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Insights into L2 teachers' pedagogical content knowledge: A cognitive perspective on their grammar explanations

Abstract

Language teacher cognition research has deepened our understandings of the pedagogical decisions L2 teachers make and of how these are influenced by a range of psychological, socio-cultural, and environmental factors. Building on this tradition of work, this paper examines the interactions between cognitions and context in the grammar teaching practices of two experienced secondary school teachers of English in Argentina. The primary data came from classroom observations and post-lesson stimulated recall interviews in which the teachers provided the rationale for their grammar explanations. Further data were collected through semi-structured interviews. The findings highlight not only the array of instructional strategies employed by the teachers in their explanations but also the diverse and interacting range of pedagogical concerns which informed the choice of these strategies. The results also show evidence of the influence on teachers' pedagogical decisions of their perceptions of the context in which they worked. The findings shed light on the nature of L2 teachers' grammar-related pedagogical content knowledge. The qualitative accounts of teachers' classroom practices and of their rationales also constitute material which can be productively used in language teacher development contexts.

Keywords: Language teacher cognition, grammar explanations, pedagogical content knowledge, knowledge about grammar.

1. Introduction

Influenced by research and practice in general education, applied linguists have made notable efforts and advancements to provide insight into second and foreign

language (L2) teacher education through a multiplicity of perspectives, including teacher cognition, teacher expertise, teacher narrative, teacher reflection, and teacher research (Kumaravadivelu, 2012). The present article focuses on language teacher cognition (LTC), emphasising the central role this domain of inquiry plays in the understanding of the process of L2 teacher education and L2 teachers' instructional practices. LTC is defined here as the networks of beliefs, knowledge, and thoughts which L2 teachers hold about all the aspects of their profession and draw on in their work (Borg, 2006).

This study contributes to an established tradition of LTC research by examining, with specific reference to grammar teaching, how cognitive and contextual factors interact in defining L2 teachers' classroom practices. One issue examined by LTC studies on grammar teaching has been teachers' choice of instructional techniques, although within this body of work limited attention has been awarded specifically to the study of teachers' *grammar explanations*. Johnston and Goettsch (2000) is an exception here. This study examined the knowledge base underlying the grammar explanations of four experienced ESL (English as a second language) teachers in the USA. Drawing on categories of teacher knowledge introduced by Shulman (1987), Johnston and Goettsch (2000) state that "the way experienced teachers give explanations of grammar points in class ... is pedagogical content knowledge [i.e. knowledge of subject-specific instructional techniques] par excellence" (p. 449). Their analysis showed that grammar rules did not feature prominently in the explanations of any of the teachers; rather, the teachers placed much more emphasis on using examples during explanations. The teachers also encouraged student questions and devoted significant time to student-initiated discussions. This stance was based on the general belief that such active

student involvement supported the processes of understanding language. The teachers varied in their views about the role of metalanguage in grammar explanations, with two of the teachers more supportive of it (particularly at lower levels) and two (teaching higher levels) not feeling it was particularly important. Building on this work, our focus here is on understanding teachers' grammar-related pedagogical content knowledge (GPCK), that is to say, their knowledge of the specific instructional techniques (e.g., metaphors, analogies, examples, etc.) which they use to explain grammar content in order to make it accessible to the learners.

Though not focusing specifically on grammar explanations, several LTC studies highlight different strategies that teachers use in teaching grammar. The experienced EFL teacher in Borg (1998a), for instance, undertook grammar work based on the analysis of learners' errors, encouraged students to make reference to their L1, elicited grammar rules from them through an interactive class discussion and, when they were unable to cope with the complexity of grammar rules as presented in grammar books, he provided "user-friendly" or simplified versions of them. Pahissa and Tragant (2009) also report on the use of a variety of pedagogical techniques by the experienced EFL teachers in their study, including L1-L2 comparison, translation, structure analysis, elicitation, metaphors, word association, and the use of simple rules and practical tips. Moreover, the literature providing practical advice on how to teach L2 grammar discusses a number of grammar teaching strategies such as the use of actions, realia, minimal pairs and concordance data (Thornbury, 1999). Scrivener (2011) suggests visual support (e.g., timelines, diagrams, and substitution tables), examples, and guided discovery using Socratic questioning (e.g., concept questions, context questions, and problem-solving tasks). Celce-Murcia (2002, 2007) advocates contextualised discourse-

level analyses of grammar. Guided by questions set by the teacher, students work collaboratively in groups to analyse specific grammar items in spoken or written discourse and advance their own explanations of such items. Fotos (2002), in turn, supports the use of structure-based interactive tasks aimed to raise students' awareness of L2 grammar forms. In addition to identifying particular techniques for explaining grammar, the present study aims to examine the rationales underlying their use and thus shed light on the cognitive factors which shape teachers' pedagogical decisions.

