

**Enhancing EFL teacher trainees'
cognition through
Systemic Theoretical Instruction
(STI)**

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A la memoria de mis padres

Raúl y Golli

con todo mi amor

ABSTRACT

Vygotsky's Sociocultural Theory (SCT) proposes that human mental functioning is fundamentally a *mediated* process that is organized by cultural artefacts, *language* being one of the primary means of mediation (Lantolf & Thorne, 2007). Based on SCT, Gal'perin (1969) conceived Systemic Theoretical Instruction (STI), a developmental theory that proposes ways of developing cognition through three key phases: 1) *Materialization*; 2) *Verbal Action*; and 3) *Internalization*.

Given that EFL teachers must possess a solid level of knowledge (linguistic, metalinguistic and pedagogical) and that there is no exact correspondence of the forms of tense/aspect in English and Spanish, these grammatical features seem to be particularly difficult to attain for learners of L1 Spanish. Thus, following a methodological design of mixed methods (quantitative and qualitative), this study aimed to investigate the extent to which intervention with STI could contribute in enhancing teacher trainees' cognition of these features.

The study was carried out at the University of Quintana Roo in México with a group of 50 participants (teacher trainees) during 8 weeks and distributed throughout 12 sessions. Data collection included pre, post and delayed testing and participants were divided into control and experimental groups. Intervention consisted of training based on STI (including its three phases) aiming to compare the effectiveness of this with Traditional Instruction in teaching the concepts of tense and aspect in English.

Results showed that STI contributed to the development of metalinguistic knowledge which eventually leads to internalisation. Having received instruction on the basis of 'minimal-conceptual-units', materialization and verbalisation contributed to fostering cognitive development (MLK and pedagogical thinking) among teacher trainees. Microgenesis affordances resulting from verbalisation revealed that collaborative languaging activated the effective use of semiotic tools (i.e. *discourse markers, reasoning markers, play and metalanguage*). This served to deploy mechanisms enabling *joint attention* and *intersubjectivity* which allowed learners to attain self and other *regulation* and ultimately *internalization* of the concepts of tense and aspect.

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Chapter 1. Introduction

This chapter outlines the contents of this thesis and provides an overall idea of the study and its aims. In the following sections I will briefly describe the research project and how it was conducted. The various sections relate to the methodological design, research questions, the key Sociocultural theory constructs, and the importance of implementing STI among English as a Foreign Language (EFL) teacher trainees.

1.1. Overview of the study

The present study is framed within Vygotsky's Sociocultural Theory of mind, (SCT) which proposes that human mental functioning is fundamentally a *mediated* process that is organised by cultural artefacts, language being one of the primary means of mediation (Lantolf & Thorne, 2007). Encompassed within SCT the pedagogical approach of *Systemic Theoretical Instruction* (STI) proposed by Piotr Gal'perin (Arievitch & Haenen, 2005) led the theoretical framework for this study. In this, Gal'perin proposes ways of "materializing conceptual knowledge, so it can be appropriated by learners and used to mediate their performance in goal directed activity" (Lantolf & Poehner, 2014, p. 3). Thus, we set out to investigate the extent to which a group of EFL teacher trainees at university level in Mexico could have their cognition (particularly metalinguistic knowledge –regarding the concepts of tense and aspect) enhanced through STI.

50 participants took part in the study using a mixed methods methodological design which included both quantitative and qualitative components. The study was implemented during 8 weeks and distributed into 12 sessions. Data collection included pre, post and delayed testing. Participants were divided into control and experimental groups for intervention. The ultimate goal was to compare the effectiveness of instruction based on STI, as opposed to Traditional Instruction on the concepts of tense and aspect in English.

1.2. Research Questions

The following research questions provided the foundations of the study:

1. Is STI more effective than TI for enhancing EFL trainee teachers' linguistic knowledge (metalinguistic knowledge and language use) regarding the aspectual distinctions conveyed by simple past, past continuous and present perfect in English?
2. Is STI more effective than TI for enhancing EFL trainee teachers' ability to apply linguistic knowledge to pedagogical thinking?
3. What insights into STI can be derived from a case study approach to *linguaging*? The case of the top scorers.

1.3. The theoretical underpinnings of SCT and STI leading the study

One key principle in Vygotsky's SCT is that knowledge is not exclusively created in the mind, but instead, it is the result of human social interaction with the environment (Vygotsky, 1986). "Language use, organization, and structure are the primary means of *mediation* generating developmental processes through participation in cultural or linguistic settings, family life, group interaction, instructional contexts" (Lantolf & Thorne, 2007, p. 197). Thus, the most important forms of human cognitive activity develop through interaction within these social and material environments (Lantolf & Thorne, 2007, p. 198). Within *mediation* as the ultimate means of connecting and developing social and mental activity STI emerges as a developmental pedagogical approach proposing an alternative to develop human knowledge, e.g. teacher trainees' cognition from a sociocultural perspective.

Gal'perin (1969) advocated that teaching-learning necessarily implied some type of action directed at specific objects in the service of a goal and specific objectives and these can be achieved with support at different levels of abstraction: *material/materialized, perceptual, verbal* and *mental* (Arievitch & Haenen, 2005; Haenen, 2001 in Lantolf & Poehner, 2014, p. 61).

Hence, the central tenets of STI as conceived by Gal'perin consisted of: Phase 1) the *materialization stage*, i.e. working with SCOBAS (Schema of a Complete Orienting Basis of an Action). Phase 2) *Verbal Action*, i.e. 'dialogic thinking' (self-talk) and 'communicated thinking' (collaborative talk). Phase 3) *Inner Speech*, i.e. understanding and internalisation of the concept. These three phases comprise the whole cycle of STI and were the ones my study implemented to teach the concepts of tense and aspect during intervention.

1.4. The importance of implementing STI with teacher trainees

Available studies (see Borg, 2009; Cross, 2010; Benson, 2004; Gan, 2013) as well as empirical evidence gathered from personal experience in the context of study, suggests the need to enhance EFL teacher education particularly regarding metalinguistic knowledge and pedagogical knowledge. In the particular case of Spanish and English there is not necessarily an exact correspondence for each one of the forms of tense/aspect in both languages to allow them to be taught straight forwardly. Potential language teachers need to have a solid basis of both metalinguistic and pedagogical knowledge. It is particularly important for teachers to possess a strong explicit knowledge of language and how it functions as this seems to be strongly related to L2 performance (Roehr-Brackin, 2018).

In this context, STI could be a promising innovative pedagogical treatment to be implemented as an alternative to current practice in EFL teacher education in Mexico to teach concepts such as tense and aspect.

Previous studies conducted on the premises of SCT and STI have explored the implementation of these approaches to tackle diverse topics and various features of grammars in various languages i.e., Spanish, English, French, Japanese, German, Catalán, and artificial languages with promising outcomes for the field of language teaching (see Negueruela-Azarola, 2003; Negueruela-Azarola & Lantolf, 2006; García, 2012; 2017; Gánem-Gutiérrez & Gilmore, 2018; Gánem-Gutiérrez & Harun, 2011; Gánem-Gutiérrez, 2014, 2016; Kim, 2013; Lee, 2012; Ohta, 2017; Polizzi, 2013; Johnson & Golombek, 2018; Swain & Lapkin, 2013; Swain & Watanabe, 2013; Yáñez-Prieto, 2008; Antoniou, 2016; Walter & van Compernelle, 2017; van Compernelle,

2018). Undoubtedly, these studies have served as crucial reference works for our research as they represent the foundations of all the theoretical framework and methodological design.

Although my research takes as crucial reference all the previously mentioned studies, I slightly diverge from them in the methodological design, especially since no other study has followed an exact-same methodological design as the one I am presenting here. I compared two different groups (control vs. experimental) in a longitudinal way (throughout 8 weeks) implementing the whole 'Gal'perian STI cycle' and this is what makes this thesis particularly novel.

1.5. Structure of the thesis

The thesis consists of 5 chapters. The present chapter (Chapter 1) provides a general overview of the thesis, its aims, and introduction to its theoretical underpinnings and the structure of the chapters.

Chapter 2. The Literature Review provides an account of Sociocultural theory and its core components; i.e. mediation, zone of proximal development, regulation and its sub-variants along with the developmental model of Systemic Theoretical Instruction and all its elements and how these work together. In this chapter I also provide an account of the types of knowledge language teachers would ideally possess; and I also present the linguistic features of tense and aspect from both the classic grammatical perspective and from a Cognitive Linguistics view. I close the chapter with an account of the most relevant studies in the field of SCT particularly those based on STI.

Chapter 3. Methodology delineates the complete methodological design followed to accomplish the project. In this chapter I provide a detailed account of the research data collection procedures and methods of analysis used for each research question. I also describe each of the instruments for data collection and schedule of the study.

Chapter 4. Results and Discussion provides both the results and discussion for each research question. For RQ1 and RQ2 I followed a specific format; that is, the results for each question were presented separately from their discussion. RQ1 drew

exclusively on quantitative data, whereas RQ2 was mostly qualitative in nature with a small proportion of quantitative findings. By contrast, for RQ3 I present both results and discussion together -due to the nature of the data and the type of analysis conducted, i.e. *microgenetic*.

Chapter 5. Conclusions, presents the overall conclusions of the study and the pedagogical implications. For the general conclusions I present them as a summary of the main findings of each research question. I continue with a discussion of some pedagogical implications rising from the results; and finally, I conclude with some of the limitations of the study.

Chapter 2. Literature Review

Introduction

The present chapter will focus on reviewing and discussing the literature based on four major topics relevant for this study. The first section of the chapter (2.1) will be devoted to *the nature of EFL teachers' cognition* in order to explore the types of knowledge an EFL teacher has been identified to require, *metalinguistic, pedagogical* and *practical*.

The second section of the chapter (2.2.) will present the major theoretical framework by which this study is guided, Lev Vygotsky's *Sociocultural Theory (SCT)* with particular attention to some of its key notions such as *The Zone of Proximal Development*, the concept of *Mediation*, *verbalisation* and *inter/intra psychological interaction*.

Drawing on SCT, section three (2.3.) will introduce the leading pedagogical model informing this study, *Systemic Theoretical Instruction (STI)* and its core elements, *Orienting Basis of Mental Action (SCOBAs)*, *Dialogic Thinking*, and *Communicated Thinking*.

Finally, section four (2.4.) will present an overview from various perspectives, e.g. *the classical perspective* and, *the cognitive linguistics perspective*, of the target concept in this thesis, i.e. *tense and aspect* in English. This section will also outline the *key challenges* this concept poses to L1 Spanish speakers learning L2 English, before describing the traditional approach to teaching tense/aspect at the University of Quintana Roo in Mexico. I will close this section with an overview of the current research based on CBI/STI for L2 learning.

2.1. The nature of EFL Teachers' cognition and its types of knowledge

The nature of the ELT teacher's cognition is precisely what shapes the teacher personality. Teachers' cognition refers to everything that is in the mind of the teacher; as Borg (1999) suggests, it is the sum of all beliefs, knowledge, theories, assumptions, and attitudes they bring to the classroom: "Teachers' cognition is the milieu of thoughts (internal) that guide the language teacher, as opposed to behaviour which alludes to what the teacher does in practice (external) visible to everyone" (S. Borg, 1999, p.118).

In contrast to a traditional teacher who teaches any subject content (e.g. mathematics, physics, history, etc.) a language teacher is usually someone who will 'transport' the learner to a new world in a totally different language. Therefore, a language teacher does not only need to possess a good amount of linguistic knowledge of and about the target language, but also the appropriate pedagogy to communicate it; but most importantly, a language teacher must be someone empathetic with his/her pupils and always committed to 'transporting' the learners into a 'new world'. A new world of words, ideas and perception; because when we learn another language, and eventually aim to speak another language, it is as if we gain a new personality or enter a different world.

For Cook (1999), a language teacher is someone who is a "multicompetent language user" (p.185); a person who does not only master the target language (in the case of non-native speakers, which is the case in this study), but that also knows about methodology, pedagogy, and is empathically ready to step into the learners' shoes. A fundamental part of language teachers' knowledge is that they must possess a positive attitude to guide the learners -as the 'ambassador of the target language' making it desirable and attractive to be learnt by his/her pupils.

Teachers' cognition can also be understood as divided into two main streams as VanPatten (1997) suggests, where there is a *micro-level* of knowledge which is related to the 'whys' and 'do's' of teaching (internal); and a *macro-level* of knowledge which examines and influences teachers' knowledge within the greater social context (external) (p.2). On the one hand, the *micro-level* specifically deals with all that is related to teachers' knowledge regarding their interests, attitudes, judgement, self-control, enthusiasm, adaptability, personality and degree of training and all that influences the teaching/learning process. On the other hand, the *macro-level* has to do with the knowledge about interaction within the language classroom, curricular

progression, testing and evaluation, types of tasks and activities, aids and materials and the whole framework of the educational institution context (Richards, 1987).

For the purposes of this study, the focus of attention regarding teachers' cognition will be centred on three major categories or types of knowledge that some authors have identified and seem to agree upon (see Basturkmen, Loewn, & Ellis, 2004; Borg M., 2001; Borg S., 1999, 2003, 2006, 2009; Carrier, 2003; Gatbonton, 1999; Golombek, 1998; Richards, 1987; Shulman, 1986); that is, *metalinguistic knowledge*, *pedagogical knowledge* and *practical knowledge* which play an important role in "the enhancement of EFL teacher trainees' cognition through Systemic Theoretical Instruction (STI)" as the title of this thesis suggests. The following sections will explore these types of knowledge.

2.1.1. Metalinguistic knowledge

Metalinguistic knowledge (MLK) is defined as explicit knowledge about language that can be brought into conscious awareness and be articulated (Roehr, 2010, p.10; Hulstijn, 2005; Roehr, 2006). MLK is related to knowing the rules and systems that govern the language. It has to do with the amount and organization of the knowledge as well as with understanding the structures of the subject matter which in this case is the English language. This type of knowledge is perhaps the most important of the three discussed here to become a language teacher; without it the teacher simply cannot communicate any linguistic knowledge. Although metalinguistic knowledge is fundamental for the milieu of teaching, it is not the type of language that is perceived or noticeable at first sight; it is usually 'veiled' within teachers' overall knowledge but vital so the teacher can survive pedagogically.

In other words, it could be said that *metalinguistic knowledge* is considered within the 'big umbrella' of what is also known as *technical knowledge* or *subject matter content knowledge* (Blyth, 1997, p.56), which has to do with the amount of organization and systematicity of the subject matter per-se (Shulman, 1986). Technical knowledge "denotes the body of explicit ideas derived by a profession from deep reflection or empirical investigation" (Basturkmen, Loewn, & Ellis, 2004, p. 246). Thus, according to the literature previously cited, it could be said that metalinguistic knowledge is about being aware and understanding the dynamicity, functions and

relation of the grammatical components of a linguistic system (e.g. lexicon, syntax, morphology, phonology, verbs, nouns, adjectives, etc.).

Having a sound metalinguistic knowledge of the target language does not mean automatic expertise for the teacher, i.e. to gain fluency or pedagogical knowledge. Some authors (see Blyth, 1997; S. Borg, 1999; Sheen, 2002; VanPatten, 1997) suggest that for language teachers it is important to have a good metalinguistic knowledge as it helps to transfer and guide learners towards the recognition and purposes of being aware of basic grammatical concepts through the names, categories and parts of the language (e.g. speech, tenses, sentences, nouns, prepositions, adjectives, etc.) (Borg, 1999, p. 97). However, metalinguistic knowledge is not something all learners want to master; but some of them usually are interested in grasping it, e.g. adult and mature learners tend to find useful the provision of metalinguistic knowledge from the teacher as opposed to younger learners (p.99). This may be linked to the fact that some learners rely more on explicit knowledge and therefore could benefit from explicit learning which is "characterized by the learner's conscious and deliberate attempt to master some material or solve a problem" (Dörnyei, 2009, p.136).

Borg S. (1999) addresses the fact that achieving a high degree of metalinguistic knowledge among language teachers is associated with teachers' experience, cognition and contextual factors among others. At the same time he emphasizes the importance of such type of knowledge in strengthening the intellectual and professional development of the teacher.

Metalinguistic knowledge is, undoubtedly, a very important type of knowledge; however it is not always mandatory to teach it in a very explicit way. Its emphasis and relevance are strongly linked to learners' types and needs and the teaching context, as well as the expertise of teacher; it is undoubtedly the type of knowledge a teacher cannot lack of.

Blyth (1997) points out how stressful, difficult and sometimes frustrating it can be for both teachers and learners to deal with metalinguistic terms of concepts like *tense* and *aspect* and how to apply 'aspectual' rules that are based on descriptive terms such as "continuing event", "durative event", "punctual event", "single event", "repeated event" (p.54). Blyth (1997) cites Langacker (1994) in emphasizing the importance for teachers who will eventually transmit this knowledge to their learners of knowing clearly each one of the grammatical concepts and categories, and states that traditional teaching methods and textbooks only address these concepts at a very descriptive level

without taking into consideration that *concepts* like *tense* and *aspect* must be taught as dynamic mental processes (p.52). The author further argues that it is through the content in traditional text books that language teachers gain their metalinguistic knowledge but it also shows up their limitations regarding this type of knowledge and that they may not yet be ready to teach or have enough of this knowledge.

The claims about the relevance of understanding and fully knowing concepts like *tense* and *aspect* made by Blyth (1997) and Langacker (1994) strengthen the case for focusing on trainee teachers such as the participants in this study. Anecdotal evidence from the researcher working in the field where the study was conducted (Negrete-Cetina, 2007; 2010) and the literature regarding this issue (see Casillas-Navarro, 2006; García, 2012; Gaspar-García, 2012; Yáñez-Prieto, 2008; Cuza, Miller, & Sadowski, 2012, p. 6) provide evidence that the concepts of *tense* and *aspect* are notorious for their complexity in both teaching and learning among L1 Spanish language learners of L2 English. For instance, Blyth (1997) states that teacher assistants routinely confuse aspect with tense and this is also a very common mistake among learners (p.57)

For achieving the goal of training future language teachers regarding the concepts of *tense* and *aspect* at a metalinguistic level, Blyth (1997) suggests the incorporation of elements from cognitive linguistics as Langacker (1994) proposes in order to understand them from a more dynamic and holistic approach (p.56) and this is precisely what this study aims to achieve (*cf. Section 3.2.*).

2.1.2. Pedagogical knowledge

Pedagogical knowledge is the type of knowledge related to the 'knowing how' to make the subject matter (in this case English) comprehensible to others. Pedagogical knowledge can also be seen as the 'bridge' by which teachers will connect their different types of knowledge and personal philosophies of teaching with their students. For Shulman (1986) pedagogical knowledge is strongly linked to *subject matter content knowledge* which is not exclusively metalinguistic knowledge, but is a type of knowledge directly linked to the subject content matter. That is, *subject matter content knowledge* could be considered as a 'sub-component' of pedagogical knowledge in the sense that it alludes to the forms and ways in which content knowledge is related to other topics and disciplines in both theory and practice. In the context of our study, *subject matter content knowledge* is the English language; not only as the target to be

learnt, but also as a tool itself for mediation and developing knowledge. The teacher should therefore know how to deal with it and better transmit to the learners (Shulman, 1986, p. 9).

Pedagogical knowledge goes beyond subject matter content knowledge as it 'handles' knowledge with such 'care' that it can be delivered to the learners in the most complete, accurate and simple form so pupils can understand what it is all about. In the words of Shulman (1986), *pedagogical knowledge* is talking about a given topic/theme in its most 'teachable' form; "...the most useful forms of representation of given ideas or concepts, the most powerful analogies, illustrations, examples, explanations, and demonstrations..." (p. 9). The author suggests that pedagogical knowledge is finding a way in which teachers can encourage their learners for example as also suggested in Bloom's taxonomy, that is, through actions and skills to develop and gain knowledge on the basis of cognitive: mental skills (knowledge); affective: growth in feelings or emotional areas (attitude or self); and psychomotor: manual or physical skills (p. 9). For example, in our case we will only focus on the development and gain of knowledge (mental skills). Overall, *pedagogical knowledge* implies "understanding of what makes learning of specific topics easy or difficult to be learnt" (ibid).

Pedagogical knowledge is also connected to *curricular knowledge* (Shulman, 1986) which is concerned with knowing the curriculum and identifying what order topics should be taught in, and also how to relate one topic to another (p.10).

2.1.3. Practical knowledge

Practical knowledge denotes the "procedural knowledge an individual practitioner has derived from experiences of teaching and learning languages... it is used as a resource to be applied rapidly and intuitively" (Basturkmen et al., 2004, p. 247). *Practical knowledge* is derived from teachers' experiential knowledge and is strongly linked to *personal practical knowledge* and different sub-variations forms of knowledge (i.e. *propositional knowledge*, *case knowledge* and *strategic knowledge*) (Shulman, 1986, p.10; Clandinin & Connelly; 1987). For Golombek (1998) teachers' *personal practical knowledge* is about "teachers' personal philosophies, metaphors, rhythms, and narrative unity as representing forms in the language of practice... contextualized in experience and represents unity among teachers' beliefs, values and actions" (p.448). Clandinin & Connelly (1987) see *personal practical knowledge* as

“being dialectical, situated, and dynamic in response to their personal and professional lives, embodied in persons, and taking the form of stories...” (p.497). These sub-variants of teachers’ knowledge aim to explain what is behind each one of the actions and decision taking of a teacher in the classroom.

Golombek (1998) identifies ESL teachers’ *personal practical knowledge* as (1) filtering experience so that teachers can reconstruct and respond to any given teaching situation; and (2) giving physical form to their practice; that is their knowledge in action. For the author it is about ‘how teachers use their knowledge in the language classroom’ (p.447).

Under the main frame of teachers’ *practical knowledge*, Shulman (1986) suggests three forms of teacher knowledge: (1) *propositional knowledge*, (2) *case knowledge* and (3) *strategic knowledge*, each one of these with a very specific function approached as follows:

(1) *Propositional knowledge* has three sub-variants: *principles* (disciplined empirical or philosophical inquiry), *maxims* (practical experience), and *norms* (moral or ethical reasoning). Propositional knowledge encapsulates all the principles of teaching on the basis of what is logical and correct on behalf of everyone involved in the process of teaching-learning and society. These kinds of propositions are “norms or values, ideological commitments of justice, fairness, equity, and the like that ideally every teacher must apply and keep in mind” (p.11). (2) *Case knowledge* has its basis on the experience of events that have occurred in the language classroom and set a precedent for further decision taking on how to ‘tackle’ a complex situation (e.g. learners’ behaviour, or how to teach in relation to past experiences). Finally, (3) *Strategic knowledge* is the form of knowledge that arises in the resolution of an un-expected event where there is a precedent and the teacher has to solve the situation in the least problematic way on the principles of wisdom and practice (p.13).

As seen previously, the ‘spectrum’ of teachers’ knowledge is sufficient to allow teachers to have cognition from a diverse range of perspectives. Pedagogical knowledge, practical knowledge, personal practical knowledge, propositional knowledge or strategic knowledge, are all forms of approaching teachers’ cognition. From a Sociocultural theory point of view, Golombek (2015) suggests that both teachers’ emotions and cognition are socially and culturally derived from the social interaction of teaching where we co-construct and re-shape our emotions, experience,

culture and knowledge (p.481). Similarly, Johnson & Golombek (2018) consider the reconceptualization of teacher cognition in what they call a more productive and appropriate framing considering the idea of *ecologies of teachers' inner lives* which they believe is an "all-encompassing, emergent, situated, distributed, and embodied characterization of teachers as whole persons taking action in the social world" very much aligned with Vygotskian SCT (p.447).

The next section explores in depth what Sociocultural theory proposes through its core elements, particularly within its pedagogical approach of developmental education, Systemic Theoretical Instruction (STI) which will be discussed below.

2.2. Sociocultural Theory

Introduction

The theoretical framework informing this study is that of Sociocultural Theory (SCT); thus, section 2.2. will explore some of its fundamental concepts, i.e. mediation, regulation, and Zone of Proximal Development (ZPD) which are crucial for understanding and interpreting the pedagogical model investigated in this study. To that end section 2.3 will specifically focus on Gal´perin´s Systemic Theoretical Instruction (STI) which is an approach to developmental education strongly linked to SCT.

L2 learning theories such as the so-called interactionist perspective tend to see interaction primarily as a mechanism to provide learners with opportunities to be exposed to input, receive feedback, and engage in negotiation of meaning. Long's Interaction Hypothesis proposes that:

... environmental contributions to acquisition are mediated by selective attention and the learner's developing L2 processing capacity and that these resources are brought together most usefully, although not exclusively, during negotiation for meaning. Negative feedback obtained during negotiation work or elsewhere may be facilitative of L2 development, at least for vocabulary, morphology and language-specific syntax, and essential for learning certain specifiable L1-L2 contrasts. (Long, 1996, p. 414) .

Together with opportunities to produce output (Swain, 1985; Swain & Lapkin, 1995), these interaction features are seen as the driving force facilitating language comprehensibility and thus hopefully supporting the acquisition process. As will be outlined below in more detail, interaction is also at the heart of Sociocultural Theory, but this theoretical approach sees the social plane as much more than a mechanism for individuals to engage in negotiation of meaning or be exposed to comprehensible input, for example. SCT sees interaction, and more broadly, the social plane, as the source of opportunities for jointly constructed meaning making, for the co-construction of knowledge, for work in the zone of proximal development. From this perspective the very contributions of individuals are inter-dependent on each other. In sum, language use and language learning are seen as one and the same thing (see Lantolf & Thorne, 2006a; 2006b; Swain, Kinnear, & Steinman, 2011).

2.2.1. The Nature of Knowledge

One fundamental premise for Vygotsky's SCT is that knowledge is not exclusively created in the mind, but instead it is the result of human social interaction with the environment. Wells (1992, pp. 286-287) in Gánem-Gutiérrez (2004) suggests that knowledge is determined by three basic principles; first, knowledge is inter-psychologically created by knowledgeable individuals, thus it is not something already pre-conceived ready to be used or applied; second, knowledge is the co-construction between individuals and their social environment; and third, such co-construction is always mediated by cultural processes and/or psychological or physical tools.

For Vygotsky the human mind was conceived as a functional system in which the properties of the natural, biologically specified, brain are organized into a higher or culturally shaped mind through the integration of symbolic artefacts into thinking. These higher order mental capacities include voluntary attention, intentional memory, planning, logical thought and problem solving, learning and the evaluation of these processes (Lantolf, 2000, p. 2). Among these, language serves a vital function as the ultimate mediation tool for regulating and exercising control over other people and the self (Gánem-Gutiérrez, 2004, p. 8).

To understand these higher order capacities Vygotsky proposed four genetic domains: *phylogenetic* domain, how human mind has evolved through the integration of

mediational tools over the course of history; *sociocultural* domain, how different types of symbolic tools developed by human cultures throughout the course of their respective histories affected the kinds of mediation; *ontogenetic* domain, how children appropriate and integrate mediational means, primarily language, into their thinking activities as they mature; *microgenetic* domain, interested in the reorganization and development of mediation over a relatively short span of time (Lantolf, 2000, p. 5). These four domains allow for a complete understanding and exploration of the human capabilities of thought and interaction together.

The *microgenetic* domain in particular will serve as a core component of analysis in this study thus allowing us to trace individual and/or co-constructed knowledge among language learners. Through *microgenesis* the processes of mediation, collaboration and scaffolding that will be introduced and discussed below can be studied and analysed in order to investigate L2 learning and development.

2.2.2. The Zone of Proximal Development (ZPD)

Generally speaking, the Zone of Proximal Development is a metaphor that Vygotsky proposed to refer to a developmental space where mediational means can be appropriated and internalized (Lantolf, 2000, pp. 16-17). The ZPD refers to the distance between what we can do independently and what we can do with the assistance of others or of cultural artefacts and, which hopefully lead to internalization and appropriation of co-constructed knowledge. Thus, the ZPD is also conceived as the collaborative construction of opportunities for individuals to develop their mental abilities (Lantolf, 2000); or as Machado de Almeida Matos (2000) suggests 'the area where learning takes place' (p.335).

The ZPD is not something that is easily measurable or tangible by means of a specific task or a grammatical form. It is a metaphorical space and it could be said it is a process which accounts for the learning process seen as a continuum with emerging and changing needs of the individual in terms of the quality and quantity of assistance required for development and co-construction of new knowledge.

