Concept-Based Instruction:
Teaching Grammar in an Intermediate-Advanced Spanish L2 University
Classroom*1

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Introduction

The issue of teaching grammar in a foreign language classroom has been regaining the attention of researchers and teachers in recent years. This rekindling of interest is arguably the result of concern about the lack of grammatical accuracy observed among learners who have passed through pedagogical programs where opportunities to communicate are given greater emphasis than are the formal features of learners' performance. As Odlin (1996) points out, one of the difficulties faced by those who wish to bring grammar back is the need to develop a clear understanding of what grammar consists of in the first place. For instance, in a recent survey of the discussions that have appeared in the L2 literature on grammar and grammar teaching, Ellis (2004) notes, among other things, that researchers do not agree either on the relevance or even the relationship between such concepts as implicit vs. explicit grammatical knowledge, automatic and controlled processing of grammar, metalinguistic knowledge, deductive vs. inductive learning of grammatical features, etc. (see also Ellis 1997, 2002; Hinkel and Fotos 2002). Additional topics that have been addressed, but without reaching a satisfactory conclusion include the role of input vs. output in grammar learning, the importance of feedback (implicit vs. explicit), the types of pedagogical activities that most effectively promote grammatical development, etc.

While all of the above issues, and several others, are relevant to the matter of grammar teaching and learning, in this chapter, our focus is on what we believe to be the most important components of the topic: the quality of the grammatical knowledge that is presented to learners in the classroom setting and how we can promote the appropriation of this knowledge in a way that learners can access when using the L2, either in speech or in writing. In what follows we

propose an approach to teaching grammar that is predicated on the Vygotskyan principle that schooled instruction is about internalizing and developing control over theoretical concepts that are explicitly and coherently presented to learners, who in turn are guided through a sequence of activities designed to prompt the necessary internalization and control over the relevant concepts.[2] The primary value of theoretical concepts is that unlike spontaneous, everyday concepts, they are not connected to an individual's personal experience; rather they represent the generalized experience of a culture or social group (Karpov 2003, p. 66). This enables learners to operate independently of a specific context and instead provides them with the capacity to transfer the concept to all relevant contexts as needed. Although it is essential that students appropriate theoretical concepts, successful development is not merely a matter of acquiring concepts; it also depends on an ability to intentionally use the concepts to mediate the learners' future activity, including in the domain of linguistically-based communication. Thus, according to Karpov (2003, 70), true control over theoretical concepts entails conceptual as well as procedural knowledge. As he further points out, "rote skills are meaningless and nontransferable, and pure verbal knowledge is inert" (ibid.).

While Vygotsky laid down the principle that instruction must focus on the explicit and coherent presentation of theoretical concepts, he left it to his students to develop a concrete pedagogical approach for implementing this principle. P. Gal'perin and V. Davydov are arguably the two leading pedagogical interpreters of Vygotsky's thinking on classroom instruction. While both have worked out systematic pedagogies for promoting concept-based instruction (henceforth, CBI), in the remainder of the chapter we will be concerned primarily with an approach to grammar instruction based on the ideas of Gal'perin (for an approach to L2 writing based on the ideas of Davydov (1988), see Ferreira, in progress). Although Gal'perin himself, to our knowledge, did not write a great deal about L2 instruction, he and several of his students and colleagues, developed concept-based pedagogies for teaching a number of school subjects, including math, science, and Russian as a first language. To be sure, a few researchers (Carpay, 1974; Carpay & Van Oers, 1999; Kabanova, 1985; Van Parreren, 1975) have conducted experiments on L2 instruction using Gal'perin's approach; however, virtually all of these have been brief in duration, lasting no more than a few hours or a few days. The only study that we are aware of that represents an attempt to implement CBI in an L2 classroom over an extended period of time was conducted by the first author of the present chapter and reported on in Negueruela (2003). In what follows we will present a brief overview of Negueruela's project as it was carried out in a university level Spanish L2 classroom centering on three issues: minimal unit of instruction, materialization and didactic models, and verbalization activities. We will begin our discussion by first outlining the most important pedagogical principles and procedures of Gal'perin's approach, which he generally referred to as Systemic-Theoretical Instruction, or STI.

Before proceeding, however, it is important to clarify the distinction between CBI and STI. The former emanates from Vygotsky's theoretical arguments on the importance of schooling for development and as such represents his contention that the fundamental unit of instruction must be the theoretical concept. The latter represents Gal'perin's framework for implementing a pedagogy centered on theoretical concepts. We will further explicate these two important notions as the discussion proceeds.

Vygotsky and the importance of concepts in development

Vygotsky's (1986, 1978) argument that properly organized instruction leads development is the point of departure for CBI. According to Vygotsky (1978, p. 90), "properly organized learning results in mental development and sets in motion a variety of developmental processes." Vygotsky proposes that there is a fundamental connection between instruction and development, and that indeed learner's development will be affected by the quality of instruction. Furthermore, for Vygotsky, the relationship between instruction and cognitive development and the relationship between thinking and speaking come together in the unit of analysis proposed for the study of mind, the concept. Concepts, as the minimal unit of higher forms of thinking (intentional memory, voluntary attention, planning, imagination, problem solving) are primarily, although not exclusively, verbal in nature.[1] This explains Vygotsky's fundamental interest in language activity (speaking or writing), because it is here that culturally agreed upon or conventional meanings come into contact with contextualized meanings, which can be individual or socially constructed personal meaning, or what he called, sense; that is the highly contextual meaning that individuals construct as they engage in concrete goal-directed and verbally mediated activity in the material world. In this sense (pun intended), the only way to get at meaning is through sense, that is, through studying meaning in context, i.e. in a specific activity inside a specific community of practice. John-Steiner (1985) points out, however, that concepts can also be visual as in the case of painters, auditory, as in the case of musical composers, or even a combination of both, as in the case of choreographers.

Cultural meanings are then those intentions/motives/values/perceptions, senses in the Vygotskyan view, constructed through interaction that become sedimented in language and that emerge in a community as it struggles not only to understand but to change the material world through specific activities (e.g. labor, education, and play). Of course, cultures themselves are not monolithic entities but are in turn comprised of multiple communities of practice with their own activities. Thus, while one may speak of American, Spanish, Mexican, or Chinese cultures, one must also recognize that each of these in turn is comprised of scientific, educational, business, political, sport, labor, etc. Each of these subcultures has produced its own set of concepts within the general umbrella of Spanish, Mexican, American, Chinese culture. To give a specific example, in general everyday American culture the concept indexed by the word 'gold' is usually conceived of as a yellow-colored metal that is relatively heavy in weight and that is often fashioned into jewelry that is relatively expensive to purchase. Within the scientific community, gold indexes something very different – an element of the periodic table that has a specific atomic weight and contains a specific number of electrons and protons, etc. In the business world, yet the word points to yet another concept – an object that represents monetary value and that be used as a hedge against such market forces as inflation. For Vygotsky, "Thought is restructured as it is transformed into speech [including what he called written speech]," because it is here that it comes into contact and forms a unity with the conceptual meanings of the relevant culture (Vygotsky 1986, p. 251). As Vygotsky puts it, thought "is not expressed but completed in the word." (ibid.). At the same time, the culturally constructed concepts are malleable to the extent that in the concrete circumstances in which human communicative with each other the relevant cultural concept is often shaped and reshaped in accordance with the speakers' communicative intentions (see Rommetveit, 1974 & 1992 and Lantolf and Thorne, forthcoming), but the process is supported by the original cultural meaning. Importantly, while concept of gold someone relies on depends on the specific activity one is engaged in. For example, the scientist who wishes to purchase a piece of gold jewelry is not likely to utilize the scientific concept of gold when thinking about what is entailed in the purchase process (cost, quality of the workmanship, etc.). In fact, to do so, would not only be

odd, but would in fact interfere with thinking about the factors necessary to make a wise purchase.