A key influence on L2 grammar teaching practices which is highlighted in the LTC literature and which we will consider in seeking to understand teachers' grammar explanations is the teachers' pedagogical context, that is, the psychological, socio-cultural, and environmental realities of the classroom and institution. Evidence of the influence of contextual factors on L2 grammar teaching is available in the existing LTC literature. Drawing on his extensive work on teacher language awareness, Andrews (2007) claims that contextual factors such as time, syllabus, and students (e.g., their attitude and level) impact on teachers' lesson preparation and the application of their language awareness in the classroom (e.g., the ways in which they filter the language input made available for learning). Borg (1998a) found that the experienced teacher in his study selected grammar work (e.g., analysis of students' mistakes and development of grammatical terminology) based on his perceptions of the demands of the immediate teaching context (e.g., his learners' expectations and their language learning, communicative, and motivational needs). Similarly, Pahissa and Tragant (2009) report that their participants were motivated to teach grammar and use specific teaching techniques (e.g., L1-L2 comparison and structure analysis) by a high-stakes university entrance exam their students needed to take. The power of contextual factors is such

that they may mediate the extent to which teachers' practices may be aligned with their stated beliefs. Exploring teachers' tensions between their grammar teaching beliefs and practices, Phipps and Borg (2009) found that student expectations and preferences as well as classroom management concerns led teachers to take decisions and actions which were contrary to their stated beliefs. We believe that context must be included in any analysis which seeks to understand what teachers do. One of our concerns is thus to examine the contextual factors which shape teachers' decisions in providing grammar explanations and to understand how these interact with cognitions (i.e. beliefs and knowledge) in shaping the instructional choices teachers make.

2. The study

2.1 Context and Purpose

The context for the study is the teaching of English as a foreign language (EFL) in a state secondary school (Cortázar School; fictitious name) in Argentina. Cortázar School is one of the few secondary schools in Argentina dependent on an autonomous state national university. University schools differ from other state schools in a number of ways: e.g., all teachers are qualified, subject-specialised and experienced, curricular content is more advanced than that outlined in national curricular guidelines, and students are selected on the basis of their academic performance in competitive entrance examinations. With respect to EFL instruction, Cortázar School learners are grouped into EFL proficiency levels and there are no more than 20 students per class. Despite these differences, the budgetary restrictions to which most state institutions in Argentina

are subject (Zappa-Hollman, 2007) are also evident in the basic building facilities and material resources available at Cortázar School, including small and ill-equipped classrooms containing old desks and chairs, a small blackboard, a storage cabinet, and no technological devices, except for one CD player which is shared by all the teachers from the department.

The purpose of this paper is thus to further the LTC research tradition noted above not only by extending our understandings of L2 grammar explanations and cognitions but also by doing so in the work of state sector EFL teachers. The volume of classroom-based research of the kind we report here remains limited in such contexts and South America in particular has not featured strongly at all in the LTC literature.

2.2 Research questions

The analysis below (part of a larger eight-month investigation of teacher cognition and L2 grammar teaching) examines the ways in which GPCK is realized in language classroom practices, with a particular focus on the following research questions:

1. What instructional techniques do the teachers use to explain grammar content to learners?
2. What role do cognitive and contextual factors play in defining the selection and use of these techniques?

2.3 Design and participants

This research project was exploratory-interpretive in nature and followed a within-site (Cresswell, 2007) embedded multiple-case (Yin, 2009) design. Two case studies were conducted and, within each case, cognitive and contextual factors (themes or embedded units) were examined. The cases and themes were studied within their particular micro context of occurrence (the teachers' EFL classes), which was, in turn, immersed in a macro context (the EFL department at Cortázar School).

