TALKING AND WRITING IN A FOREIGN LANGUAGE IN CLIL CONTEXTS: A LINGUISTIC ANALYSIS OF SECONDARY SCHOOL LEARNERS OF GEOGRAPHY AND HISTORY[1]

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ABSTRACT. *This paper presents an analysis of spoken and written productions in English by early secondary school Spanish students (11-12 year olds), collected in two state schools which have just started introducing CLIL (Content and Language Integrated Learning) in a number of disciplines. A topic selected from the curriculum for Geography and History was the focus of a class discussion in a revision session led by the teacher, which was recorded for the oral data. The written data consisted of a short composition on the same topic, written a few days later, in class. The analysis follows the systemic-functional model. We focus on the representation of content in the language used by the learners: types of processes, circumstances and clause complexes, and on the interventions of the speaker or writer by using expressions of modality. We also look at register differences, comparing the learners' spoken and written productions. Finally, we reflect on the learners' productions in relation to the language used in the textbook they follow. The work is a part of a larger project, a longitudinal study on language needs in the CLIL class in this discipline.*

KEY WORDS: *CLIL, Written Productions, Oral Productions.*

1. INTRODUCTION

In Spain, there are several CLIL projects under way, both at the primary and secondary levels. One of the pioneering projects was the result of the agreement between the British Council and the Spanish Ministry of Education for the teaching of an integrated curriculum (Spanish/English) in a number of schools ranging from nursery, through primary to secondary level, in a pilot scheme. This project started in 1996 at the pre-school level, and has recently reached the secondary level. While all the schools involved in this agreement teach social sciences (geography and history) in English, the

other subjects selected for the projects depend on the availability of specialists willing to teach their subject in English. At secondary level, as opposed to primary, while teachers who volunteer for the CLIL classes have a high level of English and are content specialists, in many cases, not being English-teaching specialists, they are not able to identify the linguistic needs of their learners in their subjects. In this situation, we think it is important for researchers to focus on specific subjects and the genres that they require and find the linguistic and rhetorical features that need work. This is all the more necessary since the preliminary secondary school curriculum for the teaching of social sciences in English does not offer much linguistic orientation apart from lists of vocabulary related to the topics.

2. AIM OF THE PRESENT STUDY

This study is part of a larger project aimed at providing support for secondary school CLIL teachers. In it we are trying to identify the specific linguistic needs of EFL learners in the area of social sciences (geography and history) as the subject most frequently found in the new CLIL classes. We feel this is urgent, since a large part of learning a discipline is learning the language of that discipline, and these students' success depends to a large extent on language proficiency in the subjects they are studying (Swain 1990).

In view of the teaching/learning scenario described, the purpose of this paper is twofold: first, to analyse first year secondary school learners' (11/12-year-olds) written and spoken production on a topic from the social science syllabus in two state secondary schools that follow an integrated curriculum (Spanish/English) in order to produce a first description of student achievement and difficulties. And, second, to compare the features of the students' productions with the language used for this topic in their textbook, as their main source of input, both in its original written form, and recontextualized in the teachers' classroom discourse. While the students are, obviously, not expected to reproduce the register of the expert, their evaluation in this subject will be based on their ability to reproduce the content of the topics studied. We wanted to describe the degree to which their spoken and written interlanguage achieved that aim.

3. THEORETICAL FRAMEWORK

The theoretical framework for the study comes from genre theory developed within Systemic Functional Linguistics (see Dafouz this volume), as our approach is both rhetorical and linguistic. In this theory, a genre is a goal-oriented social process realised through register, with features appropriate for the social context (eg. Martin 1992: 505). Our approach follows studies using this model that looked for the features characteristic of different genres belonging to different educational levels. These studies continued the work in educational linguistics begun in the 1970s in the U.K. by linguists

and teachers collaborating with Halliday (see chapters in Whittaker *et al.* 2006 for the history of this research and its applications). This research developed Hasan's work on genre (eg. 1989) in a number of projects in Australian schools, led by Jim Martin (Rothery 1994; Christie and Martin 1997; Christie 2002). The studies point out the role of the changing linguistic uses in the transition from the oral to the written language (Halliday 1989), as a key factor in the study of school disciplines, and they offer a linguistic model that allows us to analyse the written and oral texts produced by the students in the classroom. Finally, in our specific discipline, the language of social science has been studied by psychologists and linguists, given the difficulty, both for comprehension and production, it represents for native learners. Working in the SFL model, we have a number of studies of the language of history and, to a lesser extent, geography (van Leeuwen and Humphrey 1996; Veel and Coffin 1996; Coffin 2000; Groom 2004). Using this framework, then, we designed our research project, some first results of which we present in this chapter.

