

The construction of grammar concepts at secondary school

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Theoretical framework

In our study classroom is approached as a context for didactic research; didactic knowledge is understood as a discourse shared by researchers and teachers which emerges from practice and returns to practice for interpreting it (Bronckart & Schneuwly, 1991). We follow studies with a participant and ethnographic perspective concerning data collection characterized by: an emic perspective on data analysis, a qualitative and interpretative analysis, and the attention to discourse generated in teacher-pupil and pupil-pupil interaction (Van Lier, 1988). The last two educational laws in Spain have left behind grammar instruction but work on grammar is justified by the important role that research gives to metalinguistic activity in order to deal with complex grammar problems in an efficient manner, such as those derived from written composition, L2 acquisition, linguistic variation in a bilingual learning-teaching setting or multilingual competence. A pedagogical grammar is therefore needed. It should take into account a wide range of aspects such as (i) transposition of the knowledge of reference (Bronckart & Plazaola, 1998), (ii) linking spaces between grammar and use (Camps et al., 2005), (iii) metalinguistic activity and the so called “grammaring” through the organic integration of pragmatics, semantics and form (Larsen-Freeman, 2003), (iv) cooperative work, oral interaction and written composition as procedural tools of learning (Fontich, 2006) or (v) exploration of pupils grammar concepts (Fisher, 2004).

Research questions

In this study we make a general research question [1] and two specific ones [2] i [3]:

- [1] How can we establish a new model for teaching and learning grammar?
- [2] How metalinguistic knowledge is built within this model?
- [3] How can we elaborate an analysis model for exploring grammar knowledge?

Methodology

We develop the general question [1] as follows. In a traditional scenario, grammar content focuses strictly on form, teaching is transmissive rather than transformative and the way grammar is presented has no connection with real practice. In a new model, grammar content would integrate pragmatic, semantic and formal issues in order to mediate between use and system; teaching would promote cooperative work and exploratory talk, and grammar knowledge would result from organizing the exploration of language in its real use. This model will be that of the Grammar Didactic Sequence (GDS) (Camps et al., 2005) developed in collaboration with secondary education teachers (Camps & Zayas, 2006). It is inspired by the project work in language arts, which integrate a wide range of influences: the New School contributions, sociocultural psychology, cognitive psychology, activity theory or research on language didactics. It takes into account teaching as well as learning processes and it overcomes the unit-activity. It establishes

three phases: a preparation one (a representation of the task is shared with the pupils), an executive one (a set of activities oriented to what is expected to be learnt) and a third one for metacognitive reflection (a final written paper, an oral communication) that will make the pupils be aware of what they have been working on, with monitoring tools like a class diary along the whole process.

In our study, the teacher has designed a sequence of activities entitled “The verb and the sentence”, which will allow us to gather data and to interpret them. Learners are meant to work on a set of grammar notions (for example syntactic functions) specified in the official curriculum, while working at the same time on a series of tools to improve the understanding of these notions (like consulting material, surveys or automatic translators). The ground rules for the exploratory talk are considered as one of these tools, since learning does not derive automatically from making the pupils get together to talk (Mercer, 2008). This project is developed in 18 sessions of an hour (one month and a half), some of which imply 20 minutes of recorded discussions in small group. The teacher takes part in the discussion if required and she listens to it and evaluates it afterwards, by means of a description sheet. This sequence adopts a lexical perspective in which the verb is the center of the sentence: depending on its semantic profile and on pragmatic issues, it will accept, refuse or demand certain arguments, unfolding a set of formal relationships (Brucart, 2000). Pragmatic and semantic dimensions are the starting point for entering the formal grammar complexity, especially that of pronouns (quite a complex system in romance languages). Figure 1 is a synthesis of the sequence carried on:

Figure 1

Phase 1	Phase 2	Final phase
1. Learning objectives 2. Lexical perspective on the study of the sentence 3. Initial activities 4. Ground rules for exploratory talk 5. Elaboration of consulting material (1) 6. Research proposal	7. Research: How we use pronouns 8. 4 dimensions of this research: I. Automatic translators II. Speakers III. Class books IV. Compositions 9. Elaboration of consulting material (& 2) 10. Final activities	11. Written paper on all the project 12. Oral communication at the UAB (U. Aut�noma de Barcelona)
<i>Class diary</i> →		