The selection of the cases was based on individual teacher characteristics which we were interested in studying: a Bachelor's or higher degree in L2 teaching or related field, ten years or more of L2 teaching experience in state schools, and a current teaching position at a state secondary school where observations could be carried out. The participants were Emma and Sophia (pseudonyms), both L2 English speaking EFL professionals with more than 30 years of teaching experience and a Bachelor's degree in English language teaching. At Cortázar School they both taught EFL to a group of intermediate learners. Emma's class (5th level) had a total number of sixteen 15-16 year-old students, while Sophia's (6th level) consisted of eleven 16-17 year-olds.

As with all qualitative research of this kind, we are not making any claims about the typicality, as teachers of English in Argentina, of Emma and Sophia. We do feel, though, that the insights provided into the practices of these teachers and into the factors behind them will be of interest to secondary school teachers of English in several other state sectors worldwide.

2.4 Data collection and analysis

A multi-method approach to data collection was adopted and, in addressing our research questions, we made use of semi-structured interviews, classroom observations, and stimulated recall (SR) interviews. The purpose of the study was disclosed only partially (i.e. teachers were informed that the focus of the project was teacher cognition) so as to minimise any type of influence on the teachers' responses and behaviour. For each teacher, the data collection process involved three stages:

- **Stage 1:** A 90-minute semi-structured interview with each of the participants was conducted in Spanish at the beginning of the project to establish a detailed profile of their educational and professional background, their beliefs about L2 teaching and grammar teaching in particular, and of their working context.
- **Stage 2:** 20 classroom observations (10 per teacher) were conducted with a focus on the participants' grammar explanations and use of techniques to make grammar content accessible to learners. While we acknowledge the impact that the presence of an observer can have on teachers' practices, we are confident that we minimized any such effect by observing both teachers teaching several lessons over an extended period of time. Then, 18 SR interviews (8 with Emma and 10 with Sophia) were carried out (see further details in the Appendix).
- **Stage 3:** Finally, a 60-minute semi-structured interview was conducted with each teacher at the end of the study to discuss their overall experience during the project. Some of the issues addressed included the contextual factors influencing their teaching decisions and their rationale for the salient strategies observed in their grammar explanations. In line with the teachers' preference, the interviews in stages 2 and 3 were conducted in English.

The data were collected and analysed cyclically throughout the period of fieldwork, with each data collection stage influenced by the analysis of the data previously collected. In stage 2, for instance, SR interview schedules were informed by the analysis of the most recent observational data collected (where episodes in which grammar was explained were identified), and were also based on issues emerging from the analysis of the initial interview (stage 1) and of other earlier SR interviews. In addition to cyclical analysis, on completion of the fieldwork summative data analysis (as explained in Borg, 2011) was conducted for each participant using qualitative content analysis procedures, including thematic analysis, codification, and categorization (see, e.g., Boyatzis, 1998; Yin, 2009). First, the data were linked to pre-conceived themes which were derived from the research questions of the study, though some other topics emerged such as the teachers' knowledge of the learners and their personal and professional history. Second, the data chunks associated with specific themes were coded. This process generated codes, comments, and insights which further specified the nature of the themes. Finally, the coded data within each theme were arranged into categories which emerged from the data. Summative data analysis and description were done first in relation to each participant (within-case analysis) and then across the two cases (cross-case analysis) (Cresswell, 2007).

Finally, the teachers were shown the findings and conclusions of their particular case and were given the opportunity to correct factual errors, add further information, and express their opinion about the adequacy of the analysis. In addition to its ethical dimension, respondent validation of this kind is also commonly cited in qualitative research as a strategy for enhancing the trustworthiness of the findings (e.g., Cho and Trent, 2006).

3. Results

We now present an analysis of each teacher's practices and cognitions in relation to grammar explanations. As we do, the following conventions are used to identify the sources of the data we quote: (SR) stimulated recall interviews, (CO) classroom observation, and (I) interview. In the classroom extracts we present, English translations are included for any utterances which were originally in Spanish.

3.1 Emma

Emma engaged actively in both planned and incidental grammar teaching and adopted a wide variety of pedagogical techniques to make grammar concepts accessible to the learners. The ones most predominantly used by Emma included exemplification; translation; repetition; and analogies, metaphors, and images. Extract 1 illustrates three such techniques - exemplification, translation, and repetition - in order to explain the use of *would* to express past habit:

Extract 1

E: ... now you can use a synonym to "used to" and that would be "would". You can use it in the same ... erm for example, I will give you an example: when I was a kid I liked the merry-go-round. I liked going to the merry-go-round. I *went* to the merry-go-round. I would go, I would go to the merry-go-round, listen, I would go to the merry-go-round every Friday and I ... I used to be *very* good, I used to *be* very good

at the merry-go-round. I would pick the ring [Emma refers here to the ring a carousel rider tries to grab in order to get a free ride] like twice or three times in an afternoon.