The selection of the linguistic features to be analysed in the corpus comes from Halliday's (2004) view of the use of language to fulfil three main functions: to represent reality (ideational function), to interact with others (interpersonal function) and to build text (textual function). In Halliday's model, different areas of the grammar of English are shown to convey these three functions. In our study, we focus on the area of transitivity: processes, circumstances and clause complexes (all part of the ideational function), used to express the content the students are producing, and modality (interpersonal function), used to qualify statements from the point of view of the speaker/writer. Our purpose is to find out if our learners are able to make the appropriate choices to construct a text that belongs to a specific educational genre.

4. DATA COLLECTION AND ANALYSIS

Data was collected in two classes from two Madrid schools (CA and CB) in areas with different socio-economic status (upper- and lower-middle class). The students participated in an oral activity led by the teacher in which they discussed a number of points taken from the syllabus for the topic *Natural Disasters*. In the next social science class session, the students were asked to write a short composition on the same subject. The topic of *Natural Disasters* was chosen as the teachers in both schools agreed that it was one of the most popular among their students, and we hoped it would motivate them to participate. The written data was collected from 26 students in school A and 17 from school B. The writing prompt they were given was as follows:

> Choose one natural disaster that you have studied. Write a composition about it. Try to include the following ideas: Describe a natural disaster. Explain where it takes place and why. What are the consequences, and what can be done to minimise them? Can you personally do anything to prevent or mitigate natural disasters? (20 minutes).

The teachers had included the same points in the discussion.

The linguistic analysis of processes, circumstances, clause complexes and modality followed Halliday (2004) and Martin *et al.* (1997). The decision as to the level of specificity the transitivity analysis was made on the basis of the type of language required for the register of the topic. Tables 1, 2 and 3 below show the categories that were selected for analysis; with the code we gave each category in the angled brackets:

TABLE 1. *Transitivity processes and circumstances*

Process Type	Circumstances
Material <MA>	Extent place <ET-PL>
Relational –intensive-attributive <RE-IN-ATT> –intensive-identifying <RE-IN-ID> –circumstantial <RE-CIR> –possessive <RE-POS>	Extent time <ET-TM> Location place <LO-PL> Location time <LO-TM> Manner <MN> Cause <CA>
Mental <ME>	Contingency <CO>
Behavioural <BE>	Accompaniment <AO>
Verbal <VE>	Role <RO> Matter <MT>
Existential <EXI>	Angle <AN>

TABLE 2. *Clause complexes and logical connectors*

Kind	Finite: Modal	Adjunct
MODALIZATION –PROBABILITY <MODA-PR>	MUST/SHOULD/WILL, WOULD/MAY, MIGHT, CAN, COULD	Probably, possibly, certainly, perhaps, maybe
MODALIZATION –USUALITY <MODA-US>	MUST/SHOULD/WILL, WOULD/MAY, MIGHT, CAN, COULD	Usually, sometimes, always, never, ever, seldom, rarely
MODULATION-OBLIGATION <MODU-OB>	MUST/SHOULD/MAY, MIGHT, CAN, COULD	Definitely, absolutely, possibly, at all costs, by all means
MODULATION READINESS- <MODU-RE> (Inclination, Ability)	MAY, MIGHT, CAN COULD; WILL, WOULD, MUST, SHALL, CAN, COULD	Willingly, readly, gladly, certainly, easily