The ZPD defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state.

These functions could be termed the "buds" or "flowers" of development rather than "fruits" of development. The actual developmental level characterizes mental development retrospectively, while the zone of proximal development characterizes mental development prospectively (Vygotsky, 1978, p. 86).

Vygotsky (1978) argued that the learner's development depends on the quality of mediation received within his/her ZPD which makes it crucial pedagogically and methodologically for understanding (and supporting) the process of learning and development and how these should be approached, investigated and empirically measured. Vygotsky pointed out that "it is the ZPD which allows to trace the learner's immediate future and his/her dynamic development, not only for what has already been achieved developmentally, but as well for what is in the course of maturing" (Vygotsky, 1978, p. 87) . It is precisely, within this metaphorical space where mediation, internalization and appropriation of knowledge occurs (Gánem-Gutiérrez, 2013, p. 135).

2.2.3. Mediation

Perhaps the key construct in Vygotsky's SCT theory is that of *mediation* which is the core of all forms of human activity, language, being one of the most powerful mediation tools to regulate our relationships within our environment and ourselves. Mediation is the result of the *dialectical* interaction between elementary biological processes and culturally shaped forms of life i.e. tools, concepts, institutions (Lantolf & Poehner, 2014, p. 55).

In an educational context *mediation* can also be interpreted as the 'medium' or the 'means' by which the teaching-learning process becomes interconnected (i.e. tools, signs, numbers, music, art, language). In other words, human social and mental activity is organized through culturally constructed artefacts (Lantolf, 2000). So, *mediation* alludes to the full interaction being conducted during the process of gaining and developing new knowledge in what the authors suggest arises as a *dialectical* relationship where "two opposing, different, or complementary forces" inter-act together (Lantolf, 2000, p.56) (*cf. Section 2.2.3.2*).

Miller (2011) in Lantolf & Poehner (2014) identifies three orders of mediation in Vygotsky's theory and suggests their general characteristic is "the interception of the

self by the other” (p.57). Thus, indistinctly of the mediation (first, second or third order) “the individual always enters a macro-cultural system, i.e. family, political, legal, sports, religion or education as an actor whose behaviour mental and physical eventually becomes influenced by the environment” (p. 57). Overall it can be said that it is mediation that allows the human being to understand and interact with the environment and in this process become a self-regulated agent/person capable of developing their cognitive human potential.

In considering *mediation* as the ultimate means of connecting and developing human social and mental activity, Vygotsky proposed the three orders known as *first order mediation*, *second order mediation* and *third order mediation*; these are presented in the following sections.

2.2.3.1. First-Order Mediation

According to Karpov & Haywood (1998) in Lantolf & Poehner (2014) first-order mediation refers to *metacognitive mediation* and has its origins in interpersonal communication. The author uses the example of when parents tell to their children not to do something because it could be harmful for the child. In a situation with this dynamic, “parents are regulating the child’s behaviour and at the same time providing the child with a tool of self-regulation” (p.27). Parents are passing the child crucial information which will serve the child to understand and learn something new from the environment. By understanding this instruction the child eventually starts to self-regulate by appropriating this new knowledge to be on their guard against something potentially harmful. Usually as an imitation act, children react to something first said by adults, subsequently internalizing new knowledge obtained from their immediate environment (people, situations and objects).

Interaction in first order mediation usually implies the use of semiotic tools for self-regulation, i.e. clarification, summarizing, questioning or monitoring (Karpov & Haywood, 1998, p. 27). Thus, first order mediation is strongly related to early stages of human cognitive development as when we learn crucial and basic elementary things about our surrounding environment. First order mediation is basically self-evaluating-planning-monitoring-checking and is most likely to be acquired during childhood. It is

basically high order thinking which implies self-control on the cognitive processes involved in learning.

2.2.3.2. Second-Order Mediation

Second-order mediation is related to culturally constructed tools; for Miller, (2011), second-order mediation alludes to the “surrogate form[s] of consciousness” which function as an aid to “facilitate certain actions and inhibit others” (p.398). For Karpov & Haywood (1998) second-order mediation is related to *cognitive mediation*; that is, artefacts or mediation tools acquire a special relevance until they are integrated into human activity entering a dialectical relationship with the user. In other words, it is not until humans take up artefacts to carry out activities, that the artefacts influence and shape the activity, and at the same time, humans shape and influence artefacts (Wertsch, Del Río, & Álvarez, 1995, p. 23 in Lantolf & Poehner, 2014). Second order mediation refers to the ‘relation’ between the human being and any artefact or tool used to develop, discover, or understand new knowledge; *dialectical* comes from the Greek διαλεκτική, *dialektiké* being concerned with the participation/involvement of two parts being complementary one to each other. The authors exemplify this with the use of clay to mould figures in the arts, paper and pencil as a tool to manifest ideas or thoughts, or the use of numbers in infinite ways in mathematics. Second-order mediation occurs in a dialectic-symbiotic way, that is, between human and artefacts, and it is the human individual who leads this activity.

Thus, second-order-mediation is basically making use of external resources to achieve specific learning and communicative goals, i.e. the use of numbers, letters, nature, or art amongst others in all its possible forms to enhance human cognition.

2.2.3.3. Third-Order Mediation

Third-order mediation encapsulates all sorts of mediation framed within the scope of “institutions, social structures or cultural forms constituted by bundles of relations between people and between people and their products (i.e. education, politics, religion, work, economy, leisure, family, science, etc.)” (Miller, 2011, p. 400). Third-order

mediation is the type of mediation which strongly relates to what Vygotsky referred to as *leading activities* for which play and education are fundamentally conceived. Third order mediation is linked and “relevant to human psychology society because what it considers influences the nature of first and second order mediational means” (Lantolf & Poehner, 2014, p. 61). For instance, STI as a third order mediation developmental/ pedagogical approach proposes a model to pursue as its ultimate goal the development of human cognition and development framed within the context of society, i.e. among individuals usually in the setting of education institutions having as agents the learners and teachers.

It is within third-order mediation where Systemic Theoretical Instruction (STI), the developmental pedagogical approach which will lead this study emerges, proposing an alternative to develop human knowledge from a sociocultural perspective. To explore more the components that give support to STI I will start by discussing in the following section some of its core elements like *verbalisation*.

2.2.4. Interaction, Verbalisation, Linguaging and Collaborative Dialogue

“While -and through- speaking and interacting with others learners engage in verbal thinking” (Vygotsky, 1986 in Negueruela-Azarola, García, & Buescher, 2015, p. 233). It is through interaction that learners advance in their learning process to eventually attain the targeted knowledge, i.e. concepts, ideas, forms, processes, etc. or the desired mental development level (Vygotsky, 1978, p. 90). It is language that “completes thought” playing an important role in mediating cognitive processes (Swain, 2006a). *Interaction* among learners is usually through *verbalisation*, also known as *linguaging* which is the process of “making meaning and shaping knowledge and experience through language” and therefore considered as a key component in the process of learning (Swain, 2006, p. 98).

From an SCT view, interaction is an essential part of the learning process that enables individuals to achieve development; thus, through linguaging in collaborative dialogue or individually learners are engaged in inter-psychological activity ultimately becoming able to co-construct knowledge and to create meaning (Gánem-Gutiérrez, 2004, p. 15). Through linguaging, language becomes the most powerful tool to mediate

our thinking or our interlocutor's, co-constructing meaning as a source of language learning and development; "linguaging is the use of language to mediate cognition and affect" (Swain & Lapkin, 2013, p.105). When we speak with another person using language to construct knowledge, we are *verbalising* or *linguaging*. We can do it in the form of *collaborative dialogue* (interpersonal communication) or by contrast, we can speak or whisper to ourselves as *private speech* (intrapersonal communication), "when one languages, one uses language, among other purposes, to focus attention, solve cognitive problems and create affect" (Swain & Lapkin, 2013, p. 105). *Verbalisation* in the form of *private speech* has been found to contribute positively in the process of second language learning. It helps learners to gain self-regulation during task completion from early stages of learning as they enter into a dialogue with themselves on reflecting, monitoring and decoding their own learning process (Stafford, 2013, p. 168). Linguaging as *Collaborative dialogue* "is where language use and language learning can co-occur; it is language use mediating language learning; it is cognitive activity and social activity" (Swain, 2000, p. 97). During collaborative dialogue learners refine their knowledge and gain a new or deeper understanding of a phenomenon. Speaking produces an utterance, a product (an artefact) that can be questioned, added to, discredited, and so forth (Swain & Watanabe, 2013, p. 1).

Negueruela-Azarola (2013) proposes that "linguistic mediation is central in internalization from a social perspective...internalization as a transformative developmental process leads only to learning or learning and development..." (p.4-5), thus "the internalization of the verbalised conceptual understanding mediates subsequent oral and written communicative performance" (Negueruela-Azarola et al., (2015, p. 334).

In this study the concepts of *verbalisation*, *linguaging*, and *collaborative dialogue* (as previously explained) appear in different sections. These allude to the various ways in which learners interact within the language classroom particularly in section 2.4.3.2 on Verbal Action in which the different phases of linguaging that STI considers *dialogic thinking* (individual linguaging/private speech) and *communicated thinking* (collaborative dialogue) are explained. It is through these two forms of verbalisation that this study aims to gather information from learners (participants) and to explore how they co-construct their knowledge.

2.3. Systemic Theoretical Instruction (STI)

Systemic Theoretical Instruction (STI), also known as Concept Based Instruction (CBI) (Lantolf & Poehner, 2014) is a pedagogical model proposed by Gal'perin (1969; 1992) and can be seen as a continuum or complementary to Vygotsky's work. Following Vygotsky's line of enquiry, Gal'perin expanded on STI as a theory of developmental education which proposes ways of "materializing conceptual knowledge, so it can be appropriated by learners and used to mediate their performance in goal directed activity" (Lantolf & Poehner, 2014, p. 3), that is, both learners' behaviour and activities must be oriented towards a very specific goal and purpose. Either perceived as a developmental theory or pedagogical approach, "STI seeks to help learners through the integration of theory into educational praxis, not merely to understand concepts, but to appropriate them for use in concrete practical activity, including communicative activity in the case of language" (ibidem p. 62). In other words, Lantolf & Poehner propose that STI represents a promising approach (particularly for adult learners) to make use of declarative knowledge (e.g. using SCOBAs to help learners understand how form conveys meaning) for communicative activity. They suggest that, with appropriate practice, STI can be more efficient than approaches which focus exclusively on practice as a tool to automatization of procedural knowledge.

Thus, to understand STI from a broader perspective it is key to look at its basic components which are presented in the following sections.

2.3.1. The Dialectical Unity of Teaching/Learning

For Gal'perin, teaching and learning were two concepts intrinsically related as in ancient philosophical dialectics; that is, the duality of teaching-learning can be understood as having a bi-directional quality. The act of teaching, i.e. the instructor, the means, the materials, and the speech in the language classroom are all part of a social act and simultaneously are influencing and transforming other members of the society. Thus, in a teaching context, learners are constantly receiving, processing information, dialoguing either with the instructor, among their peers or with the self which could be interpreted as the type of 'duality' of teaching-learning Gal'perin conceived. "Vygotsky insisted on the dialectic unity of learning-and-development- a unity in which learning lays down the pathway for development to move along and which in turn prepares

ground work for further learning, and so on...” (Dunn & Lantolf, 1998, p. 422). The authors put forward that in Vygotsky’s view; “specifically human mental activity is the consequence of the dialectic interaction between natural and cultural/historical forces” (Dunn & Lantolf, 1998, p. 426) which we could think is enacted within the teaching and learning synergy.

Lantolf & Poehner (2014) state that “a dialectical relationship is established when a user takes up the artefact and uses it to achieve specific communicative goals” (p. 61). This idea could be interpreted in dialectical terms, where the ‘user’ could be the learner, language acting as the ‘artefact’, and the achievement of a specific communicative goal could be the act of understanding, internalising and ideally learning a given concept or idea. As earlier discussed (*cf. Section 2.2.2.*) the ZPD is no other but a *dialectic unity of learning-and-development*, or more appropriately, *learning-leading-development* (Newman & Holzman, 1993 as cited in Dunn & Lantolf, 1998, p.420).

2.3.2. Mental Action and its levels of abstraction

Gal’perin advocated that teaching-learning necessarily implied some type of action directed at specific objects in the service of an aimed goal, and actions could be conducted with support at four different levels of abstraction: *material/materialized*, with support of physical objects or their representation in the form of models, diagrams, or pictures; *perceptual* carried out without support of external objects, but with the support of visualized or imagined objects; *verbal*, performed with the support of external speech; and *mental*, conducted internally without the support of artefacts or speech to achieve self-regulation (Arievitch & Haenen, 2005; Haenen, 2001 in Lantolf & Poehner, 2014, p. 61) Once the learner has gained ‘*self-regulation*’, he/she is capable of directing his/her own cognitive functioning in a given learning context (Stafford, Catherine, 2013, p. 166). To exemplify this, the authors make reference to the idea of planning the layout of a garden; in concretizing and attaining this specific goal, first the person has to think of a piece of land and perhaps *materialize* it by seeing it physically or drawing the potential distribution of it in a *perceptual* way as imagining the desired outcome; then *verbalise* the plan of action to carry out the goal (perhaps with the guidance or collaboration of someone else) and finally ‘wrapping-up’ and conceiving *mentally* the complete idea of the garden potentially finalized.

Gal'perin suggested that such mental actions were characterized according to three indicators: *generalization*, the extent to which an action is stable and essential, if it is context independent and possibly implemented in a variety of environments; *abbreviation* indicates if the original components of an action are executed or reduced, which typically occurs as a result of practice; and *mastery*, indicates if the action can be conducted independently with or without help of others, i.e. the teacher, a diagram or a model (Haenen, 2001, p. 160)

For Gal'perin this was the ideal form of pursuing cognitive development and eventually achieving the learning goals (Haenen, 2001; Arieviditch & Haenen, 2005). In considering these levels of abstraction a developmental theory such as STI could be implemented to the benefit of human intellectual and cognitive development.

2.3.3. The Phases of the Process of STI Implementation

STI comprises three general phases and two sub-phases of operationalization which seek to stimulate development and mental actions of the learners. However, these do not necessarily follow a sequential order or have to be carried out together; their application depends on the context conditions and, classroom practices aimed to be implemented on learners' current knowledge (Arieviditch & Haenen, 2005, p. 159).

The phases STI comprises in order to accomplish its pedagogical proposal are, the first regarding the implementation of *Orienting Basis of Mental Action (SCOPA)* and the second regarding *Verbal Action* which is subdivided into two sub-phases known as 1) dialogic thinking and 2) communicated thinking. And the third or final phase, 3) inner speech; these are explained in the subsequent sections.

2.3.3.1. First Phase: Orienting Basis of Mental Action (SCOPAs)

According to Lantolf & Poehner (2014) the implementation of the *Schema of a Complete Orienting Basis of an Action (SCOPA)* is perhaps the most important and influential phase from the three (p.63) because it is during this phase that, learners are introduced usually for the first time to the new concepts to be learnt. Through the implementation of *SCOPAs* which consist of, i.e. a picture, a model, a diagram or some

other non-linguistic representation of the concept, learners are exposed to novel information and start processing it towards understanding and internalization. “Gal’perin argued that verbal explanations of concepts alone are potentially problematic for learners, particularly at the early stages of developmental education” (Lantolf & Poehner, 2014, p. 63). It is precisely because they represent systematic conceptual knowledge that the use of SCOBAs is argued to better serve pedagogical purposes since these are holistic, abstract, generalizable and do not require strict memorization; they only contain ‘bits’ of language and serve as reminders of knowledge required to engage in particular actions (Lantolf & Poehner, 2014, pp. 63-64).

The classical definition of *Concept*, is an idea or mental image which plays a part in the use of reason or language (Oxford Dictionary, 2019). From a SCT view ‘concept’ is an abstract idea or notion that represents something with the specific purpose of making it understandable and clear to others. A concept can be represented in words, numbers, sounds, images or any other not tangible form but clear enough to convey the meaning essence of the concept to others. “Communication in social interaction is the origin of *conceptualizations* in personal-intra-action... it is the internalisation of meanings with functional significance in communicative activity...” (Negueruela-Azarola et al., 2015, p. 233). Conceptualisations are constructed through verbal thinking (Vygotsky, 1986) and SCT is based on conceptual development and personal transformation in the L2 classroom (Negueruela-Azarola et al., 2015, p. 233). Thus, the goal of conceptually-based pedagogy is promoting internalisation.

SCOBAs capture concepts and their main challenge is to convey pedagogically the systematic essence of such concepts (basically a general idea) clearly enough to help learners understand the concept. The ultimate goal is to allow them to re-use this new knowledge and deploy it in broader contexts in concrete goal-directed activities with a specific purpose and use (Lantolf & Poehner, 2014, p. 65).

Thus, as mentioned above and in simpler words, a SCOBA is a very general idea of the new item (concept) aimed to be learnt in its most basic form. That is, a SCOBA is a pedagogical tool that serves the function of an instrument to teach or introduce new knowledge to the learner in ways in which it does not require any effort for memorization but rather encourages a deep understanding of the concept. Its function is “more of a materialized ‘reminder’ to guide their performance regarding the knowledge

required to engage in a particular action” (Lantolf & Poehner, 2014, p. 64). Figure 1 (p.21), below from Yáñez-Prieto (2008) used to teach tense exemplifies what a SCOBA is.

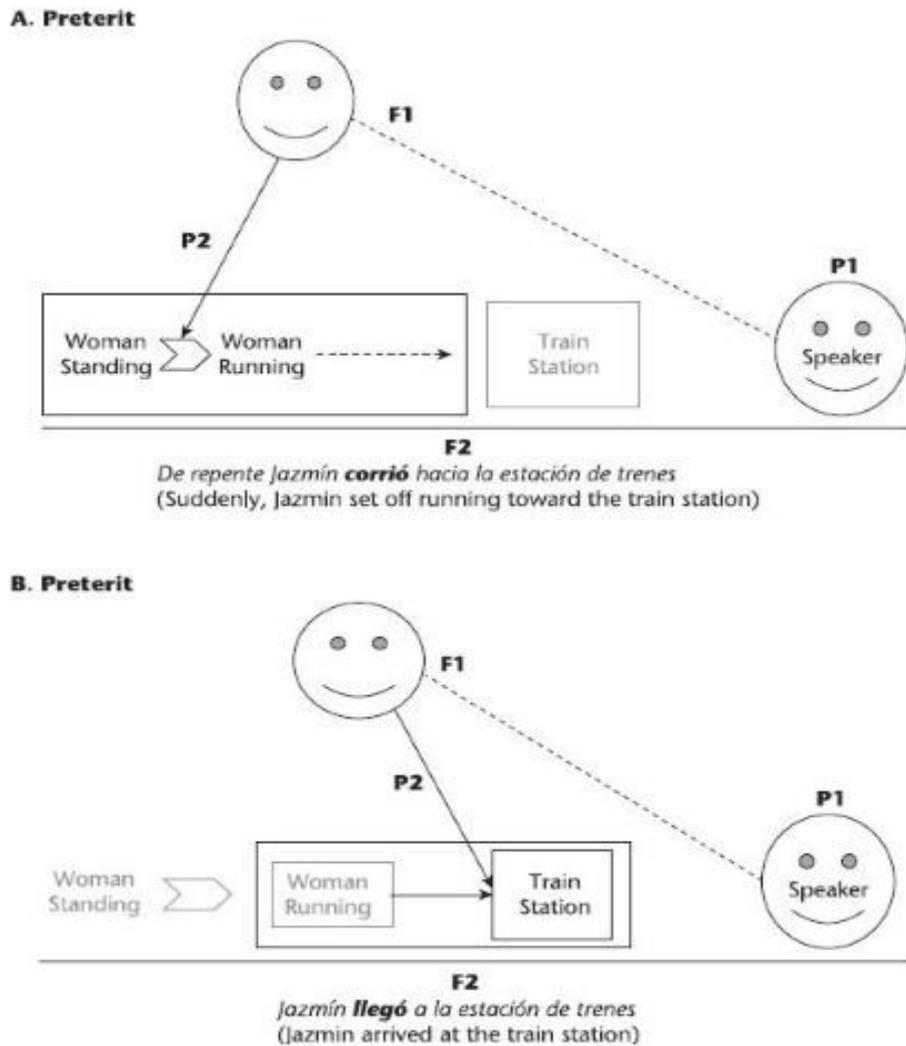


Figure 1. Example of SCOBAs from (Yáñez-Prieto, 2008).

In Figure 1 Section (A) **Preterit**, **P1** indicates the temporal perspective from which the narrator views the event -a point in time later that the event itself. **P2** indicates an imaginary temporal perspective that the narrator adopts in order to reposition herself/himself as if viewing the event at the time it occurred. **F1** is speaker’s focus on Jazmin. **F2** is speaker’s focus on the initiation of the event (i.e., Jazmin setting off running). In (B) **Preterit**, the speaker shifts focus (**F2**) to the conclusion of the event whereby Jazmin arrived at the station.

2.3.3.2. Second Phase: Verbal Action

Gal’perin, (1969) in Lantolf & Poehner, (2014, p. 65) suggested that the second phase, *Verbal Action*, should proceed (ideally) once the learners have shown a high

level of understanding and control of the concept through the SCOBAs. He argued that once the learner had grasped the new concept/knowledge, the use of external speech would serve the function of ensuring understanding and internalization had occurred. The verbalisation phase was conceived as serving the learners to become able to speak reflexively regarding the new concept either with their peers or to themselves; this verbalisation phase would serve to make the transition between the material and mental actions.

Gal'perin proposed two phases of verbal action, 1. *Communicated thinking*, and 2. *Dialogic thinking*. In the former, students are required to carry out an action linguistically in order to make it comprehensible to others and not just themselves. In the latter learners are encouraged to speak to themselves covertly about what they are doing when understanding and deploying a concept; (Gal'perin, 1969, p. 260; Lantolf & Poehner, 2014). In the following section the particularities of these two forms of verbal action are explained in detail.

2.3.3.2.1. Communicated Thinking

In Gal'perin's (1969) ideal, conceptualisation of STI *communicated thinking* was a key verbalisation phase followed by *dialogic thinking*. Communicated thinking is overt speech with someone else aiming to transfer verbal information comprehensible to others; it is spoken and open discourse aiming to get a message across. Gal'perin believed that it was necessary to "separate the action from its previous materialized support to give path to overt social speech" (Haenen, 2001, p.163). During communicated thinking learners are expected to verbally externalize/communicate the action/concept linguistically rather than relying on any direct tangible objects. Gal'perin believed that overt speech was a transitional phase between the materialized and the mental action; he argued that after manipulating tangible representations of a concept in a materialized form, the next step was to replace such materialization with speech through communication. By proposing this, "Gal'perin encompassed Vygotsky's general law that social speech became the source of thought" (Haenen, 2001, p.163). He thought that only through socially-based application of the concept aimed to be learnt, the proper learning of it could occur. This was because the communicative function of speech was only effective until speech conveyed the message to others.

2.3.3.2.2. Dialogic Thinking

Dialogic thinking is no other than *talking to oneself*; it is also known as *private speech* (Lantolf & Poehner, 2014, p. 66) During this type of talk the learner explores the 'inner speech act' by covertly talking to him/herself in order to reflect on what he or she is aiming to learn. In proposing his developmental theory, Gal'perin, (1969) proposed Dialogic thinking as an activity that the learner conducts individually. It is a silent moment in which the learner while 'speaking to him/herself' has the opportunity to reflect on what he is trying to understand to eventually internalize for further externalization. It is this reflexion that will contribute to make the learner aware of the new knowledge being learnt.

Paul (2012) in his critical thinking essays, suggests *dialogic thinking* is precisely the type of activity learners need to put into practice to really reflect, assimilate and understand the new knowledge presented to them. He points out that through dialogic thinking learners –(individually and mentally) can “compare and defend multiple points of view on issues, exploring and testing them, and become more truly convinced of what they are learning, and thus take that knowledge to heart” (p.268). The author also suggests that it is dialogic thinking that encourages rational thinking by the learner by adjusting his or her thinking to the nature of each concept or query; this implies that the person has to think on the relevance, completeness or implications of the information he/she is processing. The key is, how do we make learners achieve this kind of reflection? “Learners should be encouraged to make their ideas more explicit and to critique them; this will help to make their own ideas more sophisticated and reason about them”, the author points out (p.271).

According to Lantolf & Poehner (2014, p. 66) it is *dialogic thinking* that takes learners from the “I/You” common interactions, to the “I/Me” speech which implies features of psychological speech; that is, through “continued engagement in dialogic thinking, activity becomes increasingly routinized and moves closer to becoming purely mental from the abstract to the material, (Haenen, 2001, p. 164). It stops being only about the ‘subject’ “I/You” to turn into the ‘object’ “I/Me”; the learner becomes able to manipulate and reflect upon the concept/new knowledge in a more objective way rather than just subjectively. For Haenen (2001), dialogic thinking is the transition from ‘overt

speech' to 'speech minus sound' which in the mind such overt form of speech will take the shape of a "deep structure" that is the new concept (p.164).

For the purposes of this study, *linguaging* will be approached from the two different phases proposed by STI: *communicated thinking* and *dialogic thinking*. Thus, either through *dialogic thinking* or *communicated thinking*, *linguaging* allows for manipulation and use of the recently learnt concept in new contexts or activities going from the mental concept to the materialization of the idea.

2.3.3.3. Third/Final Phase: Inner Speech

The final or third phase of STI, is that of *inner speech* and alludes to the stage in which the learner has gained 'mastery' of the concept. At this point, the learner has understood and internalized the concept and it becomes mental and can make almost automatized use of it in all sorts of contexts using his creativity freely. In Gal'perin's words, the learner "just knows that's how it is" (1957, p. 221 in Lantolf & Poehner, 2014). *Inner speech* is completely different to dialogic thinking in that it is purely mental, therefore thought; on the contrary dialogic thinking is usually covert speech to oneself.

The phase of *inner speech* alludes to the moment in which the learner can execute and deploy the newly learnt knowledge quickly, almost spontaneously and error free; according to Lantolf & Poehner (2014) "the individual is now able to use the concept with facility in different contexts and often in creative ways" (p.69). At this point, the learner has gone from the materialization of the concept through the manipulation of the *SCOBAs*; has mediated through *communicated thinking* while trying to understand and being able to transfer the new knowledge to others; and has gone through the *dialogic thinking* phase with him/herself in an effort to make the new knowledge mental and automatic. The learner now is ready to 'deal' with the new concept purely at an abstract level; the new form has become "pure thought" (Haenen, 2001, p. 164). The action/concept is mentally executed with the aid of mental images and abstract concepts (ibid). As SCT suggests, language is perhaps the most 'powerful' tool learners have to *mediate* in their process of understanding while co-constructing their new knowledge (Vygotsky, 1986). Ideally, at this stage the learner will be able to

understand, cope and apply as mentioned above, -spontaneously and error free, the target concepts being learnt indistinctly of the nature of these (i.e. metalinguistic knowledge, language use, pedagogical knowledge, etc.).

Thus, it is through STI and all the components that make it (SCOBAs, verbalisation, and internalisation phases) that we aim to explore the enhancing of EFL teacher trainees' metalinguistic knowledge specifically in relation to the grammatical concepts of *tense* and *aspect*. An array of studies suggests that these linguistic features usually are considered as complex and problematic areas to cope with, see for example, 'acquisition of tense and aspect and agreement morphology in L2 English' (Casillas-Navarro, 2006); 'development of the grammatical concept of aspect' (García, 2012); 'the acquisition of tense and aspect in L2 English by Spanish speakers' (Gaspar-García, 2012); 'the development of tense and aspect morphology in child and adult heritage Spanish (Cuza, Miller, & Sadowski, 2012); 'teaching teachers to teach aspect' (Blyth, 1997). In the case of the participants in our study with L1 Spanish learning English, anecdotal evidence from the researcher working in the field suggests the need to explore the way in which teacher trainees are being instructed regarding tense and aspect (Negrete-Cetina, 2007; 2010). I will now proceed to the discussion on these grammatical features.

2.4. Tense and Aspect

Tense and Aspect are two linguistic features present in almost all languages. Generally speaking, *Tense* is what determines the actual time of the verb in relation to present, past or future; whereas *Aspect* determines if the action is seen as completed/bounded or in progress/occurring as time flows. These two concepts determine the degree of understanding of a given event in a time perspective from the eyes of the speaker.

