bankroupts (CA-Text 4-29)

The topic is perhaps closer to their knowledge and interests than the earlier ones on world and European history, but it is clear that these students are more proficient, using evaluative adjectives, intensifiers and attitude adverbs, as well as selecting the lexis of their academic subject, when compared to their production in their first and second year.

In the fourth year, the trend continues, with evaluation of the event the students were studying (the First World War) and justification, as in example (19):

(19) It was a ***horrible*** war, lots of people died and a lot of land was destroyed. (CB- Text 5-21)

The role of the historian can be seen in (20) and (21) where the student considers the importance of different factors involved in ending the war as in (20):

(20) ***I think*** the war came to an end because Russia was defeated and because, eh… because…the American soldiers were sent by the Germany troops, USA also got into the war and it ***definitely*** broke the balance of alliances, and it was ***last rock*** destroyed Germany (CA-Interview 5-25)

or includes the reaction of the historical actors as in (21):

(21) Yes, and for example, that was the case of Germany, which took a territory from France, France ***was very angry*** and when the war was…whaaa… when the war was finishing, that treaty, the treaty of Versailles, told Germany to give Alsace Lorraine back with a, with money, and Germany was, was, as [name of student] said, it ***was not a good idea*** because Germany ***got angry*** (CA-Interview 5-2)

## 7. Some results: teachers' language

While the focus of our research project is primarily on the language of the students, our aim was to find information useful for the teachers involved. In the analyses of the whole-class summary sessions they led, we found some interesting areas to pursue. These are discussed in this section.

### 7.1. Teacher feedback: focus on form by EFL trained teacher

Comparing the use of process types, we noted a higher proportion of verb forms in the teacher's production in one of the classes, and were intrigued to see what this was due to. Example (22), from the first year history discussion, shows the interaction between Teacher A and her students, and reveals her frequent use of recasts, offering a correction of the student's errors:

(22) TCH: … in first civilizations cities were very big. And why is that?
ST: Because if some small cities join together, they ***have***, mm, more power.
TCH: They ***had*** more power. Yes. It's one of the reasons. And, what else apart from that? A.?
ST: Eh because they make, they invent X X and invent cattle raising and agriculture, and the kings conquest, and the kings ***conquest*** the-
TCH: ***Conquered***.
ST: Conquered other cities and make empires and cities. First empires. Then cities.
TCH: So you have explained how cities are going to become empires.
(CA- Discussion 2)

This teacher has a degree in English and has been trained as an EFL teacher, later taking a second degree in History and Geography. Her focus on form is integrated into the class interaction. This was not found in School B, whose teacher is a history graduate with qualifications in English at a high level. This suggests that the teacher's background and experience may be important variables, as they may affect the type of interaction that takes place in the classroom. In this case, we found an integrated focus on content and form in one class, and in the other a focus only on the lesson content. It is likely that these different approaches will have implications for the ways students learn the language and the content.

### 7.2. Teachers' construction of their students as thinkers

The last turn of Teacher A in example (22) leads us to another feature of the classroom language, this time found in both teachers. Our analysis of process types also revealed that verbs of speaking and thinking appeared quite frequently in both teachers' discourse, though not in that of their students. We found that, in the last turn of example (22), what this teacher does is to summarize for the class the academic function performed by the student. She constructs the student as able to explain a historical process. Examples (23) and (24) show both teachers constructing their students as thinkers, and insisting on the importance of expressing their thoughts in language:

(23) TCH: The importance of the river. Why along rivers? ***Think*** about that. OK? So, ***develop that idea***.
ST: Eh, that they placed of the banks of the river, because they were the only fertile lands. (CB- Discussion 2)

(24) TCH: OK. Something else about the place or the cities? OK. So, can you ***name*** any, any, a few cities that you can ***remember?*** (CA- Discussion 2)

Believing as we do in the social construction of identity (Berger & Luckmann 1966), in the previous examples the students are positioned as thinkers and not mere "animators" (Goffman 1981) or repeaters of the words used by the teachers or in textbooks.