Human consciousness develops and is transformed through the internalization of cultural meanings during communication with others. Eventually, we begin to use these meanings organized as concepts to communicate with ourselves in private speech; that is, intrapersonal communication (Vocate, 1994) the function of which is to intentionally organize and control our own mental processes. As Vygotsky puts it, "the relationship between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing" (Vygotsky 1986, p. 255). Keeping mind that in the Vygotskyan view cognition and language activity are interconnected, learning a second language is not only a matter of learning new forms, but of internalizing while utilizing new concepts or reorganizing already existing concepts in new ways. Moreover, bringing L1 concepts into conscious focus is an important element in CBI. This is because if learners are to develop a full understanding of grammatical concepts, such as tense, aspect, mood, etc., in the new language, they need to understand how these are used in their L1.

Development of concepts requires awareness and control. However, as will be shown in some of the data presented in this chapter, L2 learners of Spanish seem to have a fairly low level of awareness the conceptual meanings operating in their L1 and as a result are unable to fully deploy their linguistic agency (lack of control) when communicating in the native language. Markova (1979) shows in an extensive pedagogical experiment on teaching Russian as an L1 in the Moscow schools, improving students' awareness and understanding of concepts such as aspect and tense through CBI, resulted in significant enhancement in the students' ability to engage in more sophisticated writing and speaking activities than was otherwise possible. In the next section we outline Gal'perin's STI as it relates to Vygotsky's notion of CBI.

Gal'perin's Systemic-Theoretical Instruction and CBI

The focus of Gal'perin's work (Gal'perin 1969, 1989, 1992a, 1992b) is on the concretization of Vygotsky's proposal that education as CBI is about promoting the cognitive development of students and not just about the amount of information at one's disposal. Gal'perin and his collaborators, especially Karpova (1977) and Talyzina (1981), developed a complete and specific heuristic for teaching that takes account of sociocultural notions such as orientation, minimal unit of analysis, action, materialization, speech, and internalization. The pedagogical proposals put forward by Gal'perin showed very promising effects in promoting cognitive development in the teaching of L1 grammar, geometry, and mathematics in elementary, middle, high school, and university settings in the former Soviet Union (Arievitch and Stetsenko 2000). Talyzina (1981) reports that STI is effective in promoting the development of abstract scientific and mathematical concepts in children at a very early age. Karpova (1977) applied Gal'perin's principles to the teaching of Russian as a first language and relies on the sequential formation of mental actions. As already mentioned, Markova (1979) implemented a conceptually grounded curriculum for instruction in Russian as a first language based on principles derived from the work of Vygotsky, Davydov, and Elkonin.

Gal'perin's program reconceptualizes the subject matter of instruction in a systematic and theoretical format beginning with a 'rational object scheme' based on the development of an appropriate conceptual unit of instruction implemented as a didactic model that materializes in a coherent way the properties of what is to be learned. To prompt internalization of the concept, speaking is necessary to liberate students from the immediate concrete

experience and to transform learning actions and concepts from the material into the ideal plane. The challenge, as Gal'perin himself recognized, is integrating these principles into a real class (see Podolskij (1990). As Haenen (1996) observes, an ideal implementation of STI to the classroom requires the re-organization of the entire curriculum, since mental actions and concepts are not formed in isolation, but are systematically connected to each other. Each concept should be coherently connected to the next.

Gal'perin argues that every human action is comprised of three components: an orientation, or planning component, an executive component and an evaluative component. The key for appropriate action, whether physical or mental, to take place is its orienting component, because it is here that the individual determines the goal of the action and the resources to bring to bear in the execution phase. Orientation is connected to understanding and generalization, whereas execution is connected to mastery and ability. In a game of chess, for instance, the orienting component of the action of moving a piece is complicated by having to consider all of the possible options and their consequences, while the executive component only entails the physical repositioning of the piece (Talyzina 1981). With regard to using a language, the orientation component entails comprehending all the linguistic and non-linguistic meanings created by participants in different communicative situations and deciding on which of these to bring to bear in the specific speech (or writing) situation. The execution component involves the ability to deploy the appropriate linguistic and non-linguistic means available with accuracy and fluency.

Different L2 teaching approaches have emphasized one or the other component. On one hand, it could be argued that grammar translation emphasized orientation with its focus on understanding of grammatical structures. Although the orientation provided by these explanations is certainly not systematic and general in Gal'perin's sense (see below). On the other hand, approaches such as audiolingualism emphasized the executive component by stressing accuracy and fluency with little attention paid to the learner's agency in deploying her own complex meanings. In Gal'perin's teaching strategy, "both understanding and ability are basically inseparable; they are conceived as a unity" (Haenen 1996, p. 149). For Gal'perin, only a proper orienting basis provided to the learner through systematic instruction can lead to full-fledged mental actions. According to Talyzina (1981), the orienting basis depends on the extent to which the guiding devices that the orienting basis contains are generalized. In the orienting stage, learners need to become aware of gain control over all of the elements that must be deployed in the execution of an action.

The Minimal Unit of Instruction

CBI supports explicit instruction in grammar to promote learner's awareness and control over specific conceptual categories as they are connected to formal properties of the language. Aspect in Spanish, the focus of our current discussion, allows the user to adopt a range of temporal perspectives which are formally signaled through a set of morphological suffixes. The key task for the learner is not so much to master the suffixes, but to understand the meaning potential made available by the concept of aspect and to learn to manipulate this in accordance with his or her communicative intentions. The concept that is the object of instruction and learning, in this case, aspect, must be organized into a coherent pedagogical unit of instruction. This unit must have two fundamental properties: it must retain the full meaning of the relevant concept and it must be organized to promote learning understanding, control and internalization (Negueruela 2003). The rules of thumb presented in most textbooks are inadequate on both counts. That is, these rules, as we will argue shortly in the case of aspect, fail to reflect the full meaning of the concept and therefore lack coherence and are not organized in a way that promotes understanding, control and internalization.

Both Vygotsky and Gal'perin recognized that effective pedagogical practice was not simply a matter of direct teaching of constructs, as say might occur in an introductory linguistics class.[2] Thus, a CBI approach to teaching language grounded in STI must link grammatical concepts to communication understood as the locus where symbolically mediated intentions are made manifest through the concepts themselves. It is through communicative activities (spoken as well as written) that learners come to realize that they can express their agency through the conceptual properties of the language rather than behaving as if there were right or wrong ways of doing things in the new language. In this respect, learner reflection on the various meanings that can be created during communicative activities is a central component of CBI. How this is achieved in STI will be illustrated when we consider Negueruela's study.

Rules of Thumb

As several scholars have already pointed out (see Garrett 1986, Danserau 1987, Langacker 1987, Hubbard 1994, Westney 1994, Blyth 1997 among others), grammatical explanations found in the vast majority of current Spanish textbooks consist by and large of incomplete and unsystematic rules of thumb that learners are somehow expected to master in order to perform appropriately in the L2. For instance, verbal aspect, usually discussed as the difference between preterit and imperfect, is often presented as a menu of unrelated rules that learners are expected to master in order to make "the right choice" when using the language. Interestingly, two of the leading applied linguists of their day, Dwight Bolinger and William Bull, attempted to remedy the situation, but without much lasting impact on Spanish pedagogical practice (see Bolinger 1991, Bull 1984/1965). While most of their ideas only sporadically found their way into mainstream Spanish pedagogy, Bull and his colleagues (Bull et al. 1972) published an introductory textbook with the title *Communicating in Spanish*, which contained coherent conceptual explanations of the grammar of the language. However, focus on grammatical explanations soon became incompatible with how communicative language teaching was defined, largely, on our view, as a result of the profound impact of Krashen's (1981, 1985) input hypothesis, which argued against the value of anything but the simplest grammatical explanation for acquisition.

