The construction of grammatical knowledge by students of primary and secondary education: Some approaches to the learning of the verb*

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Verbs are one of the categories that a school grammar must necessarily cover, not only in terms of knowledge of the concept and its relationship with other categories, but also in terms of the role it plays in writing. In this chapter, we present three studies that describe the construction of grammatical knowledge by primary and secondary school students when they learn contents related to verbs: the present tense, the verb mood, and verb complementation. Results from the three studies show how learners develop strategies and what obstacles they must face in order to develop grammatical reasoning. They also show the value of interaction (with peers or with the teacher and writing) to promote the development of metalinguistic activity at school in order to connect grammar rules and language use.

In this article, we present three studies focused on the construction of grammatical knowledge in primary and secondary school students in the area of Barcelona. These students reflect on three notions that are linked to verbs from three different levels of language articulation: the present tense (Casas-Deseures 2012), verb mood (Durán 2013) and verb complementation (Fontich 2010). The three studies assume that

^{*} Casas-Deseures, M., Durán, C., Fontich, X. (2017). La construcció del coneixement gramaticals en aprenents d'educació primària i secundària: Algunes aproximacions a l'aprenentatge del verb. *Caplletra: Revista internacional de filologia* 63, 111–38. DOI:10.7203/Caplletra.63.10396.

generating and exploring students' metalinguistic activity can give us clues to better nurture the process of building grammatical knowledge. This assumption is at the core of the grammar-teaching model developed by a number of studies in recent years, which maintain that grammatical knowledge is not a requirement for students to be involved in linguistic observation and manipulation tasks, but rather metalinguistic activity (generated by students as they perform these tasks) becomes the source of this grammatical knowledge (Camps and Zayas 2006; Camps 2014; Milian 2014; Ribas et al. 2014). In this sense, the three studies present verbal interaction (in pairs or small groups) to register, promote and enrich learners' construction of grammatical knowledge (Vygotsky 1987; Mercer 2013), a path that has not been fully explored in regular grammar classroom practices in either primary or secondary education.

1. Approaching the verb in the classroom

Although the primary and secondary education curricula in the autonomous region of Catalonia¹ include verbs as a teaching-learning target, this notion gets scarce attention. Likewise, it is mainly based on morphological content, so the pedagogic transposition of verbs in classrooms hardly addresses the relationship between forms and uses. Nonetheless, verbs are an important category in terms of knowledge about the notion itself, their relation to other categories, and the fundamental function that they perform in the construction of a text. Verbs are a remarkably complex category from both morphosyntactic and semantic-pragmatic perspectives (Badia 1994; Solà 2002).

Although descriptive grammars represent this category from the threefold morphological, syntactic, and semantic dimensions, the construction of knowledge about verbs (from a pedagogic perspective) is usually limited to the formal domain, to simplify the notion (Petit 2005). In this framework, these three studies explore new ways to consolidate the teaching-learning processes of verbs from both the methodological standpoint and the linguistic contents linked to it.

Spain is divided into 17 autonomous regions (and 2 autonomous cities), with different degrees of autonomy in planning educational policies; with regards Catalonia, see Decree 142/2007, valid until 2015, and Decree 119/2015 (primary education), and Decree 143/2007, valid until 2015, and Decree 187/2015 (secondary education).

Several studies on primary and secondary school students' grammatical concepts in L1 education show the difficulty of building coherent knowledge and emphasize the need to deepen the obstacles learners encounter (Myhill 2000; Fisher 1996 and 2004; *Camps et al. 2001; *Guasch 2014). For example, one of the first studies (Kilcher-Hagedorn et al. 1987), conducted with French-speaking primary school pupils, showed that grammatical knowledge is a conglomerate of diverse and unmanageable elements, in which the criteria used to identify an element do not remain available when solving another task.

Further studies highlighted other conclusions. Myhill (2000) emphasizes that some misconceptions about grammatical concepts originate from simplified definitions in textbooks, atomized content presentation, and activities involving the rote application of rules, and suggests that this is partly due to some of the gaps in analytic grammars (either descriptive or normative). On the other hand, Fisher (2004) speaks of methodological obstacles and conceptual difficulties arising from students' use of metalanguage.

Concurring with these observations, Camps (2014) underscores the need to explore the problems related to the structure of grammatical knowledge and they point out three kinds of obstacles:

- 1) the separation between sentence and discourse at school, which Charolles and Combettes (2001) attribute to the separation between grammar and rhetoric in the tradition of linguistic studies; this could pose some difficulties when trying to develop a coherent theoretical framework for pedagogical grammar;
- 2) the complexity of the multifunctionality of grammatical forms for both students and teachers: e.g., pronouns and the different functions they perform at discourse-, text- and sentence-levels; and
- 3) spontaneous grammatical knowledge that can be an obstacle to progress in the elaborate construction of grammatical concepts when not appropriately guided (Brucart 2000), a phenomenon observed in relation to adjectives (as noun qualifiers, Fisher 1996 and 2004) and subjects (as the first element in sentences, Gonzalvo and Camps 2003).

In this sense, Milian and Camps (2006) analyse a teacher-student conversation about verb tense in a natural setting and weigh the difficulties involved in overcoming low levels of abstraction, as well as the need to accompany students in conceptualization processes (Barth 1987).

More specific studies on teaching verbs corroborate the complexity of this grammatical category as a teaching-learning target (Fontich 2006b; *Durán 2009; Rodríguez-Gonzalo 2011; Torralba 2012). *Durán's (2009) work, for example, shows that students' notion of "verb" at the end of compulsory secondary education is constructed out of diverse and heterogeneous criteria superimposed without any systematization. Indeed, in this vein, some authors have suggested that verbs be addressed from a multidimensional perspective, integrating the morphological, semantic, syntactic, and pragmatic dimensions (Gomila and Ulma 2014; Roubaud and Sautot 2014; Gourdet 2010).