2.4.1. The Classical Pedagogic Perspective

The classical or traditional perspective to the study of tense and aspect considers *tense* as the means to express the time in which an action occurs in relation to the

moment of speaking. In most languages tense has three dimensions –present, past, and future; though some authors like Celce-Murcia & Larsen-Freeman (1999, p.109) suggest that, in English, ‘future’ is not ‘marked as a tense’ as they consider that “in English finite verb stems are not inflected to express future time”. This does not mean that English speakers cannot talk of future events; to do so they make use of auxiliary verbs, modal verbs, phrasal verbs or adverbials of time.

Tense in English grammar is formed according to the scopes of present, past, and future for which there is a specific base form of the verb that in some cases is modified morphologically indicating the corresponding person and tense. In considering some examples; *simple present* uses the form *neutral* or *zero* marker to indicate an event, (e.g. ‘we play tennis every Saturday morning’); however for third person singular there is a specific rule which consists of adding an –s to the verb (e.g. John plays tennis every Saturday morning). The *Simple past* is formed with the verb in simple past form for every person and regular verbs undergo a morphological change by adding –ed at the end of the verb (e.g. talk-talked, walk-walked, jump-jumped, etc.); for irregular verbs these undergo morphological change -observing changes in their form (e.g. speak–spoke-spoken; drive-drove-driven; am, is, are-been; etc.). For interrogative and negative statements the simple past uses the auxiliary did for every person and the verb remains in its neutral form, (e.g. Did you go to the dentist yesterday?; I did not see the dentist this week). The *present perfect* uses the auxiliary verb *have* for I, we, you and they; and *has* for third person singular with the main verb in past participle form. Regular verbs in past participle remain in the form of simple past (e.g. played; studied, etc.) whereas irregular verbs can change their form morphologically. The *present progressive* also known as *present continuous* uses the verb *to be* (am, is, are) as its auxiliary verb and the main verb undergoes a morphological change by adding –ing to the main verb, (e.g. he is studying at the library right now; we are watching a movie at home, etc.). Even when sometimes the ‘formal’ existence of the *future tense* in English is not ‘acknowledged’, notions of future events can be conveyed through the use of the auxiliary verb *will* and this tense is considered as part of the whole spectrum of time (Celce-Murcia & Larsen-Freeman, 1999a; Cowan, 2009) (see Table 1 below). The authors suggest the existence of up to 12 combinations of tenses in English.

Table 1. Tenses and Aspect in English

	Simple	Perfect	Progressive	Perfect Progressive
	Ø	have + -en	be+ing	have+-en be+ing
Present	write/writes walk/walks	has/have written has/have walked	am/is/are writing am/is/are/walking	has/have been writing has/have been walking
Past	wrote walked	had written had walked	was/were writing was/were walking	had been writing had been walking
Future	will write will walk	will have written will have walked	will be writing will be walking	will have been writing will have been walking

(Celce-Murcia & Larsen-Freeman, 1999, p.110)

In English there are two types of aspectual distinctions: the *simple* and the *progressive*. According to Hirtle (1967) in Celce-Murcia & Larsen-Freeman (1999a), the simple aspect “refers to events that are conceptualized as complete wholes and usually are not perceived as for allowing further development” (p.112). *Simple* aspect is also known as *perfect* aspect; for the purposes of this study the term used will be *simple aspect*. The criterion for choosing the term *simple* for aspect in this study is to avoid any further confusion with the terminology *perfect tense*.

On the other hand, the progressive aspect “stands in contrast and is considered as incomplete or imperfective, the event or state is viewed as a portion of a whole and there is room for further development or change in the action itself” (ibid p.112).

Celce-Murcia & Larsen-Freeman (1999); Hirtle (1967) and Smith (1983) agree in that aspect is different but complementary to tense; it is directly related to the internal structure of the action occurring at a given moment. Aspect refers to the action seen from the eyes or perspective of the viewer/speaker of the action; it allows for a holistic interpretation of the event from an external eye in relation to the event as being “bounded or completed” or “in progress or incomplete”. When the action indicated by the verb is seen as *bounded* or *completed* it can be considered as *simple/perfect* in terms of aspect; that is, the action has a clear beginning and end within the frame of time it takes place. On the contrary, when an event is seen as *in progress* or *incomplete* it is considered to be *progressive/imperfect* in terms of aspect; this means the event is seen as ongoing and has no specific beginning or end within the scope of time it takes place.

According to Celce-Murcia & Larsen-Freeman (1999) there are four aspects to be considered in English: *simple* (also know as zero aspect), *perfect*, *progressive* and their combination, *perfect progressive* (p.111). Cowan (2009) also points out the existence of the *iterative* aspect which is when the action is repeated, and the *habitual*

aspect which alludes to an action occurring regularly. The author suggests that these different aspects are present in the verbs of most languages.

Regarding the *progressive/imperfect* aspectual distinctions (in-progress/incomplete) two are formed with the use of auxiliary verbs; these are, the *progressive/continuous* and the *perfect*. The *progressive/continuous* is indicated with the use of the auxiliary verb *to be* + main verb (*-ing*). The *progressive* aspect usually indicates an on-going action that can occur at any time and expresses duration (Cowan, 2009, p. 362). The *perfect* aspect is formed with the use of the auxiliary verb *have/has* + main verb (*past participle*) and alludes to events that started in the past and continued to the present; this gives to the perfect aspect the notion of 'recency' or 'incompleteness' and it is commonly used retrospectively to indicate a time prior to now (Celce-Murcia & Larsen-Freeman, 1999, pp.116-118).

Both imperfect aspects (*perfect* and *progressive*) can be used together and can be framed within the spectrum of present, past and future. Another particular characteristic of these two aspects is that they are usually built with activity verbs and convey time expressions of duration like 'for' or 'since' (Cowan, 2009, p. 272).

Smith (1983) suggests that aspect has two core components: 1) *situation aspect* which involves type of situation, e.g. event or state; and 2) *view point aspect* which involves the type of perspective, e.g. simple or progressive (p. 479); these are also directly related to the concepts of *habituality* and *iterativity* (Bertinetto & Lenci, 2010). Thus, events can be perceived as non-dynamic, e.g. John played his guitar last night; or as on-going processes, e.g. John is playing his guitar now. The non-dynamic nature of the former indicates that the event is completed; it has a clear beginning and end therefore its aspectual perspective can be considered as simple/perfect. The latter indicates that the event is still an ongoing situation and has no clear boundaries of when it exactly begins or finishes; therefore it is considered to have a progressive/imperfect aspectual perspective. Hence, in simple/perfect aspect the verb remains in neutral or zero form, while progressive/imperfect aspect is signalled by a particular form which is considered an aspectual morpheme: auxiliary *be* + *ing* (ibid p.480).

Thus, from a classical perspective on tense and aspect it can be said that there are *12 tenses* in English and *4 aspects* which for purposes of ESL/EFL teaching and learning could be seen in a more simplified way: three tenses (in the basic form) as the

base for building the 12 tenses and two aspects (simple and progressive) for gaining a general understanding of the tense-aspect system on English, as Bardovi-Harlig & Reynolds (1995); Celce-Murcia & Larsen-Freeman (1999); Cowan (2009); Hirtle (1967); Smith (1983); amongst others seem all to agree.

2.4.2. Cognitive Linguistics Perspective on Tense and Aspect

Another way of approaching tense and aspect for its study, different from a 'traditional grammars' view, is from the approach of Cognitive Linguistics which offers an alternative perspective of interpretation.

For Cognitive Linguistics (henceforth CL) language is seen as working in conjunction with all the cognitive structures such as mechanisms of perception, attention, categorization, memorization and inferencing (Dirven, 2005; Langacker, 1987; 2008; Reif, 2012; Niemeier & Reif, 2008). It is from Cognitive Linguistics that Cognitive Grammars (henceforth CG) derive and see language as the result of every semiological component, i.e. semantics, phonology and symbolic structures working together (Reif, 2012, p. 39).

Cognitive Grammar posits that in "linguistically-mediated communication, lexis and grammar are understood to specify different portions of a cognitive representation, which conjointly enable optimal 'meaning transfer'. The interaction between lexis and grammar in discourse is therefore crucial to the understanding of the overall functioning of language" (Reif, 2012, p. 39).

For Cognitive Grammar, language comprises two subsystems: 1) Lexical subsystem; which considers open class elements, e.g. nouns, lexical verbs and adjectives; and 2) Grammatical subsystem, which comprises closed class elements, e.g. determiners, auxiliary verbs and conjunctions. Cognitive Grammar postulates no constructive rules for the syntagmatic combination of lexical items; instead it proposes constructional meaningful schemas rather than rules to capture formal patterns (Reif, 2012, p. 40). Cognitive Linguistics aims for the development of meaningful concepts emanating from dynamic mental processes of conceptualization (Langacker, 2008).

Thus, from a Cognitive Grammar perspective, tense and aspect are seen as a meaningful holistic system that works at the morphological and syntactical levels and

in hand with the cognitive mental structures, rather than just a set of strict prescribed rules that must be followed (Reif, 2012, p. 43). CG treats tense and aspect as a system that 1) involves overt grammatical markers such as bound inflectional morphemes (e.g. "ing" and "ed") and grammaticised free morphemes (e.g. "be" and "have"); and 2) constructional schemas, which provide templates for the composition and combination of elements within a verb phrase (Langacker, 2008).

For CG lexical elements have an impact on the content of cognitive representations, whereas grammatical elements specify the structure. Therefore, if the lexis is changed a completely new scene is produced; on the other hand, if grammatical properties change, these alter the structural organization of the situation and perception (Talmy, 2000).

Fauconnier (1997; 2007) suggests that *tense* alludes to a 'mental space' or 'base space' in both the speaker's and hearer's mind, and that it is precisely in such space where tense and time become anchored. Furthermore, it is within this mental space where 'speech time' or the speaker's moment of speaking and the 'event time' when the action occurs merge and become an 'external' reality. Hence, tense appears as "the grammatical tool that allows the speaker to locate, select, or highlight a time span which is relevant for what he/she wants to say... the present tense is always used to express proximity/immediacy –be it temporal, epistemic or "narrative" proximity –while the past tense always indicates distance/non-immediacy, either with respect to relevance time, reality status or social commitment" (Niemeier & Reif, 2008, p. 342). For Boogaart & Janssen (2007) in Reif (2012) tense is precisely when the language user "contextualizes the situation into the current discourse", in other words, it is through the inflexions in the lexicalized verbs e.g. live, lived that "tense establishes a temporal relation between the communicative situation and the situation communicated" (p.70).

According to Reif (2012) tense has the characteristic of being *deictic* since tense forms are elements whose meaning can only be inferred and described with reference to the communicative situation; in other words, its interpretation depends on 'who is talking', 'who they are talking to', 'where they are talking', 'when' they are talking etc. (p.70). It is tense that allows the speaker to 'keep track' of time.

Evans & Green (2006) put forward the notion of *construals* which are forms of linguistically mediated communication triggered by means of linguistic expressions to

access conceptual knowledge activating domain –general processes like perspectivisation or focusing attention. From a CG standpoint tense and aspect are construals evoking conceptual representations manifested through utterances in which *resolution* and *viewing* are implied to convey and interpret meaningful messages along with *perception* and *conception* (Langacker, 2000).

In order to grasp the concept of tense and aspect, Langacker (2000) in Reif (2012, p. 56) (Figure 2) suggests that the viewer determines the *maximal field of view* (MF) which comprises everything observable given an orientation. Since the viewer who is the *conceptualizer* (C) cannot perceive everything within the maximal field at once, viewing necessarily involves focusing of attention. The viewer needs to single out a limited or stage region (OS) area of the maximal field as the centre of his/her attention. The OS is perceived then as the *maximal scope* (MS) in which the *immediate scope* (IS) is contained as figure 2 below shows.

The following images (Figure 2 and Figure 3) all taken from Reif, (2010) portrait the concepts above mentioned in a visual.

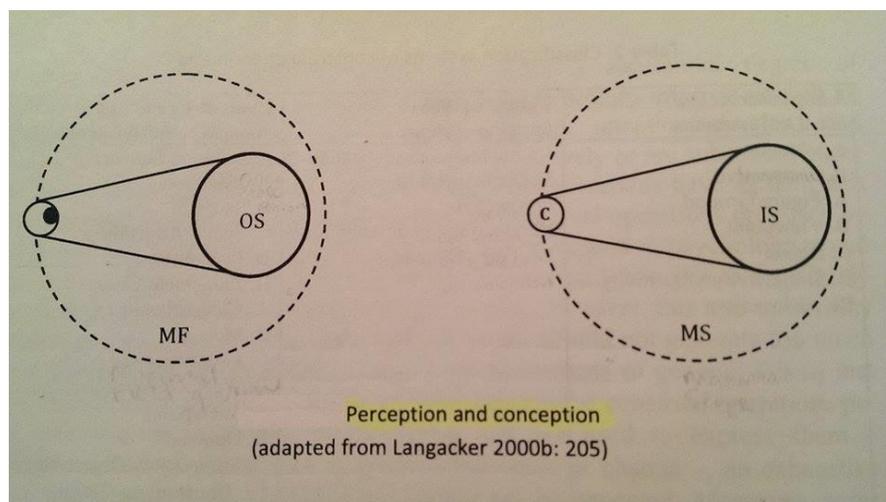


Figure 2. Perception and Conception (Reif, 2010, p.56).

The *immediate scope* (Figure 2) can be considered as the *viewing frame* (Radden & Dirven, 2007) which allows for a *zooming in* of the situation in order to identify the boundaries of the events (Figure 3) (Smith, 1991 in Reif, 2012, p. 101). Moreover, Figure 3 depicts the viewing frames with indefinitely lasting states, i.e. *maximal viewing frame* and *restricted viewing frame*.

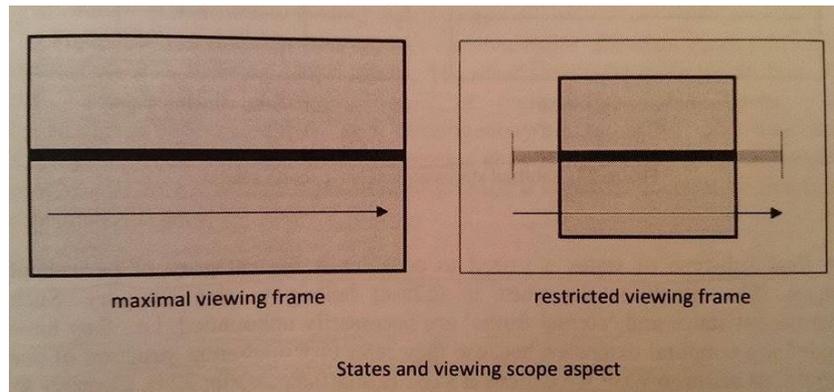


Figure 3. States and viewing scope aspect (Reif, 2010, p. 107).

Cognitive processes and mechanisms of perception, attention, categorization, memorization and inferencing will enable to identify the *processing time* which is the time span required for the conceptualization of the situation, and the *conceived time* which is the time in which the situation occurs. A *sequential* and *summary scanning* occurs to determine the nature of the events as figure 4 suggests. If one access the component stages of a situation successively as it unfolds through time, like in motion picture, that mode of processing is referred as *sequential scanning*; it represents the actual nature of the real-time viewing experience (Langacker, 2008p. 111). In the mode of *summary scanning* the component stages of a situation undergo summation, in that "representations of successive stages are superimposed to form a single gestalt"; the situation is seen in 'summary fashion', so that "all the component states are simultaneously active and available" (Langacker, 2008, p.111).

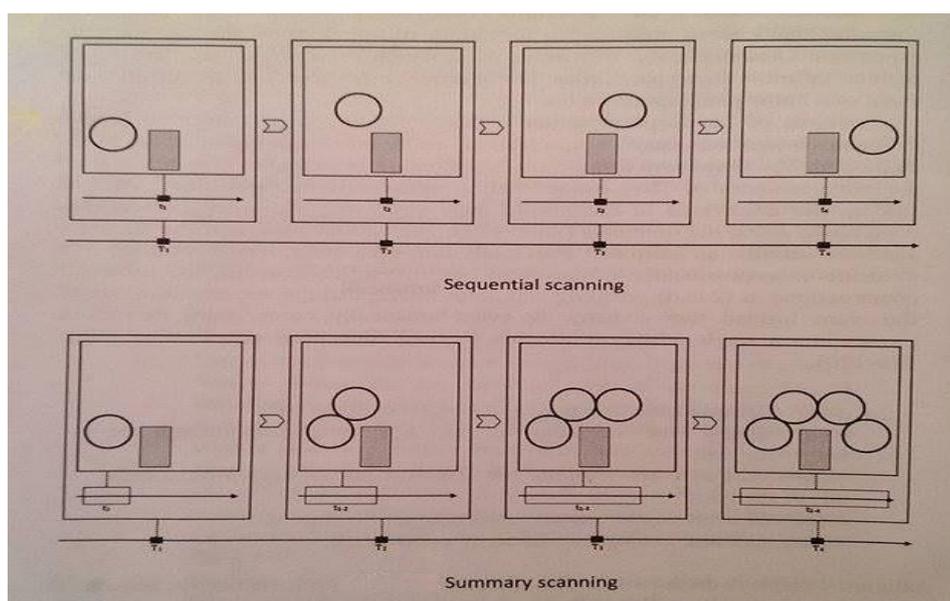


Figure 4. Sequential and Summary scanning (Reif, 2010, p. 60).

Once the event has been identified as either a sequential or summary event, the boundedness determines if the aspect is simple or progressive (see Figure 5).

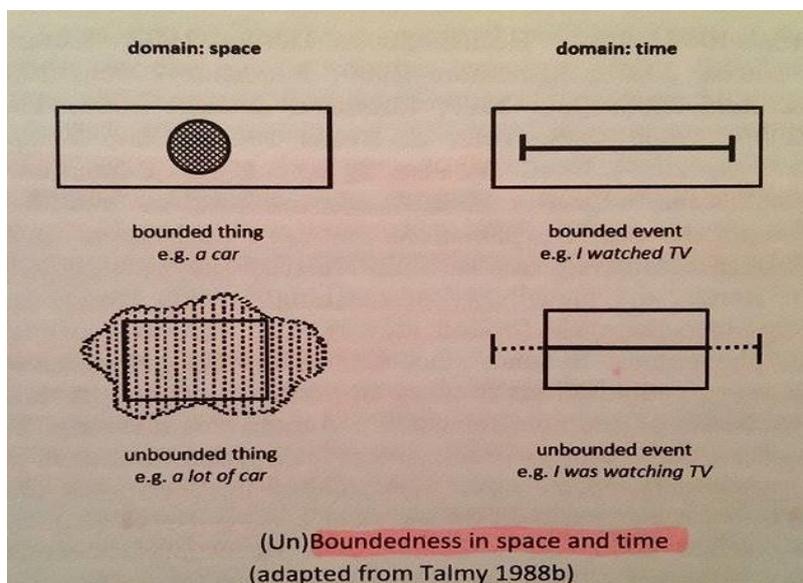


Figure 5. Boundedness in Space and Time (Reif, 2010, p.19).

All these process concepts occur within the *Mental Spaces framework* suggested by Fauconnier's (1997; 2007) *Model of Mental Spaces* which forms the basis for Reif's (2012) integration of the linguistic categories of tense, viewing direction aspect and viewing scope aspect into one coherent framework through the *Mental Space Approach* (Reif, 2012, p. 115). Through the idea of mental spaces, the author proposes a way in which the concepts of time and aspect are conceived as components of the same linguistic structure; however, each one has a very specific function. Based on Fauconnier's premise, Reif (2012) suggests that the notion of *mental spaces* consists on "cognitive constructs which are activated during both language production and language comprehension of content elements, possess an internal structure, and are connected to other mental spaces within a particular space configuration" (p.115). The construction and connection within these mental spaces occurs through the lexical and grammatical devices of language; "tense is responsible for helping us to keep track of the time shifts and epistemic shifts within discourse; aspect is concerned with the construal of the situation spaces themselves by indication from which direction they are accessed and whether they are viewed with a maximal or a restricted scope" (ibid).

Emerging from the core of Cognitive Linguistics, the notion of *mental spaces* initially proposed by Fauconnier (1997; 2007) and also explored by Reif (2010) appears as an alternative to explore the teaching and learning of tense and aspect from the perspective of cognitive grammar. The idea of language production and comprehension being interconnected with cognitive constructs within the mental spaces appears to be a strong and coherent proposal to investigate in the EFL context.

Furthermore, Niemeier & Reif (2008) consider aspect as a type of 'choice' for the speaker to refer to the action in terms of proximity and distance from the point of the viewer. That is, when the speaker sees the action as a non-progressive form *completed* or *bounded* it means it is seen as finished and therefore it is seen from a distant or an outside perspective (Figure 5). By contrast, when the speaker recurs to the use of a progressive form that is *in progress* or *incomplete* the action is perceived as a 'closer' in progress event yet not finished leaving space for more action to happen (Radden & Dirven, 2007). As opposed to tense, aspect is a non-deictic category since it does not serve the function of associating the situation intended to the communicative situation; rather, it is related to the various forms of perceiving a situation (Reif, 2012, p. 70). *Aspect* refers to "the situation spaces themselves by indicating from which direction they are accessed and whether they are viewed with a maximal or a restricted scope" (Reif, 2012, p. 115).

Cognitive grammar appears to offer an alternative way of understanding the concepts of tense and aspect from a broader perspective, arguably more logical and functional; it places emphasis on the speaker's perception of events as the *natural point of departure* for explaining aspectual choice from a logical and dynamic point of view (Blyth, 1997, p. 58). In hand with the general cognitive structures of the mind, the concepts of tense and aspect seem to gain more sense rather than looking at them as merely grammatical rules that should be memorized and learnt mechanically and discretely. The concepts of mental spaces, viewing frames, and boundedness as conceived by cognitive grammars allow for a more in-depth and clear conceptualization and perception of tense and aspect. The challenge arises in translating these into pedagogical practice; the teaching of tense and aspect in hand with cognitive grammar opens a new window for exploring alternative forms for communicating this new knowledge to the learners.

2.4.3. Challenges for L1 Spanish speakers learning L2 English.

As Celce-Murcia & Larsen-Freeman (1999) point out, in ESL/EFL teaching contexts it is most common to refer to the three basic tenses (present, past and future) and to the two types of aspect (simple and progressive) which are vital for learners to fully understand two slightly different but complementary concepts. Even when the concept of tense and aspect seems to be present in many languages, the way in which these two are expressed in English may not be easy to understand for learners from different linguistic backgrounds; this is due to the fact that in many cases tense and aspect are “conventionalized differently within discourse frames in different cultures” (Celce-Murcia & Larsen-Freeman, 1999, p. 175).

The case of L1 Spanish EFL learners is no exception in facing this type of challenge when faced with tense and aspect; see Casillas-Navarro (2006); García (2012); Gaspar-García (2012); Yáñez-Prieto (2008). These authors have conducted research regarding the acquisition of tense and aspect by L1 Spanish speakers learning L2 English, looking at the difficulty for these students when faced with such linguistic features. On trying to exemplify the difficulty some learners may encounter while learning the concepts of tense and aspect, Blyth (1997) points out that “it is usually frustrating for both students and teachers to apply aspectual rules that are based merely on descriptive terms such as “continuing event”, “durative event”, “repeated event” and so forth” (p.54). Dansereau (1987) suggests that some textbooks may be vague, incomplete, contradictory and generally have poor explanations regarding tense and aspect (p.35).

English and Spanish have slightly different ways of expressing tense-aspect distinctions (Cuza, Miller, & Sadowski, 2012, p.6).

In SPANISH there are TWO forms for TWO aspectual meanings:

- a. María tocó el piano [bounded/completed]
- b. María tocaba el piano [unbounded/habitual/ongoing]

In ENGLISH there can be ONE form for TWO aspectual meanings:

- a. Mary played the piano [bounded/completed]
- b. Mary played the piano as a child [habitual]
- c. Mary used to play the piano [unbounded/habitual/ongoing]

As the previous examples show, English and Spanish differ in the way they indicate tense and aspect; as Celce-Murcia & Larsen-Freeman (1999) point out "discourse convention of learners' native language tense-aspect-modality system will most likely not transfer positively to English" (p.175). This can, therefore, result in confusion for learners and make the learning process difficult.

As Comrie (1976) in Salaberry (2008, p.5) explains, in both English and Spanish the concept of temporality which alludes to tense and aspect is expressed morphologically (e.g. verbal endings), lexically (e.g. time adverbials), syntactically (e.g. periphrastic forms) and contextually (e.g. grounding). Nevertheless, each language has specific ways of expressing aspectual meanings; in Spanish the aspectual contrasts of perfective-imperfective meanings are represented in the past tense through the use of preterite and imperfect whereas English as opposed to Spanish does not grammaticalize the perfective-imperfective contrast, but rather the progressive-non-progressive one represented in the distinct meanings conveyed by for example *he read* versus *he was reading* (Salaberry, 2008, p.5).

For instance, in Spanish "aspectual contrasts are obligatorily marked in past tense only which is not the exact case for English. In Spanish past tense inflectional morphology indicates both tense (past) and aspect (perfective or imperfective): the preterite encodes perfective aspect and past tense, whereas the imperfect encodes imperfective aspect and in most cases, past tense" as the following examples (1a, b) suggest (Salaberry, 2011, p. 185).

(1) A. Julián comió (PRET) una manzana [bounded]

"Julián ate an apple"

B. Julián comía (IMP) una manzana [unbounded]

"Julian ate/was eating an apple"

The previous examples could indeed be confusing for L1 Spanish learners of L2 English since in the target language aspect must be marked. In English these examples would have to be conveyed with the contrast of the simple past and the past progressive (p. 185) as shown in example (2).

(2) Julián comía (IMP) una manzana, cuando llegó (PRET) Lucas.

“Julián was eating an apple, when Lucas arrived”

Another feature of Spanish aspectual forms different from English that may be misleading is the association between English past progressive and Spanish Progressive. In Spanish the imperfect covers a wider scope of aspectual notions in contrast with English; thus to convey the habituality that Spanish expresses with the use of the imperfect, English lexicalizes habitual aspect in the past with the use of verbs such as *would* or *used to* (Salaberry 2008, p. 186) as shown in example (3).

(3) A. Cuando era (IMP) niño, Julián **comía** (IMP) manzanas todos los días.

“When Julián was a child, he would eat/used to eat/ate apples every day”

However, Spanish can be said to have an ‘equivalent’ option for the English lexical markers of habituality such as the *defective* verb *sol(er)*; see example (3B).

B. Cuando era (IMP) niño, Julián **solía** (IMP) comer manzanas todos los días

“When Julián was a child, he would eat/used to eat/ate apples every day”.

The previous examples demonstrate some instances of how both languages English and Spanish differ in the way the notions of tense and aspect are conveyed, and show that there is not necessarily an exact correspondence for each one of the forms of tense/aspect in both languages. Therefore, the challenge for learners arises precisely because “morphosyntactic marking of aspectual contrasts in English is not necessarily the equivalent to the use of Spanish preterit-imperfect tense and aspect” (ibid).

Thus, the challenge is not only for the learners, but also for the teachers in trying to convey pedagogically the teaching of these linguistic features. This section provided examples of some of the features (tense-aspect) divergent in English and Spanish and provided evidence of the complexity of these systems suggesting pedagogical research in the area is necessary to help L2 teachers help L2 learners.

2.4.4. The current approach for teaching tense and aspect in the context of UQROO

In the context of the present study teacher trainees from the Bachelors Programme of English Language at the University of Quintana Roo (UQROO) in México, who are themselves L1 Spanish learners of L2 English, are usually taught under what could be described as a traditional Communicative Language Teaching (CLT) approach. As CLT suggests, the ultimate goal of the programme is to attain communication for meaning so teacher educators follow the format of the institution's English programme syllabus which is underpinned by the text book series "Interchange" (Richards, Hull, & Proctor, 2012) published by Cambridge University Press. The aim through the course development is to cover both the institutional syllabus and the content of the "Interchange" book.

It is important to say, that English is not a pre-requisite to enter the bachelors programme. This is because the pre-university level system in the state of Quintana Roo has a very weak English teaching component and it does not guarantee that candidates wanting to enter the bachelors programme may have the level of proficiency required for taking content subject courses in English (i.e. grammars for teachers, methodology, philosophy of education, practicum, linguistics, psycholinguistics, sociolinguistics, etc.).