TABLE 3. *Modality*

	Parataxis	*Hypotaxis*
Projection (Speech and thoughts) <PR>	Quoting	(that, whether, wh- Reporting (Nominal clauses)
Expansion (Elaboration) <EL>	That is, for example	who, which Non-defining relative clauses
Expansion (Extension) <EX>	And, or, but	Besides, instead of, as well as, rather than, while, whereas
Expansion (Enhancement) <EN-TM> Time <EN-PL> Place <EN-MN> Manner <EN-CAU> Cause <EN-CO> Contingency <EN-AO> Accompanient <EN-RO> Role <EN-MT> Matter	And then, for, and so, and yet	while, when, before, after, since, until, by, because, if, although, in spite of

The spoken data analysed comes from the students' performance during the half-hour whole-class discussion session[2]. In each class, the students produced about 2,000 words. The compositions contained between 85 and 100 words. The text book material on the topic had about 600 words. The oral and written data was coded by two experts who discussed problems of analysis and made decisions together when there were discrepancies. Students' errors were also coded for future analysis.

5. RESULTS AND DISCUSSION

In this section we present and briefly comment on the most relevant results from the analysis. In each table, in the left-hand column we identify the type of data: oral production in the discussion in the classes from the two schools (CA-DIS, CB-DIS), written compositions by the same students (CA-TEXT, CB-TEXT) and the textbook material (TEXTBOOK). Across the top of each table we find the code for the features included. First, in Table 4, we give the data for the process types, details of which appeared in Table 1 above:

TABLE 4. *Types of processes in the learners' spoken production (CA/CB-DIS), written production (CA/CB-TEXT), and in the textbook (TEXTBOOK)*

	MA	ME	RE (IN-ID)	RE (IN-ATT)	RE (CIR)	RE (POS)	BE	VE	EXI
CA-DIS	78.84	1.92	5.12	0.64	3.2	6.41	0.64	1,92	1,28
CB-DIS	60.76	4.61	5.38	10.76	4.61	6.15	6.15	0	1,53
CA-TEXT	66.47	1.37	10.05	7.82	3.35	2.79	5.02	1.39	1.67
CB-TEXT	63.15	3.94	9.64	6.57	2.63	3.94	3.94	1.75	4.38
TEXTBOOK	62.06	3.44	6.89	15.51	3.44	1.72	0	3.44	3.44

Table 4 shows that in both registers of the students' language, there is a high proportion of material processes (MA) -more than 60% of all the processes- followed by relational processes, mainly of the identifying (RE-IN-ID) and attributive (RE-IN-ATT) sub-types. Thus, students' productions respond appropriately to the task of describing, defining and explaining events or actions in the physical world. The textbook, with a very similar pattern of process types in general, contains more descriptive relational processes (attributive), while the students produce a higher proportion of definition (identifying relational processes). In the comparison between the students' written and oral performance, it is interesting that both groups use a higher proportion of possessive relational processes (RE-POS) in the discussion, showing more personal involvement than in the compositions, as in: *ST: We can help a lot if a natural disaster ever occurs ... because we have <RE-POS> aeroplanes and a lot of transport (CB-DIS)*

Next, in Table 5, we look at the circumstances the learners used to expand their clauses. The types and their codes were also shown in Table 1.

TABLE 5. *Types of circumstances in the learners' spoken production (CA/CB-DIS), written production (CA/CB-TEXT) and in the textbook (TEXTBOOK)*

	ET-TM	ET-PL	LO-TM	LO-PL	MN	CAU	AO	MT	AN	CO
CA-DIS	5.76	0	0	69.23	3.84	11.53	0	0	0	9.61
CB-DIS	4.87	0	14.63	53.65	4.87	9.75	2.43	4.87	2.43	2.43
CA-TEXT	0.9	0	11.81	55.45	25.45	3.63	1.81	0.9	0	0
CB-TEXT	0	0	6	68	14	0	2	4	6	0
TEXTBOOK	6.45	0	12.9	58.06	9.67	3.22	3.22	6.45	0	0

Table 5 shows that, as the topic requires, the majority of circumstances used are of place (LO-PL), in the learners' written and spoken productions, as well as in the textbook.

In the learners' written texts, circumstances of manner appear; these are also found to a certain extent in the textbook. Circumstances of cause are also used in the discussions, while they rarely appear in the learners' compositions (where cause is mainly expressed through clause complexes, see table 6 below). There are also a few circumstances of time, referring to when the natural disaster takes place, or stages in the event described.