Based on these previous studies, this article presents three studies focused on teaching-learning verbs in compulsory education from three different viewpoints: verb tense, mood, and complementation. In all three cases, the goal is to explore students' metalinguistic activity that emerges through pair or small-group interaction in order to highlight the participants' cognitive processes in relation to the construction of knowledge about this grammatical notion.

2. Methodology

From the methodological viewpoint, what the three studies have in common is a qualitative and observational interpretative approach. They are designed as devices that promote interaction as fuel for metalinguistic reflection and the re-elaboration of previous knowledge (Ribas et al. 2014). All three are also based on students' language use (*Camps et al. 2005), adhering to one of the cornerstones of cognitive linguistics, in which observation and analysis of the language system should not be based on an ideal model but on real language situations (Cuenca and Hilferty 1999). They are also characterized by activating the learners' previous knowledge (Chartrand 2003) and raising linguistic problems for them to reflect upon; that is, they are based on the premise that problematizing is a tool that allows knowledge to be developed (Giordan 1996; Bosque 1994; Barth 1987; Nadeau and Fisher 2011).

In this sense, the three pedagogic devices, in accordance with the particularities of interaction when focused on grammar, confront students "with situations, observations, interesting problems that raise questions and mobilize their desire to discover how the elements being analysed work" (Milian 2005b, p. 26; see also *Fontich 2014a). Table 1 presents the main features of the three studies:

Study Kind of **Focus** Grade **Dynamic** Data intervention Age Casas-Deseures Seminatural Present tense Primary In pairs Oral 11-12 years Durán (2013) Seminatural Verb mood Secondary In small Written 12-16 years groups Fontich (2010) Classroom Complementation Secondary In small Oral intervention 15-16 years groups

Table 1. Features of the three studies

With regard to the type of intervention at the source of the research data, we consider Casas-Deseures' and Durán's interventions as "seminatural" because although they occur within the school context, both are led by the researchers (outside and inside the language class, respectively). In turn, we call Fontich's contribution "classroom intervention" because it is a device organized as a grammar instructional sequence according to the model set forth in *Camps et al. (2005) and Milian (2014 and *2012).

The transcription of the oral data is based on the criteria established in Guasch and Ribas (2013), namely spelling transliteration and focusing on the content, referring to only basic features of the interaction (for example, the length of some pauses) without entering into prosodic or gestural details. The analysis and categorization of both oral and written data is inspired by grounded theory (Corbin and Strauss 2008) and is based on the development of systemic networks (Bliss et al. 1983), which allow the answers to be systematized according to the parameters of the task. These responses are interpreted considering the theoretical framework that guides each study.

3. Recognition of the retrospective value of the present tense by primary-school students

The first research (Casas-Deseures 2012) is a case study that explores how late primary-school students (86 students aged 11–12 from three different schools) build knowledge about the values of the present tense in Catalan (as L1 or L2). The study carries out an oral pedagogic intervention in pairs led by the researcher, and the target of analysis is the verbal interaction generated throughout the 43 recorded conversations.

This article presents results after the conversation about the following sentence: "El 1969 l'home arriba a la Lluna" (*In 1969 mankind reaches the Moon*), in which the present tense expresses a retrospective value. This sentence shows a mismatch between the time of the statement (when the events happened, expressed through a temporary modifier "el 1969" *in 1969*) and the tense of the utterance (the tense expressed in the sentence through present tense "arriba" *reaches*) (Reichenbach 1947). This poses the possibility of prompting cognitive conflict.

From the linguistic point of view, it is broadly assumed that verb tense is related to the way in which we perceive the relationship between the linguistically codified events and the tense of linguistic production. This study, then, starts with the complexity of the verb as a category that structures the expression of time through the tense system. This system allows us to locate the events regarding the moment of utterance, but the verb can express multiple temporal relationships and meanings.

In fact, grammars address both the prototypical and peripheral values of verb tenses. In this respect, Pérez-Saldanya (2002) points out that as a basic tense, the present indicates "simultaneity with the speech act or in relation to a period of time that includes the speech act" (p. 2618). Regarding derivative uses, this linguist maintains that just because the present is the unmarked tense in the verb system, it can function "extensively and take on the meaning of a marked tense" (p. 2619), such as the retrospective value, but also the prospective, habitual or atemporal.

Regarding the verb tense system, primary schools have largely focused on morphological content and a basic past-present-future temporal distinction and have given little consideration to the relationship between verb forms and their uses. In the case of the present tense, students are not invited to think about the uses associated with this verb tense, but rather they are encouraged to univocally equate the present verb tense with simultaneity with the speech act (its prototypical value), as opposed to the past and the future. This prevents them from recognizing other values this tense can express (such as peripheral retrospective or future values).

The 43 conversations generated were recorded in audio, transcribed, segmented in episodes and categorized according to the following

The notions of "time" and "tense" are expressed with a single word in Spanish ("tiempo") and Catalan ("temps").

research questions: (1) What knowledge do students have about the retrospective value of the present tense?; (2) What types of strategies do they rely upon to uncover this value?; (3) How do they build knowledge about this value?; and (4) What relationship can be established between use and explicit knowledge of this value?

3.1. Strategies to build knowledge about the retrospective value

In order to account for students' knowledge when working in pairs and to describe their metalinguistic skills, we draw on psycholinguistic studies. Klein (2009) argues that natural languages have developed at least six devices to anchor time: three have to do with the grammatical category of the verb (namely, verb tense, morphological mood, and lexical mood) and the other three are temporal modifiers, temporal particles, and the principles of speech. On the other hand, Tartas (2009) considers that children build temporal notions through experiential, intuitive, and knowledge-based parameters of the world, depending on their cognitive development.