Thus, students (i.e. teacher trainees) have to take a series of eight general English courses (one per semester) plus one course on reading and writing, one course on listening and speaking and two courses of grammar for teachers as well as the content subjects mentioned above (see Appendix 1). All these courses are spread throughout 8 semesters during the length of their 10 semester programme. Once students have completed all their credits, at the end of their bachelors course they are required to take an institutional version of the Cambridge CAE exam which certifies they have fully completed their English training.

Teacher trainers (the faculty of the program within the Department of Language and Education at the UQROO) endeavour to communicate their knowledge in the best pedagogical way possible by first introducing the new concepts and linguistic features from a communicative approach expecting that learners will grasp such new knowledge implicitly and intuitively but this does not seem to happen easily. Based on the

historical records of the scores of the Cambridge CAE exam it is usually difficult for them to pass this exam (institutional version). After teacher trainees have achieved their eight levels of English, two courses of English (one on reading and writing, and one on listening and speaking), and the two grammars for teachers courses, they take the CAE exam as a requisite for graduating. A considerable percentage of the students taking the CAE exam fail and those who manage to pass only achieve low or intermediate scores; it is very rare to have students achieving high scores. Some trainees have to take the exam two or three times before they pass. This offers evidence that in terms of language proficiency and use they are not getting the appropriate training and this is reflected in their scores.

As previously mentioned most of these courses, including the eight language courses, despite being nominally focused on CLT, appear to be taught with a strong emphasis on discrete grammatical points as if they were following a prescribed form for learning only rules and patterns of what is correct and incorrect. So in reality, rather than following an authentic communicative language teaching approach; what most language teachers are doing is just the opposite: following structural approaches of prescribed grammar rules for language teaching. Most of the syllabuses of the courses are encompassed within the contents of the "Interchange" series books but in practice the results are not showing proof of being effective enough (see Appendix 2). It appears that learners are expected just to memorise how to master grammatical rules rather than grasping general concepts in a more holistic way.

During the first semesters when learners are initially introduced to the concepts of tense and aspect, teachers usually rely on language use exercises like 'snap-shots' and dialogues usually contained within the textbooks (see Appendix 3) with the purpose of reactivating any previous knowledge (e.g. past continuous) they may bring from pre-university level. However, this does not always work at the first attempt and that is when teachers proceed to explicitly present the new target structures of grammar.

It is important that learners understand how tense and aspect work together and how they are powerful linguistic tools that enable us to communicate/convey or talk about past events. Thus, it is important to introduce teachers to an approach that might facilitate the understanding and development of the tense/aspect system, so that they eventually can use this knowledge to help their learners talk about past events.

The aim of this doctoral project is, therefore, twofold: (a) to help non-native teacher trainees better understand the tense/aspect system themselves so that they (b) can better help their own students when they graduate; but also to provide them with the opportunity to experience an innovative and potential new approach to teaching English as a foreign/second language.

2.4.5. Current research on STI/CBI for L2 learning

Pioneering investigations exploring the potential of STI/CBI for L2 learning and teaching can form the basis of the development of pedagogical materials as well as research designs for their empirical investigation. Studies have tested the model on the teaching and learning of various features of grammars in various languages, i.e., Spanish, English, French, Japanese, German, Catalán, Malay and artificial languages with encouraging outcomes for the field of language teaching. From these, some have focused specifically on the grammatical concepts of tense/aspect, and some others on diverse topics of ELT in some cases implementing the complete Gal'perian cycle while in other cases only some of the stages are implemented (e.g., use of SCOBAs or verbalisation). The studies conducted by Gánem-Gutiérrez (2016); Gánem-Gutiérrez & Harun (2011); Harun (2013); García, (2012); Negueruela-Azarola, 2003 are perhaps some of the most relevant for my design as, seen together, they demonstrate how STI/CBI can be implemented in its entirety. For example by experimenting and exemplifying issues of SCOBA construction and materialisation of concepts and/or how to go about implementing verbalisation phases.

The work by Gánem-Gutiérrez & Harun (2011) is key for our research as it investigated the effectiveness of verbalisation as a mediational tool for understanding tense-aspect marking in English based on CBI. Participants consisted of a group of six L2 advanced English learners in a British university drawing on tests and protocols (individual think-aloud and pair-work with the use of SCOBAs) to gather data. The research was conducted during two consecutive daily sessions on individual and paired basis with their verbalisation audio-recorded, and the design included pre- and post-tests. Their findings revealed that CBI process helped most of the participants to gain a deeper understanding of the concept of tense-aspect marking in English; they were able to provide definitions of aspect that included key conceptual factors relating to the

grammatical concepts and which they did not appear to have been aware of prior to having participated in the study. Microgenetic analyses evidenced the role of verbalisation as a regulatory tool as aimed in the principles of CBI.

Gánem-Gutiérrez (2016), another crucial study guiding our research, aimed to investigate the potentiality of SCOBAs for enhancing metalinguistic knowledge in an L2 Spanish context, focusing on the tense-aspect system, specifically the contrast between the Preterite and the Imperfect in Spanish. Six university students in the UK participated in the research design with pre- and post- tests and treatment which included use of SCOBAs. Data collection took place over three sessions/days and the materials consisted of a series of interconnected electronic Web-based concept maps (CMaps) and slides based on cognitive linguistics. Participants interacted freely with the materials, i.e. exploring the CMaps and looking at the embedded slides in order to respond questions followed by a paper task aiming to consolidate connections between meaning and form as part of the treatment. Overall, results indicated that the type of materials used during treatment contributed in enhancing participants' understanding and quality of resources to think about the preterite and imperfect. Although the study was relatively short with promising results, Gánem-Gutiérrez (2016) suggested that longer and deeper forms of mediation may contribute to deeper understandings necessary for full conceptual development.

Other studies that partially implemented the cycle of STI/CBI on diverse topics (i.e. teacher education) are Fogal (2017); Golombek & Doran (2014); and González & Melón (2013). Fogal (2017) explored the relevance of CBI and its implications for teacher education regarding instruction and pedagogical content knowledge through the use of SCOBAs. Golombek & Doran (2014) investigated the extent to which SCOBAs could serve the purpose of unifying language teacher emotion, cognition and activity. The study was carried out with a group of eleven language teacher trainees in a North American university, during an eight-week course for international visiting scholars wanting to improve their English. Participants had to reflect on their experiences as learners and beliefs about teaching; reading about curriculum development and genre-based approaches on language teaching; and design of their courses. Data was collected in the form of writing reflective journals, video recordings, and interviews through a video protocol. The data from the journals was analyzed through the process of conceptualizing SCOBAs. The analysis exemplifies how language served as the unit of

analysis to identify both positive and negative emotions in the data as teachers' appraisals reveal aspects of their emotional thinking and activity. The authors based their analysis on Imai (2010) on the assumption that emotional content is evident across varied levels of language, from lexicon to discourse. Golombek & Doran (2014) interpreted the instances of emotional and cognitive dissonance framed on a Sociocultural perspective, concluding that for language teacher educators the SCOBAs help to highlight that teacher expression of emotion is intertwined with cognition and activity as part of the developmental process of beginning teachers (Kubanyiova, 2012) and can be addressed through mediation. The SCOBAs seemed to have functioned with other forms of teacher education mediation and in less fruitful cases may uncover nuances in the triadic relationship of teacher cognition, they concluded.

González & Melón (2013) focused exclusively on the SCOBAs as a tool to develop learners' autonomy in the Spanish and Catalan language classroom at university level, during a school year in Serbia. The authors found that implementing the use of the SCOBAs among students served as an 'engaging' instrument that both teachers and learners were able to use actively in the classroom to develop their own learning strategies in a free manner based on the activation of previous knowledge. By the same token, Navajas & Ferrer (2012) set out to investigate the potentialities of SCOBAs as a pedagogical orienting tool to develop learners' interest, engagement and control in their learning process of Spanish; the study was carried out within a total of 30 hours distributed through a full school year. Participants were presented with models of SCOBAs containing information on how to prepare and organize their subject matter contents and how to use them; they were later asked to think and reflect on the benefits of it. Learners reported that SCOBAs served the purpose of helping to build a 'schema', 'an orienting map' or 'a way of working' in their process of learning Spanish. The authors concluded that the ultimate purpose of implementing SCOBAs was fulfilled given that it indeed was used by the students as a 'help to learn'; in other words, as it had been conceived.

Lee (2012, 2016) implemented Gal'perin's model with SCOBAs and verbalisation phases to teach the concepts of 'out', 'up' and 'over' during six 50 min classes at a North American university. Participants followed a series of tasks and assignments which showed that CBI contributed to enhance their understanding of phrasal verbs in a systematic manner to properly externalize their understanding. Lee

traced the development of the participants, concluding that working with the SCOBAs and pushing them to verbalise their understanding was crucial for the gains reported.

Through microgenetic analyses, Knouzi et al. (2010) investigated the languaging behaviour of two university students (high and low languagers) learning French as a second language. The study traced the development of the students' understanding of the grammatical concept of voice in French. Their findings suggested that languaging was a self-scaffolding tool that the high-languager used efficiently to solve cognitive conflicts, mediate mental processes, and construct meaning in general.

Williams, Abraham, & Negueruela-Azarola (2013) explored the implementation of CBI from the perspectives of pre-service and novice teachers of French and Spanish. The research was carried out in the format of case studies. The authors wanted to explore how and to what extent teachers embrace or reject a pedagogical approach that does not necessarily align with a textbook's explanation of a grammar point. They focused on the teaching of verbal aspect on the basis that textbooks of learners of both French and Spanish typically present rules of thumb for learning past tense use without explaining the systematic concept of verbal aspect. Participants were trained on the importance of distinguishing between approaches to instruction that include rules of thumb, vs. those that include a scientific/theoretical concept, i.e. CBI (SCOBAs). Data was collected through video-recordings, interviews and observations of classroom instruction. The findings indicated that in some instances and for a variety of reasons -experience, novice and pre-service teachers seem to prefer materials, techniques, and approaches that are more familiar, although not as potentially beneficial for learners. This study is particularly relevant for us, as we aim to investigate if pre-service teachers can be trained on the principles of STI/CBI in terms of MLK knowledge, language in use and pedagogical enhancement, but with a different methodological design.

In his study, García (2019) reports the results of introducing teachers to a CBI approach to the teaching and learning of the grammatical concept of aspect. The participants were three experienced in-service teachers of Spanish as an L2 (the teachers were all native speakers of Spanish). They were engaged in collaborative dialogue and also provided with the mediation necessary to promote the internalisation of aspect. García also explores the ways in which *perezhivanie* (the unity of emotion and cognition; Vygotsky, 1994) could shape and influence L2 in-service teachers' conceptual

development through dialogic interaction with others and with the self. Participants were first exposed to a complete and systematic aspectual explanation in the form of three concise visual representations (SCOBAs) so they could manipulate those models, assign them functional value and create meaning through them in communicative activity (p.138). In addition, participants were engaged in dialogic interaction (with themselves or with their peers; i.e. verbalisation). Data collected during two mediated interviews (lead by the researcher) aiming to promote collaborative dialogue was the basis for the analyses. Dialogic interactions aimed at fostering the co-construction of conceptual meaning and were conducted twice: before and after being exposed to CBI to the teaching and learning of aspect (Spanish preterit and imperfect aspectual contrasts). García (2019) concluded that through his study, he was able to witness how teachers' emotions fostered, and were impacted by, their cognition. The researcher manifested that "the study allowed him to effectively mediate developmental activity in the cognitive-emotive-dialect: by creating crisis through collaborative dialogue during mediated interviews, teachers were afforded the opportunity to make meaning and transform their consciousness in relation to the concept of aspect" (p.148).

Negueruela-Azarola's (2003) study is perhaps one of the most notable. Negueruela-Azarola assessed the extent to which STI could contribute to fostering L2 grammatical development. His research design investigated a group of twelve university students of L2 Spanish during a sixteen-week semester. From an experimental approach, the author tested the implementation of STI using different activities and materials. Multiple sets of developmental data were obtained and in due-course explored, i.e. learners' definitions of grammatical concepts, spontaneous learner performance –oral and written – diagnostics, and verbalisation consisting of students' recordings explaining to themselves the use of specific grammatical features. This data was analysed through Conceptual Interrelated Analysis (CFA) for definition analyses; Conceptual Grammatical Distribution (CGD) for discourse analyses; and Concept as Tools for Internalization (CTI) for verbalisation analyses. The findings confirmed that STI contributed to fostering L2 development towards the attainment of higher levels of awareness and control over the L2. STI led to the internalization of more sophisticated semantic understandings of grammatical meanings and therefore promoted learners' ability to effectively and creatively use the relevant grammatical features in spontaneously produced written and oral discourse.

Swain and colleagues have also conducted extensive research under the theoretical framework of SCT exploring the potentialities of verbalisation as the ultimate tool to mediate cognition either through individual or collaborative talk in language learning (Swain, 2006, p. 96) (see also Swain, 2006b; Swain et al., 2013; Swain, Brooks, & Tocalli-Beller, 2002; Swain & Lapkin, 1998; L. Brooks et al., 2010; Swain, 2001; Swain, Brooks, & Tocalli-Beller, 2002; Swain & Watanabe, 2013). Swain and colleagues strongly support the notion of *linguaging*. One of their studies, Swain et al. (2009) investigated the extent to which verbalisation (linguaging) of the grammatical concept of voice (active, passive and middle) in French led students to a deeper understanding of the concept. The study was conducted with 9 Canadian university students and a design which consisted of pre-tests, intervention (aimed to trace the process of learning) and post-tests. Participants were given 36 cards explaining the concept of voice to help them develop their understanding of the concept of voice. They analysed the amount and type of linguaging produced and found that students who were high linguagers learnt the grammatical concept of voice in French with greater depth of understanding than low linguagers. Another key finding was the use of participants' L1 as a tool to mediate cognitive activity. The authors were able to demonstrate that there was a relationship between the quality and quantity of linguaging and performance as measured by immediate and delayed post-tests. Their findings suggested that linguaging was a key component in the internalization process of second language grammatical concepts.

On the same line of thought, Harun (2013) set out to investigate the role and value of verbalisation during individual and dyadic collaborative verbalisation activity and the implementation of SCOBAs in enhancing learners' understanding of simple past, present perfect and past continuous of 32 Malay L1 learners of English L2 in their first year of university. Data collected included pre/post metalinguistic and cloze tests and microgenetic analyses of the protocols of high and low achievers who gained the most/least benefit from the CBI session. Findings indicated that 1) verbalisation helped both groups of learners to improve their understanding of the target concept; 2) specific semiotic mechanisms (e.g., types of linguaging units and discourse markers) were used as cognitive tools to establish meanings and connections of the information presented; 3) there exists a positive relationship between the quantity and the quality of verbalisation and learners' L2 performance; 4) paraphrase, analysis and integration-type

of LUs were key components in learners' fruitful verbalisation. Harun's (2013) study showed promising evidence supporting the efficacy of verbalisation as a cognitive tool to achieve self-regulation. However, one thing Harun's study did not consider in the methodological design was the implementation of a control group; doing so may have given stronger support to her findings.

Framed within the Vygotskian tradition, Watanabe (2019) explored the role of languaging by examining how 20 English learners from a Japanese university *language* when interacting with a peer (collaborative dialogue) and when interacting with themselves (speech for self). The author aimed to examine how interaction affects students' languaging and writing. Participants were assigned pair and individual writing tasks as out-of-class assignments during a two week period; additionally, each student attended two writing sessions. The analyses revealed that in collaborative pairs, both students received a higher or the same score for pair writing as compared with individual writing. On the contrary, in non-collaborative pairs, both students received a lower score for pair writing than they did on their individual writing, for which the author supports the notion that the pattern of interaction affects language learning. The overall results of the study demonstrated that all the participants *language* with their peers and with themselves to facilitate mediating their learning process.

García (2012) investigated the teaching and potential development of the grammatical concept of aspect in the Spanish L2 classroom, and the role of verbalising as a tool for internalization. Through CBI, Garcia explored the extent to which verbalisation mediates learners' understanding of the grammatical concept of aspect, the development of conscious conceptualizations, and students' written and oral production of preterite and imperfect grammatical forms. 31 college students in the US participated in the study receiving instruction on the basis of CBI for 12 weeks; from these, the author selected one case study for analyses. Multiple sets of developmental data were collected, i.e. personal, ethnographic and conceptual. In a similar fashion to Negueruela-Azarola's (2003) study, García included learners' definitions of the grammatical concept of aspect; written performance protocols; and verbalisation data recorded during two oral interviews. Data were analysed using the genetic method (Vygotsky's 1978). García's (2012) findings confirmed that learners' verbalisations were key factors to ascertain L2 conceptual development, as well as a mediational tool that fosters learners' internalization of the grammatical concept of aspect.

Ohta (2017) set out to investigate the implementation of SCOBAs for pedagogical purposes in teaching Japanese addressee honorifics which consist of clause-final forms that express modes of self-guided by “wakimae” rules. Ohta’s study was conducted on adult learners throughout a summer intensive third-year Japanese class. From this poll of students, she selected one case study (Felicia), focusing on the transformation of her understanding and use of addressee honorifics forms in Japanese. Her findings confirmed the effectiveness of SCOBAs on the principle that these mediation tools provide learners with opportunities to interact with the materials. Students re-constructed SCOBAs collaboratively, from memory which promoted internalisation as students verbalised and pooled their knowledge in order to carry out the re-construction. Felicia’s reflections on her own language use showed her internalisation of and comfort with the concepts taught regarding very complex speech style in Japanese. Ohta’s (2017) study undoubtedly provides significant evidence into STI/CBI and the implementation of SCOBAs and collaborative work.

Van Compernelle has also worked extensively within the Sociocultural theory tradition in the implementation of CBI (Walter & van Compernelle, 2017; van Compernelle, 2011; 2018). Van Compernelle (2011) insightful research on language learners’ developing understanding of and ability to use the L2 for meaning-making purposes is another relevant study to our research. From a case study approach, through a one-hour concept-based instruction (CBI) tutorial, the author investigated the development of sociopragmatic knowledge in an intermediate-level US university learner of French (Jane). The focus of the study was on sociopragmatic concepts related to the choice between French second-person pronouns, *Tu* and *Vous*. The methodological design included an in-depth moment-to-moment microgenetic analysis to trace how Jane’s cognitive functioning (i.e. conceptual knowledge) arose in and through her engagement in the CBI tutorial. This included collaboration with an expert tutor as well as access to mediating artefacts such as written concept explanations and pedagogical diagrams (SCOBAs). The conclusions van Compernelle (2011) arrived to suggest that in Jane’s case, the rules of thumb for French *Tu/Vous* use were transformed in relationship to the concepts she was integrating into her cognitive system. Results evidenced that she had reinterpreted the previous rules of thumb in terms of self-presentation, social distance, and power. The author remarks that Jane’s development was not simply a matter of passively learning or memorizing the concept explanations,

but a case of active reception in that she actively integrated the new knowledge into her cognitive system largely through verbalised reflection (p. 3280). Similar to the previous studies recounted, van Compernelle's (2011) findings give support to the premises of STI/CBI; that is, materialization through SCOBAs based on the use of holistic concepts contributes to internalization fostering cognitive development.

As discussed in previous sections, through the literature review we looked at relevant studies that have set a benchmark for the investigation of exclusively learners' talk and languaging in the language classroom which are considered as key within the SCT tradition. Although some were primarily devoted to the study of verbalisation, they did not necessarily implement the full Gal'perian cycle with both SCOBAs and Verbalisation in any sequential order (see Brooks, Swain, Lapkin, & Knouzi, 2010; Brooks et al., 1997; Brooks & Donato, 1994; Knouzi, Swain, Lapkin, & Brooks, 2010; Ohta, 1995, 2001; Swain, 2006; Swain, Lapkin, Knouzi, Suzuki, & Brooks, 2009). We also looked at key studies framed within the SCT school of thought, specifically on the implementation of CBI/STI. These studies have investigated diverse topics following the principles of individual and collaborative learning, verbalisation, and use of SCOBAs for conceptual understanding of an array of topics among language learning, e.g. grammatical categories as tense, aspect, mood; or the teaching of specific skills, e.g. writing, sociopragmatic competence, among others (see Antoniou, 2016; Gánem-Gutiérrez, 2004; Gánem-Gutiérrez & Harun, 2011; Harun, 2013; Mendes-Ferreira, 2005; García, 2012; Kim & Lantolf, 2018; Lee, 2012; García-Frazier, 2013; González & Melón, 2013; Navajas & Ferrer, 2012; Negueruela-Azarola, 2003; Ohta, 2017; Poehner & Infante, 2017; van Compernelle, 2011; van Compernelle, Gomez-Laich, & Weber, 2016; Walter & van Compernelle, 2017; Yáñez-Prieto, 2008;).

As suggested in Section 2.3., SCT, and more specifically STI as one of its key pedagogical applications, proposes that practical language skills (i.e., L2 use/communicative activity) can ultimately be promoted through explicit instruction focusing on metalinguistic knowledge. In other words, and as illustrated by the studies reviewed in this section, the use of SCOBAs -as pedagogical tools which aim at representing and explaining linguistic concepts explicitly and through the use of metalinguistic explanations (declarative knowledge) -is believed to ultimately facilitate language use (see Lantolf & Poehner, 2014). The idea behind this approach is that, by understanding and internalizing grammar concepts, for example, L2 learners will be

able to subsequently make the connections between meaning and form in order to communicate in the second language. This, however, also requires practice activities where the SCOBAs are used to facilitate that form-meaning mapping (e.g., Negueruela-Azarola, 2003) guiding students to choose appropriate forms to convey their meaning. While most of the studies published to date have provided some evidence that STI facilitates L2 development in terms of metalinguistic knowledge (e.g., better understanding of grammatical concepts), further work is required to ascertain the extent to which the use of SCOBAs and its accompanying languaging procedures might result in an increase of accuracy when learners are actually engaged in communicative activity. This is, of course, the ultimate aim for L2 educators.

In conclusion, the studies reviewed in this section have made an important contribution to the field of language teaching but there is still room to keep exploring and testing the implementation of Gal'perin's STI full cycle and its potentialities as a novel pedagogical approach. Throughout the review of the literature, we identified a 'gap' which suggests that STI has not yet been explored from the following angles combined in one single study, 1) implementation of all the phases of STI [SCOBAs, Verbalisation and Internalisation]; 2) an experimental-comparative design with control and experimental groups on a larger scale; and 3) intervention with pre, post and delayed testing.

The literature previously discussed provides evidence that language is a powerful tool to mediate cognition and foster learning as it promotes deeper understanding and thinking. Thus, this study was conceived within the framework of SCT and through the implementation of the full Gal'perian cycle of STI. The main aim was to determine the extent to which language teacher trainees could enhance their cognition, particularly in terms of metalinguistic knowledge, and extend this knowledge to language use in context and to pedagogical thinking in relation to the concepts of tense and aspect. The next chapter (Methodology) details the methodological design for the present study.

Chapter 3. Methodology

Introduction

The methodology chapter provides an overview of the research design, its rationale and an account of the various procedures for data gathering and analysis in the present study. In general terms, the aim of the study was to investigate the relative effectiveness of a pedagogical approach known as Systemic Theoretical Instruction (STI) based on Sociocultural theory to enhance an aspect of grammatical knowledge in an EFL context. The chapter is subdivided into five sections as follows: section 3.2 outlines the rationale for the research design; section 3.3 gives an account of the context in which the study took place, provides information about the participants in the study as well as the instruments for data collection; section 3.4 details procedures for the data collection and analysis; and in section 3.5 I conclude by summarising the chapter.

3.1. Research Design: Rationale

The study is informed by Vygotsky's Sociocultural Theory of mind (SCT) which suggests that language learning (and development) is attained through social interaction and is subsequently internalised by the individual. According to Vygotsky the construction of knowledge is always mediated by either physical or psychological tools; among these tools, language is considered as the ultimate mediation tool. SCT suggests that language is the most important tool by which human thinking becomes organized and regulated (Lantolf & Thorne, 2006; Lantolf, Thorne, & Poehner, 2015). Encompassed with SCT, the pedagogical approach of Systemic Theoretical Instruction (STI) (Gal'perin, 1992 in Lantolf & Poehner, 2014) serves as the framework to guide this study in an attempt to explore a pedagogical alternative within a given research context.

Specifically, the study set out to investigate the extent to which EFL teacher trainees' cognition (e.g. pedagogical and linguistic knowledge) can be enhanced through the implementation of Systemic Theoretical Instruction (henceforth STI) compared to Traditional Instruction (henceforth TI, *cf. Section 3.3.2. Participants*) as part of their training at the University of Quintana Roo.

Following pre-, while- and post-test procedures as part of the design, the participants (both control and experimental) received a treatment regarding the concepts of tense and aspect in English. The control group treatment was based on TI whereas the experimental/intervention group treatment was based on the pedagogical approach of STI implementing the use of novel materials specially designed on the basis of STI (i.e. SCOBAS = Schema of a Complete Orienting Basis of an Action) in both individual and pair work. The purpose of the study was to assess the potential benefits (or otherwise) of STI compared to TI to test the relative potential of this pedagogical approach to hopefully, support the development of the participants' cognitive skills (linguistic and pedagogical) through dialogic thinking (self-talk) and collaborative work as opposed to TI which follows traditional grammar based instruction.

A mixed methods design was implemented in which both quantitative and qualitative data were gathered to address the research questions (see below). There were various components of the study which consisted of interviews, tests to measure linguistic proficiency, metalinguistic knowledge, and intervention (either STI or TI treatment), individual and collaborative work, and lesson planning. For this study, a mixed methods design implied a blend of quasi-experimental and comparative designs (Creswell, 2012; Liamputtong, 2013; Walliman, 2010) that is, it was considered quasi-experimental because it tested a very specific pedagogical approach (STI vs TI treatment) in a particular context and conditions (control vs. experimental with ELT teacher trainees). In other words, the design did not involve rigid and strict lab conditions which implies a high degree of intervention and control from the researcher. The treatment (both control and experimental) herein was supervised at all times by the researcher under conditions similar to those of the participants' language classroom context (participants' interaction included use of multimedia, visual and audio recorders). Participants had a certain degree of freedom to speak, interact and were tested in terms of performance in experimental conditions compared with a control group at all times which gave the study an experimental design (Walliman, 2010, p.10).

The following research questions provided the foundations of the study:

1. Is STI more effective than TI for enhancing EFL trainee teachers' linguistic knowledge (metalinguistic knowledge and language use) regarding the aspectual

distinctions conveyed by simple past, past continuous and present perfect in English?

2. Is STI more effective than TI for enhancing EFL trainee teachers' ability to apply linguistic knowledge to pedagogical thinking?
3. What insights into STI can be derived from a case study approach to *linguaging*? The case of the top scorers

Thus, the variables to observe and measure for this study were metalinguistic knowledge and language use (test scores), pedagogical thinking (interviews and lesson plan scores, and amount and type of *linguaging* (cf. *Section 3.3.3. Instrumentation*). Therefore, the instruments incorporated for this study to measure such variables combined both quantitative and qualitative approaches.

3.2. The study

This section describes the context in which the study took place. It provides a detailed account of the participants and outlines the research instruments along with the procedures for data collection and analysis.

3.2.1. Context

The study took place at the University of Quintana Roo (UQROO) located in the city of Chetumal, state of Quintana Roo within the Yucatan Peninsula in Mexico during the regular school term (autumn 2016). The participants were students enrolled in the English Language Bachelors Program and all of them agreed to volunteer for the study after an informative session about it (cf. *Section 3.3.3.1.*).