So then I got, I usually got two or three free rounds. OK? What did I say?

St1: Que ibas a la calesita [unintelligible] no, que ibas a los ... al [that you went to the merry-go-round (unintelligible) no, that you went to the ... the] merry-go-round every Friday.

E: OK. One by, one by one. [Emma then moved on to elicit a translation of her example from different students] (CO2).

All grammar presentations in Emma's classes, like that in Extract 1, were deductive and centred on the analysis of discrete items at the sentence level. They were also teacher-fronted and explicit, an approach which she justified as follows:

The strength is that the student knows from the start that we are dealing with a grammar point, that he has to pay attention to the explanation as if it were the first explanation of one ... topic in class, a topic or a concept in mathematics or ... history or sociology (SR1).

Emma's comparison of grammar points with concepts in other subjects suggests she saw grammar as propositional knowledge which needed to be presented explicitly in order to provide a sound basis for subsequent work.

In terms of pedagogical techniques, after introducing the new structure ("would"), Emma decided to use *exemplification* to explain its meaning and use. She explained her use of this technique as follows: "I think that some of the tenses ... you

cannot say a lot of theory. You have to ... refer to examples” (SR2). Most often, the examples which Emma created were first about herself and subsequently about the students:

I try to involve all of them, with their names ... I remember what they are good at, or what brings up some humour in the class without being incorrect or politically incorrect (SR1).

Thus, for instance, when introducing the notion of duration or continuity expressed by present perfect continuous, she provided the following amusing example: “[Name of student] has been sleeping in class ... for three minutes so far” (SR6). Once she had provided her explanations and examples, she sometimes invited the students to contribute with their own examples. Emma thought that it was important to engage the learners in her presentations in this manner to increase their attention span and keep their interest high. She felt particularly constrained at Cortázar School by the time of the day (early afternoon) in which her class had been scheduled and believed that this had a negative impact on the learners’ concentration:

... at that time of the day ... they are too tired or ... their mind is somewhere else ...
Because they have attended class during the morning, they have probably had lunch so that makes them be drowsy ... and they have probably attended another class after lunch and they just want to go home, they are too tired at that time (I2).

In addition, based on her knowledge of secondary school students, she believed that many students' motivation was low because they were not studying the L2 of their own free will but as a compulsory subject: "it's not an institute [i.e. a private L2 school], ... they don't come here on their will, they *have* to do English" (I2).

A second technique which Emma used to support understanding when she explained grammar was extensive *use of the learners' L1* (first language), Spanish. She often resorted to the L1 herself or, as in the case of Extract 1, she invited the learners to translate her explanations or examples:

I usually give an explanation in English and say "please, say what I said in Spanish, or in English even, explain to the class what I have just said" [to check] that they have understood or that they have paid attention, which are two things that I have to check in the class (SR8).

The L1 thus served the two-fold purpose of checking not only that the students had understood her explanation but also that they had paid attention to her. She found this strategy useful with this particular group of students, who, as explained above, were often tired and got easily distracted. She was not, though, indiscriminate in her use of the L1, as noted in the following comment: "I use Spanish sometimes to help them understand and I refrain them from using Spanish when I think that it's not going to help" (SR8).

Emma also justified her use of the L1 on the grounds that it allowed her to save time. For instance, on an occasion when she was asked to explain the use of "should" in

the perfective form, she resorted to Spanish because it was “short” and “time-saving”:
“Again, short version. I resort to L1 ... Yeah. Time-saving. There’s no point in explaining and a long explanation” (SR1). Emma’s preference for short explanations was influenced by the time constraints she felt under at Cortázar school; she was also motivated by a desire to keep the learners’ interest high during presentations (“I make it short because I don’t want students to become bored” SR2), and by a belief that “at school a language teacher should be concise” (I1).