Three of the resources highlighted by Klein and Tartas emerge in this research: verb tense, temporal modifiers, and experience or knowledge of the world. These three devices serve to categorize the strategies that students use to temporally anchor the phrase (defined in Table 2):

Table 2. Students' strategies

Type of strategy	Interpretation of the verb's temporal value
Morphological	From verbal morphology
Semantic	From the semantic information about the temporal modifier
Pragmatic	Based on their own experience or world knowledge

Below, we present an example of each of these strategies. First, most pairs use the morphological strategy for anchoring the statement temporally and conclude that the sentence is anchored in present tense:

Segment 1. Morphological strategy (pair 35)

Joan: (reading aloud) 'El 1969 l'home arriba a la Lluna'
 Researcher: quan passa? quan passa això que diu la frase?
 Maria: ara... present... perquè si no diria va arribar (3-second pause) o si no arribarà
 Joan: (reading aloud) 'In 1969 mankind reaches the Moon'
 Researcher: when does it happen? when does what the sentence says happen?
 Maria: now present tense because otherwise it would say arrived (3-second pause) or will arrive

In this segment, we can see the equation of the present tense with simultaneity, in contrast to the past and the future, by appealing to a strategy of basic semantic temporal distinction, the second most common strategy among the pairs. In this case, the attention is focused on the temporal modifier:

Segment 2. Semantic strategy (pair 36)

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1. Pere: (reading aloud) 'El 1969 l'home arriba a la Lluna'	1. Pere: (reading aloud) 'In 1969 mankind reaches the Moon'
2. Researcher: quan passa això?	2. Researcher: when does this happen?
3. Montse and Pere: el 1969	3. Montse and Pere: in 1969
4. Researcher: i això quan és?	4. Researcher: when is that?
5. Montse: mm:: abans (3-second pause) bueno	5. Montse: mm before now (3-second pause) well
6. Pere: al passat	6. Pere: in the past
7. Montse: sí passat	7. Montse: yes past
8. Researcher: d'acord hi ha verb en aquesta frase?	8. Researcher: OK is there a verb in this phrase?
9. Montse: arriba	9. Montse: reaches
10. Researcher: d'acord i arriba què és?	10. Researcher: OK and what is reaches?
11. Pere: un verb	11. Pere: a verb
12. Researcher: d'acord és un verb però quan passa aquest verb?	12. Researcher: OK it is a verb but when does this verb happen?
13. Montse: (4-second pause) abans	13. Montse: (4-second pause) before
14. Pere: (3-second pause) al 1969	14. Pere: (3-second pause) in 1969

In Segment 2, the pair focused on the temporal modifier "in 1969", so they locate the statement in the past; that is, they conflate the event in the past and a verb necessarily in past tense. In this example, priority

is given to semantic above morphological information. Finally, the third strategy (world and experiential knowledge) is illustrated in the following example:

Segment 3. Strategy of world and experiential knowledge (pair 21)

1. Anna: (reading aloud) 'El 1969 l'home arriba a la Lluna'	e 1. Anna: (reading aloud) 'In 1969 mankind reaches the Moon'
2. Researcher: molt bé quan passa, això	o? 2. Researcher: good when does that happen?
3. Anna: a anys enrere perquè	3. Anna: y years ago because
4. Researcher: quan passa?	4. Researcher: when does it happen?
5. Josep: quan encara no havia nascut la meva mare i ja havia nascut la meva iaia	Josep: before my mother had been born and my grandma had already been born
6. Researcher: ah, caram molt bé pe com ho sabeu, que això va passar llavo	rò 6. Researcher: ah, gosh very good rs? but how do you know that that this happened back then
7. Josep: perquè ho explica a les revistes	Josep: because it is explained in magazines

In Segment 3, a student anchors the date between two intervals: the births of her grandmother and her mother, while the other uses knowledge of the world in relation to the meaning of the statement (turn 7). The first part of the segment illustrates an interpretation of the temporal modifier "in 1969" from well-known dates which serve to organize the chronological time (locators linked to the students' experience).

In sum, the exploration of the knowledge that the pairs have about the retrospective value of the present tense shows that, a priori, they do not recognize the retrospective value because they associate the present with its prototypical value. Regarding the strategies they rely on, we see that they mainly use the morphological strategy, followed by semantics and world and experiential knowledge. However, which of these strategies helps them build knowledge about the retrospective value?

3.2. Interaction as a strategy to promote metalinguistic reflection

The construction of knowledge about the retrospective value of the present involves overcoming the cognitive conflict the partners are facing, that is, resolving the incompatibility between the morphological information (recognition of verbal tense) and semantic-pragmatic information (meaning and use of temporal modifiers). The first type of knowledge (the result of the morphological strategy) arises from school learning, while the second (semantic-pragmatic strategy) is more closely linked to language acquisition processes. In any case, students' knowledge of the verb paradigm (which is highly complex and traditionally approached from a morphological point of view, not from the uses that are associated with it) is the element that causes the conflict. As we have seen in Segment 1, the partners prioritize grammatical information over semantic information, probably because the former is fixed in the verb form, without considering the other linguistic elements that also contribute temporal information (Klein 2009).

Thus, the school strategy seems to be of no help in overcoming the conflict. In other words, anchoring only to the morphological strategy prevents them from discovering the retrospective value of the present. The morphological knowledge that students have is too close to the verb form (it does not help them to think about the ways the form can be used) and prevents them from moving towards the interpretation of the tense according to the meaning of the statement, whose anchor must be found in other markers.

In contrast, resorting to semantic and world knowledge strategies allows students to explore a temporal anchor that does not correspond to the simultaneity expressed by the prototypical value of present tense. These strategies, then, are postulated as a good starting point to begin to build knowledge about the present tense, yet they are insufficient, because although they are based on usage, they are far removed from linguistic forms (they are of no help in understanding that the uses they explore are expressed in the same way, as seen in Segment 2; in Segment 3, there is not even a reference to verb forms). Therefore, to answer the question about the relationship between use and knowledge of the retrospective value of the present, an example is shown in which at the end of the intervention a student makes a reflection in which he seems to recognize this value:

Segment 4. Development of metalinguistic activity (pair 25, end of the conversation)

- 44. Mònica: això vol dir que... si tu dius... 44. Mònica: this means that... if you si dius un verb en present... també podria say... if you say a verb in the present... it ser... depèn de les altres paraules que hi hagi a la frase... podria ser... passat present i també futur?
- 45. Researcher: doncs això que dius és molt interessant... sí que podria ser, no? què t'ho fa pensar això?
- 46. Mònica: perquè com hem vist a la frase... aquí diu el verb en present... però... però... en veritat vol dir passat...
- could also be... it depends on the other words in the sentence... it could be... past present and also future?
- 45. Researcher: well, that is very interesting... yes, indeed, it could be, couldn't it? why do you think so?
- 46. Mònica: because as we have seen in the sentence... here the verb is in the present... but... in fact it means past...