We develop now the specific research questions [2] i [3]. This study focuses its attention in the dialogues of three groups (which have been chosen depending on the variables [+academic level] and [+/- implication in the activity]). Data consist of two dialogue sessions per group that have been transcribed and illustrate two activities, an initial one and a final one. For designing our analysis model we follow studies which try to inquire into pupils exploratory talk in a wide range of subjects (math, social and earth sciences, second language...), specially Fern ndez et al. (2001), and those studies with analytical tools that keep an integrated conception of the different stages in a conversation, specially Kumpulainen & Wray (2002) and Bee (2000). Fern ndez et al. (2001) focus their attention in exploratory talk in small groups and highlight the peculiarities of this scenario which compel to a redefinition of “scaffolding” (it is an interaction among partners) and ZPD (the interaction creates the so called “intermental development zone”, IDZ): the improvement in the collective and individual reasoning is interpreted as an example of intermental tools having shaped the intramental activity. Kumpulainen & Wray (2002) propose an instrument for exploring three different dimensions of interaction: linguistic functions (informative, reasoning, etc.), social processing (collaborative, tutorial, etc.) and cognitive processing (exploratory, interpretative, etc.).

Being a qualitative research, the authors remark that these functions may vary from one context to another and that they should not be treated as predefined categories but as situated categories. Bee (2000) establishes the notion of “frame” as a central node in her analysis model, not in a propositional sense but from a functional point of view, as a linguistic tool for organizing discourse in an argumentative interaction. It is inspired by Halliday’s triangular vision of language (interpersonal, ideational and textual functions) (Halliday, 1973) integrating contributions from different authors (Brown, Yule, Austin, Searle, Vigotsky). Social and cognitive dimensions are included in these linguistic functions and she establishes two kind of argumentative frames with different subcategories: additive (add, explain, etc.) and reactive frames (contradict, challenge, etc.). The author refers to cognitive psychology to conceive knowledge as a propositional and conceptual net placed in the memory and formed by nodes (ideas and concepts) as well as connections between these nodes. Moreover, she refers to Bakhtin (1986) and Lotman (1988) to explore the function of the idea in a discursive interaction: as these authors propose, an uttered idea stimulates a thinking process that goes onwards (creating new ideas) and backwards (taking into account what has just been said). Thus exploring knowledge refers not only to exploring the nodes but also the connections they have in both directions. The categories of our model are inspired in these models so we will discuss now some aspects of them. Kumpulainen & Wray underline the need of approaching the categories in an integrated way for reflecting the unity of discourse, but from our point of view their model has some overlapping points that create a certain confusion regarding the nature of categories: for example, their description of the cognitive dimension is parallel to the three kinds of talk identified by Mercer and his colleagues (disputative, cumulative, exploratory), which make us think of different cognitive activities but which overlap with the categories of social interaction (collaborative, conflictive, etc.). Bee’s model appears to avoid this problem because it establishes more general functional categories; however we make the following objection: her notion of “frame” accomplishes one of the author’s objectives (to underline the prospective and retrospective link between two ideas) but not the other one (to underline this link in the discursive flow).

In our model, two perspectives are taken for the analysis of the dialogues: content and discourse. Firstly, content perspective approaches dialogues from the metalinguistic repertoire point of view. This repertoire results from all those metalinguistic expressions used in order to reason about grammar problems; they are identified by the *metalinguistic statement* unit, ranging from pragmatics to semantics and form. Secondly, a discourse perspective represents an approach onto the interaction “fabric”, from the argumentative content parameter. It refers to the different ways in which argumentation is linguistically shaped. Dialogic metalinguistic inquiry places pupils in a contradictory setting: they are meant to learn some given notions by using them. Learning will consist on the progressively overcoming of this contradiction, underlying what research has shown about interaction: meanings are built up on a longitudinal turn-by-turn basis, in which participants think together tentatively, almost “gropingly”, blindly, trying to give name and to make visible the observed phenomena through their arguments.