Finally, Emma argued that using the L1 provided all learners with equal opportunities to grasp the meaning of a new grammar item: “sometimes after repeating [in English] ... three times, one or two students don’t really understand the meaning. So I make sure that all of them understood” (SR1). This reflects the deep concern which she consistently expressed for “weaker” students (see below).

Another technique which Emma used extensively in her explanations of grammar was *repetition* of key words (i.e. by the teacher), often accompanied by gestures. Evidence of this is found in Extract 1 (lines 2-5) above. When asked about her use of this technique, Emma said:

I repeat because at the same time I’m like ... making gestures for the students to ... I’m trying to infer some words or get some words [from] the students so I repeat the examples so that they follow ... I usually leave unfinished sentences for them to finish, for example (SR2).

Emma also used repetition to help learners notice a new grammar feature, to complete gapped sentences, to activate their previous knowledge, and to encourage them to translate a word or structure. An example of the latter is found in Extract 2:

Extract 2

E: He has been bothering me for a long time. Bother? Bother?

Sts: Molestar.

E: Molestar. OK (CO6).

A further technique which Emma often adopted was the *use of analogies, metaphors, and images*. A representative example of her use of metaphors is provided in Extract 3, where Emma is explaining one of the meanings of the present perfect continuous:

Extract 3

E: He has been bothering me for a long time. This tense, three parts, is used to express *duration*. She has been speaking for ten minutes already. Yes? *duration*, like ... like chewing gum of the action (CO6).

When asked to provide the rationale for her use of the metaphor, Emma explained:

To be visual ... to have an image. I trust some images for, again, for memory. Because it would be very difficult later on for the students to realize which one [present perfect simple or continuous] they can use. And something that we ...

internalized a long time ago through experience ... exposition [i.e. exposure] to the language ... they have to do it in one week; they have to know when to use one or the other because some of the exercises will include that difference. So I try to make it clear for them in which cases one can be used instead of the other and when one cannot be used at all ... I tend to use if not metaphors, analogies. Yes, it's ... the way that I feel that I can explain something, like sometimes referring to something that is more ... real to them, which is at hand, to explain something that is more abstract (SR6).

This rationale shows that Emma's use of metaphors was motivated by a range of pedagogical concerns such as enhancing students' understanding of grammar, assisting them in memorising new content, and compensating for the fact that the students do not have the luxury of picking up grammar over time and through exposure. The simplification of grammar input by turning a conceptual notion into a tangible or familiar image, which was also mentioned above in relation to Emma's use of exemplification, is rooted in her intention to make grammar content accessible to all learners, especially "weaker" ones (see categories of pedagogical concerns in Section 4).

3.2 Sophia

Sophia adopted a variety of instructional techniques to enhance learners' understanding of grammar. The ones most widely observed in her teaching include elicitation, conceptual grouping, visual support, summarizing, and L1-L2 comparison.

Extract 4, which focuses on linking words, typifies the approach she adopted when giving grammar explanations:

Extract 4

S: Let's read the first sentence and you tell me now what kind of ideas they connect.

OK? Let's see ... "A lot of people in England think that if we didn't have private schools we would have better state schools. Although these people usually don't say how you can stop private schools from opening." We have "although." If we say that it is used to connect ideas, OK?, what kind of idea is "although" connecting? What kind of relation is it indicating between the two sentences?

St1: What people think about better schools that ... people think doing something but it doesn't do anything with that because ... I don't know how to say ...

S: So, no, wait a minute. Let's see if I can help you. We have two sentences. The idea in the first sentence and the idea in the second sentence, OK? How are they related?

St2: Opposites

S: Opposites, not bad. Opposites. OK. Rather than opposites, do you remember the other word that we use when we refer to connectors? Instead of opposite?

St3: Contrast

S: Contrasting ideas. OK? [Sophia writes "contrasting ideas" on the blackboard]
Now, can you read on and see if you can find another example of this? (CO3).

Sophia tended to avoid introducing grammar through teacher exposition; rather, she preferred to work from meaningful stretches of text and, through discussion with the

students, to elicit the points which she wanted them to understand. Her unwillingness to deal with grammar in an expository manner may have been influenced by a lack of confidence in her own declarative knowledge of grammar, which Sophia expressed repeatedly. For instance, in relation to L1-L2 comparisons of grammar structures, Sophia once said: “I am not the best person to do [them] because of all the inconvenience I have [with grammar]” (SR2, E2-3).