Whitley (1986/2000) discusses the inadequacies of grammatical explanations found in most Spanish textbooks. Although the example he uses to illustrate his point with regard to aspect (see Table 1) is taken from a popular textbook published nearly forty years ago (Dasilva & Lovett 1965), even a cursory examination of texts published today reveals the ubiquity of the same rules of thumb.

IMPERFECT	PRETERITO
- Tells what was happening.	- Records, reports, and narrates.
- Recalls what used to happen.	- With certain verbs causes a change
- Describes a physical, mental emotion.	of meaning.
- Tells time in the past.	
- Describes the background and sets the	
stage upon which another action occurred.	

Table 1: Uses of Preterit/imperfect according to Dasilva and Lovett (1965) taken from Whitley (1986).

Notice that the rules presented in Table 1 are capricious to the extent that some are semantic in referring to a complete event, others are functional as when the preterit is used for

foregrounding), while others are perceptual and concrete as when the imperfect is used to tell time. Simplified and reductive rules of thumb, despite the good intentions of their creators, have the potential to do more than good, because for one thing they depict language as a sedimented entity that seems to have a life of its own independent of human users. This is hardly the stuff of coherent concepts that allow for the development of learner agency and as we will see when considering Negueruela's study, they easily lead students down a garden path of confusion and frustration. Whitley makes this point forcefully,

> the defects are manifold here [table 1]. First, this treatment represents the two categories as arbitrary groupings of independent uses: five different imperfects, two different preterits; and the fact that recordings end up as preterit rather than imperfect seems as capricious as the classification of tomatoes as vegetables rather than fruits. Second it suggests that the imperfect is used more frequently […] Third, it is extremely difficult to apply because its vagueness in specific contexts robs it of any criterial value. If students wish to convey their *I slept all day*, should they opt for 'what was happening', 'describes physical state', 'describes background', or 'records, reports'? All these seem applicable and conflicting; thus, students are baffled when their teacher recommends *Dormí todo el día* over *Dormía todo el día*. (Whitley 1986, p. 109)

It is important to understand that the learning of theoretical concepts is not in itself the goal of language teaching. On the contrary, the goal of STI is for learners to be able to exercise their agency over the language when communicating, but to achieve this, requires a deep conceptual understanding of the possibilities offered by the language to construct the appropriate meanings the user wishes to construct. In teaching theoretical concepts, therefore, it is important to make learners aware of the linguistic options available to them. In this way, learners are empowered and development the ability to control the new language rather than be controlled by it.

To conclude this section, a theoretical concept is a coherent systematic general meaning that can be recontextualized for a variety of tasks. Its regulatory power comes from abstract generalization and contextual specification (Valsiner 2001). A concrete understanding of a linguistic concept, such as a rule of thumb, lacks the qualities of a genuine concept: generality, abstractness, coherence, independence, functionality, and significance (Negueruela 2003). Simplified and reductive rules of thumb are much more constraining in that they connect to specific concrete contexts (e.g., fill-in-the-blank exercise, translations, narrative texts) where there appears to be right and wrong responses. In arguing for the relevance of conceptual explanations of grammar we are not arguing that learners are incapable of spontaneously developing a functional understanding of grammar through trial-and-error procedures, clearly they are. However, this generally takes a great deal of time and effort and is most often a frustrating process. More importantly, however, and Vygotsky (1986) strongly argued, spontaneous knowledge of any object of learning, including language is not normally the object of reflection and therefore difficult to intentionally control.

Materialization of concepts through didactic models

Once a minimal unit of instruction is determined (e.g., the concept of aspect for teaching of Spanish preterit and imperfect), the development and use of didactic models to capture the complexities of the concept forms the critical next step. Didactic models are the material tools that learners have at their disposal to help understand and internalize the concept. As we have seen textbooks do not select an appropriate unit of grammatical instruction and instead opt for often incoherent lists of cues that learners are expected to follow when using the language. Engestrom (1996) stresses the importance of developing adequate didactic models for all school subjects and argues that approaches that simplify the object of study lead to, what the German

educator Martin Wagenschein, quite provocatively calls "synthetic stupidity", a type of ignorance that emerges from the encapsulated study of the world that often occurs in the educational setting. For instance, many adults –regardless of their educational background— tend to offer a quick but absurd explanation for the phases of the moon (full moon, half moon, quarter moon, and new moon), based on the common misconception that "it is the shadow of the earth that makes the moon time and time again into a crescent" (Wageschein, 1977, p. 42-43). This confusion between the phases of the moon and lunar and solar eclipse is not an indication of immature thinking or lack of schooling. Quite the contrary, it is the result of the artifacts and misleading representations provided in school. The diagrams included in many textbooks to depict lunar phases are two-dimensional representations that do not respect scale, sizes and distances of the bodies involved. Thus, the fact that it is virtually impossible for the earth's shadow to cover the moon, other than in the rare case of a lunar eclipse is lost.

For Gal'perin, learning that fosters development is first based on material aids that can be manipulated by learners to represent structural, procedural, functional, and content properties of the object of study (see Karpova 1977 for a concrete example). Didactic models such as charts are often times the better option to represent the properties of sophisticated and complex objects of instruction such as grammatical concepts (see Figure 1 below for an example developed by Negueruela 2003). Two aspects of these diagrams are salient: their quality (empirical or theoretical) and manner of presentation to students (pre-fabricated or exploratory). With regard to quality, the models must raise learners' awareness of what linguistic resources are available to them to carry out concrete linguistic actions with specific purposes across all contexts. In essence, they must be maximally informative and at the same time generalizable. In addition, the models must allow students to explain their communicative intentions in actual performances. Whether didactic models are more effective if they are pre-fabricated by the instructor or are exploratory in the sense that learners under the guidance of the instruction invest the effort themselves to construct their own models remains an open research question that we will not consider further here.

VERBALIZATION for ASPECT

- The concept of "aspect" is simply put the perspective on an action. That is" what is the part/aspect of the action that you, as the speaker/writer, want to emphasize?

- The meaning-aspect of a verb is determined by two components:

      Lexical aspect: based on the meaning of the verb (cyclic or non-cyclic)
      Grammatical aspect: based on the verbal tense used: preterito/imperfecto.

- When these two elements are combined, you can emphasize the beginning, end, middle (ongoing), or completion of an action.