Next, Table 6 shows the results of our analysis of clause complexes, which gives interesting information about register, and about the type of logical relations expressed in the data. The codes we use are explained in Table 2, above.

TABLE 6. *Types of clause complexes in the learners' spoken production (CA/CB-DIS), written production (CA/CB-TEXT), and in the textbook (TEXTBOOK)*

	PR	EL	EX	EN-CAU	EN-LO-TM	EN-LO-PL	EN-CO	EN-MN
CA-DIS	9.09	3.63	27.27	25.45	27.27	0	7.27	0
CB-DIS	1.21	3.65	51.21	31.7	6.09	0	6.09	0
CA-TEXT	0.84	3.38	51.69	26.27	9.32	1.69	4.23	2.54
CB-TEXT	0	0	49.43	34.83	8.98	1.12	5.61	0
TEXTBOOK	0	23.52	35.29	23.52	5.88	5.88	5.88	0

First, the high proportion of extension (EX) shows the frequent use of parataxis (*and*, *but*), especially in the students' production (both written and spoken), but also in the textbook. Within the category of enhancement (EN), the most frequent subordinate clause is that of cause (EN-CAU), very often expressed by "because" in both groups (written and oral productions) and in the textbook. Time clauses (EN-LO-TM) express stages in the natural event. Interestingly, elaboration (EL) ("that is...") is found in the textbook but is very rare in the students' language. This seems to indicate a difference between the genre of the textbook material, with its explanatory function, and that of the learner's speech or written text, which, in the classroom situation, has the function of displaying knowledge acquired to an expert.

Last, we show the types of modal expressions which our learners use. The codes are given in Table 3, above. Probability (MODA-PR) and usuality (MODA-US) are the only types used in the textbook, marking and qualifying generalizations, a feature of academic language. Ability (MODU-RE) is only used by the learners, who respond the to the prompt's final focus on personal intervention to prevent or help others in natural disasters.

Finally, a statistical analysis (t-test; p<.05) was carried out to compare the use of circumstances, clause complexes and modal expressions in the two schools. In all cases, the difference in frequency was not significant (p= 0.1; p= 0.5; p= 0.8, respectively). We feel this is an encouraging result, showing that, in the features studied, the classes produce similar results, despite the differences in the socio-economic areas where the schools are situated.

6. GENERAL CONCLUSIONS AND FURTHER RESEARCH

These results show that our students are beginning to acquire some of the register features of their discipline. Some features, such as the distribution of process types, are similar in the learners' compositions, the learners' oral performance and the textbook, all of which follow a parallel pattern for this topic. As regards clause complexes, there is also a similarity between the students' performance and the textbook: the most frequent types are paratactic extension and explanations in clauses expressing cause. On the other hand, elaboration, a feature of academic exposition, is hardly ever used by the students. An additional difference is that the students' language shows features of argumentation and personal involvement, such as more possessive relational processes (especially in the discussions) and a wider variety of modal expressions, features appropriate for face to face oral communication, which are not present in the textbook but are also used by the students in their written compositions. In general, we found few differences between the students' spoken and written registers in the features analysed.

We feel then, that a focus on these and other features of the written and spoken registers is necessary. For this, we need to offer subject teachers linguistic support based on the study of the features of the registers in the curriculum, since many teachers are unaware of the role of language in their disciplines. Explicit work on language using the SFL model has proved very effective both in primary and secondary schools (Schleppergrell 2004; Custance 2006; Polias and Dare 2006).

To sum up, then, in this chapter we have described the type of language first-year secondary school students are able to produce in the early stages of learning social science in English and considered their achievement in the light of the type of language necessary for the subject. Ultimately, we intend to analyse, using a longitudinal approach, the language of the same students throughout the four years of compulsory secondary education. At the end of this research project, we hope to elaborate a linguistic inventory which will be useful for the social sciences teacher in the CLIL classroom.

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NOTES

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2. This was preceded by the teacher's presentation of the activity and some preparatory group work. Teacher talk and the language used by the students in groups will be analysed in future studies.

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