In terms of pedagogical techniques, in Extract 4 above Sophia is using *elicitation* to guide the learners in the process of discovery learning and to help them construct the meaning of new grammar items. In addition, given that she felt the students were messy, disorganized, and easily distracted, Sophia found teacher-fronted elicitation particularly effective to get their attention and keep them focused:

Since they are rather dispersed from the point of view of their attention and they're rather talkative, ... I think that what sometimes is missing is a question of concentration and attention, although they are older students ... I try to elicit ... And I think that they tend to pay more attention when we work at the front, with the blackboard (SR6).

Elicitation, then, was valued by Sophia as a strategy for retaining student attention; it required learners to listen to her and to respond to her questions and prompts. Elicitation thus featured widely in Sophia's grammar work. For example, she used it when she wanted to revise and clarify grammar points recently introduced or to help students make connections between new material and that previously covered.

After the episode in Extract 4, Sophia continued eliciting information from the students until all the linking words in the text had been grouped in a table into their respective functional category. Alongside elicitation, the teacher here used another technique, which we can call *conceptual grouping*, to help the learners grasp the meaning of new grammar content by classifying items into semantic categories (for the connecting words these categories were contrasting ideas, listing ideas, summarising, and giving examples). Other occasions where she used conceptual grouping when explaining grammar include the teaching of modal verbs (classified into categories such as necessity, prohibition, advice, and possibility) and adjectives (grouped into types like appearance, feelings, and senses). Although in teaching grammar Sophia was not observed using conceptual grouping as extensively as the other techniques we discuss here, it is an example of a pedagogical strategy for grammar work where students' attention was focused on meaning rather than form. This, as suggested earlier, was an overall trend in Sophia's work.

Elicitation and conceptual grouping were supported by a further instructional strategy, the *use of visual support*. This included techniques which facilitated understanding during grammar explanations by enhancing the salience of information and/or presenting it in diagrammatic form. The table with the semantic categories of connecting words mentioned above was an example of visual support, as was providing input enhancement by highlighting (e.g., in bold) key grammar items in a reading text. Visual support was also used to support *summarizing*, a technique which Sophia adopted at the end of her presentations to help learners see connections between various pieces of information:

For the grammar part I think that it's good that they see it on the blackboard, that we use some kind of chart ... or arrows or things to show all the information. So, as we build the chart, I think that it is good to mention again everything for them to see that, in fact, what we have built on the blackboard ... now has sense or is connected (SR9).

Sophia's selection and use of pedagogical techniques during grammar explanations were highly influenced by interacting contextual factors. She argued that she had to cope with time constraints all the time, which she believed restricted her to using instructional strategies which were time-saving. Her selection of techniques also seemed to be influenced by her perception of the learners in this particular class (messy, disorganized, and easily distracted). To cope with this, she claimed she adopted "teacher-led" techniques such as elicitation and visual support (e.g., writing on the board) to capture the students' attention and keep them focused.

In addition to the above techniques, like Emma, Sophia made *use of the learners' L1* to increase their understanding of the L2. Convinced of the importance of exposing the learners to the L2 in the classroom, Sophia used English most of the time. However, she utilized the students' L1 on some occasions to encourage them to compare L1-L2 structures. She argued that she valued L1-L2 comparisons because they allowed the students to use their L1 knowledge to make sense of the new language: "I think that it is the knowledge they have and I think that they would resort to that knowledge in order to understand another language" (SR2). She believed that cross-linguistic comparisons were feasible and effective in this particular class because the learners had a sound L1 knowledge and enjoyed tasks which challenged them

intellectually. She also found this technique useful to give the students a break from the L2, to make them focus on her explanation, to stress the target grammar, and to direct their attention:

I had the feeling that maybe resorting to Spanish ... was going to mean a break from all the English and that they were going to focus more on what I was going to say ... I thought that I was going to call their attention a bit more. I tend, sometimes, to use Spanish ... to stress something in particular, maybe I think that switching from one code to the other and then maybe I also lower my voice sometimes, I tend to think that they might be listening to me or paying more attention (SR2).

This rationale highlights a recurring concern in Sophia's comments on her work – the need to capture student attention. Using the L1 was for her another way of achieving that goal.