- Follow the flow chart below and to explain to yourself why you can select preterit or imperfect to present an action as completed, ongoing, beginning or ending?
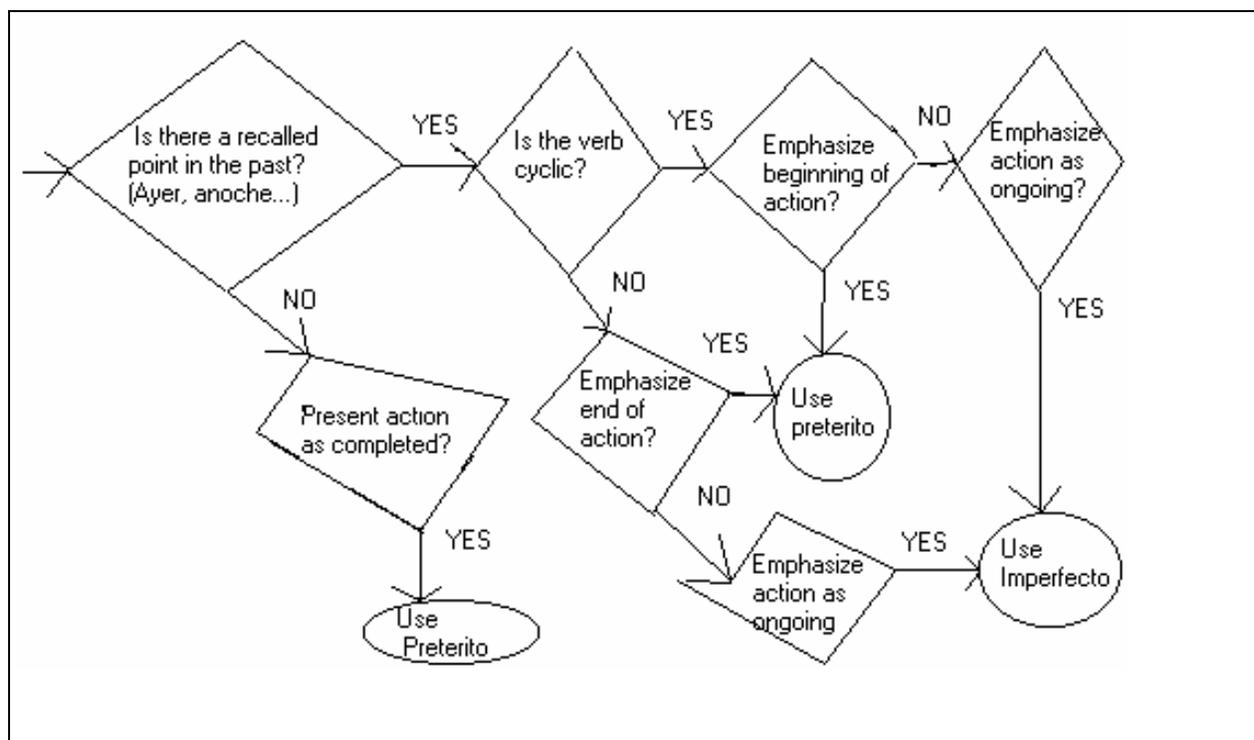
Is there a recalled point in the past? (Ayer, anoche...)
Is the verb cyclic?
Emphasize beginning of action?
Emphasize action as ongoing?
YES
YES
NO
NO
NO
NO
YES
YES
YES
YES
YES
YES
Present action as completed?
Emphasize end of action?
Use preterito
Emphasize action as ongoing
Use Imperfecto
Use Preterito

Figure 1. Didactic model constructed by Negueruela (2003) based on Bull (1965)

Although the use of flow charts is not unique to CBI approaches to teaching grammar (see for example Massey 2001), in an STI approach they are not primarily aimed at ensuring that students get the right answer to teacher questions, as often happens in encapsulated education (Engestrom 1996). Rather they are but one component in an integrated approach to instruction whose purpose is to help learners develop a new meaning-making resources, a different thinking for speaking framework, as Slobin (1996) might put it.

Verbalization activities
Vygotsky (1986) highlights the importance of speech in internalization, "our experimental study proved that it is a functional use of the word, or any other sign, as a means of focusing one's attention, selecting distinctive features and analyzing and synthesizing them, that plays a central role in concept formation" (p. 106). For Vygotsky, it is the functional use of speech in selecting and focusing attention on the important elements in concept formation that facilitates the process of internalization, and the formation of the ideal or internal plane of understanding (see also Ilyenkov 1977). Following Vygotsky's lead, Gal'perin argues that using language as the tool for internalization frees learners from the material properties of specific contextualize actions and allows them to recontextualize concepts as needed. Therefore in STI verbalization is an instructional tool for attention focusing, selection analysis and synthesis, and hence is directly connected with internalization and concept formation. Although verbalization has been broadly interpreted by different SCT scholars interested in classroom learning to include dialogic interaction between learners (e.g. Haenen 2001 & 2003, Carpay & van Oers 1999, Swain 2000), Negueruela (2003) defined it in fairly narrow terms, as the intentional use of overt speech to explain concepts to the self (see also Kabanova 1985). This is what is referred to as private speech or intrapersonal communication (Vocate 1994); that is, speech aimed as self-reasoning and self-regulation.

For the most part, the verbalization activities were conduced in the learners' L1, English, although some did attempt on occasion to use the L2. While reliance on the L1 may seem to

some to be a violation of the traditional practice of proscribing use of the L1, this practice makes little theoretical sense. It is an impossibility to build orientations to new tasks from meanings in the L2 – these are after all the ultimate goal of the learning process (see Kabanova 1985). The meanings of our L1 serve as the basis of our reasoning and self-regulation and to proscribe their use is to inhibit the very learning process we are attempting to promote. For this reason, "Gal'perin advocates that the orienting basis be built from the native language" (Carpay 1974, p. 171).

The Study

An intermediate-advanced university course in Spanish grammar and composition (sixth semester of study) was chosen to implement CBI. The section under study followed a semester calendar (16 weeks). The course concentrated on the development of writing skills and grammatical knowledge. The rationale for choosing this particular FL Spanish course to implement CBI was based on the observation that students at this level continued to experience significant problems with grammatical issues such as preterit/imperfect, indicative/subjunctive, tense selection, etc. despite the fact that in many cases the same grammatical features have been the target of instruction in almost every course students have taken since high school.

The content of the syllabus, including the main grammar points to be covered, grading criteria and exams were the same as for other sections of this multi-section course. The standard syllabus centered on the following grammatical topics: indicative and subjunctive, conditional tenses, relative pronouns, and non-personal verbal forms. Indicative and subjunctive was taught through CBI instruction and was part of the standard syllabus and exams. Additionally, the instructor also taught three grammatical points that were not covered in the prescribed syllabus: aspect, articles, and verbal tense. These three features were not explicitly included in the required course exams.

Grammar instruction in standard sections of the course followed a conventional approach based on the course textbooks as focused on a sentence-based approach using grammatical rules of thumb, fill-in-the-blank exercises, translation and editing tasks. Students participating in the CBI course were presented with grammatical concepts such as verbal mood, verbal aspect or verbal tense through didactic models, carried out verbalization activities at home where they explained to themselves grammatical forms used in discourse using grammatical concepts such as verbal aspect, mood, or tense, and improvised in spontaneous oral scenarios based on Di Pietro's (1987) Strategic Interaction Approach to language teaching.

Data Collection

Two primary types of data were collected: conceptual development data and personal data. The former consists of three subsets of data: learners' definitions of grammatical concepts designed to tap into their conscious and explicit knowledge of the relevant concept; spontaneous performance data comprising several oral and written tasks; verbalization data consisting of students' home recordings in which they were asked to explain to themselves specific grammatical concepts relying on explanatory charts provided by the instructor. Definition data were collected before a particular grammatical concept was introduced and then again at the conclusion of the course.

Six verbalization activities were included in the course. These were designed so that students could explain to themselves specific grammatical points using the concepts represented diagrammatically. These activities were carried out as homework assignments and were audio recorded by the students for later analysis and discussion. They began at the level of the sentence but quickly moved to discourse-level features of the language. This shift in focus was important because it encouraged students to reflect on how they created meaning in specific communicative scenarios.

The performance data were collected at the beginning, at various points in the course, and again at the conclusion of the course. Personal data comprised responses to an online questionnaire as well as students' reflections on the course collected in the 8th week (mid-semester) and 16th week of the semester (final week of classes).

Data Analysis

In this section we will present samples of the various types of data that were collected during the course, as described in the preceding section. We begin with definition data.

Definition Data

Conceptual definitions are important data because they reveal the quality of the resources that learners can bring to bear during communicative activity, and according to Valsiner (2001, p. 87) they are "functional for the future of the person." Importantly, as Valsiner further points out (ibid.), this type of knowledge does not equate with actual behavior (i.e., linguistic performance); however, it plays a critical role in guiding development of performance ability because it serves to orient learners to the meaning-making possibilities offered by the language. It is therefore important to uncover relationships between the development of coherent and complete theoretical concepts on the part of learners and the development of their actual performance. Thus, the data on conceptual definitions must be viewed in light of linguistic performance data (see the earlier commentary by Karpov on conceptual and procedural knowledge). As will become evident in the data analysis, prior to STI instruction students' understanding of grammatical concepts are frequently are quite fragmented and lacking in coherence, no doubt a reflection of their past experience with rules-of-thumb instruction.