In Segment 4, Mònica posits a hypothesis in relation to the knowledge that has been built throughout the conversation. With what the student verbalizes, she seems to be able to connect the verb form (morphologically the present tense) with a value beyond the prototypical (the retrospective value in the sentence on which she has reflected). This last example highlights the extent to which the interaction throughout the pedagogic device of the research has favoured the generation of metalinguistic activity, which has allowed the present-tense verb form to be related to the uses that this form can express. From this research, promoting situations in which students talk about a specific linguistic content can be a good starting point for building knowledge about this content.

4. The conceptualization of verb mood and mood values by secondary students

The second research (Durán 2013 and 2014) explores secondary school students' notion of verb mood (n=53, aged 12-16 years old, in a school in the province of Barcelona), elicited from a sentence-contrast activity. The purpose of this contrast is to elicit students' prior knowledge about this grammatical content and explore the role that metalinguistic activity plays in the conceptualization of grammatical notions. The research analyses how students reason on certain characteristics of the subjunctive in contrast to the indicative, based on the hypothesis that the sentence contrasts will inspire metalinguistic activity (i.e., they are

a setting that allow for a greater understanding of choice of mood). The results show how students interpret the values given by verb mood, as well as the difficulties they encounter when building a notion that is extremely epistemologically complex (albeit already explored in late primary school).

The complexity of the notion of verb mood must do first with verb morphology, since the mood is fused with the morphemes of tense and aspect. It also has to do with semantic-pragmatic issues, such as the different values that the subjunctive contributes, compared to the indicative. And finally, it is related to the close relationships between the grammatical category of verb mood and the notion of modality, in other words, between content framed within the scope of sentence-level grammar and content within text- and discourse-level grammar (i.e., with a direct relation to speech acts and subjectivity). This complexity has basically been addressed from a linguistic approach, and how to teach and learn it in secondary classrooms has been underexplored.

The activity that students carried out in small groups consists of comparing four pairs of sentences from their Spanish class in which the only thing that changes is the verb mood. The students were asked to jot down their reflections. The corpus of sentences chosen reflects different linguistic issues, in terms of both the syntactic structures and the values of the subjunctive in each of them:

	Subjunctive mood		Indicative mood
(1a)	Busco a un alumno que [sepa] italiano. I am looking for a student who knows Italian (meaning any student).	(1b)	Busco a un alumno que [sabe] italiano. I am looking for a student I who knows Italian (meaning a specific student I already know).
(2a)	Aunque [cueste] caro me lo voy a comprar. Although it may be expensive, I am going to buy it (meaning that I still do not know whether it is expensive or not, in any case, I am going to buy it).	(2b)	Aunque [cuesta] caro me lo voy a comprar. Although it is expensive, I'm going to buy it (meaning I know it is expensive).

	Subjunctive mood		Indicative mood
(3a)	[Quisiera] una barra de pan. I would like a loaf of bread (in a somewhat formal expression).	(3b)	[Quiero] una barra de pan. I want a loaf of bread (in a neutral register).
(4a)	Quiero que me lo [cuentes]. I want you to tell me (meaning that you have not told it yet).	(4b)	*Quiero que me lo [cuentas]. *I want you to tell me (meaning that you are already telling me).

This device follows Bosque's (1994) model, according to which the sentence contrast raises a problem (i.e., a challenge) that allows students to explore certain aspects of the language, which must necessarily be addressed through reflection. Therefore, contrast is viewed as a tool for reflection and accompaniment on the abstraction process (Barth 1987). The discussion is guided via several questions and specific instructions (see Figure 1) which ask students to collaboratively develop a text in which they explain the differences detected between the sentences presented. In sum, they are asked to solve a metalinguistic writing task based on their linguistic competence (Chartrand 2003) and on oral interaction as a tool for reflection and learning (Vygotsky 1987). Below is a summary of the results of the analysis of the texts produced by the students.

In groups of three, observe the following pairs of sentences and write a brief text for each of them in
which you answer these questions:
What is the difference between (a) and (b)?
Do they mean the same thing?
What is the word that keeps changing?
Why does it change?
Why do you think we write / say it one way or another?
You can use the following template:
"The difference between sentence and consists of
(a) and the second one (b) (mean/do not mean) the same thing
because The word that changes is It changes
because We say or write the first sentence in situations such
as, and we use the second one in

Figure 1. Support material to guide written commentaries

4.1. From meaning to linguistic form, from use to grammar conceptualization

The task of comparing sentences fundamentally targets understanding and contrasting the given sentences, triggering students' reflection strategies. This reveals their holistic and contextualized perspective as well as their different approaches to linguistic data. Initially, most students approach the sentences through meaning, and only later do they observe the form (i.e., the morphology) in which this meaning is enacted. They relate the grammatical structure to the social and discursive context in which they imagine the sentence can be recreated. This is an eminently pragmatic perspective, since students initially focus on how the context influences the interpretation of meaning, and only after that do they look at language as a subject of analysis in an attempt to justify the difference between the two sentences.

For example, in Segment 5, a specific context is set up when addressing sentences (3a) and (3b):

Segment 5. Quisiera/Quiero (group 4D)

- (3a) Quisiera una barra de pan.
- (3b) Quiero una barra de pan.