As part of this research study, a pilot study was conducted one year prior to the main study (autumn 2015) with a small number of participants taken from the same context of the main study with the purpose of ensuring that the design was feasible and to identify any possible flaws. For this purpose, a sample of nine students from 5th, 7th, and 9th semester were selected. The pilot study was conducted over a period of two months. The methodological design followed the same format/procedures of the main study, that is, it had a pre-test, intervention, post-test and delayed testing stages. Previous to the pilot study, the instruments to gather the data and the materials for the

intervention (SCOBAs) went through a process of revision and sequential development. The MLK test was designed by Gánem-Gutiérrez (2015) and, based on the data gathered from the piloting stage, it was considered suitable for the main project; in other words, the participants did not report any difficulties and it rendered the necessary data to gauge levels of metalinguistic knowledge. Therefore, the test did not need any revisions. The language in use test went through a series of drafts and was also piloted by a couple of native speakers of English to verify its linguistic accuracy. Inter-rater reliability for both tests was checked (*cf. Section 3.2.3.4. Tests*). The pedagogical materials designed for the study (SCOBAs) were also verified in advance for the piloting. Particular attention was given to the number of slides to ensure participants were able to understand the materials, work with them and that the time scheduled for participants to work with the SCOBAs was appropriate and realistic (given instructional constraints, for example). Based on the pilot study, some adjustments were implemented such as the number and level of participants, the length of the study (number of sessions) and a few changes in the manner in which the treatment was to be conducted (e.g., the specific implementation of communicated versus dialogic thinking sessions, timing, implementation of a pre lesson plan and tests timing). The pilot study also served to check the availability of infrastructure and resources needed (computer labs, recording and interview procedures). Overall, the pilot study confirmed the feasibility and usefulness of the instruments and helped adjust procedures for data collection.

The Bachelor's program at UQROO consists of 10 semesters as follows: odd numbered semesters, i.e. 1st, 3rd, 5th, 7th and 9th are offered in the autumn and the even numbered semesters 2nd, 4th, 6th, 8th and 10th are offered in the spring. One key aspect of the admission process to this program is that it has no English proficiency level requirement for the applicants. That is, any student wanting to pursue a Bachelor's degree in English even without having studied English formally before entering university can apply and get accepted. The university has this policy because they believe that every student must have the same chance to enter even if they did not have the opportunity to study English before university especially given that the English offered at pre-university level in public education is not strong enough to prepare them to enter the program. So, every year usually half of the applicants, 40 out of 80 (approximately) enter the program without knowing any English.

3.2.2. Participants

The study was conceived as a mixed-methods one (experimental and comparative) cross-sectional design with quantitative and qualitative components (Creswell, 2012; Liamputtong, 2013; Walliman, 2010). Participants from three different levels/semesters were invited to take part. Originally, 60 students agreed to participate in the study; however, throughout the 12 sessions required (see **Table 2** below) some of them dropped-off and at the end of the study the total number of participants was 50 distributed in the following manner:

Table 2. **Distribution of Participants**

Groups	5 sem	7 sem	9 sem	Total
Control	10	7	5	22
Experimental	10	10	8	28
Total	20	17	13	50

The aim was to have a representative sample from different levels of the Bachelors Program in English Language. Participants' ages ranged from 18 to 23 (Mean=22, SD=2.3, Median=21) with a distribution of males (N=18) and females (N=32) throughout the three levels. As mentioned previously, although some students begin their university course with no knowledge of English, some enter the university with some knowledge because they have taken private classes at academies or after school programs. Having selected the participants per semester allowed to organize them on the basis of their proficiency which was also confirmed through a proficiency test administered at the beginning of the study during the pre-test session (*cf. Section 3.3.4.1. Sessions 1 & 2*). The rationale for including participants from different levels was driven by a need to ascertain the extent to which this pedagogical approach is suitable across a range of proficiency levels. The main idea behind this is rooted in an understanding that, regardless of level of proficiency, learners should be able to grasp a given grammatical concept (e.g., tense and aspect), through use of the SCOBAs and verbalisation. However, to achieve this aim, it is crucial that the language in which the input is conveyed (i.e., the explanations used for the SCOBAs) does not represent a barrier for the students; hence, the decision to use the participants' L1 for the materials explanations, a common practice in previous studies (see Literature Review). A specific innovation in my project is the evaluation to the degree to which participants might be

able to apply their conceptual understanding of tense and aspect to pedagogical thinking/practice. While it is acknowledged that there were also differences among the participants in relation to lesson planning and language teaching methodology, this was deemed to be an interesting aspect of the design because no explicit connection was made during treatment regarding a practicum element. Just as we wanted to examine the assumption that increased understanding of a grammatical concept *might* lead to increased accuracy in language use (even as the main focus was MLK development), we also wanted to investigate the extent to which that conceptual understanding *might* be used when participants were engaged in thinking for lesson planning (regardless of the teaching methodology level).

The context at the University of Quintana Roo for the Bachelor's in English Language is that of a small community of students with an estimated 300 students across 10 semesters. According to the university records (Control Escolar Office), most of the students, about 95% approximately have Spanish as their L1 and the remaining 5% have other languages. The other languages are for example Maya which is a variety of the Mayan indigenous Language spoken in the Yucatan Peninsula, and Chinese for students who come from Belize where there is a large Chinese community and it is very common for them to come to Mexico to pursue their degrees. Thus, it can be said that students are mostly in a monolingual setting with few opportunities to practise the target language (i.e. English) in a natural setting. Therefore, they have to find ways to practise either speaking among themselves and their teachers, or using the language and multimedia labs and other resources they consider suitable for their particular learning needs.

According to the curricula, they have to take a series of core courses in which English is mandatory from second to ninth semester. From 2nd to 7th semester they take 8 hours of English per week; and from 8th to 9th semester they take 4 hours of English per week. In addition to English they have to take other core courses which are content knowledge courses like Grammar for Teachers, Methodology, Practicum, Linguistics, Psycholinguistics, Sociolinguistics, CALL, Philosophy of Education, Literature, History of the English Language, and Life and Culture in English speaking countries among others. They also have the option of taking elective courses from which they can choose French, Translation I, II & III, and Selected Topics which are courses 'tailored' according to the semester for which they are offered for example methodology for

teaching children or ESP. All core courses and electives of the Bachelor's in English Language are taught in English with some exceptions in the first two semesters where every student at university has to take a series of mandatory courses, i.e. Logic, Research Methods, Mathematics, Reading and Comprehension in Spanish, Spanish Grammar, Introduction to Psychology, Universal Literature, and Society and Culture in Contemporary Mexico (see Appendix 1 containing the curricula of the program).

The way in which classes (English classes) are conducted are considered from the perspective of this study as 'Traditional Instruction'; that is, classes are taught in the format of 'PPP' (Present, Practice and Produce [PPP] Harmer, 2007) and are teacher centred. That is, teachers have the lead of the class and usually the format followed is that of the teacher as 'the provider' or 'the one who possesses the knowledge' and the learner is just a 'receptor' who is passively sitting waiting to be 'fed' as the recipient of the information (Skehan, 2003; Thornbury, 1999). Most of the classes, particularly English classes follow a very traditional format based on grammar teaching leaving no room for incorporating or trying different teaching approaches where students could work more independently (Maftoon & Sarem, 2012; Willis, 1990). It is very common for teachers to come in the classroom and just write on the board pedagogical grammar rules and straight away provide the students with instructions and assignments to do in a very traditional/classical way (e.g. "well, today we'll study the formation of the past tense. First you have to know that in English there are regular and irregular verbs to form the past tense..."). Each teacher is free to use any textbook or teaching aids for their classes according to their own criteria, so there is no specified textbook for any of the levels. Teachers select and adapt their materials from various sources always instructed by the academic committees to follow the course syllabus according to the level they are teaching and relying on the materials as they think suitable for their classes.

Some exceptions of this occur from time to time when students work on presentations or do collaborative work in small groups with their peers; however, this is not applicable to all courses. In addition to the hours of English class with direct instruction with the teacher in the classroom students are encouraged to work on their own after class at the Self-Access-Centre (SAC) which is a multimedia language lab at the university but there is no way of forcing them to do it; so, it is not easy to encourage them to do extra work after class. In sum, students depend mostly on the hours of direct

English instruction received in the classroom; if they really want to reinforce their studies they must work on their own with the facilities the university offers them either at the library or the SAC.

Students can also benefit from the Languages Centre at the university where they have the opportunity to learn other languages in addition to English which is the 'backbone' of their program. At the Languages Centre they can choose from French, Italian, Portuguese, German, Mandarin, and Maya at no extra cost to their tuition and taking these courses can enable them to gain credits for their own program.

Another way the university has for supporting students in their learning process is through the academic exchange programs where students can apply to spend one or two semesters studying abroad. This gives them the opportunity to experience living in another country using the target language in its natural setting. However, from the approximately 300 students enrolled in the program, it is only possible for 3 or 4 of them per year to participate in these programs due to the high demand for those scholarships.

Following the ethical codes and regulations from the University of Essex, the participants were informed about the study details and invited to participate. Those who volunteered were happy to sign a letter of consent (see Appendix 4). Participants were not paid to take part in the study; however, they were offered snacks and refreshments after the sessions as a token of gratitude for their participation.

3.2.3. Instrumentation

Different instruments were used for the collection of data; these were interviews, tests and data from tutorials. The tutorials for both groups (control and experimental), which consisted of a suite of power point slides, were key instruments for the study and had a dual function; that is, as SCT suggests (Gal'perin, 1969 in Lantolf & Poehner, 2014; Negueruela-Azarola, 2003; 2013), to provide the input and content for knowledge enhancement as well as to elicit information which was used as data, e.g. verbalisation. In addition, questionnaires, interviews, lesson plans and tests were also used as sources of data to address the research questions.

3.2.3.1. Consent form

As required by the University of Essex, appropriate ethical procedures were followed and ethical clearance obtained. Before the study began, participants were given an informative session in which they received all the information concerning the study and its overall purpose. They were informed about the different components of the study, the different stages, number and length of the sessions and, as stated above, those happy to participate signed a consent form (see Appendix 4).

3.2.3.2. Biodata questionnaire

The Biodata questionnaire (see Appendix 5) was a means of gathering biographical and academic background information about the participants and it was written in Spanish to ensure that the participants could understand what was being asked from them and could answer as freely as they wished. The questionnaire contained demographic questions regarding age, gender, linguistic background (items 1, 2 & 3) and study habits and history (items 4, 5, 6 & 7). Some of the items (1, 4 & 5) were of multiple choice format and others were open-ended format (2, 3, 6 & 7) to allow the participants to provide more detail about their specific study habits and background.

3.2.3.3. Interviews

The short interview was structured and consisted of three questions regarding the use and form of the past tense in English. The interviews were held in Spanish in order to give the participants the opportunity to speak with freedom without language constraints which could have posed difficulties for those participants less skilled and proficient in English. There were only three open ended questions as follows:

1. What do you know about the past tense in English?
2. Do you know the difference between tense and aspect in English?
3. If you were to teach someone the concept of tense and aspect in English, how would you do it pedagogically?

The interviews (henceforward "Awareness Interviews" or "AI") were conducted by the researcher and were audio-recorded for subsequent analysis.

3.2.3.4. Tests

Three tests were administered to gather information about the participants' *proficiency level*, their ability to *use* the target features, and their *metalinguistic knowledge* (MLK) about the target concept features, i.e. aspectual distinctions conveyed by simple past, past continuous and present perfect in English. All three tests were administered in electronic format due to the convenience and practicality for the researcher given the number of participants (n=50) and length of the tests and because this format is also ecologically friendlier. Furthermore, having them in electronic format allowed for accessibility; all the data collection sessions, including the tests were conducted under supervised conditions in a classroom with computer facilities.

3.3.3.4.1. General Proficiency Test

As a measure of General Proficiency, the grammar section of the Oxford Placement Test was used (UCLES, 2004). The reason for using only the grammar part was that the main focus of the study was on metalinguistic knowledge and written language use. Only the written grammar part of the test (100 multiple choice items, see Appendix 6 for a sample of the questions) was used because this was considered adequate to ascertain the baseline for all participants.

3.3.3.4.2. Metalinguistic Knowledge Test

The Metalinguistic Knowledge (MLK) Test was designed by Gánem-Gutiérrez (2015) to assess levels of metalinguistic knowledge regarding tense and aspect in English. The test was designed based on Cognitive Linguistics in order to evaluate the potential of the pedagogical materials (SCOBAs) and the treatment. The same test was administered to all participants, and it was considered suitable for administration across levels of proficiency. The maximum score possible was 57. The MLK test consisted of

36 items distributed in various sections and formats, i.e. open ended, match, gap fill, and was designed in a matched format for the pre and post testing conditions (see Appendix 7). The first section of the test, Part A consisted of 8 main questions. From these, items 1 to 4 were open ended, item 5 had four open sub questions, item 6 had three sub questions of gap fill type, item 7 had eight open sub questions, and item 8 had 9 sub questions of gap fill type. The second section, Part B consisted of 2 main questions both of which had 10 sub questions each. Some item examples are:

1. Verbs are words that enable us to talk about situations such as events and states and they intrinsically evoke certain characteristics in our minds; each of the verbs in 'be happy', 'live in London', 'listen to music', 'kick a ball' evoke specific inherent characteristics.

Please write the four verbal phrases ('be happy', 'live in London', 'listen to music', 'kick a ball') in the appropriate box, one has been completed as an example:

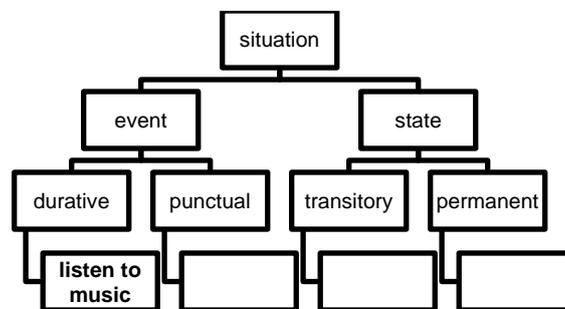


Figure 6 Example of MLK test item

2. Describe the difference in meaning of the present perfect versus the simple past between the (a) and (b) members of the following pairs:

- (i) a. I've been in the army for two years
- b. I was in the army for two years

Since some of the items contained a subjective element for scoring (see *Section 3.3.5.1.*) inter-rater reliability based on 10% of the tests was checked with the collaboration of a language teacher; agreement was high at 85%.

Furthermore, internal reliability tests were also conducted and these yielded the following results: pre-test alpha= .531 and post-test alpha= .729

3.3.3.4.3. Language in Use Test

As a measure to determine participants' ability to use the target forms in context, i.e. 'language use', the Language in Use Test (LiU) was specially designed by the researcher for the purpose of this study (Appendix 8 for the complete test).

- LiU test was a 1300 words original story
- It contained 31 items in multiple choice format
- LiU had PRE and POST matched versions

The Language in Use test was a story based on the life of the researcher's grandfather who was a musician and lived almost 100 years. It included 31 grammatical items regarding the different forms of tense and aspect so it allowed participants to activate knowledge on the target forms in terms of language use. From those 31 items, 21 were a combination of simple past, past continuous and present perfect; and the remaining 10 were distractors (present and future tenses); perfect and progressive aspectual forms were distributed throughout the 31 items.

During the process of design of the LiU test a native speaker of English was asked to complete the test as a way of checking that the test was accurate and sound in terms of English, that there was no ambiguity or that two answers were not possible. This test was first used during the pilot study (*cf. Section 3.3.1.*); the Cronbach's Alpha factor reliability for the pre-test was .613 and for the post test was .731.

An extract of the test is presented below to illustrate its format and content:

Grandpa Emilio is 97 years old; he has had a nice life. He was born in the small town of Tinúm, Yucatán on August 8th, 1917 and arrived in Chetumal, Quintana Roo on February 10th, 1956. Who could have said that it (1) (*to be/go*) **was going** to be a mix of destiny, fate and nature blended together?! It was during the 1920's that he was brought by his uncle to live at the "Hacienda Henequenera X'nobó". If he had remained at his hometown Tinúm, he might (2) (*to develop*) **have not developed** his love for music.

3.2.3.5. Lesson Plans

Lesson Plans were used as a measure to identify participants' ability to apply or transfer metalinguistic knowledge to pedagogical thinking in relation to tense and aspect in English. These were considered as a complement to the awareness interview to address RQ2 (*cf. Section 3.3.3.3. Interviews*). Participants were asked to develop a

lesson plan in pairs with the only instruction of “ helping their learners to talk about events in the past”. The lesson plans had no strict pedagogical format as evaluating methodological knowledge was not the focus of the task, the focus being to gauge the participants’ pedagogical thinking before and after treatment as reflected in the lesson plans. Participants had not been taught about lesson planning and did not have to follow and specific format for this purpose.

As discussed previously (*cf. Section 2.1.1.*), it is crucial for language teachers to possess a solid base of metalinguistic knowledge as it helps to guide learners in their learning process of grammatical concepts and all parts that form the language, e.g. speech, tenses, sentences, nouns, prepositions, adjectives, etc. (Borg, 1999, p. 97). Thus, transferring metalinguistic knowledge into pedagogical thinking is key in the process of English language teaching. From a Sociocultural theory stance, Lantolf & Poehner (2014) suggest that “praxis orientation depends on teachers’ classroom activity and their use of theoretical principles to orient classroom practices, only possible if teachers have a well-developed theoretical understanding of their content (language) and of learner development” (p.206). Therefore, metalinguistic knowledge is a fundamental part of teachers’ pedagogical knowledge as it provides a base for the theoretical concepts that lead teachers’ practice. As Negueruela-Azarola & García (2016) point out, “ELT teachers should promote systematic conceptual communication... reflection using concepts which also promote the internalization of new ideas... from this perspective, language teaching is essentially about personal transformation (defined as change based on conceptual development) both for learners and teachers” (p.298).

3.2.3.6. Tutorials

The tutorials were key components of the study both as intrinsic to the intervention and as a source of gathering data. Both groups, experimental and control, received a treatment which consisted of working with a series of materials specially designed for the purposes of this study. These instruments were based on Traditional Instruction (TI) for the Control group following the same teaching methodology as the teachers currently use at UQROO (*cf. Section 3.3.3.5.1. Tutorial Control Group*). The suite of materials for the Experimental Group (SCOBAs) was based on the novel pedagogical approach known as Systemic Theoretical Instruction (STI) (Lantolf &

Poehner, 2014, pp. 66-67), as detailed in *Sections 2.3.3.1. and 3.3.3.5.2*. Both sets of materials for the tutorials were developed and delivered using Power Point (Microsoft Office 2010) and are detailed below.

3.2.3.6.1. Tutorial Control Group

As mentioned previously, the Control Group Tutorial was based on the content and format of instruction used at the University of Quintana Roo (UQROO) to teach the target forms. This is considered Traditional Instruction for the purposes of this study (*cf. Sections. 3.3.1. & 3.3.2.*). The *Programas de Estudio* (Curriculum) and *Paquetes Didácticos* (Didactic packages) that are the teachers' guides for conducting their classes at the university served as the baseline and source to guide the contents of the control group tutorial materials. The books used for this purpose were specifically grammar books and text books that the teachers commonly use to prepare their classes such as the series of *Interchange* (Richards, Hull, & Proctor, 2012); *Passages* (Richards & Chuck, 2008); *The Grammar Book an ESL/EFL Teacher's Course* (Celce-Murcia & Larsen-Freeman, 1999a).

The tutorial consisted of 36 slides in which the concept of tense and aspect in English was explained followed by a series of exercises. Following what theorists of Sociocultural theory (see Appel & Lantolf, 1994; Swain & Lapkin, 1998; 2013; DiCamilla & Antón, 2012; Swain & Watanabe, 2013; Swain & Lapkin, 2000; Villamil & De Guerrero, 1996) have stated regarding the validity and relevance of the use of the L1 as a mediation tool in the language classroom, the materials were written in Spanish. For instance they explain that "...Within the sociocultural tradition the use of the L1 is considered as an important semiotic tool specially among L2 learners with the same L1 background and low level of proficiency in the second language..." (Antón & DiCamilla, 1998, p.316). Allowing the use of the L1 in our study helped participants with a low level of proficiency to cope better with the different activities as part of the treatment. As detailed in the Data Collection section (*cf. Section 3.3.4.3 Sessions 4 & 5*), although the number of slides was not exactly the same in both tutorials, the length of exposure to content and input was kept identical for both sets of materials (control and intervention).

Veamos algunos ejemplos utilizando los aspectos: simple, progresivo y perfecto.



This is my friend Maria.

- ***She lives*** (live) in Rome because
- ***She has worked*** (work) there since 2010.
- ***She is visiting*** (visit) Chile this summer.
- ***She has*** (have) a summer house there.



These are my friend Maria's parents

- ***They are*** (am/is/are) retired now;
- In the summertime ***they live*** (live) in England and the winter time they live in Mexico and right now
- ***they are spending*** (spend) the summer time in England.



This is Patrick, Maria's brother

- ***He is*** a professional photographer and
- ***He travels*** around the world taking extreme photography in far and exotic places. ***He has taken*** photos to wild animals and dangerous natural events like volcanos' eruptions.
- ***He is spending*** the summer with Maria in Italy.

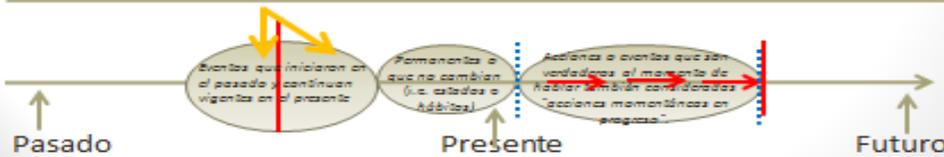
Adapted from *Riches* (2005)

23

Como se mostró previamente, todos los tiempos gramaticales (presente, pasado y futuro) pueden tener los diferentes tipos de aspecto (simple, progresivo y perfecto).

TIEMPO	ASPECTO			
	Simple ∅	Perfecto have + en	Progresivo be+ing	Perfecto Progresivo have+en be+ing
Presente	write/writes walk/walks	has/have written has/have walked	am/is/are writing am/is/are/walking	has/have been writing has/have been walking
Pasado	wrote walked	had written had walked	was/were writing was/were walking	had been writing had been walking
Futuro	will write will walk	will have written will have walked	will be writing will be walking	will have been writing will have been walking

Table 1. 'Tenses and Aspect' in English. Collier-Morris & Larson-Pruett (1999:112).



22

Schema of a Complete Orienting Basis of an Action (SCOBA)

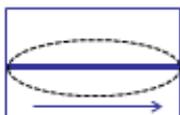
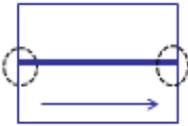
As discussed in Chapter 2, the SCT literature refers to this type of material as *Schema of a Complete Orienting Basis of an Action* (henceforth SCOBAs) as formulated by Gal'perin (1989, 1992) in Lantolf & Poehner (2014). Gal'perin's rationale for the use of SCOBAs was to provide "a cognitive map that serves to orient learners whenever they engage in activities related to a concept" (Lantolf & Poehner, 2014; p.64). In other words, the aim of the SCOBA is to provide the learner with as complete as possible a picture, diagram, image, model or other combination of primarily non-linguistic representations of the concept to be learnt; in this case the concept of tense and aspect in English. Gal'perin suggested that learning new concepts only verbally implied an effort of memorisation for the learner which made the process of internalisation and learning slower and more difficult without a deep understanding of the concept. By contrast, "the SCOBAs are holistic representations of concepts and do not require any memorisation; they serve as materialised reminders of the knowledge required to engage in a particular action" (Lantolf & Poehner, 2014, p.64).

Thus, the tutorial for the experimental group consisted of a set of PowerPoint slides (SCOBAs) designed under Gal'perin's premise. The SCOBAs were designed in conjunction with the thesis supervisor and represent some of the most innovative materials for teaching aspectual distinctions to date designed within this theoretical and methodological paradigm. For this purpose, we took as model the SCOBAs implemented in the previous studies by Gánem-Gutiérrez & Harun (2011) and Gánem-Gutiérrez (2016) as these were also based on the principles of Cognitive Linguistics. They served as key reference for ours, as our SCOBAs also aimed to facilitating a semantically grounded understanding of the concepts of tense-aspect, illustrating schematically the key concept of mental spaces, i.e. *boundedness*. Just as Gánem-Gutiérrez (2016) stated, we aimed to "afford a non-linear approach to explicit L2 input that considered the concept of tense-aspect making in a holistic manner" (p.33).

The complete set of SCOBAs in the experimental tutorial consisted of 52 slides to allow the participants to explore and understand the concept of tense and aspect in English.

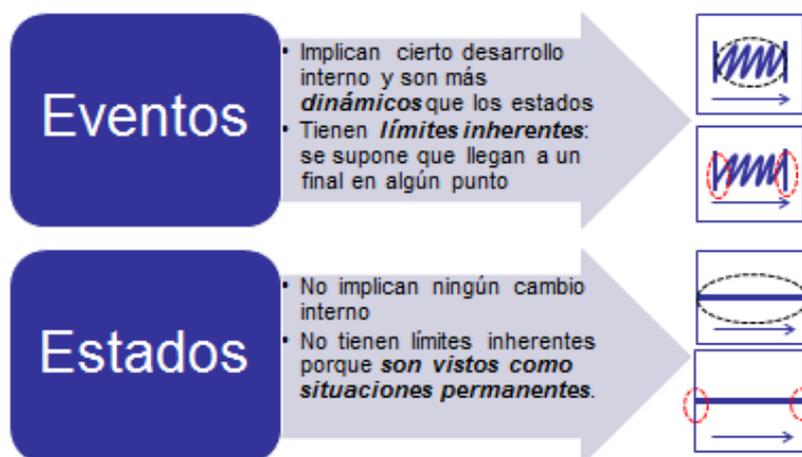
Figure 8 Examples of slides containing the SCOBAs of the experimental group (3, 8, 17, 21, 39, 47).

It shows some examples of the slides (full set of slides can be found in Appendix 9).

Propiedades inherentes de las situaciones	
eventos	estados
Constitución Cuantitativa	
Implican cierto desarrollo interno y son más <i>dinámicos</i> que los estados	No implican ningún cambio interno
	
Contorno del tiempo	
Tienen <i>límites inherentes</i> : se supone que llegan a un final en algún punto.	No tienen límites inherentes porque son vistos como <i>situaciones permanentes</i> .
	

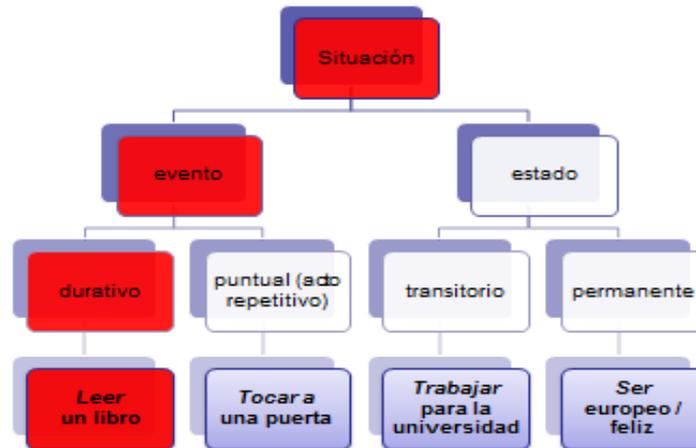
3

¿Qué tal lo hiciste?



8

Ejemplo: leer un libro



17

... en contraste también podríamos describir una situación como en progreso...

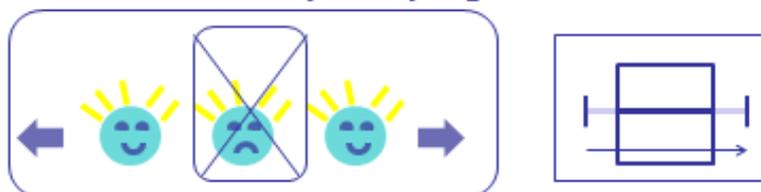


21

La interacción entre tipo de situación y aspecto gramatical

(ii) Estados y aspecto gramatical

Aspecto progresivo

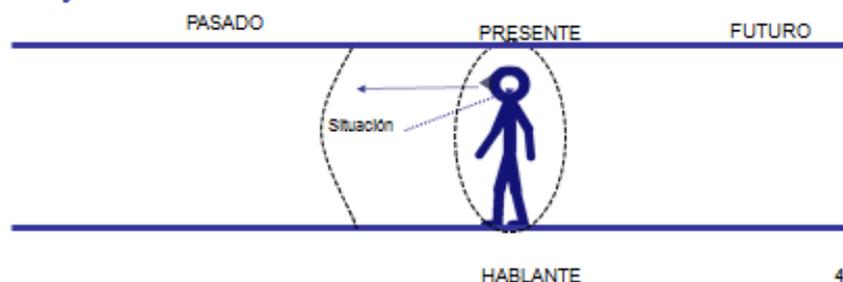


- Ayer, Juan **se estaba siendo** miserable porque no se sentía bien.
- > **Cuadro de perspectiva restringida:**
- El estado es únicamente temporal.
- Hacemos un 'zoom in' (ampliación/acercamiento) en el estado y así es como le imponemos límites.