Regarding content (from a broad general sense to a specific metalinguistic sense) we have established five categories: (1) Dialogue, (2) Discursive Sequence, (3) Metalinguistic Sequence, (4) Metalinguistic Subsequence and (5) Metalinguistic Statement. The major analysis unit is *Dialogue*: it corresponds to an answer to a demand and its boundaries go from the starting point of the discussion until the group decides to stop, so the length of dialogues may vary quite a lot. It is divisible en *Discursive Sequences*, each one focused on a specific question (the identification of an accusative pronoun, the invitation to a partner to take part in the discussion, doubts about the sense of the task, periods of absent-mindedness, etc.). Some of the Discursive Sequences are of a metalinguistic kind: we call them *Metalinguistic Sequence* and they are constituted by *Metalinguistic Statements*. Each statement corresponds to a specific metalinguistic expression made in an utterance: more than one of these statements may be uttered in one turn, and a single statement may take more than one turn. Some of the Metalinguistic Sequences are relatively long

and they may be divided in subsequences that explore a single metalinguistic question from different perspectives: for example, a Metalinguistic Sequence may focus on the accusative from two perspectives (pronoun form and position regarding the verb form). We call each one of these perspectives *Metalinguistic Subsequence*.

Regarding discourse, we have established two categories: (6) Argumentative Sequence and (7) Argumentative Episode. As we have said before, the interaction among students is organized by additive and reactive frames that link one idea to another, but these frames are local links that can not explain by themselves the argumentative organization of the discursive flow. For describing this flow a major category that includes them is needed: this category would allow us to observe and describe how additive and reactive frames follow one another and create links and higher argumentative units. These higher units could give account of the resolution of the task and how the conversation moves forward and shapes the metalinguistic content. We call *Argumentative Sequence* each one of these higher units. We call *Argumentative Episode* these additive and reactive frames. We identify the following reactive episodes: *diverging* (to change the focus), *contradicting* (to show total disagreement), *clarifying* (to show partial disagreement) and *challenge* (to show disagreement by highlighting a contradictory item to what has been said). We identify the following additive episodes: *explaining* (to bring a reason), *expanding* (to enlarge the perspective on what is being observed), *adding* (to repeat), *accepting* (to approve an idea) and *concluding* (to bring an argumentation to its last point). In a discussion on a specific question there may be a disagreement (*contradicting, clarifying, challenging*) which will determine the starting point of a new Argumentative Sequence inside a Metalinguistic Sequence, developed by additive frames. When a student changes completely the focus of the conversation we consider her contribution a diverging Argumentative Episode that opens a new Metalinguistic Sequence. A discussion develops chronologically and the same item may be explored, left behind and recovered later on. Our analysis will choose/select from every dialogue a specific metalinguistic item, no matter if approached in an on-and-off manner. Our basic idea is that a progressive entrance to grammar complexity (and thus the construction of metalinguistic knowledge) will be attained through the group capacity of creating a rich argumentative discourse.

Results

On this paper we will focus the attention on Dialogue 1 of Group I (low motivation, medium academic level), focused on activity [1]. The demand was “Look at the sentences you have just analyzed and choose the easiest and the most difficult one, explaining why you think they are so”. It aimed at pushing the pupils to use metalinguistic notions to justify the simplicity or complexity of a sentence. This group chose as a low difficulty sentence “El Dalí va pintar aquell retrat de Lincoln” *Dali painted that portray of Lincoln*. We show now how we apply our categories to its starting passage and how we interpret it. The main idea will be that from the argumentative point of view it is not a rich conversation, but that from a metalinguistic perspective there are some interesting features:

- 1.1 Sònia: a vera | u = dificulta::t =
- 1.2 Joana: = (ac) pero ponlo así! =
- 1.3 Sònia: dificultat baixa | el Dalí va pintar de jove aquell retrat del Lincoln | llavors
- 1.4 Joana: = = del Lincoln es ce i \ || = és ce i \ =
- 1.5 Sònia: = del ce de \ =
- 1.6 Joana: és ce i! | de qui! \ <4>
- 1.7 Sònia: és ce de!
- 1.8 Jordi: és ce de / Joana \
- 1.9 Joana: (p) ah vale \

- 1.1 Sònia: let's see | u = difficulty:: =
- 1.2 Joana: = (ac) but write it like that! =
- 1.3 Sònia: low difficulty | Dali painted as a young man that portrait of Lincoln | then

- 1.4 Joana: == of Lincoln is dative \ || = it's dative \ =
- 1.5 Sònia: = of accusative \ =
- 1.6 Joana: it's dative! | whose! \ <4>
- 1.7 Sònia: it's accusative!
- 1.8 Jordi: it's accusative / Joana \
- 1.9 Joana: (p) right OK \