Decimos o escribimos la primera en esta situación cuando estás en la tienda y pides situation when you are in the store and la barra de pan y la segunda la utilizaríamos ask for a loaf of bread and the second one para lo mismo que en la primera. would be used the same as the first one.

To interpret the sentences, the students refer to their own experiences and knowledge of the world, and they consider both sentences characteristic of the same communicative situation, namely going to buy bread, although they are decontextualized sentences that could have occurred in different contexts (e.g., the expression of a desire). They consider the linguistic and extralinguistic factors that influence language use (Luquet 2004) and adequately perceive the mood as a pragmatic information marker that reflects the speaker's intention and guides the addressee's interpretation (Ahern 2004).

Broadly speaking, for most students the proposed sentences do not present interpretative difficulties. They manage to capture nuances that differentiate them, some of them very subtle as in (2a) and (2b). In the

following example, we notice that the participants see that the mood alternation reflects the speaker's perspective with regards to the situation rather than any difference in the situation itself:

Segment 6. Cueste/Cuesta (group 4B)

- (2a) Aunque cueste caro me lo voy a comprar.
- (2b) Aunque cuesta caro me lo voy a comprar.

La diferencia entre las oraciones 2a y 2b

The difference between sentences 2a and consiste en que en la 2a no sabes el precio y 2b is that in 2a you do not know the price en la 2 supuestamente sabes el precio.

and in 2b you supposedly know the price.

Only a small number of students is unable to discern differences between these sentences. Both groups that find no differences are focused on the propositional content and do not contextualize the sentences:

Segment 7. Sepa/Sabe (group 2B)

- (1a) Busco a un alumno que sepa italiano.
- (1b) Busco a un alumno que sabe italiano.

La primera (1a) y la segunda (1b) oración [significan] lo mismo porque se trata del mismo verbo y cambia la conjugación verbal. La palabra que cambia es 'sepa' y 'sabe'.

The first (1a) and the second (1b) sentences [mean] the same thing because it is the same verb and the verb conjugation changes. The word that changes is 'sepa' and 'sabe'.

These results seem to show that starting from students' language use and knowledge is a necessary step to activate their metalinguistic reflection. In fact, the participants show that they need to start from the meaning to be able to observe the language as a subject of study, and then pay attention to the formal aspects. However, this strategy of addressing the semantic-pragmatic content, though necessary, is not enough to trigger active reflection on the phenomenon of mood selection. The latter requires other strategies that allow different criteria to be integrated. The pragmatic dimension is so powerful that it may make them forget about the linguistic form.

One example of this is these students, who refer to linguistic elements that are not actually present in the sentences (namely, the formal you "usted" in Spanish) but are possible in the formal situation considered with a marked value of courtesy:

Segment 8. Quisiera/Quiero (group 1B)

- (3a) Quisiera una barra de pan
- (3b) Quiero una barra de pan

The difference between sentences 3a and 3b is that sentence 3a uses 'usted' [formal you] and sentence 3b does not.

La diferencia entre las oraciones 3a y 3b consiste en que la oración 3a habla de usted y la oración 3b no.

Segment 9. Cuentes/Cuentas (group 1D)

- (4a) Quiero que me lo cuentes.
- (4b) *Quiero que me lo cuentas.

En la frase la palabra cuentas no encaja con In this sentence the word 'cuentas' does las demás.

not fit with the others.

The strategy of referring first to potential uses can also be seen in the contrast between (4a) I want you to tell me and (4b) *I want you to tell me. When faced with a grammatical sentence, students appeal to use, to their implicit knowledge of how the language works as competent users, and only afterwards do they try a more analytical approach.

Now, the shift from the user's awareness (which tells them what can and cannot be said) to grammatical awareness (in which it is necessary to analyse the reason why) is a difficult step for students. It shows the fragility of their explicit grammatical knowledge, as found in Segment 9: we have seen the difficulties they encounter when arguing for the ungrammaticality of the second sentence drawing on syntactic reasons and their lack of suitable metalanguage.

4.2. The notion of verb mood that emerges from students' metalinguistic writing

In general, students approach mood values drawing on multiple criteria and different language levels. This multiplicity of criteria shows a rich and kaleidoscopic look at the complexity of the grammatical content they are analysing. They refer to phonological or graphic aspects, as well as to morphological, syntactic, semantic, or pragmatic issues to justify mood alternation. However, these criteria are not accompanied by an organization of this grammatical knowledge that allows them to understand the relationships established therein; instead, they use them

cumulatively and non-critically and have very low metalinguistic mastery, with very superficial knowledge that does not allow them to engage in more elaborate reflection.

Broadly speaking, these students show a low capacity for reflection and weak declarative knowledge about the language in general and about verbs and verb mood. This is paradoxical given the tradition of grammar teaching in Spain, which emphasizes the formal aspects of verbs: students do not seem to have appropriate knowledge to relate meaning and use. Their metalinguistic writings show little understanding of the features of the mood system, as well as a low command of the appropriate metalanguage (they never use terms such as "indicative", "subjunctive," or "verb mood"). The notion of mood seems to be conflated with the grammatical categories of tense and aspect:

Segment 10. Quisiera/Quiero (group 1A)

(3a) Quisiera una barra de pan

(3b) Quiero una barra de pan

La diferencia entre las oraciones 3a y 3b consiste en que quisiera es futuro y quiere is that 'quisiera' is future and 'quiero' [is] [está] en presente. [...] Este cambio se produce para cambiar el tiempo verbal.

The difference between sentences 3a and 3b present tense. [...] This change occurs in order to change the verb tense.

On the other hand, as linguistically competent users, they are capable of recognizing various values of mood selection (some of them very subtle indeed), such as non-specific, non-assertive, and non-actual features, which coincide with what many linguists attribute to the subjunctive. They are also able to realize the syntactic obligation in some constructions and the marked courtesy value of some subjunctive forms. Some of the criteria, such as the reference to modality, allow us to infer that they see a direct relation between mood and modality.