39

Los significados principales que comunicamos cuando usamos el 'presente perfecto' o 'retrospectivo' son:

3. *Recientes*: cuando queremos enfocarnos en la noción de reciente podemos usar el perfecto en combinación con un elemento léxico como '*just*'; por ejemplo, "She has *just* finished her essay" (Ella justo ha acabado su ensayo).



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Figure 8 Examples of slides containing the SCOBAs of the experimental group (3, 8, 17, 21, 39, 47).

Similar to the control group tutorial and following literature recommendations, (see Appel & Lantolf, 1994; Swain & Lapkin, 2013; DiCamilla & Antón, 2012) the experimental group tutorial (SCOBAs) were also written in Spanish for the pedagogical reasons previously explained.

Verbal Action

Within the pedagogical approach of STI, one fundamental part complementary to the implementation of the SCOBAs is that of *verbal action*. According to Gal'perin (1969) in Lantolf & Poehner, (2014, p.65) "learners should be encouraged to rely on the principle of speaking which is... a reflexive activity that allows to externalise directed speech (of what has previously been internalized through the SCOBAs) to the interlocutors in social interaction as well as at the self". The relevance of incorporating this component in the study relates to the fact that "verbal action is simultaneously material and symbolic and therefore serves as the transition phase between action that relies on purely material or materialized support (e.g. the SCOBAs) and action that leads to the formation of a new object of action, namely abstraction" (Lantolf & Poehner, 2014, p.66). More specifically, verbal action alludes to two types of verbalisation accompanying the use of the SCOBAs as components of STI: 1) *Communicated Thinking*, and 2) *Dialogic Thinking or Self-Thinking*; (Haenen, 2001, p.163).

Communicated Thinking: Paired Tasks

Communicated Thinking refers to a specific form of verbalisation within STI. Communicated Thinking involves the participants having to communicate to others (as opposed to themselves) what they understood (or are understanding) from the SCOBAs in a comprehensible way. By speaking to others, the participants ideally have to make an effort to "appropriately use the new concept in a practical way as an important step in transferring the new knowledge and how to use it from the material to the mental plane" (Lantolf & Poehner, 2014, p.66).

Throughout some of the sessions of the study (*cf. Section 3.3.5. Data Collection Procedures*), participants had to engage in paired activities to accomplish a set of tasks like doing lesson plans and re-telling activities with their peers which implied verbalising. In other words, such verbalisation consisted of talking to each other overtly about the new concepts being learnt. By doing so, participants had the opportunity to explore and expand on the process of verbalisation which aimed to help them externalise, manipulate and appropriate the new knowledge, in this case, tense and aspect in English.

Dialogic Thinking

In contrast to Communicated Thinking, Dialogic thinking refers to *talk to oneself* and is also known as *private speech* (Lantolf & Poehner, 2014, p.66). This phase of STI procedures consists of allowing the learner to self-explore the SCOBAs while talking to one-self, i.e. using private speech about the new concept being internalized. During this stage the participants are encouraged to speak to themselves about their understanding deploying their knowledge about the new concept. Although the instructions for this phase of the study were to use 'covert' speech recording devices were unobtrusively located in order to capture any spontaneous overt speech that could arise from the practice.

3.2.4. Procedures for Data Collection

The first step of the procedures for data collection was to contact the participants creating a Facebook Group page where the researcher posted general information regarding the study. This was with the purpose of having a common space where both the participants and the researcher could ask questions freely at any time especially when all the participants reported having a Facebook account. Through this social network both the participants and the researcher had the opportunity to interact, ask questions and set convenient schedules for all involved.

Both the invitation letter and the consent form were presented in Spanish so the instructions and general information regarding the study were clear. The main procedures for data collection were conducted throughout twelve sessions spread over eight weeks during the autumn term of 2016 at the University of Quintana Roo.

When verbalisation was involved, the sessions were audio-recorded (Sessions 3, 6, 7, 8 & 9). For these purposes, the audio-recording devices were placed in the least intrusive place near the participants so all trace of spoken language was recorded.

For purposes of transcription of the recorded data a set of conventions adapted from Gánem-Gutiérrez (2004) (see Appendix 10) was used to produce protocols for data analysis. Since the treatment allowed the participants to use their native language to interact freely, extracts where they used Spanish were translated into English.

Table 3 provides a general overview of the data collection procedures and outlines the activities for each session and their timing. It also shows the mode of implementation for each task (i.e. individual work, dialogic thinking, paired work, communicated thinking). All data were collected by the researcher; exact details about the procedures are explained below.

Table 3: Overview of Data Collection Schedule

Main Study Data Collection - Operationalization Schedule										
September					October					
Week 1	Week 2		Week 3		Week 4		Week 5	Week 6	Week 8	
12-16	19-23		26-30		3-7		10-14	17-21	31-4 nov	
S1 + S2	S3	S4	S5	S6	S7	S8	S9	S10 + S11	S12	
PRE-testing	PRE-testing	Treatment	Treatment	Treatment	Treatment	Treatment	Treatment	Post-testing	DELAYED testing	
1. Consent form (15 min) 2. Biodata questionnaire (15 min) 3. Awareness Interview (15 min) 4. General proficiency Test (2 hrs.) 5. Language in Context Test (2 hrs) 6. Metalinguistic knowledge test (2 hrs.)	EXPERIMENTAL group (STI)								1. Awareness Interview (15 min) 2. Language in Context Test (2 hrs) 3. Metalinguistic Knowledge test (2 hrs.)	Metalinguistic Knowledge test (2 hrs) (Administered 4 WEEKS later)
	Lesson Plan baseline		Phase 1 SCOBAs		Phase 2 COMMUNICATED THINKING		Phase 3 DIALOGIC THINKING			
	Participants work in pairs to elaborate a 45 min lesson plan whose objective is to help adult EFL students refer to/talk about events in the past. (Audio recorded)	Participants work individually and silently with the SCOBAs	Participants work individually and silently with the SCOBAs	Participants work individually and silently with the SCOBAs	Communicated thinking (orally) While looking at the SCOBAs through Paired work participants verbalise and make their understanding comprehensible to others. (Audio recorded).	Communicated thinking (orally and written) Participants work in pairs to elaborate a 45 min lesson plan whose objective is to help adult EFL students refer to/talk about events in the past (Audio recorded)	Participants work individually with the SCOBAs to practice Dialogic Thinking. Participants were instructed to look at the materials and explain to themselves (covert self directed speech) what they understood as they were looking at the SCOBAs (Audio recorded)	Participants work individually with the SCOBAs to practice Dialogic Thinking. Participants were instructed to look at the materials and explain to themselves (covert self directed speech) what they understood as they were looking at the SCOBAs (Audio recorded)		
	CONTROL group (TI)									
	Participants work in pairs to elaborate a 45 min lesson plan whose objective is to help adult EFL students refer to/talk about events in the past (Audio recorded)	Participants work individually and silently with the CONTROL tutorial	Participants work individually and silently with the CONTROL tutorial	Participants work in pairs with the CONTROL tutorial In pairs they do the exercises contained within the tutorials (slides 32, 33, 34 & 35). (Audio recorded)	Participants work in pairs to elaborate a 45 min lesson plan whose objective is to help adult EFL students refer to/talk about events in the past (Audio recorded)	Participants work individually with the CONTROL tutorial individually they do the exercises contained within the tutorial.	Participants work individually with the CONTROL tutorial individually they do the exercises contained within the tutorial.	Participants work individually with the CONTROL tutorial individually they do the exercises contained within the tutorial.		
	Time: 6:45 hrs.	Time: 1 hr	Time: 1 hr	Time: 1 hr	Time: 1 hrs	Time: 1 hr	Time: 1 hr	Time: 1 hr		

3.2.4.1. Sessions 1 & 2

Sessions one and two were considered the pre-testing stage of the study; the time allocated for completion of these two sessions was 6 hrs and 45 mins. During session one participants signed consent forms, completed the biodata questionnaire, the awareness interview and the general proficiency test. Session two was devoted to administering the Language in Use Test and the Metalinguistic Knowledge Test as a measure to identify their base levels of knowledge at the beginning of the study.

3.2.4.1.1. Consent form and Biodata questionnaire

Both instruments were administered in group form but completed individually and electronically.

3.2.4.1.2. Awareness Interview

The Awareness Interview (*cf. Section 3.3.3.3.*) was the first means of gathering information from the participants' general knowledge regarding tense and aspect in English. The researcher conducted each one of the interviews with the participants individually and face to face. On average, the participants spent less than 5 minutes answering the three questions. Interviews were conducted in Spanish in order to give the participants the opportunity to speak freely and with ease in their native language as opposed to using English which for the less skilled ones would have been constraining and, therefore, disadvantageous. The interviews were audio-recorded and were transcribed verbatim for analysis.

3.2.4.1.3. Tests

Three tests were administered during sessions 1 and 2. The tests were the General Proficiency Test, Language in Use Test, and Metalinguistic Knowledge Test and were (computer-based) exactly the same for both groups of participants, i.e. control and experimental (*cf. Section 3.3.3.4.*). Two hours were allocated for each test and the General Proficiency Test was administered during session one after the consent form,

the Biodata Questionnaire and the Awareness Interview. The Language in Use Test and the Metalinguistic Knowledge Test were administered during the second session with two hours allocated for each one. As previously mentioned all three tests were in electronic format and were administered in test conditions on a group basis for each level, i.e. 5th, 7th and 9th semester.

Methodological triangulation was pursued by using different instruments to gather data and thus strengthen validity and reliability of the research design (Cohen, Manion, & Morrison, 2000). Therefore, data from interviews, tests (MLK, language in use), tasks (developing lesson plans) and verbalisation phases, was examined and taken into account to address the research questions.

3.2.4.2. Session 3

Session 3 was also considered a Pre-testing stage. During this session participants had to complete a lesson plan (*cf. Section 3.3.3.5.*) in pairs aiming to teach the past tense in English and they were given one hour to complete the task. There was no pre-stated format for the lesson plan; participants were simply instructed to "work with their partners in order to write down a lesson plan whose objectives were to teach/help EFL students talk about events in the past". Participants therefore, worked in pairs at the computer and while they were writing and discussing their plans, they were also being audio-recorded. Once the plans were completed, these were sent electronically to the researcher for subsequent analysis (see below).

3.2.4.3. Sessions 4 & 5

Sessions four and five were devoted to working individually with the tutorials for both the experimental and the control groups. As previously mentioned (*cf. Section 3.3.3.6.*) two sets of computer-based tutorial materials were designed specifically for each of the two groups. Particular care was given to the length of exposure time for both groups to ensure comparability; in other words, both groups spent the same length of time working with the tutorial materials (one hour) for each session. As displayed in Table 3 (*cf. Section 3.3.4. Procedures for Data Collection*) each session had specific

activities allocated for each day; i.e. for sessions 4 & 5 looking at the tutorials on the computer. Specifically, the treatment involved having each one of the participants working individually and silently looking at the corresponding tutorial.

3.2.4.4. Session 6

Session 6, unlike the previous ones, was devoted to pair work for both groups. During this session the experimental group worked with their tutorial on the basis of *communicated thinking* as STI suggests. Participants had to work collaboratively with their peers commenting and trying to explain to each other their understanding while looking at the tutorial materials (slides). The ultimate goal of communicated thinking is to make participants verbalize their understanding in order to make it comprehensible to others, in this case to their peers (*cf. Section. 2.3.3.2. Second Phase: Verbal Action*). By contrast, the control group worked in pairs as well but on the basis of traditional instruction. They had to complete a series of grammar based exercises which were included within their tutorials (see). Figure 9 and Figure 10 provide examples of some of the slides participants worked on.

Ahora vamos a hacer algunos ejercicios utilizando los aspectos: simple, progresivo y perfecto. (ANSWER IN ENGLISH)

- 

• These are my grandparents.
 • _____(live) in Spain; in the past _____ also _____ (stay) in Mexico for a period of time. At the moment
 • _____(stay) at my parent's house in London.
 • _____ (to be) together for more than 50 years.
- 

• This is my niece Christina.
 • _____(study) the primary school. _____(like) history a lot and _____ also _____(love) to write stories. Last year
 • _____(win) a contest of fairy tales writing in her town.
 • _____(want) to become a famous writer when she grows up that is why _____(start) to write her own stories.
- 

• This is my nephew Erick.
 • _____(love) music a lot. _____ already _____(take) music lessons at the Conservatory of Music in London. At the age of twelve
 • _____(give) a concert of Spanish guitar!
 • Last year _____(win) a child talent music contest.

29

Qué eventos ocurrieron exactamente en el pasado, y cuáles siguen vigentes hasta hoy? (ANSWER IN ENGLISH)

a) Where were you born and where have you lived?

b) What were you doing between the ages of 8-13 ?

c) What were you doing during your teenage years?

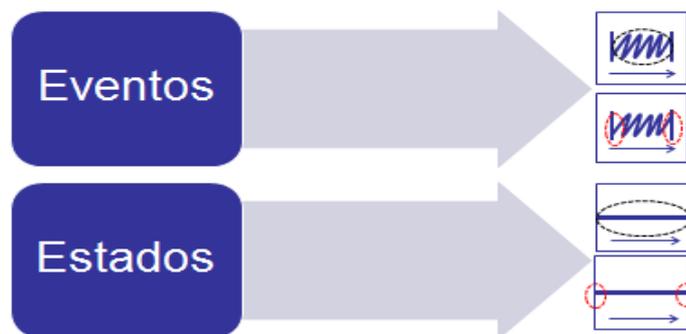
d) What major events occurred during high school and university?

e) What other major events in your life can you remember?

[31]

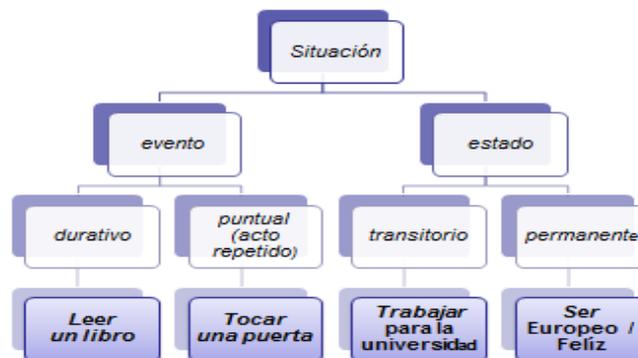
Figure 9 Examples of TI materials for participants to work in pairs (Control Tutorial slides 29 & 31)

Antes de continuar, recuerdas la diferencia entre 'eventos' y 'estados'?



7

Resumen (describiendo situaciones)



9

Figure 10 Examples of STI materials for participants to work in pairs (Experimental Tutorial slides 7 & 9)

As shown in Table X and explained above, session 6 lasted one hour. All verbalisation; that is, communicated thinking in the case of the experimental group and pair work talk, in the case of the control group was captured digitally (recorded) for subsequent transcription and analysis.

3.2.4.5. Session 7

Session 7 kept with the collaborative (pair-work) mode for both groups. Participants were instructed to develop a 45 minute lesson plan aimed to teach the past tense in English. The instructions for both groups (STI and TI) were exactly the same; "For today's session, you will work with your partner (the same one you did the first lesson plan with) and together you have to write a second lesson plan. You need to imagine that you're going to teach a 45 minute lesson to EFL adult students. The main objective of that lesson is to help your students talk about events that occurred in the past. You can use whatever format you wish for your lesson plan; when you finish please send it to me via email".

Session 7 was also audio recorded for both groups for subsequent transcription and analysis purposes. The objective of having the participants doing a lesson plan was to assess the extent to which the knowledge (hopefully) being internalised from the tutorials might have an impact on how these trainee teachers subsequently conceptualise a language session where the focus is to help EFL students talk about past events. In other words, I wanted to investigate if (and to what extent) the treatment might have an effect on the participants' application/use of metalinguistic knowledge about tense and aspect in relation to their pedagogical thinking as reflected in lesson planning.

3.2.4.6. Sessions 8 & 9

During sessions 8 and 9 participants worked again with their corresponding tutorials (control or experimental). Once again, both groups had the same time allocated for working on their tutorials, a total of 1 hour per session. During this session, participants from the experimental group worked on what STI calls *dialogic thinking* 'mode' which consists of working individually and through covert self-directed speech.

That is, participants were instructed to look at the materials and explain to themselves what they understood as they were flipping through the SCOBAs. A digital recorder was turned on next to each participant in order to capture speech in case they may utter any speech 'overtly'. Participants from the control group also worked individually with their tutorials based on traditional instruction; the same length of time as the experimental group was allocated to the session (one hour) but they were not asked to verbalise in any way.

3.2.4.7. Sessions 10 & 11

Sessions 10 and 11 were devoted to post testing. During session 10 a post Awareness Interview (AI) was conducted on an individual basis (same conditions as for the corresponding pre-testing). 15 minutes were allocated for this; however, the average time was 5 minutes per participant.

Following the Awareness Interview, the Language in Use test was administered in the same conditions as for the pre-test.

The Metalinguistic Knowledge post-test was administered during session 11 and also followed the same conditions as during the pre-test (*c.f. Section 3.3.4.1.4.*). On average, participants completed the tests in one hour.

3.2.4.8. Session 12

During session 12 a delayed MLK was administered (one month after the post-test) in order to assess the lasting effect (or otherwise) of the treatment. As all other tests, this one was completed on an individual basis and under the same conditions as the pre- and post-tests. The delayed MLK test was identical to the post-test.

3.2.5. Procedures for Data Analysis

This section describes the procedures for data analysis organized on the basis of the three research questions (see *cf. Section 3.2.*). The study by Swain, Lapkin, Knouzi,

Suzuki, & Brooks, (2009) served as a crucial point of reference for some of the analyses in my study (e.g. languaging) although it must be noted I did not aim to replicate their work. Our design included pre- and post- testing and the focus herein was to examine the potential of the intervention (implementation of STI) to influence both the *process* of learning and the *product* from the intervention/treatment stage.

3.2.5.1. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' linguistic knowledge (MLK and language use) regarding aspectual distinctions in English (RQ1)

In order to investigate the effectiveness or otherwise of STI compared to TI to enhance EFL teacher linguistic knowledge (MLK and language use) with regard to aspectual distinctions in English as expressed by the target grammar features (simple past, past continuous and present perfect), it was necessary to look at the results of the various tests administered for this purpose (*c.f. Section 3.3.4*). In general terms, comparing the scores of the pre, post and delayed tests served as a quantitative measure both within participants as well as between control and experimental groups.

Based on previous findings reported in the literature as to the beneficial effects of STI for language learning (see for instance (Negueruela-Azarola, 2003; Swain, 2006; Swain, Lapkin, Knouzi, Suzuki, & Brooks, 2009) it was hypothesised that in this study the intervention group would perform better on at least some measures (e.g. MLK) than the control group. It has to be highlighted that, to the best of my knowledge and, as discussed in Chapter 2, no study to date has empirically compared STI to other pedagogical treatments while implementing the full Gal'perian cycle (Lantolf & Poehner, 2014, p. 66)

Thus, more specifically, to address RQ1 (potential enhancement of metalinguistic knowledge and language use) statistical analyses comparing the results in the scores of pre-, post- and delayed MLK and language use tests were conducted.

3.2.5.1.1. Proficiency Test

The proficiency test consisted of 100 items of multiple choice format which had the same value of 1 per item; an answer key accompanies the test (see Appendix 12). Answers in the proficiency test were therefore scored dichotomously in accordance with the answer key, that is, each correct answer was awarded one point. Independent Samples T-test was conducted to identify if there was any significant difference between groups (control vs. experimental) to ensure that both groups shared a similar proficiency level at the beginning of the study.

3.2.5.1.2. Metalinguistic Knowledge Test

For the MLK test, the scoring varied according to each of the two parts of the test (A and B). For part A, items 1, 2, 3, 4 and 5 followed a scoring system on a scale ranging from 0 to 3 (0= no evidence of metalinguistic knowledge or awareness, 3= fully accurate metalinguistic knowledge evidence) assessing the participants' metalinguistic knowledge; the scoring system was adapted from Roehr & Gánem-Gutiérrez (2009) and scoring samples are provided in Table 4. Item 6 (a diagram with 3 sub-items to complete), item 7 (with 8 sub-items) and item 8 (a table with 9 sub-items to complete) were scored dichotomously; that is, they had either a right or wrong answer based on a prepared scoring sheet and each sub-item was worth 1 point. Part B contained two main items with a total of 10 sub-items with a value of one point each. The total maximum possible score was 57.

Table 4: Scoring example of MLK test

Question example	key
Can you explain what <i>aspect</i> is?	<p>“Aspect refers to how we, as speakers, use grammar to describe a particular view or perspective of a situation. Aspect is inherent in verbs (lexical aspect) and can also be marked grammatically, e.g. through inflections in verbs such as –ed or –ing”. (Gánem-Gutiérrez, 2016)</p> <p>It is the grammatical form which shows how a speaker <i>views</i> a situation or event.</p> <p>Aspect can be expressed lexically (semantically) or grammatically (morphosyntactically)</p>
Scored examples	Score
‘No’	0
‘Aspect is the speaker’s perception on an event and can be expressed both lexically and grammatically’.	3

Where qualitative judgements were involved inter-rater reliability procedures were conducted, i.e., a second scorer blind marked 10% of the tests. Inter-rater agreement was 85% which was considered good according to Koch et al. (1977). Disagreements were resolved through discussion between the markers. Once inter-scorer reliability was established the researcher proceeded to mark all MLK tests.

3.2.5.1.3. Language in Use Test

The Language in Use test (pre- and post- matched versions) consisted of 31 items each; participants' performance on these tests was scored dichotomously in accordance with a prepared answer key (Appendix 12); one point was awarded for each correct answer; therefore the total maximum possible score was 31.

For both the Language in Use and the MLK tests preliminary analyses, i.e., to check for normality of the data, were conducted. Thus, a series of one-sample Kolmogorov-Smirnov tests were carried out and these confirmed that the data did not differ significantly from a normal distribution, which warranted the use of parametric statistics. The alpha level α was set at .05. In addition, descriptive statistics such as means, standard deviation (SD) and percentages were generated for both groups. Independent samples T-tests were also conducted for the Proficiency tests to identify if there was any statistical difference between groups. Repeated measures ANOVA on MLK tests were also conducted to compare the scores obtained from the pre-, post- and delayed tests between groups (see also Results chapter).

3.2.5.2. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' ability to apply linguistic knowledge to pedagogical thinking (RQ2)

In order to determine whether or not STI was more effective than TI for enhancing EFL teacher trainees' ability to apply linguistic knowledge from a pedagogical perspective data were gathered from two sources: 1) awareness interviews and 2) lesson plans.

The awareness interviews served to investigate the participants' metalinguistic knowledge of the concepts of tense and aspect, their thinking and reflexion about these

concepts (before and after intervention) and how they might use this knowledge to help EFL learners talk about past events.

In addition to the awareness interviews, lesson plans conducted initially during session 3 prior to intervention, and after intervention during session 7 (*cf. Section 3.3.4.5.*) served to provide the researcher with some information about the participants' overall ability to apply or transfer MLK to potential pedagogical thinking. The purpose of session 3, therefore, was to obtain a baseline for comparison, to assess if treatment may have had any positive effect on participants in pedagogical terms (lesson planning in session7).

I will first explain the awareness interviews analyses procedures followed by lesson plans rubric and finally lesson plans languaging.

3.2.5.2.1. Awareness Interviews

The first step involved verbatim transcription of the pre and post awareness interviews to produce protocols for analysis (see example of interview excerpt data and transcription in Appendix 13). The answers for each participant were then scored following the Roehr & Gánem-Gutiérrez (2009) scheme (*cf. section 3.3.5.1.2.* see Table 4). The scoring scheme was based on a 0-3 points scale (Table 5) reflecting the participants' knowledge with regard to tense and aspect (scored examples are shown in Table 6).

Table 5: Scoring System for Awareness Interviews

Value	Level of sophistication of the answer
0	No evidence of knowledge
1	Little or minimal idea about the concept
2	Basic level of description and/or explanation regarding the concept with simple, non-sophisticated use of (meta) language
3	Full description/explanation of the target concepts using appropriate metalanguage

Table 6: Awareness Interview with Answers and Scoring Scheme

Awareness Interview Scoring Scheme with examples			
Questions	Key	Examples of answers	Score
1. What do you know about the	The past tense is the grammatical tool which allows the speaker to talk about previous/past events	EX. 1 "... I don't know anything about it..."	0
		EX. 2 "...Past tense is the time in English..."	1
		EX. 3 "...it came to my mind past simple, present perfect, past continuous... past simple refers to events that finished in the past	2

past tense in English?	and locate them in chronological time. It can be formed by inflecting the verbs or the use of certain auxiliaries (i.e. did) for this purpose; ex. watch-watched for regular verbs; or speak-spoke for irregular verbs.	<i>and that were made during a specific time; present perfect refers to events that started in the past and that continue up in the present; past continuous refers to events/actions that were doing or interrupted in the past while other events were doing at the same time...</i>	
		EX. 4 <i>"The past tense tells us when the action happened in time; like yesterday or last week in a time-line. There are different types of 'past'; for the simple past we use the verbs depending if they are regular or irregular. If they are regular we add ed- at the end and if they are irregular we change the form of the verb. And there is also the past continuous or the past perfect that uses auxiliaries like the verb had"</i>	3
2. Do you know the difference between tense and aspect in English?	Tense refers to the grammatical tool/marker that allows us to communicate/ talk about events and locate them in relation to time. In other words, tense is the grammatical tool that allows us to ground or locate situations in time (non- retrospectively or retrospectively). Aspect refers to how we, as speakers, use grammar to describe a particular view or perspective of a situation. Aspect is inherent in verbs (lexical aspect) and can also be marked grammatically, e.g. through inflections in verbs. English has two aspectual distinctions: non-progressive aspect (expressed by +ed) and progressive aspect (expressed by be+ing).	EX.1 <i>"...No, I do not have idea... no I do not know it..."</i>	0
		EX. 2 <i>"...well, tense could be present, past and future and aspect would be if it is present simple, present perfect or present progressive and it can be in past and future..."</i>	1
		EX. 3 <i>"... Tense is the time when the action happens, it can be present, past or future; and aspect is about how we perceive that action happening in the time..."</i>	2
		EX. 4 <i>"... The tense and the aspect are two different things but they complement each other. Tense is when the action happens; it can be present, past or future. And the aspect is more about how that action happened, is the perception of the event; like something that was happening or like something that happened and finished in a very specific moment; that is why the aspect can be progressive with the use of the verbs in gerund, or simple with the verb in past tense, or participle for example..."</i>	3
3. If you were to teach someone the concept of tense and aspect in English, how would you do it pedagogically?	There is no single answer for this question; the score awarded takes into account the level of sophistication in relation to the ability to transfer metalinguistic knowledge into pedagogical thinking.	EX. 1 <i>"... I don't know..."</i>	0
		EX. 2 <i>"... I will give them examples first in Spanish and after in English..."</i>	1
		EX. 3 <i>"... I will teach them the tense and aspect first so they can identify them, then I will provide them with examples..."</i>	2
		EX. 4 <i>"...I will teach them diagrams of time lines so they identify the basic tenses (present, past and future) and with images I will teach them what are the different aspects and how these are related to time. I will give them examples of various actions in which the progressive and non-progressive aspects were portrayed..."</i>	3

As pointed out before, given that scoring the interviews involved an element of subjectivity, 10% of all data of this type was scored by a second rater in order to check interrater reliability. Agreement between the two coders was 85%. Once inter-rater

reliability was established, the researcher proceeded to score all interview protocols. Following scoring of the interviews, descriptive statistics were generated and later repeated measures ANOVA, and t-tests were also calculated.

As a complementary way of exploring more in depth the quantitative results from the awareness interviews, we looked at specific cases in detail from a qualitative point of view to trace the evolution of individuals' improvement in terms of pedagogical thinking. The excerpts for examination were selected based on the quality of their answers which was also reflected in their contrasting scores from pre- to post- testing (see Table 7 for some case examples).