Negueruela (2003) devised an approach to the analysis of conceptual knowledge that he refers to as Concept interrelated Feature Analysis, or CFA. CFA is comprised of seven interrelated features; three of which form the basis of the theoretical definition: generality (synthetic), abstractness (analytic), and systematicity (coherence and hierarchical). The fourth, explicability (awareness), emerges from the first three and relates to a learner's ability to define concepts coherently. The remaining three features, independence (re-contextualized), functionality (control), and significance (personal sense) can be inferred from the first four; that is, a very concrete or unsystematic definition will not be easily recontextualized, and will not have theoretical functionality and will lack personal significance –in the case of a grammatical concept, personal significance can be studied through evidence of agency, that is, the use of pronouns in a definition that reveal the learners' understanding that much of choices in marking aspect emanates from the speaker's perspective on an event and does not depend on external triggers, as often claim by rules of thumb . In an interesting small-scale study, Seliger (1979) investigated the relationship between grammatical rules of thumb and performance and found no connection between the two. Learners knew correct rules, but couldn't apply them, while others, including natives, did not know the correct rule, but still could produce the correct form. From the CBI perspective this is not a surprising outcome, because rules of thumb are not concepts and are very difficult to transfer beyond the bounds of the specific contexts (e.g.,

grammatical exercise) in which they were encountered. It is precisely this situation that theoretical concepts seek to ameliorate.

Due to space limitations, we cannot consider anything near the full set of rich and complex data from the sixteen learners reported on in Negueruela (2003). We will instead examine the data from some of the learners for one of the grammatical concepts addressed in the STI course – verbal aspect. The following definition of aspect was provided by the participant 1 at the point in the course where aspect was about to become the object of study (time 1): "The idea behind imperfect and preterit is for expressing things in the past. I use preterit when it wants to express something that is finished, or that it has a definitive time. The imperfect is used to describe things that happened with frequency in the past, or general things. The imperfect is used in the past to describe characteristics of people, to tell age of a person, and also to tell time." At time 2, the student produced the following definition of verbal aspect: "The imperfecto is used to describe a point in the past that isn't specific. It is also used when describing the background of a story. The pretérito is used when you are talking about a recalled point in the past, something specific that happened at a specific time."

In the first definition provided at time 1 the student's understanding emphasizes a non-specific explanation of the use of preterit based on completeness of an action, but there is no parallelism for use of imperfect, since its use is defined in terms of perceptual concrete criteria. The student no doubt externalized knowledge of aspect that she had appropriated in previous instruction, and it seems clear that this knowledge was based on a rules-of-thumb approach. Moreover, one can easily present counterexamples to the rules she presented. At time 2, on the other hand, the definition incorporates the importance of establishing a point of reference in determining the aspectual meaning of preterit in a specific utterance. The definition is more coherent and it shows sensitivity to the relevance of speaker perspective in marking aspect and thus takes on a more semantic and functional tone. To be sure, the definition still fails to manifest full conceptual understanding of aspect, but it is greatly improved over the original definition provided. Table 2 summarizes the differences between the participant's definitions at time 1 and time 2 in terms of CFA.

PARTICIPANT Student 1	ASPECT	
	TIME 1 (10/30/02)	TIME 2 (12/20/02)
1. Explicability	Yes	Yes
2. Generality	Perceptual/ Functional Some	Functional Semantic Some
3.Abstracteness		
4. Systematic	No	Yes
5. Independence	No	Yes
6.Potential Theoretical Functionality	No	Yes
7. Significance		
	No	Yes

Table 2: Participant 1 analysis of aspect at time 1 and time 2

Discourse data

Discourse data come from L2 learners' spontaneous performance collected before and after STI instruction through written and oral language diagnostic tasks administered during the first three weeks and again during the final two weeks of the semester. The written diagnostic used for assessing development of aspect consisted of a nine-picture sequence taken from Mayer's (1979) well-known book, *Frog Goes to Dinner*.

Before proceeding with the analysis of the narratives produced by participant 1, a word of caution is in order. According to Negueruela (2003), target-like performance on a specific task, in itself does not definitively demonstrate full conceptual understanding of a grammatical feature. What is required, as was robustly demonstrated in Markova's (1979) impressive ten-year study of Russian school children, is to document performance over a wide array of tasks over a long period of time. One of the most important findings of Markova's study was the fact that students developed a high level of creative ability in using their L1 – an ability that allowed them to use language in ways not specified by conventional norms of the community. Clearly, Negueruela's study, as with most studies that have been reported in the L2 literature, was limited in its scope, due in large measure to the constraints imposed by the general language program in which the STI course was embedded. The unfortunate feature of the study is that at the point where the students were beginning to shift their understanding of the relevant grammatical features and to improve their language use, the course was over.

In (1) we include examples of written performance collected at time 1 (before STI) and (2) we documents samples of the student's writing following STI. Words in bold indicate coherent use of relevant aspect morphology and underlined words indicate incoherent use of the morphology. The translations provided are literal in order to capture to the extent possible the full meaning, and where relevant, the awkwardness of the Spanish sentences.

1. WRITTEN PERFORMANCE: Frog story before STI

(1.a)　[…] *para celebrar el cumpleaños de él, la familia de Roberto* <u>*vayan*</u> *a un restaurante*
　　　　'…in order to celebrate his birthday, the family of Roberto be gone to a restaurant'
(1.b)　[...] *y la familia* <u>*fueron*</u> *muy excited a ir*
　　　　'…and the family were very excited to go'
(1.c)　*Cuando Roberto y su familia* <u>*estaron*</u> *en el restaurante, Jorge [rana]* **dejó** *el jaquete [sic] de Roberto y* **<u>fue</u>** *en el saxofono de un miembro [sic] del grupo musical.*
　　　　'When Roberto and his family were in the restaurant, Jorge [rana] left the jacket of Roberto and went in the saxophone of a member of the musical group'
(1.d)　*Todos los clientes del restaurante no* **querían** *que* <u>*hay*</u> *un frog en el restaurante.*
　　　　'All the clients in the restaurant did not want that there is a frog in the restaurant'
(1.e.)　*Toda la familia* <u>*era*</u> *furioso con Roberto porque él* **trajó** *Jorge al restaurante.*
　　　　'All the family was furious with Roberto because he brought Jorge to the restaurant'
(1.f.)　*Cuando* <u>*regresaban*</u> *a su casa, el padre de Jorge* **mandó** *a él a* <u>*ir*</u> *a su cuarto*
　　　　'While Roberto came back, the father of Jorge sent him to go to his room'
(1.g)　*Roberto* <u>*aparece*</u> *sentir malo por sus acciones*
　　　　'Roberto seems to feel bad for his actions'

2. WRITTEN PERFORMANCE: Frog story after CBI

(2a)   *Este es un cuento de un chico, Juan, que **iba** a la cena con su familia.*
        'This is a story about a boy, Juan that went to have dinner with her family'

(2b)   *Toda la familia **estaban** felices con la excepción de Juan*
        'All the family was happy with the exception of Juan'

(2c)   *Mientras ellos **estaban** leyendo el menu, la drana [sic] de Juan, <u>jumped</u>... **saltó** (no sé la palabra pero está en la forma de pretérito) de la chaqueta al instrumento de uno de los miembros del grupo.*
        'While they were reading the menus, Juan jumped (I don't know the word but it is in the preterit form) of the jacket to the instrument of one of the members of the group'

(2d)   *Todos los clientes del restaurante no **podían** creer lo que **pasó**.*
        'All the clients in the restaurant could not believe what happened'

(2e)   *Juan **se dió** cuenta de que la drana [sic] **era** de él, y su familia **estaba** 'horrified'.*
        'Juan realized that the frog was his, and his family was horrified.'