In short, the task of comparing sentences is shown to be an effective activity to promote students' metalinguistic activity around mood selection, as it forces them to de-automate their view of the sentences and reflect on the value of mood based on the syntactic and discursive contexts. On the other hand, it also shows the difficulties of conceptualizing a notion that was introduced much earlier, in primary education, but does not seem to have been consolidated throughout compulsory education.

5. Metalinguistic reflection on verb complementation by secondary school students

The third study (Fontich 2010, *2014a, 2014b) explores the reasoning of students in three mid- and late secondary school groups (a group of 30 students in 2nd year, a group of 30 students in 3rd year, and a group of 25 students in 4th year) from a school in the Barcelona metropolitan area. These students are engaged in activities on the notion of verb complementation in small groups (from two to five students).

The aim of the intervention was to work on the notion of verb complementation, according to which the lexicosemantic needs of the verb, as well as the intentions of the speaker, determine whether certain verb complements appear (Combettes 2007). As the research presented in the previous sections emphasizes, schools tend to address sentence-level phenomena by prioritizing descriptive and formal aspects and underestimating the relevance of semantic and pragmatic aspects and the use of linguistic intuition (Brucart 2000).

This intervention was intended to enable students to refer to morphosyntactic, semantic, and pragmatic aspects, drawing on the idea that students can work together (manipulating linguistic data and discussing the possibilities of certain uses) if they have resource that helps them get involved in the task. The proposed resource here, developed by the teacher-researcher, was a graph where the verbs (which appeared in isolated sentences and in texts provided by the teacher) were to be classified. Students were given 10 examples, in which verbs may appear with a direct complement (DC), indirect complement (IC), or prepositional complement (which has a longstanding tradition in Spanish linguistics and education, and which refers to complements with mandatory prepositions):

- (1) Li han robat [un quadre]DC.

 He has had [a picture]DC stolen.

 Literally: To him they have stolen [a picture]DC.
- (2) [M']IC han enviat aquelles fotos.

 They have sent me those pictures.

 Literally: [To me]IC they have sent those pictures.

- (3) Està llegint [una novel·la de por]DC. She is reading [a thriller]DC.
- (4) Viu [la vida]DC!

 Live [your life]DC!
- (5) [Li]IC agraden les novel·les de por.

 He likes thrillers / Thrillers please [him]CD.

 Literally: [To him]IC please thrillers.
- (6) [M']IC han molestat, aquelles fotos.

 Those photos have annoyed/bothered [me]CI
 Literally: [To me]IC have bothered/annoyed, those pictures.
- (7) [Li]IC toca el darrer seminari.
 He is in charge of the last seminarLiterally: [To him]CI corresponds the last seminar.
- (8) En Pere ja no beu [Ø]DC.
 Peter no longer drinks [Ø]DC.
- (9) [Hi]i creus, [en les meves possibilitats]i *Prepositional Complement*?
 - Do you believe [in my possibilities] Prepositional Complement? Literally: [In them]i do you believe, [in my possibilities]i Prepositional Complement?
- (10) No [en]j parla mai, [de política]j Prepositional Complement.

 He never talks [about politics] Prepositional Complement.

 Literally: He never talks [about it]j, [about politics]j Prepositional Complement.

In the proposed task, the term Indirect Complement subsumes several values, such as the possessive dative (see sentence (1)), the benefactor (sentence (2)), and the experimenter (sentence (5)). The students had to classify the verbs in a double-entry table, as illustrated in Table 3. This classification does not refer to the prototypical behaviour of the verbs that are classified but to their behaviour in the actual sentences in which they appear (in which they may be used in non-prototypical ways, such as in sentences (8), (9), and (10)).

Table 3. Classification of verbs

	+DC	-DC
+IC	(1) Robar steal	(5) Agradar <i>likel please</i>
	(2) Enviar send	(6) Molestar botherlannoy
		(7) Tocar correspond
-IC	(3) Llegir read	(8) Beure drink
	(4) Viure <i>live</i>	(9) Creure believe
		(10) Parlar <i>talk</i>

On this basis, the classification task facilitates two resources for reasoning (albeit with their own limitations, see Brucart 2000): comparing verbs that behave similarly and drawing on the students' linguistic intuition. Likewise, the task assumes that observing certain non-prototypical behaviours (e.g., pronouns with an unusual value such as possessive dative or complementation that obeys pragmatic reasons) may intensify metalinguistic reflection (see Cuenca and Hilferty 1999 for the notion of prototypes). Prototypical uses are very entrenched in textbook explanations (Coronas 2014), as well as in teachers' explanations (*Fontich and Giralt 2014; Fontich *2014a, 2014b), which implicitly assume that non-prototypical constructions should be left for more advanced levels and that it is better to stress the systematic aspects, since the regularities help the learner feel secure.

Nonetheless, several studies show that the use of prototypical behaviour can result in fossilization of knowledge. When this happens, it is very difficult to clarify or enrich the knowledge acquired even after years of instruction (Gonzalvo and Camps 2003; *Notario 2001). These studies suggest that the excessive emphasis on prototypical grammatical behaviour may explain the difficulties faced by students when they must resort to grammatical knowledge in language use situations (which is non-prototypical most of the time). In this sense, pedagogically non-prototypical instances or uses deviating from the habitual use can trigger metalinguistic activity, that is, a frame for discussion and comparison in which grammar concepts are interrelated.

5.1. Analysis of four verb complementation segments

We shall now present four brief segments in which students work in small groups in their Catalan class and try to solve the proposed classification task. In Segment 11, the students explore a sentence provided by the teacher: "Li han molestat, aquelles fotos" (*Those pictures have bothered/disturbed him*, literally "To him bothered/disturbed those pictures"). The verb "molestar" can behave in two ways in Catalan (and in Spanish): causative, with a typical transitive structure (e.g., His classmate is bothering/disturbing him) and stative. The latter is what we have here, and it takes a peculiar structure, with the experimenter heading the sentence in the dative case and the subject shifted to the end (Bel 2002).