4. Discussion

The various strategies that Emma and Sophia employed in supporting students' understanding of grammar constitute evidence of their grammar-related pedagogical knowledge (GPCK). This study generated, through a variety of data sources, extensive data not only about the realization of GPCK in the classroom but also of factors – cognitive and contextual – which shaped the teachers' pedagogical choices.

A range of insights emerge from the data. Firstly, both Emma and Sophia made use of an array of instructional techniques to make grammar explanations more

accessible to students: exemplification; use of learners' L1 (translation and L1-L2 comparison); repetition; analogies, metaphors, and images; elicitation; conceptual grouping; visual support; and summarizing. This adds to the list of grammar teaching strategies suggested by the literature and provides more empirical evidence about their use (e.g., Pahissa and Tragant, 2009; Scrivener, 2011; Thornbury, 1999). Emma's and Sophia's use of techniques was well aligned with their overall L2 teaching approach and their stated beliefs – i.e. there was a noticeable lack of what Phipps and Borg (2009) describe as “tensions” between the observed practices and stated beliefs of both teachers in this study. Their extensive experience, reflective disposition, and the fact that they worked in a context which did not constrain their pedagogical choices in any significant way may all be factors which contributed to this apparent harmony between the teachers' beliefs and practices in teaching grammar.

Another insight to emerge here was that both Emma and Sophia were able to articulate a clear rationale for the instructional techniques which they used in explaining grammar. Our collective analysis of these highlights a range of broader pedagogical concerns which motivated their choice of such techniques:

- (a) *Being economical* - using strategies which are efficient, time-wise (e.g., translating).
- (b) *Motivating learners* - using strategies which create in learners a willingness to engage with grammar (e.g., personalizing examples).
- (c) *Making grammar concrete* - using strategies which turn abstract concepts into tangible material (e.g., metaphors).

- (d) *Promoting reflection* - using strategies which give learners opportunities to reflect on what they have learned (e.g., eliciting and summarising content previously covered).
- (e) *Encouraging participation* - using strategies which encourage learners to contribute actively to grammar work (e.g., inviting students to provide their own examples).
- (f) *Reinforcing learning* - using strategies which enhance the salience of grammar information (e.g., teacher repetition).
- (g) *Gaining and sustaining attention* - using strategies which attract students' attention and keep them focused (e.g., eliciting content and examples).
- (h) *Monitoring understanding* - using strategies which provide the teacher with information about learners' level of understanding (e.g., inviting learners to translate the teacher's explanations and examples).
- (i) *Providing support for weaker students* - using strategies which enable weaker students to understand grammar (e.g., explaining in the students' L1).

This categorization illustrates the complex decision-making processes that grammar teaching involves and the multiplicity of pedagogical concerns which motivate – very often simultaneously - experienced teachers to use certain strategies when explaining grammar. Some of these categories are similar to some of the maxims guiding language teachers' instructional decisions identified by Richards (1996) (i.e. the maxims of “efficiency,” “involvement,” and “encouragement” resemble pedagogical concerns (a), (b), and (e) respectively). Although we have given examples above of instructional techniques which address different teacher concerns in explaining grammar, across

teachers individual concerns may result in similar techniques, while the same technique may be motivated by different concerns (this lack of a one-to-one relationship between principles and practices in L2 teaching was also noted by Breen et al., 2001).

Finally, the data reveal that the realization of GPCK in classroom practice is profoundly impacted by interacting contextual factors. Borg (2006) has argued that analyses of teachers' practices and cognitions which ignore the micro and macro context for teachers' work are likely to be partial or flawed. For that reason we also focused in this study on understanding the nature of the contextual influences which shaped the teachers' decisions in how to make grammar information meaningful to students. Though the influence of the context has been highlighted in previous studies of grammar teaching (e.g., Andrews, 2007; Borg, 1998a), we would like to argue that context, as it impacts on teaching, is not an objective entity external to teachers; rather, the elements that make up the different levels of the teaching context (from the classroom to the educational system more broadly) are filtered through teachers' cognitions and, therefore, even teachers who work in the same institutional context may interpret and react to it in diverse ways. In this sense we can distinguish any objective description of an instructional context from what we might call the *teacher constructed context*. Thus, for example, Emma and Sophia did not perceive Cortázar School students in identical ways, and this had an impact on their selection and use of instructional strategies when explaining grammar. They shared the view that the students were messy, talkative and easily distracted, and that this was exacerbated by EFL classes being inconveniently scheduled after lunch. However, while Emma felt that, as typical secondary school students, the learners had low motivation and often struggled to understand grammar, Sophia's perspective was that Cortázar School

students had a sound L1 knowledge and that they enjoyed intellectual challenges. In order to support learners' understanding of grammar, both teachers made use of their L1 but, in line with their differing interpretations of the students at this school, while Emma used the L1 to simplify her explanations and keep them short, Sophia used it to engage them in challenging comparisons of L1-L2 structures.