(2f)   *Cuando **llegó** a la casa el padre **mandó** que Juan <u>fue</u> a su cuarto.*
        'When he got home, his father sent John to go to his room.'

(2g)   ***Estaba** muy feliz porque no **necesitó** pasar toda la noche celebrando los cumpleaños [sic] de su hermana.*
        'He was very happy because he did not need to spend the whole night celebrating the birthdays of her sister.'

The improvement from time 1 to time 2 is marked. Before STI, participant 1 had problems with verbal aspect. In 1.a, she used present subjunctive, most likely a random selection on her part, deploying a meaning that is incoherent in the context of use. In 1.b, the learner should have used imperfect morphology and the verb '*estar*' to convey the emotions of the family, instead of using the Spanish verb '*ser*' in the preterit that conveys an incoherent meaning in this context. Following STI 2.a and 2.b show a marked improvement not only in how she uses aspect, with imperfect used consistently in both cases ('*iban*' and '*estaban*'), and with appropriate lexical choices. The copula '*estar*' is also used appropriately, whereas time 1 (example 1.b) it was not.

We have underlined '*fue*' in 1.c (coherent use of aspect) because the meaning conveyed by the verb in the particular context is not very natural. Example 2.c. is especially interesting. The learner used '*saltó*' which conveys the meaning depicted in the sequence, despite the fact that she first wrote the verb in English 'jumped', then in Spanish '*saltó*', and then she stated that she does not know the word –when indeed she did—stating that she desired to render it in the preterit form. Finally, 1.d is one of the few instances in which participant 1 used imperfect appropriately before instruction. However, she constructs a complex sentence that would require her to use imperfect subjunctive in the subordinate verb. Instead she used the present tense. After STI, in 2.d she used a different construction where she coherently deployed imperfect and preterit.

All of the examples confirm marked improvement in the use of verbal aspect. Item 2.e shows how the learner was able to first use the preterit, and then the imperfect form of both *ser* and *estar* in the same sentence. Example 1.f produced prior to instruction nicely reflects the application of a rule of thumb that resulted in an inappropriate formation. The student attempted to use imperfect after *cuando*, since this is one of the adverbs that is often taught as a trigger for the imperfect. Learners are instructed that they should use the imperfect to set the

scene in a narrative, and then use the preterit in the next verb. Following this rule of thumb, the meaning participant 1 conveyed in 1.f was not coherent in the context of the narrative. The pictures in the story are not about the father sending the little boy to his room while they were coming back home in the car; the father sent the boy to his room once they came home. Following instruction, in example (2f) participant 1 used two verbs in the preterit with the word *cuando*, thus violating her previous rule of thumb, but conveying a coherent meaning –the two actions were sequential and not simultaneous with regard to the story she was trying to construct (when the family arrived home, the father sent the boy to his room).

The emergence and frequent use of the Spanish imperfect to construct narratives in the past, which parallels the semantic and functional conceptualizations of Spanish verbal aspect is especially interesting. It is important to remember that before STI the learners had no doubt studied verbal aspect numerous times in their previous courses. In fact, participant 1, as most of the participants in Negueruela's study (9 out of 12 learners) had been given the traditional rule-of-thumb explanation in the Spanish course they participated in the semester prior to enrolling in the STI course.

Verbalization data

A total of 558 verbalizations were collected and compiled into a corpus. In addition to documenting developmental trends showing enhanced conceptual understanding of the relevant grammatical feature, the corpus also reflects the learners' struggle to overcome their previous, rule-of-thumb-based understanding of the concept. In what follows we will consider a few examples relating to aspect.

The first example comes from participant 1:

> (3) I was trying to say, one day, my friend and I were going shopping. Entonces I used the imperfect. "Ir" no es un verbo cíclico y no hay un tiempo específico. If I wanted to say: "my friend and I went shopping", I could've use the preterit, but because I was telling the background of the story es mejor decir "íbamos". [participant 1]

In this first example, participant 1, through reflecting in the notion of lexical aspect and her own intent of portraying the event as durative, is able to realize that in most contexts both preterit and imperfect are indeed possible. She is still intermingling semantic reasons, the meaning of aspect, with functional ones, providing the background of a story, but she is beginning to realize the personal significance of the grammatical choices she makes, as is documented in the continuation of her verbalization in (4):

> (4) Entonces cuando estábamos en esta tienda los mismos dos que nos vimos en otra tienda caminaba por la puerta". First verb: "estábamos", imperfect because it was the ongoing action of us being in the store. Second verb: "The same two men that we saw", here I used the "pretérito" (vimos) because it was a completed action. Third verb: "They walked", here I should've said, "caminaron por la puerta", but "caminaba" could work if I had intended to say "those men were walking through the door. [participant 1]

Here the learner once again reflects on how she has the option of choosing between the two morphological forms that manifest aspect –action completed or ongoing— and crucially that it is possible to utilize either aspect depending on the meaning she as speaker wishes to express.

Although participant 1 came a long way in her understanding of aspect, the road to conceptual development is not, as Vygotsky (1986) cogently argues, a smooth linear process. In

a later verbalization, the same participant resorts to a rule-of-thumb approach to explain her choice of aspect:

> (5) "Como siempre mi familia y yo fuimos a la casa de mi tío". En esta frase usé el pretérito y debí usar el imperfecto porque es el "background" y es una acción habitual. [participant 1]

Not only she is using a rule of thumb for imperfect (use it for habitual actions), but the rule that she invokes leads her to argue that imperfect is a better option for the utterance she has created, when indeed is not. Both options are possible; it is simply a question of perspective. Notice also, that in this case, she relies on the L2 in formulating her explanation. An interesting topic for future research would be to investigate the impact of L1 vs. L2 verbalizations on conceptual development.

As it turns out, participant 12 was able to explain his use of aspect quite effectively even at the time of the initial verbalization, as evidenced in (6):

> (6) *El seis de junio fui a la escuela a mi dormitorio para comenzar mis clases*. [June 6th, I went to school to my dorm to begin my classes] I used preterit here because it's referring to a recalled point: "el seis de junio" and since "fui" is a non-cyclic verb, it's referring to the beginning of the action. [participant 12]

The explanation seems to show that he understands the importance of temporal perspective in the selection of the appropriate morphological marker of aspect. However, despite continued STI instruction, which we might anticipate resulting in even greater understanding of the concept, a time (2) verbalization reveals an inconsistency in which influence of a rule-of-thumb account slips into his explanation:

> (7) *Siempre había mucho para comer*. [There was always a lot to eat] Imperfect because it's emphasizing an ongoing action because I am saying "*siempre*", so I use Imperfect cause it's a habitual action. [participant 12]

The learner begins his explanation by stating that his use of imperfect reflects an on-going action, but then confuses thing by keying in on the temporal adverb *siempre*, frequently pointed to by textbooks and teachers as a trigger for imperfect because it indicates "habitual action."

Participant 2 is able to incorporate semantic reasoning when explaining grammatical features at time 2, but she continues to explain her use of imperfect as relating to habitual actions, again, reflecting a rules-of-thumb approach.

> (8) *Como cada día de las fiestas mi abuelo se dormía* [Like each day of the holidays my grandfather slept]. "*Dormía*" because the action is ongoing. It's something that occurs all the time, so it's cyclic in a sense and it emphasizes that he slept until the dessert was ready, so therefore I used imperfect. [participant 2]

She begins by explaining her choice of imperfect appropriately, an on-going action. However, when attempts to explain its meaning, her account becomes incoherent and fails to present a coherent and complete understanding of verbal aspect. In fact, she says that the verb '*dormía*' is cyclic (which it is not), and she adds that the verb is cyclic because the action happened all the time. It appears that the learner accesses the everyday meaning of cyclic – occurring repeatedly at regular intervals, as with the seasonal cycles – to construct her understanding of aspect. The

problem is that this meaning does not jibe with Bull's special understanding of cyclic aspect as entailing a simultaneous beginning and end of an event. In this sense, the learner appropriates the term 'cyclic' for her explanation but personalizes its meaning based on the everyday meaning of the concept. This sense of term will not help the learner understand the relationship between verbal aspect and lexical aspect, and the meaning expressed by imperfect morphology in the context of use. The fact that the grandfather's sleeping occurred "all the time" is not conveyed by imperfect morphology but by the adverbial phrase *"como cada día"* (like every day). Thus, the preterit option is also possible in example (9). Rules of thumb still permeate through this explanation.