One of the students establishes an analogy between "molestar" bother and "tremolar" tremble, which allows her to observe through complementary distribution that the first-person clitic "em/m" (with a value of either dative or accusative) can be exchanged with the third-person singular "li" (which always marks the dative). By means of non-subject agreement, she identifies "les cames" the legs as a subject shifted to the end of the sentence, thereby classifying the verb in the correct quadrant. We could consider that more than a dialogue, this is an example of thinking aloud, one of the ways in which the students' reasoning emerges when working cooperatively (Mercer 1995; Mercer 2004; Edwards and Mercer 2012).

Segment 11 (Group I, 3rd year, 14-15 years old)

- 1. Gemma: 'li tremolen les cames', això és com 'li tremolen les cames', la 'ema' (referring to the dative pronoun "Em" expressed with an apostrophe "M" in 'M'han molestat aquelles fotos' literally *To me have bothered those pictures]*) és el que fa funció... de complement indirecte, i 'aquelles fotos' fa funció de subjecte, perquè si canvies el verb 'm'ha molestat' canvia també 'm'ha molestat aquella foto'
- 2. Carla: la 'ema'...
- 3. Gemma: no, la 'ema' és del complement indirecte, és com el 'li' de 'li tremolen les cames'... quart quadrant
- 1. Gemma: 'li tremolen les cames' His legs are trembling [literally To him tremble the legs], this is like 'His legs are trembling' | the 'em' (referring to the dative pronoun "Em" expressed with an apostrophe "M" in 'M'han molestat aquelles fotos' literally To me have bothered those pictures) is the one that serves the purpose... of indirect complement, and 'those pictures' has the function of a subject, because if you change the verb 'M'ha molestat' it also changes 'M'ha molestat aquella foto' To me has bothered that picture.
- 2. Carla: the 'em'...
- 3. Gemma: no, the 'em' is the indirect complement, it's like the 'li' him/to him in 'Li tremolen les cames' *To him do tremble the legs...* fourth quadrant.

But the comparison between these verbs presents a small decalage: the dative in the verb "molestar" bother expresses the idea of "experimenter", whereas that of "tremolar" tremble expresses the idea of "possessive" (i.e., what tremble are Peter's legs; see Fontich 2004 for the so-called dative of inalienable possession). In addition to expressing different values, in both cases it is a non-prototypical dative. As we can see, however, this has not prevented the student from reasoning correctly, seeming to find support for her reasoning in similar yet contrasting verbs.

This is not what happens in Segment 12, where the students must determine whether "robar" steal can accept both a Direct Complement and an Indirect Complement at the same time. One student proposes a suitable example, but after thinking it over (long 3-second pause), she herself dismisses it:

Segment 12 (Group II, 3rd year, 14-15 years of age)

- 1. Miquel: i aquest no hi pot anar perquè... 'Va robar un quadre al Pere' (3-second pause)
- 2. Carles: no...'Ell va robar un quadre'
- 3. Miquel: no sona bé
- 4. Carles: 'A la casa... del Joan'
- bé... aviam pot ser... 'va robar'
- 1. Miquel: and this cannot go here because... 'He stole a picture from Peter' (3-second pause)
- 2. Carles: no... 'He stole a picture'
- 3. Miquel: it doesn't sound right
- 4. Carles: 'In Joan's house'
- 5. Assumpta: home... sonar bé sí que sona 5. Assumpta: well... it does sound right... I mean, it can be... 'He stole'

This is a contradictory situation, since the example was not only proposed by this student himself but is mostly accepted by his peer, after two proposals to explore if the verb can work without the dative. The explanation of this problem can be found in the possessive meaning of the dative subcategorized by the verb "robar" steal. Unlike in Segment 11, where the non-prototypical uses of dative do not constitute an obstacle to the analogy between "molestar" bother and "tremolar" tremble, it seems that in this case it prevents the verb's behaviour from being correctly identified. This somehow contradicts one of the assumptions of the classification task, namely that the task can help students' reason about non-prototypical behaviours.

This is what we see in Segment 13, in which the classifying task leads students to explore whether an intransitive verb can take a Direct Complement:

Segment 13 (Group III, 2nd year, 12-13 years of age)

1. Pere: sí però és que és una xorrada dir 'què vius? la vida'	1. Pere: yes, but it makes no sense to say 'what do you live? life'
2. Jofre: i? però es una frase [in Spanish]	2. Jofre: so? but it is a sentence [in Spanish]
3. Pere: '¿Qué vives? la vida' [in Spanish]	3. Pere: 'What do you live? Life' [in Spanish]
4. Raquel: però pots dir una altra cosa que la vida	4. Raquel: but you can say something other than life.
5. Domènec: no 'Jovisc el món'	5. Domènec: no 'I live the world?'
6. Jofre: 'Yovivo el fútbol' [in Spanish]	6. Jofre: 'I live football' [in Spanish]
7. Domènec: Sí	7. Domènec: yes
8. Francesc: 'Jo visc el bàsquet'	8. Francesc: 'I live basketball'
9. Domènec: aniria a més complement directe	9. Domènec: the direct complement should go there then

Segment 13 is a dialogue in which one student has proposed transitive behaviour for the verb "viure" *live*. This possibility is ruled out by Pere, and his partner disagrees, although without offering any kind of reasoning. Pere holds his position and repeats the question test as if showing the absurdity of a transitive use for "viure" *live*. We could interpret that classroom-trained information can be found in this initial exchange: the fact that intransitive verbs can behave as transitive ones if the complement is semantically close to them.

The example that DIEC2 (the normative dictionary for the Catalan language) provides for "viure" *live* as a transitive verb ("Viure una vida tranquil·la" *Living a peaceful life*) reflects this idea. Although the noun "vida" *life* is adequate, Raquel correctly proceeds with the reasoning, suggesting that they look for another complement, an idea that is accepted and extended by her mates with the nouns "football" and "basketball." Domènec (turns 5, 7, and 9) accepts the proposed reasoning, and although initially he launches a counterargument, after considering it, he deems the reasoning plausible and classifies the verb in the correct section (transitive verbs). Unlike Segment 12, the non-prototypical use does not prevent students from developing a cooperative dialogue.