First figure: dialogue 1 (out of 6); second figure: turn; == overlapped turns; :: length of a sound; || silence; < ...> long pause in seconds; /\ tonality; (p) piano; (ac) accelerated

Metalinguistic Subsequence 1.1

AS	Argumentative Episode			Metalinguistic Statement			
	Order	Reactive	Additive	Nature			Statement
				P	S	F	
I	1.	Diverge	-	-	-	-	1.1 Sònia [a vera u dificultat] [let's see u difficulty]
	2.	-	Expand	-	-	X	1.3 Sònia: el Dalí va pintar de jove aquell retrat del Lincoln Dalí painted as a young man that portrait of Lincoln
	3.	-	Expand	-	-	X	1.4 Joana: del Lincoln es ce i of Lincoln is dative
	4.	-	Add	-	-	-	1.4 Joana: és ce i it's dative
	5.	-	Add	-	-	-	1.4 Joana: és ce i it's dative
II	6.	Contradict	-	-	-	X	1.5 Sònia: del ce de of accusative
III	7.	Contradict	-	-	-	X	1.6 Joana: és ce i! it's dative!
	8.	-	Explain	-	X	-	1.6 Joana: de qui! whose!
IV	9.	Contradict	-	-	-	X	1.7 Sònia: és ce de! it's accusative!
	10.	-	Add	-	-	X	1.8 Jordi: és ce de it's accusative
	11.	-	Accept	-	-	-	1.9 Joana: [ah vale] [right OK]

AS: Argumentative Sequence; P: Pragmatics; S: Semantics; F: Form

The analysis of Metalinguistic Sequence 1.1 shows us 7 metalinguistic statements, focused on the notions of accusative and dative (the off-task turn 1.2 is pulled out). In this Metalinguistic Subsequence the group focuses the attention in whether the observed element is accusative or dative (1.4 Joana: of Lincoln is dative, 1.5 Sònia: of accusative, 1.6 Joana: it's dative, 1.7 Sònia: it's accusative!) with a disputative kind of talk and only one reason given (1.6 Joana: whose!). This fragment ends with a cumulative utterance (1.9 Joana: right OK). How can we figure out what pupils mean? Certainly “de Lincoln” of Lincoln is not accusative neither dative but a further analysis could be as follows. Event nouns have an argument structure that may be inherited from the verb (in deverbal nouns) or may not (for morphological reasons) (Martí, 2002). “Retrat” portray is not a deverbal noun but as an event noun it has an argument structure AGENT – PATIENT identical to the structure of “retratar” (the verb to portray). The fact that students focus the attention in “retrat” portray and its semantic structure as a predicate instead of the verb “va pintar” painted makes us think that they have in mind a phrase structure with a light verb (a sort of verbs characterized by its lack of argument structure) (Butt, 2003), in this case “fer” make, overlapping the following three structures:

- (a) “El Dalí va pintar aquell retrat de Lincoln” *Dalí painted that portray of Lincoln*
- (b) “El Dalí va fer aquell retrat de Lincoln” *Dalí made that portray of Lincoln*
- (c) “El Dalí va retratar Lincoln” *Dalí portrayed Lincoln*

Regarding the semantic and lexical perspective of our GDS we can read pupil’s mistake as a partially attained solution, since they are being sensitive to semantics (an argument structure) and to pragmatics (Dalí is an agent, Lincoln is a patient). Certainly pupils show a lack of metalinguistic repertoire concerning semantic dimension and that’s why they use formal notions (dative, accusative) instead of semantic ones.

Conclusions

Our objective is to explore how metalinguistic content is being transformed all along the interaction. As we have just observed, the starting point of Dialogue 1 has a low argumentative interaction and metalinguistic content is rigid. Nevertheless, we have argued that behind pupil’s references to accusative or dative there’s the semantic notion of argument and predicate, a content of the grammar sequence. Our hypothesis is that through a more collaborative interaction the group would have created a richer argumentative discourse so that metalinguistic content would have been more ductile. Pupils must try to solve at the same time grammatical problems and interaction, confirming what has been observed in teacher-pupil interaction. The results of the study underlie the need, identified by sociocultural studies, of developing rich settings to promote the management of the pupils own learning in grammar teaching.

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