Personal Reflections

Students were also asked to reflect on their experiences learning Spanish grammar through STI. They were asked submit their reflections via email during the eighth week and again during the sixteenth, and final, week of the semester. These reflections provide a unique opportunity to understand the feasibility of implementing CBI in a L2 classroom. The reflections were organized according to how they related to the main principles of CBI: understanding grammar through meaning and not mechanical rules, the 'cognitive need' that arises from instructional activities based on understanding instead of memorization, and the relevance of charts and verbalizations in learning grammatical concepts.

Understanding grammar

One of the critical issues in the application of CBI instruction was the importance of understanding grammatical categories through understanding the complexities of the conceptual meanings carried by specific forms while avoiding the misleading shortcuts provided by grammatical rules of thumb. In this regard participant 3, in her reflections collected the last week of classes, stressed the importance of explaining grammar to herself to really know if she understood it:

> (8) When I explain concepts to myself, I always understand the concepts better. If I can explain it to myself, then I know that I really do understand the information. I feel as though I have learned so much about the language. I have really improved my writing, and now in my writing I am able to use preterit, imperfect, subjunctive, indicative and future tenses. Before this class I only used present tense. [participant 3]

As Vygotsky (1986), if one cannot put something into language one does not really understand it. More importantly, this participant connects her newfound understanding of grammar to her ability to use a wider array of forms in performance.

Participant 5, in his mid semester reflections, comments on how he struggled between the old grammatical explanations and the new conceptual understanding of grammar:

> (9) It's more difficult to speak and rationalize using a certain tense for me, mainly because the reasoning is different from what I've been taught in the past. I'm still stuck on trying to rationalize it using old methods and it gets confusing sometimes. [participant 5]

STI has generated a conflict for this student – a conflict that can lead to positive developmental outcomes. Indeed, as we see in the student's final reflection, the conflict is resolved and there emerges a much clearer understanding of the importance of personal agency in creating contextualized meaning through grammatical resources:

(10) [Verbalizations and recordings] have helped a lot because it's a more abstract way of thinking about it, so instead of saying 'ok, this situation uses this particular rule, so I need to use this tense' I say 'what is the point I'm trying to express here, and which tense best accomplishes that.' I think I've learned how to effectively communicate my ideas better. [participant 5]

Development of a sense of agency that this learner reports after STI instruction is further confirmed at a later point in the final commentary:

(11) I need to consider the aspect that I wish to emphasize and what the meaning is behind the words that I'm saying so that the verb tense helps people understand what I'm saying as much as the actual verbs I use. [participant 5]

The learner's discovery of the importance of meaning makes this learner feel that he had not only learned about grammatical forms or even concepts, but that he had also learned something about communication in the new language. This is clearly an important goal of any communicative language pedagogy.

The following two comments, typical of those produced by virtually all of the students at the conclusion of the course, reveals an appreciation of the difference between a rules-of-thumb approach to grammar instruction and a CBI approach in which user agency is central to meaning making:

(12) In past classes, we have studied every part of grammar that we studied in this course. The difference is this: throughout Spanish 200, we were taught a different way of looking at the material. Yes, we reviewed it and realized our previous mistakes, but we also learned how to look at the grammar abstractly. It's no longer, 'use subjunctive when you say 'es importante', etc., now we can look at the meaning of the sentence and realize indirect reasons for using the subjunctive, for example [participant 7]

(13) In earlier Spanish classes they would tell us to choose a tense or mood based on very specific guidelines, but in this class I learned that the guidelines are not always exact and that it also depends on how you are trying to express the action or situation [participant 8]

Verbalizations

With regard to verbalizations aimed at self-explanations of their performances, participant 12 made the following remarks:

(14) These assignments help me justify my reasoning for my decision. Even though I'm not sure if they are correct, it helps to explain vocally. Also the reasoning comes from actual concrete aspects that you gave us. For example, just because it says 'para que' should not indicate that the sentence will take the subjunctive form. [participant 12]

These reflections show again the conflict between prepackaged menus of rules and the conceptual way of understanding of grammar, which the learner feels is 'easier' to remember than rules.

An especially interesting comment comes from participant 7 who reports that it was beneficial for her not only to explain her performance to herself, but also to someone else, even if the other person did not understand what she was talking about:

(15) Now that I think about it though, I made my roommate (who isn't a Spanish major, mind you, so she had no idea what I was talking about) listen to me explain when you use which pronoun, etc. Again, I always have found it helpful to explain to someone else (or a machine for that matter) the information … (I really liked the idea of the tape- at first it was weird to talk to yourself into a recorder, but it helped me so much … By recording myself speaking, it was basically the same thing- and I think it helped me learn the information. [participant 7]

This reminiscent of the 19th century German writer Heinrich von Kleist, who in a short piece entitled, *On the Gradual Working Out of One's Thoughts in the Process of Speaking,* quoted in Appel and Lantolf (1994, p. 438), nicely illustrates the importance of speaking for understanding:

 If you want to understand something and can't figure it out by pondering, I would advise you, my dear ingenious friend, to speak of it to the next acquaintance who happens by. It certainly doesn't have to be a bright fellow; that's hardly what I have in mind. You're not supposed to ask him about the matter. No, quite the contrary; you are first of all to tell him about it yourself.

Living in a more technologically advanced age than von Kleist, participant 7 found not only a friend who didn't understand anything about Spanish, but she also found a machine, which functioned equally well. The point is, however, that the primary addressee for participant 9's utterances was neither the friend nor the machine, but the self. In essence, the verbalization activities were a form of private speech, which as we know from the work of Vygotsky (1986) and others (Lantolf 2003, Ohta 2001, among others) is the primary mechanism through which concepts are internalized.

Participant 7 remarked that it was also useful for her to talk to others during group-work in class:

(16) I found that the best way for me to learn is to try to teach other's what I know. That's why I like working in groups and trying to explain to others the information. (It shows me what I know, and what I don't know) [participant 7]

Wells (1999) notes that even when someone is engaged in social speech, as in (15), the speech be reflexive, and thus have a private as well as a social function. Learner 7 seems to attest to just this type of circumstance.

The final two commentaries on the verbalization activities come from participants 2 and 1, respectively.

(17) I enjoy doing the verbalizations because it helps me internalize the rules of grammar more effectively. After the recordings I did silently explain the assignments to myself. I have a tendency to talk to myself when I have to remember things. I think it helps no matter what you are studying [participant 2]

Interestingly, this learner appropriated the terminology "internalization" which had been used by the instruction in explaining grammatical concepts and in presented the concept diagrams. Moreover, it appears that the assigned verbalization activity triggered the learner's use of subvocal private speech, a common strategy that he is aware of deploying in the past.