While these students were able to accurately draw from their linguistic intuition in relation to possible uses of "viure" *live*, in Segment 14 we can observe the difficulty of carrying out an intuitive reflection centred on the uses of certain pronouns that do not exist in Spanish. These students may not have Prepositional Complement pronouns in their pronominal repertoire:

Segment 14 (Group V, 2nd year, 12-13 years of age)

- 1. David: eeeeeh, el complement, el complement preposicional és el que té, va precedit d'una preposició, 'parlaven, de política'... de és una preposició, llavors 'de política' és el complement preposicional
- 2. Rosa: i és això, ja està
- substituir-lo per un pronom, que era 'tots la parlaven' 000, algo així, era... tu te'n recordes?
- 4. Rosa: no
- 5. David: 'George Bush creu en Déu', segons diu 'en creu'... seria com... com un pronom... el pot substituir
- 1. David.: ehhhh, the complement, the prepositional complement is the one that is preceded by a preposition, "they talked about politics" ... about [de] is a preposition, so "about politics" is the prepositional complement
- 2. Rosa: so that's it, we're done
- 3. David: me'n recordo que també es podia 3. David: I remember that you could also replace it with a pronoun, like 'everyone talked it' or something like that, it was... do you remember it?
 - 4. Rosa: no
 - 5. David: 'George Bush believes in God', since he says 'He believes in it' (literally with the non-acceptable partitive pronoun "en")... it would be like... like a pronoun: it can be substituted

Initially, David identifies the Prepositional Complement through a clearly visible mark, the preposition "de" (about). When he attempts to extend the reasoning towards pronominalisation, they get stuck, and this suggests that these students require special assistance beyond the pedagogic material or information they may have been able to memorize.

This selection of observations that we have presented suggests that the classification task triggered metalinguistic reasoning, leading students to rely on their intuition as speakers. They also suggest that non-prototypical cases (e.g., "tremolar" tremble, "molestar" disturb and "viure" live) prompt reasoning, both through the contrast with a model verb and by exploring possible contexts for intransitive-transitive uses.

However, this classification task also poses some obstacles (Fisher 1996 and 2004). It seems that intuition may not automatically trigger a reasoned reflection for different reasons. Segment 12 suggests that the difficulty can be found in the impossibility of equating a dative pronoun with a use other than what is usually covered in school, namely benefactor (admitting that we do not know if this was the value that the students had in mind); likewise, in Segment 14, the problem lies in the impossibility of referring to a certain pronoun that probably does not exist in these students' pronoun subsystem.

In summary, this study shows the pedagogic potential of a relatively simple task, such as the one presented in here, which suggests hints for developing valid strategies and uncovers specific obstacles. It also suggests that, in this sense, metalinguistic activity can be the source of grammatical learning and inquiry into grammar in schooling.

6. Conclusions and implications

The three studies briefly presented in this article explore some of the processes that primary and secondary school students follow in constructing their knowledge about certain contents related to verbs, which affect three different areas: the expression of tense, the expression of mood, and complementation. Although both the objectives and the analysis procedures are different in these studies (see Table 1 above), the common denominator is the design of devices that promote verbal interaction and metalinguistic activity via observation, classification, or contrast. In all three cases, the learners show a clear ability to reason (something also observed in similar studies, e.g. Fisher and Nadeau 2003), which confirms the benefits of interaction in grammar teaching-learning as what fuels different kinds of cognitive operations.

The three studies allow us to explore some clues on how the students construct their grammatical knowledge, especially with regards to some of the strategies they used to solve the tasks, or their ability to evoke and use previous knowledge. In this sense, Nadeau and Fisher (2006) consider that "l'apprentissage constitue ainsi une transformation des représentations initiales et successives des apprenants" (p. 55). When faced with the proposed tasks, the students appeal to the form, function, or meaning of the verb contents being analysed (sometimes rather intuitively), and interaction allows what we know as spontaneous concepts in Vygotskyan terms to emerge (Vygotsky 1987). From these concepts, adult mediation can help the learners in their process of abstracting and systematizing grammatical knowledge.

In the studies, the role played by cognitive conflict is also evident. While at some points it can cause the learner to stall, in others it opens the possibility of discussing the statements and progress in their discussion about grammar. These studies reveal the need to explore the obstacles encountered by learners, such as the fragility of their declarative knowledge, the lack of appropriate metalanguage to refer to

the phenomena they detect, and their cognitive difficulties, a kind of reflective activity to which they do not seem accustomed.

In this sense, the pedagogic transposition of grammatical contents should not consist of a translation of simplified linguistic models in the classroom, since, according to studies on learners' grammatical concepts (see section 1), this simplification can prevent the gradual construction of knowledge about the concepts at stake. According to Bronckart and Plazaola (1998), transposition must be viewed as newly connected knowledge, assuming the complexity of the subject of study and considering the strategies that learners utilize to build specific knowledge. This position recalls Dewey's distinction (1916) between the logical order of knowledge (from science) and the psychological order (the learner's).

Finally, this article has foregrounded the necessary attention to the process of knowledge-building and its relation to the learning contents. While the importance of learning the content is irrefutable, these contents cannot be detached from the processes that make them possible. This idea supports the need to put the focus of research on metalinguistic activity. In the words of Dewey (1916), "the quality of the mental process, not the production of correct answers, is the measure of educational growth" (§4). Attending to learning processes will allow us to better understand the difficulties that arise during these processes and to be able to provide the most appropriate assistance. The three studies presented confirm the need to rethink the teaching and learning process of verbs in compulsory education, aiming to select, sequence, and specify the contents that schoolchildren must build throughout their education. In short, it aims to promote metalinguistic reflection in the language classroom through coherent grammatical reasoning strategies to establish a bridge between knowledge on use and declarative knowledge.