Table 7: Examples of Responses of Awareness Interviews

	PRE	score	POST	score
1. What do you know about the past tense in English?	AI-EXC-Q1B(P09 CTR 5) "The past tense is what happened and is finished now"	1	AI-EXC-Q1A(P10 CTR 5) "Past tense is when we talk about events that happened in the past time"	1
	AI-EXC-Q1B(P10 EXP 5) "It is a tense that indicates an action in past, something that was conducted and had an end in time"	1	AI-EXC-Q1A(P10 EXP 5) " <u>The past is a grammatical form that we use to indicate actions that took place in the past time. It can be in the form of simple past, past perfect and past progressive</u> "	3
2. Do you know the difference between tense and aspect in English?	AI-EXC-Q1B(P05 CTR 7) "No"		AI-EXC-Q1B(P04 CTR 9) "actually I've never thought about it; I don't know the difference between tense and aspect"	0
	AI-EXC-Q2B(P07 EXP 7) "No"	0	AI-EXC-Q2A(P08 EXP 9) "the tense are the moments in which the activities occur, for example it could be present, future or past and the <u>aspect is how we perceive those activities, they could be progressive, simple and past progressive also, they are related because according to those situations time and aspect is the way that people perceive an activity</u> "	3
3. If you were to teach someone the concept of tense and aspect in English, how would you do it pedagogically?	AI-EXC-Q3B(P08 EXP 5) "I will begin with the structure, the subject then you have to put a verb in past tense and then complete sentence and then I will explain that there are regular and irregular verbs and how these change and I will explain the structure of the past tense and I will put examples of the real life and that's all"	2	AI-EXC-Q3A(P08 EXP 5) "First, I will ask them about their recently activities they made, then I will write those examples in past tense, then <u>I will explain them the structures with diagrams and images. I will explain the verbs regular and irregular and the forms in interrogative and negative. I will tell them that <u>tense is the time and aspect is how we view events.</u></u> "	3

Once awareness interviews were analysed quantitatively and qualitatively, I proceeded to analyse the lesson plans.

3.2.5.2.2. Lesson Plans

The second element considered to answer RQ2 were the lesson plans which were done during pre and post treatment and served to provide different types of data.

1) Participants' pedagogical knowledge/thinking displayed in the actual lesson plans; i.e. *Depth of knowledge (DOK) of the topic (tense and aspect)* and how such knowledge was used for pedagogical purposes. A rubric adapted for this purpose was used to assess the lesson plans in a systematic way. The rubric consisted of two main criteria as described below.

2) *Languaging Episodes (LEs)* which were identified from the audio recorded interaction between participants while developing the lesson plans and will be described below. I will first address the analyses procedures for the lesson plans and secondly, I will detail the analyses of the verbalisation (recorded interactions while participants developed their lesson plans).

Lesson Plans Rubrics

The lesson plans were analysed following a rubric which was adapted for this purpose from various sources (Ur, 2010; Scrivener, 2011; Brown & Heekyeong, 2015) in order to assess the extent to which the participants were able to transfer or apply MLK to pedagogical use. As mentioned before (*cf. Section 3.3.3.5. Lesson Plans*) participants were given one hour during sessions one and seven (*cf. Section 3.3.4.*) to write a lesson plan in pairs having been given the following instructions: "work with your partner and write down a 45 minute lesson plan whose objectives are to teach/help EFL students talk about events in the past".

The purpose of this task was exclusively to explore if, and to what extent, participants might transfer or apply the knowledge/understanding/thinking gained through the treatment materials to the conceptualisation of lessons (i.e., lesson planning). In other words, I wanted to see if having (hopefully) gained further understanding about tense and aspect in English, this deeper understanding might have had an impact on how they thought about their teaching of simple past, past continuous and present perfect. Therefore, the rubric for scoring the lesson plans focused on the

potential use of metalinguistic knowledge rather than teaching methodology as such which was outside the remit of the present project.

The rubric (Table 8) contained two main criteria which looked at 1) Depth of metalinguistic knowledge on tense and aspect; and 2) Evidence of metalinguistic Transfer to Pedagogical Thinking which were rated on a scale from 0 to 3, similarly to the approach taken for the Awareness Interview as shown in Table 5.

Table 8: Rubric for Scoring the Lesson Plan

Criteria	Not Effective 0	Developing 1	Acceptable 2	Exemplary 3	Points
Depth of MLK (tense and aspect)	Null or weak evidence of MLK on tense and aspect	MLK is present with a minimal description about the concept, needs more development	MLK is at a basic level of description and/or explanation with simple non-sophisticated use of (meta) language	MLK is correctly and fully described/explained with the precise concepts/definitions of tense and aspect	
Evidence of MLK transfer to Pedagogical Thinking	No evidence that understanding of the target concept is applied to practice as reflected in the lesson plan	Evidence that little or minimal understanding of the target concept is applied to practice as reflected in the lesson plan	Evidence that a basic understanding of the target concept is applied to practice as reflected in the lesson plan	Evidence that a full/deep understanding of the target concepts are applied to practice as reflected in the lesson plan	

An example of an actual lesson plan is shown below (Table 9) with its respective rubric of evaluation to exemplify the process of analysis and scoring. The evidence of pedagogical application of the concepts of tense and aspect identified within the lesson plans are in underlined italics.

Table 9: Example of Lesson Plan marked with rubric included

Lesson Plan (PRE)		Lesson Plan (POST)				
(P03+04EXP9sem) Teaching past tense to adults 45 minute lesson plan						
1.	1. The teacher will write past tense sentences on the board.	1.	Teacher says the class will be about past tense. (1 min)			
2.	2. Students will put the sentences in order to make a short text. (10 min)	2.	Teacher provides examples of tense and aspect in sentences (<i>including events and states</i>). (7 min)			
3.	3. Both the teacher and students will check the text. (5 min)	3.	Students identify the differences between tense and aspect. (5 min)			
4.	4. The teacher will ask what they see different in the verbs that are in the present and in the past. (5 min)	4.	Teacher gives a complete explanation about them emphasizing that <i>tense indicates the chronological time and aspect the perception of the event</i> . (5 min)			
5.	5. The <i>teacher will explain the rules for regular past tense verbs (-ed) and some irregular verbs</i> . (10 min)	5.	Teacher asks if there are any questions regarding the topic. (1 min)			
6.	6. The teacher will ask some questions about what they did yesterday, so students have to use past tense verbs. (5 min)	6.	Teacher gives students a worksheet with exercises about past tense. (10 min)			
7.	7. The teacher will project a video and students have to write down only the verbs in the past that they hear. (3 minutes)	7.	Both the teachers and students check their answers. (2 min)			
8.	8. With the verbs written, students have to write a paragraph or short text using the verbs. So, this is going to be their evaluation for past tense verbs. (7 min)	8.	Students are required to write a 180-220 words text about what they did last Christmas. (7 min)			
		9.	Students are told that they have to <i>underline with red colour the events and with blue the states</i> in their text.			
		10.	Teacher chooses three students to read their work. (7 min)			
		11.	The other classmates have <i>to identify the events and states</i> in the texts.			
		12.	Teacher says there is no homework for today.			
Rubric						
Criteria	Not Effective 0	Developing 1	Acceptable 2	Exemplary 3	PRE Points	POST Points
Depth of MLK (tense and aspect)	Null or weak evidence of MLK on tense and aspect	MLK is evidently present in a minimal idea about the concept, still needs more development	MLK is at a basic level of description and/or explanation with simple non-sophisticated use of (meta) language.	MLK is correctly and fully described/explained with the precise concepts/definitions of tense and aspect	1	2
Evidence of MLK transfer to Pedagogical thinking	No evidence that understanding of the target concept is applied to practice as reflected in the lesson plan	Evidence that little or minimal understanding of the target concept is applied to practice as reflected in the lesson plan	Evidence that a basic understanding of the target concept is applied to practice as reflected in the lesson plan	Evidence that a full understanding of the target concept is applied to practice as reflected in the lesson plan	0	2

Scores from pre- and post- awareness interviews as well as the lesson plans were then used to assess the levels of pedagogical application of the target concepts as a result of treatment. Since lesson plans were done in pairs, the scores given were the same for both participants. Descriptive statistics were generated followed by repeated measures ANOVA to determine the level of improvement (or otherwise) after intervention.

Scores from pre- and post- lesson planning sessions were then used to assess the levels of pedagogical application of the target concepts as a result from treatment. Since lesson plans were done in pairs, the scores given were the same for both participants.

Descriptive statistics were generated followed by repeated measures ANOVA to determine the approximate level of improvement after intervention.

Lesson Plans Verbalisation (Languaging Episodes)

Following the analyses of the lesson plan rubric scores, I proceeded to analyse the *verbalisation* participants produced while interacting with each other during this task. From this verbalisation, and based on my adaptation of Swain’s (2006) ‘languaging’ concept; two types of *Languaging* units, i.e. fragments of dialogue where language is used for cognitive purposes were identified: 1) *Metalinguistic Related Episodes* (MREs) when participants used language to discuss issues in relation to the target concepts and/or forms (e.g. expanding on them, clarifying meanings and explaining grammar to each other); and 2) *Pedagogically Related Episodes* (PREs) when participants used language to discuss pedagogical issues for the lesson plan.

A *Languaging Episode* began when one of the participants started to focus on (i.e., discuss) primarily either language or alternatively pedagogical aspects on how to explain or approach a lesson relating to the concepts of tense and aspect. Thus, one protocol (an actual transcript of communicated thinking) could contain several *Languaging* episodes. The following (Table 10) provides a more detailed description of both MREs and PREs.

Table 10: Languaging Episodes (definitions)

Adapted from Fortune & Thorp (2001) and Swain et al. (2009)	
Definition	
<i>Metalinguistic Related Episodes (MREs)</i>	<ul style="list-style-type: none"> • Participants give each other ‘hints’ or ‘clues’ on a given aspect of language relying mostly on explicit knowledge of metalinguistic terms. • Describes episodes which focus on choice of tense, formal construction of a verb phrase and choice between gerund and infinitive; or any other grammatical allusion.
<i>Pedagogical Related Episodes (PREs)</i>	<ul style="list-style-type: none"> • Alludes to pedagogical considerations and objectives being considered within the lesson plan, decision making, negotiation of content, e.g. whether to use pedagogical rules or diagrams for explanations. • Giving instructions, provision of feedback, opening, wrap-up & closure of activities

Table 11 contains examples of languaging episodes captured during lesson plan elaboration. As it can be observed, several turns can represent one single type of episode (MRE or PRE). On the far right column we can see the type of episode found during the analyses (MREs and PREs). Interrater reliability was checked with a second reader with an agreement of 85%.

Table 11: Example of Languaging Episodes

Turn	Participant	Languaging	Type of Episode
1	A	Podemos decir que el aspect nos ayuda a describir la visión y percepción de una situación particular (...)	MRE
2	B	En el tiempo (.) ¿No? Eso es referente al aspect (...) y ¿referente al tiempo? Pues es un marcador gramatical que nos sirve para ver ehh (.) si estamos en presente (.) pasado ó futuro (.) no?	
3	A	sí	
4	B	Ahh (.) bueno (.) entonces como tú dijiste el 'aspecto' se refiere a la parte de 'continuidad' que se le da a los verbos (.) por ejemplo (.) eehhmm existen dos tipos de aspectos que serían el aspecto no-progresivo y el aspecto progresivo (...) Cuando se refiere al aspecto no-progresivo es que se refiere (.) significa que un verbo no continúa en el tiempo (...) por ejemplo "Aarón leyó tres libros el mes pasado" esa oración tiene un aspecto no-progresivo ya que el verbo denota una finalidad en el tiempo que es en el pasado (.) 'lo empecé a leer y terminó' entonces esa es la parte del aspecto no-progresivo (...) y pues la parte del aspecto progresivo significa que continúa en el tiempo como el ejemplo de "Aarón estaba leyendo un libro cuando llegué" (.) esa oración denota que Aarón se pudo haber seguido leyendo el libro (.) pero no denota una finalización de la acción en el pasado (.) entonces este (.) el aspecto progresivo significa que continúa en el tiempo (.) no tiene un punto final (.) Eso es concerniente al aspecto y al tiempo (.) ¿No? ¿Sí? Otro ejemplo del aspecto gramatical ó del aspecto que se refiere a los verbos (.) es que ehh (.) por ejemplo cuando decimos "mi hermana estaba trabajando actualmente para la universidad" ehh en esta oración digo que mi hermana (.) oséa se mantiene la duración del verbo de la frase verbal y no tiene un punto de finalización (.) ese sería el aspecto progresivo porque continúa ó es progresivo en el tiempo y no tiene un límite (...)	
5	A	Es lo que no sé (.) si sólo el tiempo (.) si vamos a poner sólo el tiempo y ¿Qué enseñar? 'tense and aspect' (...) ¿Así en español? ¿Hacer qué?	PRE
6	B	Mmhhh sería (.)	
7	A	Ó hacer	
8	B	Objetivos (...) lograr que los estudiantes comprendan las diferencias entre 'aspect and tense'	
9	A	Comprendan la diferencia (...)	
10	B	Aja que comprendan la diferencia entre 'tense y aspect'	
11	A	Podríamos poner entre el 'time' igual para que se pueda diferenciar para saber ¿cuál es la diferencia entre el aspecto y el tiempo gramatical? Ok (.) ¿la actividad?	
12	B	La actividad	
13	A	¿Primero una explicación? ¿ó no?	
14	B	sí	
15	A	Una explicación y después ya un ejercicio (...) no	
16	B	Si (.) ¿Una explicación y un ejercicio para identificar el aspecto de ciertas oraciones?	
17	A	Si pero (.) ohh si (.) pero lo tenemos que poner detallado ¿no? Explicar primero ahmm ¿qué es el tiempo gramatical? ¿Qué es el tiempo? ¿Explicar la diferencia ¿no?	
18	B	Sí (.) explicar la diferencia entre 'tense and aspect' (...) y realizar ejercicios	
19	A	Ejercicios de (.) se harán ejercicios (...) siento que es algo muy general (...) sí (...) así como identificando en una oración ¿qué? ¿Cuáles son las diferentes partes de la oración ó algo así? Por ejemplo si yo digo ehh si yo digo "mi hermano trabajó" (...) oséa le vamos a poner varias oraciones que digan cuál es el 'tiempo' (.) cuál es el 'tense' y cuál es el 'aspect' ¿no?	
20	B	'realizarán ejercicios que contendrán oraciones para que los estudiantes diferencien (...) ¿indiquen? ¿Identifiquen!	
21	A	¿Identifiquen!	
22	B	Para que los estudiantes identifiquen (...) las partes gramaticales de la oración	
23	A	Las partes gramaticales	
24	B	Para que los estudiantes identifiquen los aspectos (.) no! Las partes de la oración	
25	A	Por ejemplo (.) ¿Ponemos el ejemplo?	
26	B	¿Sí! Ejemplo "Laura está corriendo por el bosque"	
27	A	'bosque' ok (.) entonces vamos a poner: "Time present"	
28	B	'continuos' ¿no?	MRE
29	A	Ahh (.) perdón no	
30	B	Ahhh pero está corriendo!	
31	A	Pero ese es el 'tense'	
32	B	Ahh (.) 'Tense Present Continuous'	
33	A	Y después el 'aspect'	

34	B	¿Progresivo?	
35	A	Sí (...) entonces (.) vamos a hacer (.) bueno (.) les vamos a dar una serie de oraciones y ellos tienen que identificar esas tres partes (.) ¿Ponemos la (.) la (.) la (.) la (.) la cuestión de 'estado y (...)	PRE
36	B	Evento? Estaría bien (.) pero ¿aquí cuál sería? (...) ¿Sería el de estado?	
37	A	¿Ó event? Ok (.) dejémoslo así (...) Ok, ¿qué más, qué más vamos a poner? Así nomás (.) que ellos identifiquen nadamás la diferencia entre el tense y el aspect (.) ya está siendo hecha por los estudiantes (.) ¿No?	
TOTAL NUMBER OF EPISODES: MREs: 2 , PREs: 2			

GLOSS			
T	P	Languing	E
1	A	We can say that the aspect help us to describe the vision and perception of a situation in particular (...)	MRE
2	B	In the tense (.) right? That is referring to aspect (...) and referring to tense? Well, it's a grammatical marker that help us to see ehh (.) if we are in the present (.) past or future (.) isn't it?	
3	A	Yes	
4	B	Ahh (.) good (.) then as you said the 'aspect' refers to the 'continuity' part that we assign to verbs (.) for example (.) eehhmmm there are two types of aspects that would be the non-progressive aspect and the progressive aspect (...) When it refers to non-progressive aspect it refers (.) means that a verb does not continue in time (...) for example "Aaron read three books last month" that sentence has a non-progressive aspect as the verb denotes and ending point in the time that is the past tense (.) 'he started to read it and finished' so that is the part of non-progressive aspect (...) and so the part of the progressive aspect means that it continues in time like the example of "Aaron was reading a book when I arrived" (.) that sentence denotes the ending of an action in the past (.) so this (.) the progressive aspect means that it continues in time (.) it does not have an ending point (.) That is concerning time and aspect (.) isn't it? Right? Another example of the grammatical aspect or from the past that refers to verbs (.) is that ehh (.) for example when we say "my sister was working recently for the university" ehh in this sentence I say that my sister (.) I mean the duration of the verb of the verbal phrase remains and it does not have an ending point (.) that would be the progressive aspect because it continues or is progressive in time and does not have a limit (...)	
5	A	That is what I don't know (.) if only the tense (.) if we are going to put only tense and what to teach? 'tense and aspect (...) like that in Spanish? Do what?	PRE
6	B	Mmhhh would be (.)	
7	A	Or to do	
8	B	Objectives (...) to make students understand the differences between 'tense and aspect'	
9	A	To understand the difference (...)	
10	B	Aha, to understand the difference between 'tense and aspect'	
11	A	We could put between the 'time' so they can differentiate to know what is the difference between aspect and grammatical tense? Ok (.) the activity?	
12	B	The activity?	
13	A	First and explanation? Isn't it?	
14	B	Yes	
15	A	An explanation and after an exercise (...) isn't it?	
16	B	Yes (.) an explanation and an exercise to identify the aspect of some sentences?	
17	A	Yes but (.) ohh yes (.) but we have to put it detailed isn't it? Explain first ahmmm what is the grammatical tense? What is tense? Explain the difference isn't it?	
18	B	Yes (.) explain the difference between 'tense and aspect' (...) and make exercises	
19	A	Exercises of (.) exercises will be done (...) I feel is something very general (...) yes (...) like identifying in a sentence what? Which are the different parts of a sentence or something like that? For example if I say ehhm if I say "my brother worked" (...) I mean we are going to give them a series of sentences saying which is 'tense' (.) and which one is 'aspect' right?	
20	B	They will make exercises containing sentences so the students can differentiate (...) indicate? identify!	
21	A	Identify!	
22	B	So students identify (...) the grammatical parts of the sentence	
23	A	The grammatical parts	
24	B	So the students can identify the aspects (.) no! the parts of the sentence	
25	A	For example (.) do we put the example?	
26	B	Yes! Example "Laura is running in the forest"	
27	A	'forest' ok (.) then let's put "Time: present"	
28	B	'continuous' ¿no?	MRE
29	A	Ahh (.) sorry no	
30	B	Ahh but it's running!	
31	A	But it's the 'tense'	
32	B	Ahh (.) 'Tense: Present Continous'	
33	A	And after the 'aspect'	
34	B	Progressive?	
35	A	Yes (...) so (.) let's to (.) well (.) we are going to give them a series of sentences and they have to identify those three parts (.) we put the (.) the (.) the (.) the thing of the 'states and (...)	PRE

36	B	Event? That would be fine (.) but what would it be here? (...) would it be the state one?	
37	A	Or event? OK (.) Let's leave it like that (...) Ok what else? What else are we going to put? (...) Just like that (.) so they will identify just the difference between the tense and the aspect (.) it's been made by the students (.) isn't it?	
TOTAL NUMBER OF EPISODES: MREs: 2, PREs: 2			

Once MREs and PREs were identified, they were counted to ascertain the amounts of each type of episode per dyad. The scores for both groups were analysed statistically. Since the data pertaining to MREs and PREs were found to significantly deviate from normal data distribution, non-parametric Mann-Whitney U and Friedman tests were conducted to compare control and experimental groups. In addition, Pearson Correlation analyses were conducted to determine the extent to which groups performance could have been correlated with the type of activities carried out, and the amount of verbalisation registered. These analyses served to compare the overall performance between groups, and to determine the potential effects of the treatment on transfer of the target concepts to a pedagogical plane.

Furthermore, and in line with Sociocultural theory thinking, this also allowed us to determine the extent to which the communicated thinking phase (verbalisation) through collaborative work helped participants (experimental group) to enhance their metalinguistic and pedagogical thinking with regards to the concepts of tense and aspect. Although there was no difference between both groups in terms of instructions or tasks for developing their lesson plans, it was expected that because of their treatment during session 6 (which included the communicated thinking for the experimental group) a difference in performance might have occurred. It was hoped that the amount and type of languaging episodes would correlate with the scores of the lesson plans which were obtained through, 1) evidence of MLK displayed; and 2) evidence of MLK transfer to pedagogical thinking.

Looking at the protocols of the lesson plans languaging not only provided the type and amount of metalinguistic and pedagogical related episodes, but it also provided extra information about participants' general languaging during communicated thinking. That is, from the protocols it was possible to trace the exact number of turns and words per participant, which allowed us to build a more complete picture of the potentialities of verbalisation while students interacted with each other. To further confirm any possible relation/positive outcome between verbalisation phases and lesson planning in terms of pedagogical thinking, Pearson correlations were conducted to verify this.

3.2.5.3. Insights into STI based on an analysis of languaging: The case of the top scorers from the experimental group (RQ3)

In order to gain a deeper understanding of the potential of STI and taking the work of Gánem-Gutiérrez (2016) as a key reference for this type of analysis, I first proceeded to identify the highest achievers from the experimental group by drawing on the quantitative data generated for RQ1, i.e. based on the scores for the metalinguistic knowledge (MLK) and language in use (LiU) tests. Once these participants were identified, I also looked at their awareness interviews (and scores); lesson plans (and scores in terms of metalinguistic knowledge (MLK) and pedagogical thinking (PDK)). In order to contextualize the profiles of the experimental group case studies for this research question, I first conducted a comparison between them and the two top scorers from the control group; this was exclusively done based on the quantitative results.

Following such quantitative comparisons between the top scorers of both groups, I carried out qualitative analyses of the participants' *languaging* protocols from their communicated thinking sessions, i.e., (1) while they were working in pairs with the SCOBAs; and (2) during the process of developing their lesson plans. For these qualitative analyses I looked at the two highest scorers within the experimental group.

Thus, the *languaging* produced during the Communicated Thinking Event (*cf.* Section 3.3.4.4. henceforth CTE), was analysed following a case study approach in which qualitative (microgenetic) analyses were conducted in order to trace the evolution and possible effects resulting from intervention with STI (see Gánem-Gutiérrez, 2004; and Gánem-Gutiérrez & Gilmore, 2018). *Microgenesis* refers simultaneously to both the *method* and the *object* of study (Gánem-Gutiérrez, 2004); for Wertsch (1985) *microgenesis* is 'a very short-term longitudinal study' ... 'a local, contextualized learning process' ... (cited in Lantolf & Thorne, 2006, p.56). *Microgenetic* analysis was considered a suitable type of analysis of the CTEs as it allows for tracing the origin and history of a particular learning and/or developmental event.

Through these microgenetic analyses, I could also study the participants' use of some semiotic tools which have been identified as important for supporting *intra-personal* (cognitive) and *inter-personal* (social) functioning strategies (Vygotsky, 1978)

during interaction. For example, *discourse markers* (e.g., ‘ok’); *acknowledgement discourse markers* (‘umm’, ‘yeah’) and *reasoning markers* (e.g., ‘so’), (Gánem-Gutiérrez, 2008; Gánem-Gutiérrez & Roehr, 2011; McLaughlin, 1987; Schiffrin, 1987; Centeno-Cortés & Jiménez Jiménez, 2004) were identified in the data. Centeno-Cortés & Jiménez Jiménez (2004) found that various types of reasoning markers are present in different stages of the thinking process (initiation, progression and conclusion). The authors found that L1 English language learners extensively used reasoning markers throughout these stages, i.e. *so* and *then* during what they call the ‘initiation’ stage of reasoning. *So*, *because*, and *if* were also used as part of casual and conditional clauses during the main reasoning stage, which they called ‘progression’ stage. The marker *ok* was used during the ‘conclusion’ stage, which together with other expressions of relief or frustration would signal closure of the reasoning process (Centeno-Cortés & Jiménez Jiménez, 2004, pp. 17-22; see also Gánem-Gutiérrez & Roehr, 2011). Discourse markers appear to also enable *inter-subjectivity* which has a special importance among semiotic tools as it is considered to contribute ‘to developing a sense of shared physical, symbolic, psychological, and social space for the participants’ (McCafferty, 2002, p.202). Furthermore, expressions such as *let’s see*, or *do you understand all this?* support collaborative efforts from the learners to advance together in the co-construction of their knowledge (*Ibidem*).

In sum, key mediation mechanisms used as a guide to conduct microgenetic analyses included *discourse markers*, *reasoning markers*, and *metalinguage* in order to study processes of *regulation*, *intersubjectivity*, *joint attention*, *thinking space*, *active reception*, *participation* and *play* (Gánem-Gutiérrez & Gilmore, 2018; Gánem-Gutiérrez & Roehr, 2011)

Following the analyses of the Communicative Thinking Events (CTEs), from the communicated thinking session 1; I proceeded to conduct the analyses of communicated thinking session 2 when participants developed a lesson plan in pairs. From these, data in the form of the metalinguistic related episodes (MREs) and pedagogical related episodes (PREs) were gathered. The criterion for analysing these was presented in the lesson plans section (*c.f. Section 3.3.5.2.2.*).

All quantitative results were converted to percentages, and due to the small size of the case studies sample, the analyses remained at a descriptive level. The data gathered qualitatively (awareness interviews and languaging) were analysed through microgenetic analyses as previously explained. Due to the fact that I conceptualised RQ3 as a case study, the results and discussion for this question are presented in one single section (unlike RQ1 and RQ2 for which results and discussion are presented separately).

Chapter 4. Results and Discussion

Introduction

This chapter is organized based on the three research questions that led the study. In section 4.1. the results and discussion of RQ1 and RQ2 will be conducted. I will first present in section 4.1.1. the results for RQ1 obtained from the Proficiency Tests, the Metalinguistic knowledge (MLK) and the Language in Use (LiU) tests all of them of quantitative nature. Within this section I will first introduce the descriptive statistics results and secondly I will present the inferential statistics results for MLK and LiU tests. I will follow with section 4.1.2. presenting the results for RQ2 which were obtained from the Awareness Interviews and the Lesson Plans with qualitative and quantitative components to analyse. Once the results of RQ1 and RQ2 are presented, I will proceed with the discussion of both RQ1 and RQ2 in section 4.2. Finally, section 4.3. will present the analyses and discussion (all together) for RQ3 based on descriptive microgenetic analyses from a case study approach in order to trace emergent, moment-to-moment, developmental processes (Lantolf & Poehner, 2014. p.24).

4.1. Results RQ1 and RQ2

Introduction

This section presents the results yielded from the analyses of data gathered from all participants (N=50) by means of various instruments, i.e. interviews, tests, lesson plans, and verbalisation activities. Due to the nature of the research design and the different variables (i.e. level of MLK and language use knowledge, amount and quality of verbalisation, and ability to apply MLK to lesson planning), the methodological design required a combination of quantitative and qualitative approaches (Creswell, 2012; Walliman, 2010). Thus, each type of data and its respective results either quantitative or qualitative entailed specific data analysis methods.

4.1.1. RQ1. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees’ linguistic knowledge (MLK and language use) regarding aspectual distinctions in English (Results).

4.1.1.1. Preliminary Analyses

A series of one-sample Kolmogorov-Smirnov (KS) tests confirmed that the data did not differ significantly from a normal distribution, so the use of parametric statistics was warranted. The alpha level was set at .05.

The participants’ level of English was assessed by means of the Oxford Quick Placement Test (UCLES, 2004) as summarized in Table 12. Independent samples t-test indicated that there were no statistically significant differences between the experimental and control groups: $t(48) = -2.870, p = .424$.