### 7.3. Message abundancy

Finally, another interesting practice found in the recordings of the teachers is the use of what Gibbons (2006) calls "message abundancy". Anticipating possible problems of comprehension, the teachers often reformulate or add specifications to their questions, as in (25):

(25) TCH: OK. Good. And what about ***the obligations*** of the peasants? ***What did they have to do***, A.?
ST1: They have to work the lands of the, of the lords, but they can't leave. They could [n't?] go to another, eh, to the land of another, of another lord if they want.
TCH: OK. And P., the same. What about ***their rights***? What were ***the rights of the peasants***?
ST2: Eh, the, the, the free peasants, eh, they were free. They could do-. They work, attending the lords and things like that. And the serfs were similar to slaves. They, they have few rights. (CB- Discussion 3)

The phrases in bold in the first turn of example (25) show how the abstraction "obligations", though not likely to cause problems, as a cognate with the Spanish term, is expressed in the next clause using a modal form: "have to". After selecting another student in the next question, the teacher specifies the reference of the possessive "their", helping the students to recover the referent, and to construct their answers.

## 8. Some results: scaffolding registers

The design of the data collection, with the sequencing of the data collection procedure, where students worked on the same material for the class discussion and then wrote a short composition following the same prompt, which also guided the final interview with a small number of them, proved to be useful for students' successful performance. Llinares & Whittaker (2009) refer to this sequencing of tasks as "scaffolding registers". Example (25), above, shows the use of one type of scaffolding by the teacher during oral activities, the main vehicle for learning in the class. However, as we have said, we also focused on writing, given its role in learning in a foreign language and its importance for evaluation. Example (26), taken from a student's composition, shows another type of scaffolding: the effect of oral activities in providing input for writing:

(26) In those times there were less machins that now. Also cities were worst, in those times they didnt have a system of plumbing, ***in off*** *[= enough]* medicines doctors. Nowadays living conditions are better. (CA-Text 3-20)

The student must have learnt "enough", at least for the context he/she is writing about, during the class talk, given the spelling used to reproduce it in the composition. In sum, the data collection seems to have played the role of different types of scaffolding activities which let the students build a firm knowledge base from which to write their texts.

## 9. Conclusions

In this chapter we have shown how the research conducted in the UAM-CLIL project is providing information on the linguistic features found in the productions of secondary school students as they represent the content of the disciplines of geography and history, and create discourse which begins to follow the conventions of the register of the discipline. Analysis of the students' use of modality shows that this is an area that needs further research, both in terms of the interpersonal language used in relation to the discipline, and in the students' use of personal language while performing different tasks with their peers. However, we do find indications of development in the students' ability to take on the role of evaluator in the later data collections. Besides this, we have also seen the teachers' use of language to integrate focus on form, to create the students' role as members of a disciplinary community, and to provide scaffolding for the students as they work on the content of the subject.

Regarding the type of analysis that has been conducted, most studies have been cross-sectional, comparing written and spoken registers, as well as students' performance in two different schools with different teacher backgrounds. One specifically developmental study has been conducted, revealing development through the four years (Whittaker *et al.* 2010) in the complexity of the noun phrases that students produced. Evidently, more developmental studies on the data are needed, especially comparing the same student's written performance with their spoken language in the interviews, throughout the four years. This work is also in preparation.

Finally, in this project we have found that the Systemic Functional model provides one of the most comprehensive frameworks for the study of CLIL students' learning of language and content in an integrated way.[3] The importance given by SFL research to identifying linguistic features of different genres and registers is particularly applicable to CLIL, providing as it does a principled way to understand disciplinary content and language. Evidently, this is not only of interest to researchers, but should also form a part of the training of CLIL teachers and the EFL teachers who support their colleagues working in CLIL projects (Whittaker and Llinares 2010). CLIL teachers should not only make sure that they integrate language and content learning in their curriculum and lesson planning, but also in the daily interaction in the classroom, where subject teachers can intervene at the right moments, trying to make explicit for the students those features of the language of their discipline which are more relevant for students' academic success in the foreign language. At the same time, these teachers will be able to design and implement assessment practices which are coherent with the double objective of CLIL subjects, as well as transparent to other colleagues and – most importantly – to their students.

3 See Morton (2010) for examples from CLIL classes.

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