Participant 1, as we see in (22), reports a similar awareness of using private speech as a way of understanding concepts, regardless of domain. However, it seems that the effectiveness of the strategy was not only confirmed for the learner as a result of the required verbalization assignments, but that he now realized that overt vocalization was even more powerful than subvocal speech:

(18) In all honesty, I never really consciously silently explained anything to myself. I think when I am studying that is basically what I am doing, and when I am trying to learn a concept, I do the same thing. But I never really sat down and thought to myself, 'hey, now I'm going to explain this concept to myself.' I think that these techniques have taught me a different way of studying and learning [participant 1]

Concept Diagrams

The students consistently reported that they found the concept diagrams to be effective mediators of their learning. Participant 12, for instance, notes that not only did CBI provide him with a different perspective on grammar, but the diagrams were actually easier to recall than lists of rules:

(19) Explaining things to myself helps me a lot, but using the subjunctive flow chart was a little more challenging than using the conditional one. I think that it is because I learned subjunctive a different way in Spanish 4 and 5 in high school. While I did learn NEW uses for it when we covered it in this class that I hadn't been taught in high school, the way in which it was taught to me first was that there are certain situations in which to use it (change of subjects, expressing doubt, expressing an opinion) but not that they follow a set of steps, like our flow chart. The flow charts worked well for me-- they're easier to remember than lists of individual rules-- and the conditional one was much easier. I think that my only difficulty with using the first handout was the result of the fact that it was a different way of explaining the subjunctive than I had originally been given. [participant 12]

In his final sentence, this student also further documents the initial struggles the learners had with CBI, because it conflicted with their past experience and with what they had already internalized.

Participant 4, also compares the effectiveness of the diagrams with her past experiences with rule-based pedagogy:

(20) The charts are a grammar-figuring-out-guide that work better than the rules (like the rules for preterit and imperfect) that we had learned in Spanish 100. It was very helpful to see the concepts in a visual structure because the concept of grammar is a very structural concept, and being able to visualize it made it make much more sense [participant 4]

Participant 1 remarks that the diagrams generated better understanding of the grammatical feature but that they also compelled him to think about why a particular feature (in this case tense) is used. As we have said earlier, this is an essential aspect of STI:

(21) I think they helped me learn the grammar better. Rather than using a certain tense just because you know a certain phrase requires it, you actually think about why that tense is used [participant 1]

Participant 3 also perceived the explanatory function of the diagrams, as illustrated in the final extract given in (26):

(22) The charts are extremely helpful. I have them all saved in a folder. It is helpful to see the thinking patterns of why you use each verb tense [participant 3]

Concluding Comments

In this chapter, we have briefly explored the main principles of CBI as it relates to the L2 classroom and specifically to instruction in Spanish grammar. Clearly, the learners in Negueruela's class still have a long way to go before they develop a full conceptual understanding of the grammar along with the capacity to automatically access this knowledge to regulate their written and oral performance in the language. Nevertheless, the data considered here evidence both conceptual development and improvement in performance. Indeed, all of the learners in Negueruela's (2003) full study exhibit development in both domains; however, and this is an important point, development was not uniform across learners. According to Vygotsky development, which he defines as a revolutionary rather than a uniform process either across or within individuals, occurs in fits and starts, and moves in unanticipated directions (see Lantolf & Aljaafreh 1995), including earlier phases (Frawley & Lantolf, 1985). Unfortunately, Negueruela's class concluded after a relatively short sixteen weeks and at the point where the students were in a real sense just beginning to overcome their previous history as language learners. Although this is a relatively long time frame as far as the majority of L2 studies are concerned (see also Ohta 2001), it pales in comparison to Markova's (1979) monumental decade-long study of nearly three thousand school children. While we are not arguing that all L2 research on classroom learning must traverse such a long period of time, we concur with other L2 researchers (e.g. Wardhaugh 1998), who lament brevity of most research in our field.

It is important to reiterate that CBI in itself does not constitute a pedagogy, but a theoretical claim about the appropriate object of instruction in any educational domain, which originated in the writings of L. S. Vygotsky. To bring the theoretical stance into the classroom in a concrete way requires an appropriate pedagogy. The pedagogical framework adopted and adapted by Negueruela (2003) on whose larger study the present chapter is based, was Gal'perin's Systemic-Theoretical Instruction. As we discussed, STI, as developed by Gal'perin follows a preferred procedure to promoting the internalization of the relevant concepts. STI begins with a full verbal explanation of concepts accompanied by a concrete schematic (concept diagram, our term) that synthesizes the concept in a way that can be effectively used by learners to mediated their learning. An additional feature of the approach is that it assigns a central role to learner verbalization of the concepts themselves as well as verbalization of learner explanation of their oral and written performances again mediated by the concept, often in the form of the concept diagram. Verbalizations also play a central role in STI because, again following Vygotsky's theory, they are the mechanism through which internalization takes place.

However, we also must keep in mind that the goal of CBI is not simply the internalization of concepts, in the banal sense of memorization, but it is to develop the learner's capacity to use the concepts to mediate (i.e., self-regulate) their language performances. Thus, communicative activities are an important component for CBI. These activities, in Negueruela's study, these were based on Strategic Interaction and although we did not have space to discuss this aspect of the course, we do not wish to leave the impression that such activities are less important. They are not, but we leave it to the interested reader to consult the full study as well as the work of Di Pietro on this intriguing way of stimulating classroom communication of both the spoken and written variety.

We also want to point out that STI is only one way of implementing CBI. In fact, Negueruela's study, while relying on many of the features of STI, implemented this approach to teaching in a more flexible way that it is described in the writings of Gal'perin and his colleagues and students (see also Fariñas León 2001). We also want to point out that STI is not

only one way of implementing CBI. In fact, Negueruela's study, while relying on many of the features of STI, implemented this pedagogical approach in a more flexible way than is described in the writings of Gal'perin and his colleagues. Instead of rigidly adhering to the linear six-stage discrete sequence proposed by Gal'perin—motivation, orientation, materialization, overt-verbalization, sub-vocal verbalization, and silent verbalization—the approach advocated here is more flexible, while at the same time it maintains focus on the three foundational principles of STI: appropriate pedagogical unit for instruction, materialization through didactic models, and verbalization of concept-based explanations of user performance. Moreover, it argues that language instruction is about communication and not about internalizing grammatical concepts per se. Any concept-based approach to instruction, regardless of its object of study, must concern itself with the proceduralization of concepts in concrete material activity. In the case under consideration, this means the ability to engage in effective communicative (spoken and written) activity where conceptual understanding of grammar in the service of the user's efforts to construct appropriate meaning is the goal of instruction.

Finally, CBI represents a significant shift in how we think about language teaching. Currently, much more emphasis is placed on pedagogy than on the object of study – language – both in terms of classroom practice and with regard to teacher education programs. Some may think our argument here is too strong, but we do not think it is. Applied linguistics such as Bull and Bolinger, among others of course, recognized the importance of in-depth understanding of the target language. With the push toward communicative language teaching, however, that emerged in the 1980s and continues today, pedagogical practice has been much more in focus in SLA research and in teacher education programs than has conscious conceptual understanding of the target language in all of its aspect, not just grammar. In light of Vygotsky's thinking on the importance of concepts of development in schooled instruction, we believe that the time has come to reintroduce teachers, curriculum developers and students to the viewpoint on language learning so forcefully argued for by scholars such a William Bull and Dwight Bolinger.

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Endnotes

[1] Vygotsky uses the term "scientific" rather than theoretical concept; however, we opt for the latter term, because the term scientific is often misinterpreted to mean concepts that have been exclusively developed by what is traditionally understood as the field of science. Clearly, as Karpov (2003, p. 66) notes, Vygotsky understood science in the broadest sense to include not only the field of natural science, but also the social sciences and the humanities.

[2] Our understanding "concept" does not imply a static objective meaning located inside the head of speakers, but a dynamic and dialectical movement between meaning and sense, the social and the private, the functional and the theoretical. Concepts are meaning-constructed abstract tools for self and other regulation, which are utilized, materialized, and transformed through communication in concrete contexts as speakers and writers attempt to response to specific intentions.

[3] This task is one that still needs to be developed in L2 pedagogy by borrowing insights from gathered in different linguistic theories that give prominence to pedagogy and explanations of language based on meaning categories (for instance Bull 1965, or Bolinger 1991).