5. Conclusion

The detailed accounts of teachers' practices and commentaries on their work presented in this article provide continuing evidence of the value of qualitative approaches to the study of teaching which examine both what teachers do as well as the factors which shape these practices. Our analysis of how teachers seek to make grammar accessible to learners (i.e. teachers' GPCK) generated both a list of pedagogical strategies as well as – and we feel this is a particularly valuable outcome here – a list of pedagogical concerns which motivated teachers in opting for these strategies (see Section 4 above). More broadly, the study provides evidence of the interpretive nature of teaching and of the many factors that shape teachers' classroom decisions: teachers' perceptions of their knowledge of grammar, their beliefs about the value of grammar in L2 learning, and their interpretations of their context (particularly of their learners). The experience these teachers had accumulated over many years in the classroom will have undoubtedly also contributed to their decisions in teaching grammar, although this was not a theme that emerged strongly in this study. This is not because we were not interested in it but because eliciting from teachers accounts of how

their past teaching experience impacts on what they currently do is inherently challenging given the often tacit nature of such impact.

These results can be used productively in teacher education and development contexts. They can provide pre-service teachers with evidence of a varied range of grammar teaching techniques and insights into the informed use which experienced teachers make of them. The data presented here can also be used to raise teachers' awareness of the complex decisions that teaching grammar entails and of the interacting factors which impinge on such decisions. Finally, the accounts we have presented can be used to stimulate teachers to reflect on their own approach to teaching grammar and on their rationales for it. Where reflection of this kind is a novel activity for teachers, it can be structured by providing initial opportunities for teachers to reflect on the work of Emma and Sophia (what Borg, 1998b, p. 273 calls "other-oriented inquiry") before teachers then conduct a similar analysis of their own work. This type of case-based reflective practice can not only enhance the teachers' pedagogical knowledge and their awareness of themselves and of their own perceptions, but will also promote a sustainable form of professional development.

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Appendix

Features of stimulated recall (SR) interviews as used in the present study (adapted from Faerch and Kasper (1987)'s classification categories of introspection research).

<i>Category</i>	<i>Use in present study</i>
Object of Introspection	<ul style="list-style-type: none"> • Teachers' grammar explanations. • Grammar-related pedagogical content knowledge. • Contextual factors.
Modality	The data introspected were oral.
Relationship to concrete action	The introspection was related to concrete classroom events or actions.
Temporal relation to action	Each teacher was observed twice a week, each time during a two-hour class. Each SR session lasted 40-80 minutes and was held once a week the day after the last class of the week. This means that the time between the events under analysis and the interview was never longer than 4 days after the first observation of the week. In the cases when a SR session was cancelled, arrangements were made with the teacher so that, as suggested by Faerch and Kasper (1987), the time between the events under analysis and the interview was kept as minimum as possible (never longer than a week).
Participant training	The type of SR interview used required no specialised training on the part of the participants. Emma and Sophia were both experienced teachers who were used to being observed and to participating in interviews. Yet instructions were provided during SR interviews.
Stimulus for recall	A recall support (audio and transcripts of relevant lesson episodes) was used to prompt responses. When relevant, other stimuli were used such as textbook materials, tasks, and learners' work.
Elicitation procedure	<ul style="list-style-type: none"> • The researcher initiated the verbalisations by asking the teacher to listen to and read the transcript of a grammar teaching event in their classes. • The researcher and the teacher then engaged in a concrete discussion of what the teacher was doing, her interpretations of the event, and her rationale for the instructional decisions she was taking (Borg, 2006). • Though the researcher selected the events to be discussed, the participant was invited to comment on other episodes and actions she considered relevant. • Though the discussion was based on the researcher's questions, a certain amount of freedom was allowed in terms of the direction the discussion took.

Word count

Abstract: **184 words**

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