Table 12: L2 learners’ proficiency level by treatment group (N=50)

	Mean	SD	Min	Max
Control (N=22)	63.77	12.150	45	96
Experimental (N=28)	66.64	12.758	41	87

In order to answer RQ1, the performance of two groups (control vs experimental) on the MLK test at pre-test, post-test and delayed post-test and the measure of language use at pre-test and post-test were compared.

4.1.1.2. Metalinguistic Knowledge Test (MLK)

Table 13 provides an overview of the groups’ performance on the MLK test (maximum possible score was 57).

Table 13: Descriptive statistics for the MLK test (N=50)

	Mean	SD	Min	Max
Control group (N=22)				
MLK pre-test	20.86	5.222	13	31
MLK post-test	23.68	4.765	14	32
MLK delayed post-test	18.23	5.237	10	30
Experimental group (N=28)				
MLK pre-test	21.29	7.802	5	35
MLK post-test	33.71	8.546	7	49
MLK delayed post-test	28.39	8.381	5	44

The descriptive statistics for the pre-test suggests similar performance across groups. This was confirmed by independent samples t-test, which revealed no statistical differences between the groups: the control group ($M = 20.86$, $SD = 5.220$) and the experimental group ($M = 21.29$, $SD = 7.802$), $t(48) = -.218$; $p = .828$.

As Figure 1 below shows, Repeated Measures ANOVA on MLK test comparing the scores participants obtained for the pre-test, post-test and delayed post-test yielded a significant main effect of time with medium to large effect size, $F(1,48) = 159.23$, $p < .001$, partial $\eta^2 = .68$; a significant main effect of group with a marginal effect size, $F(1,48) = 13.03$, $p = .001$, partial $\eta^2 = .21$, and an interaction between time and group with a moderate effect size, $F(1,49) = 41.52$, $p < .001$, partial $\eta^2 = .52$.

Post-hoc comparisons (independent samples t-tests) indicated that the experimental group ($M = 33.71$, $SD = 8.456$) significantly outperformed the control group ($M = 23.68$, $SD = 4.765$) on immediate post-test: $t(48) = -4.93$, $p < .001$ and delayed post-test: experimental group ($M = 28.39$, $SD = 8.38$), control group ($M = 18.23$, $SD = 5.237$), $t(48) = -.4.97$, $p < .001$.

Repeated-measures ANOVAs comparing participants' scores on the immediate and delayed post-tests for the MLK tests indicated that there was attrition between these two testing times with a main effect of time, $F(1,49) = 154.23$, $p < .001$.

Participants' Performance on MLK test

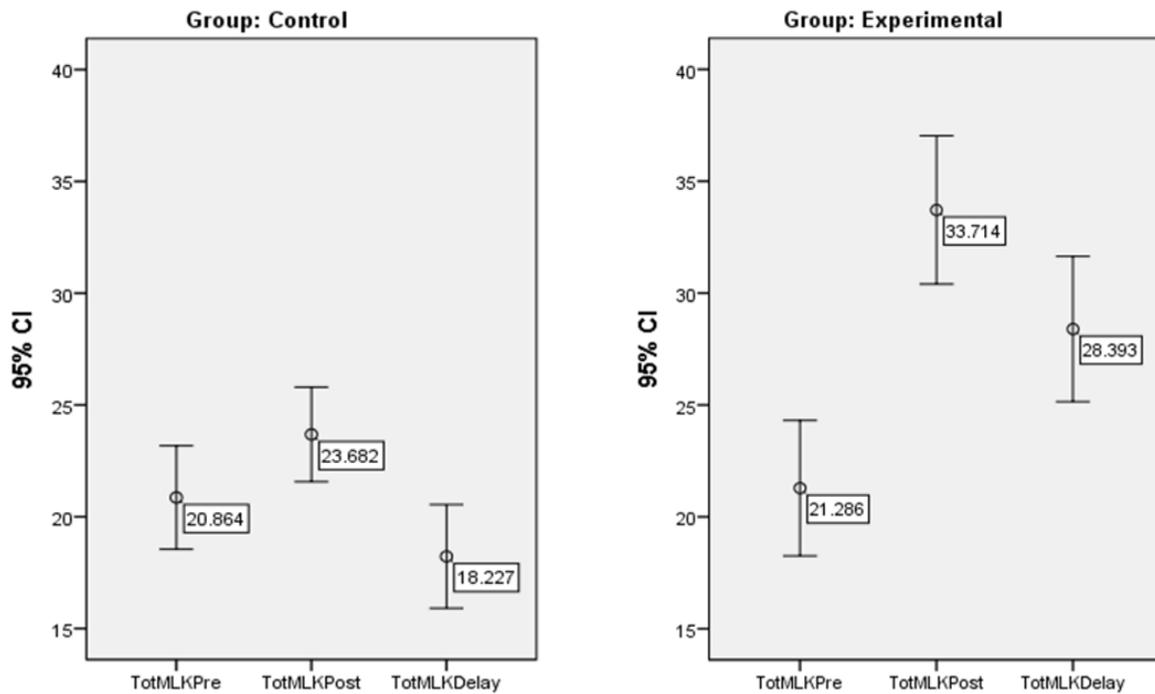


Figure 11 Participants' performance on MLK test

Based on the statistical analyses conducted, it is possible to say that the experimental group outperformed the control group on the MLK test during post and delayed times as results clearly confirm.

4.1.1.3. Language in Use Test

Table 14 shows the descriptive statistics for the Language in Use test.

Table 14: Descriptive Statistics Language in use Tests (N=50)

	Mean	SD	Min	Max
Control group (N=22)				
Language in use pre-test	18.77	3.351	14	27
Language in Use post-test	22.18	4.272	13	29
Experimental group (N=28)				
Language in Use pre-test	18.18	3.954	10	25
Language in Use post-test	24.11	3.910	14	31

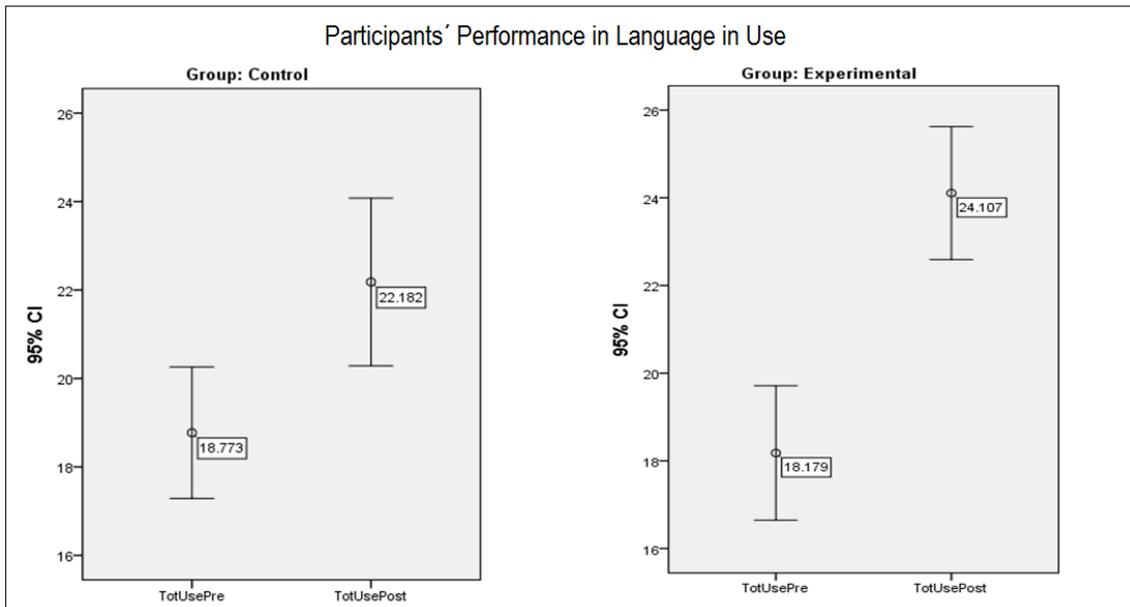


Figure 12: Participants' Performance on Language in Use test (N=50)

Repeated Measures ANOVA on the Language in Use test comparing the scores participants obtained for the pre-test and post-test yielded a significant main effect of time with medium effect size, $F(1,48) = 58.38$, $p < .001$, partial $\eta^2 = .55$; a non-significant main effect of group with a marginal effect size, $F(1,48) = .518$, $p = .475$, partial $\eta^2 = .01$, and an interaction between time and group with a marginal effect size, $F(1,49) = 4.250$, $p = .045$, partial $\eta^2 = .08$.

Thus, there was not much difference between groups' performance on the language in use post- test; just a slightly higher improvement on the experimental group.

4.1.1.4. Analyses by Level/Semester

Analyses were also conducted on the basis of the level/semester to identify if there was any difference in the metalinguistic knowledge and language use scores between groups, (control vs. experimental); the results of these analyses are presented below. Although when groups (control and experimental) were split by level and they became very small, this was not considered a problem; it was just another way of looking at the data from a different angle. Looking at the data from a control vs. experimental perspective provided a more ample scope for analyses.

Table 15: Descriptive statistics for the MLK test for Semester 5 (N=20)

	Mean	SD	Min	Max
Control group: Semester 5 (N=10)				
MLK pre-test	19.30	5.272	13	31
MLK post-test	21.50	4.950	14	32
MLK delayed post-test	17.90	3.604	11	23
Experimental group: Semester 5 (N=10)				
MLK pre-test	18.30	8.895	5	32
MLK post-test	29.30	11.480	7	49
MLK delayed post-test	23.50	10.586	5	44

Repeated Measures ANOVA on MLK test comparing participants' performance on the MLK test for the pre-test, post-test and delayed post-test revealed a significant main effect of time with a large effect size, $F(1,18) = 39.470$, $p < .001$, partial $\eta^2 = .82$; a non-significant main effect of group with a marginal effect size, $F(1,18) = 1.407$, $p = .251$, partial $\eta^2 = .073$, and an interaction between time and group with a moderate effect size, $F(1,18) = 13.966$, $p < .001$, partial $\eta^2 = .622$.

Table 16: Descriptive statistics for Language in Use for Semester 5 (N=20)

	Mean	SD	Min	Max
Control group: Semester 5 (N=10)				
Language in Use pre-test	18.00	3.771	15	27
Language in Use post-test	21.40	3.766	13	29
Experimental group: Semester 5 (N=10)				
Language in Use pre-test	16.20	3.882	10	23
Language in Use post-test	23.20	4.341	14	27

Repeated Measures ANOVA on the Language in Use test for the pre-test and post-test yielded a significant main effect of time with medium effect size, $F(1,18) = 28.430$, $p < .001$, partial $\eta^2 = .61$; a non-significant main effect of group with no effect size, $F(1,18) = .000$, $p = 1.000$, partial $\eta^2 = .000$. Hence, no interaction between time and group was observed with a marginal effect size, $F(1,18) = 3.407$, $p = .081$, partial $\eta^2 = .16$.

Table 17 presents the descriptive statistics for the MLK test for Semester 7.

Table 17: Descriptive statistics for the MLK test for Semester 7 (N=17)

	Mean	SD	Min	Max
Control group: Semester 7 (N=7)				
MLK pre-test	19.71	4.957	13	28
MLK post-test	23.29	3.147	18	28
MLK delayed post-test	15.14	3.761	10	21
Experimental group: Semester 7 (N=10)				
MLK pre-test	19.20	6.033	12	28
MLK post-test	33.60	5.420	25	43
MLK delayed post-test	29.60	5.700	21	39

Repeated Measures ANOVA on MLK test comparing participants' performance on the MLK test for the pre-test, post-test and delayed post-test revealed a significant main effect of time with a large effect size, $F(1,15) = 144.516, p < .001$, partial $\eta^2 = .95$; a significant main effect of group with a small effect size, $F(1,15) = 12.746, p = .003$, partial $\eta^2 = .459$, and an interaction between time and group with a moderate to large effect size, $F(1,15) = 17.415, p < .001$, partial $\eta^2 = .713$. Post-hoc comparisons (independent samples t-tests) indicated that the experimental group significantly outperformed the control group on immediate post-test, $t(15) = -4.505, p < .001$ and delayed post-test $t(15) = -.5.815, p < .001$.

Table 18 illustrates descriptive statistics for Language in Use for Semester 7.

Table 18: Descriptive statistics for the Language in Use test for Semester 7 (N=17)

	Mean	SD	Min	Max
Control group: Semester 7 (N=7)				
Language in Use pre-test	19.57	2.699	17	23
Language in Use post-test	24.00	3.873	17	27
Experimental group: Semester 7 (N=10)				
Language in Use pre-test	18.10	3.510	10	22
Language in Use post-test	25.20	3.293	20	31

Repeated Measures ANOVA on the Language in Use test for the pre-test and post-test yielded a significant main effect of time with medium effect size, $F(1,15) = 35.908, p < .001$, partial $\eta^2 = .705$; a non-significant main effect of group with no effect size,

$F(1,15) = .010, p = .922, \text{partial } \eta^2 = .001$, and a non-significant interaction between time and group with a marginal effect size, $F(1,15) = 1.928, p = .185, \text{partial } \eta^2 = .114$.

Table 19 presents the descriptive statistics for the MLK test for Semester 9.

Table 19: Descriptive statistics for the MLK test for Semester 9 (N=13)

	Mean	SD	Min	Max
Control group: Semester 9 (N=5)				
MLK pre-test	25.60	2.702	23	30
MLK post-test	28.60	2.608	25	31
MLK delayed post-test	23.20	6.760	16	30
Experimental group: Semester 9 (N=8)				
MLK pre-test	27.63	4.627	21	35
MLK post-test	39.38	3.159	35	45
MLK delayed post-test	33.00	4.957	25	43

Repeated Measures ANOVA on MLK test comparing participants' performance on the MLK test for the pre-test, post-test and delayed post-test revealed a significant main effect of time with a large effect size, $F(1,11) = 40.102, p < .001, \text{partial } \eta^2 = .89$; a significant main effect of group with a small effect size, $F(1,11) = 11.500, p = .006, \text{partial } \eta^2 = .511$, and an interaction between time and group with a moderate to large effect size, $F(1,11) = 11.705, p = .002, \text{partial } \eta^2 = .701$. Post-hoc comparisons (independent samples t-tests) indicated that the experimental group significantly outperformed the control group on immediate post-test, $t(11) = -10.775, p < .001$ and delayed post-test $t(11) = -9.800, p = .012$. Table 20 illustrates descriptive statistics for Language in Use for Semester 9.

Table 20: Descriptive statistics for the Language in Use test for Semester 9 (N=13)

	Mean	SD	Min	Max
Control group: Semester 7 (N=5)				
Language in Use pre-test	19.20	3.633	14	23
Language in Use post-test	21.20	3.701	16	26
Experimental group: Semester 7 (N=8)				
Language in Use pre-test	20.75	3.454	15	25
Language in Use post-test	23.88	4.224	17	28

Repeated Measures ANOVA on the Language in Use test for the pre-test and post-test yielded a non-significant main effect of time with marginal effect size, $F(1,11) = 4.297$, $p = .062$, partial $\eta^2 = .281$; a non-significant main effect of group with a marginal effect size, $F(1,11) = 1.421$, $p = .258$, partial $\eta^2 = .114$, and a non-significant interaction between time and group with a marginal effect size, $F(1,11) = .207$, $p = .658$, partial $\eta^2 = .018$.

Figure 13 and Figure 14 below illustrate the analyses carried out for MLK and LiU tests results per group and per level.

Participants' Performance on MLK test per Level

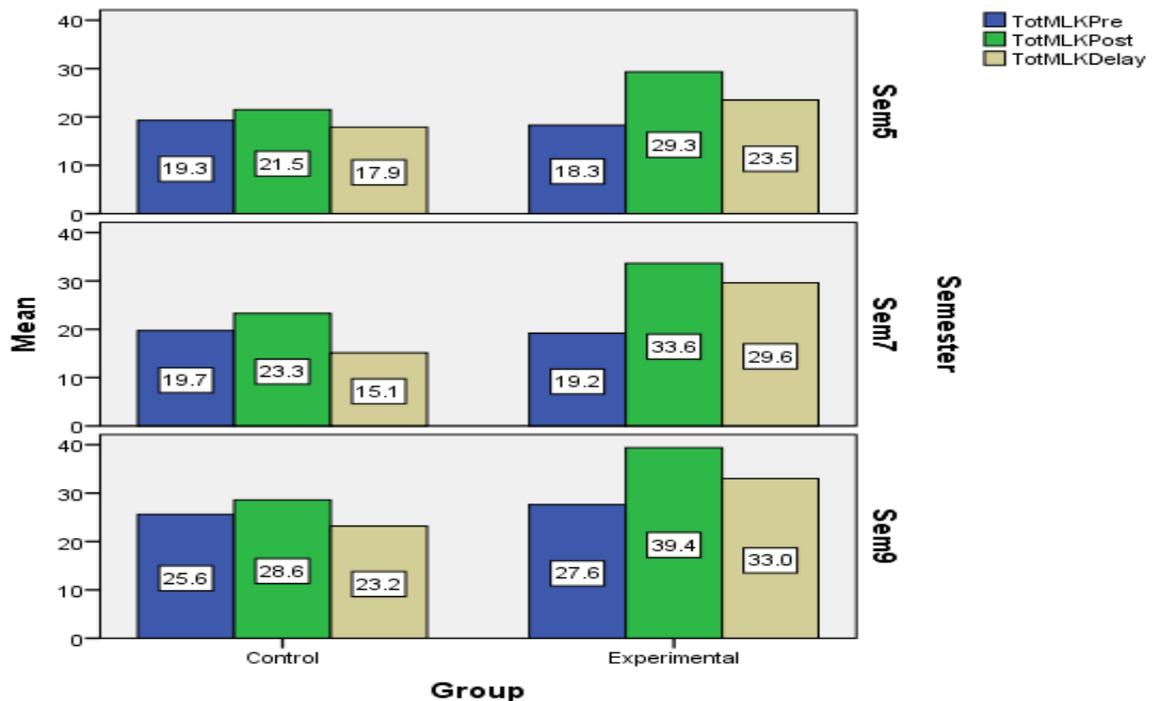


Figure 13: Participants' performance on MLK test per level

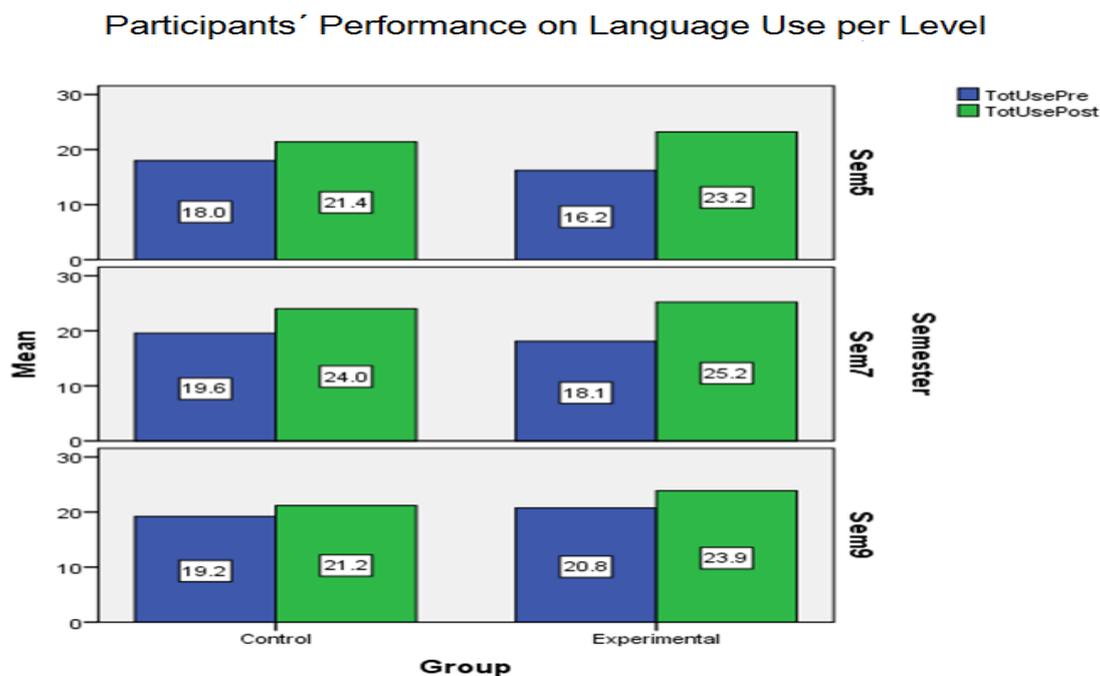


Figure 14: Participants' performance on language use per level

The analyses per semester per group on both measures (metalinguistic knowledge and language use) confirmed that the experimental group outperformed the control group at the three different levels/semesters predominantly in relation to metalinguistic knowledge. The MLK test results showed a higher significant difference in improvement from pre to post and from post to delayed on the experimental group over the control at all levels. Whereas for the language in use tests results, there was no significant statistical difference despite the minimal improvement observed among groups from pre to post testing.

4.1.2. RQ2. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' ability to apply linguistic knowledge to pedagogical practice (Results).

Another way of determining the potential of STI over TI was by exploring its impact on teacher trainees' cognition regarding the concepts of tense and aspect as reflected in their pedagogical thinking. To that aim data obtained from 1) Awareness Interviews, and 2) Lesson Plans were examined. I will first present the results on the awareness interviews and then I will proceed with the Lesson Plans.

4.1.2.1. Awareness Interviews

Awareness interviews results are first presented quantitatively. Then I will illustrate the qualitative dimension of the analysis by providing a selection of excerpts from the interviews. The selected excerpts are representative of the patterns found. For details regarding this tool for data collection please refer to the Methodology chapter (Chapter 3).

Awareness Interviews mean scores were calculated for pre-test and post-test by adding up the scores the participants obtained for each question in the interview to obtain an overall score for each participant. Table 21 summarizes descriptive statistics for Awareness Interviews (N= 50)

Table 21: Descriptive Statistics for Awareness Interviews (N=50)

	Mean	SD	Min	Max
Control group (N=22)				
Awareness interviews pre-test	3.636	1.002	2	6
Awareness interviews post-test	4.500	1.945	2	8
Experimental group (N=28)				
Awareness interviews pre-test	3.176	1.055	2	6
Awareness interviews post-test	6.214	1.618	3	9

Repeated measures ANOVA comparing the mean pre-test and post-test Awareness Interviews scores yielded a significant effect of time with a small to medium effect size, $F(1,48) = 45.98, p < .001$, partial eta squared = .49, a significant effect of group with a marginal effect size, $F(1,48) = 4.504, p < .001$, partial eta squared = .09 and a significant interaction between time and group, $F(1,48) = 14.27, p < .001$, partial eta squared = .23. Independent-samples t-test indicated that the experimental group significantly outperformed the control group, $t(48) = -1.71, p = .001$.

Qualitative analyses of the awareness interviews provided a complementary view and a more detailed account regarding participants' improvement in terms of metalinguistic knowledge. They also served the purpose of exploring whether they could 'spontaneously' transfer what they learned regarding the concepts of tense and aspect during treatment to their pedagogical thinking when conceptualising lesson plans.

Table 22 shows some examples of the awareness interview responses contrasting both groups (control and experimental) from pre to post times as evidence of the improvement in the quality of participants' answers. As presented previously, participants from the experimental group outperformed the control group as confirmed by ANOVAs and t-tests. This was evidenced with participants' answers, which were more elaborated among participants in the experimental group. They were also more detailed and accurate than those given by participants in the control group which did not show much improvement when compared to the former. In these excerpts (Table 22) we can trace how participants' answers evolved from pre to post times. From the three questions of the awareness interview, question 2 was the most contrasting one between groups' answers as it was the one that had a more marked change from pre to post versions (see excerpts in Table 22).

Table 22: Excerpts from Awareness Interviews

	PRE	POST
1. What do you know about the past tense in English?	(P09CTR5) "The past tense is what happened and is finished now"	(P09CTR5) "Past tense is when we talk about events that happened in the past time"
	(P10EXP5) "It is a tense that indicates an action in past, something that was conducted and had an end in time"	(P10EXP5) " <u>The past is a grammatical tense that we use to indicate actions that took place in the past time. It can be in the form of simple past, past perfect and past progressive</u> "
2. Do you know the difference between tense and aspect in English?	(P05CTR7) "No"	(P05CTR7) "aspect is like the type of verb, I don't remember what it is"
	(P04CTR9) "No"	(P04CTR9) "actually I've never thought about it; I don't know the difference between tense and aspect"
	(P04EXP5) "No I don't"	(P04EXP5) "tense is the way in which we can identify if the verb is in past tense and <u>aspect</u> are characteristics of <u>how we see the tenses as they can be perfect or progressive</u> "
	(P07EXP7) "No"	(P07EXP7) "tense can be progressive, continuous and simple, and <u>aspect is divided in simple and progressive and it means that the sentence has a point when it starts and when it ends and another is when we do not know when it finishes and when it ends</u> "
	(P08EXP9) "No"	(P08EXP9) "the tense are the moments in which the activities occur, for example it could be present, future or past and the <u>aspect is how we perceive those activities, they could be progressive, simple and past progressive also, they are related because according to those situations time and aspect is the way that people perceive an activity</u> "

3. If you were to teach someone the concept of tense and aspect in English, how would you do it pedagogically?	AI-EXCQ3B(P08 EXP5) <i>"I will begin with the structure, the subject then you have to put a verb in past tense and then complete sentence and then I will explain that there are regular and irregular verbs and how these change and I will explain the structure of the past tense and I will put examples of the real life and that's all"</i>	2 AI-EXCQ3A(P08 EXP5) <i>"First I will ask them about their recently activities they made, then I will write those examples in past tense, then <u>I will explain them the structures with diagrams and images.</u> I will explain the verbs regular and irregular and the forms in interrogative and negative. I will tell them that <u>tense is the time and aspect is how we view events.</u>"</i>
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In Table 22 we can see (underlined) how participants from the experimental group and from the three different levels were able to provide what was expected, i.e. an accurate metalinguistic explanation of the targeted concepts, and a brief description of how they would explain such concepts in a pedagogical context. By contrast, participants from the control group provided less accurate answers. The type of improvement/transformation in participants' answers displayed in Table 22 are the 'trend' found in responses where clear improvement was found, either providing the definition of the targeted concepts or explaining how they would approach these concepts in a pedagogical plane. Due to space constraints, I am only presenting a few of the most representative examples of the qualitative analyses of the awareness interviews.

Overall, quantitative analyses based on the awareness interviews responses, confirmed that the experimental group performed better than the control group after treatment. The data samples from the AI presented, illustrate those changes in the quality of responses. As shown in this section, it appears that participants in the experimental group were able to better incorporate their knowledge about the target concept to their pedagogical thinking. They provided more accurate and elaborated explanations showing the incorporation of the concepts of tense and aspect not only on their direct answers; but it also seemed to have 're-shaped' their pedagogical thinking to an extent as attested in the examples presented in Table 22. On the contrary, participants from the control group on the post AI did not register any considerable change or improvement in this respect.

4.1.2.2. Lesson Plans

As detailed in the method chapter (*cf. Section 3.3.5.2.2.*), a global score for each participant was calculated by adding up two scores reflecting the quality of the lesson plans: 1) MLK about the target concept, and 2) the ability to apply or transfer that knowledge to pedagogical thinking. The appropriate statistical tests were run on these figures.

Lesson plans were scrutinised through 1) the rubrics which served as a quantifiable measure to evaluate knowledge of tense and aspect and how this was considered/applied for pedagogical purposes; and 2) through the verbalisation participants uttered while doing the lesson plans. On the one hand, the rubrics provided straight and specific information such as the participants' depth of knowledge and the objectives they considered for their teaching. On the other hand, the verbalisation allowed to obtain more 'subjective' information in a qualitative way regarding how participants worked collaboratively or why they favoured a specific strategy of teaching while doing the lesson plans, how they processed their knowledge on tense and aspect and how they managed to transfer it into a pedagogical dimension.

Data based on the verbalisation protocols obtained while participants were working on their lesson plans was also processed in a way that enabled statistical analysis as explained in the method chapter (*cf. Section 3.3.5.2.2.*). An overall score per participant was obtained by adding up both scores from: 1) the lesson plan rubrics containing the scores of Metalinguistic knowledge [MLK] and Pedagogical knowledge [PDK] contained within the lesson plan; and 2) from the lesson plan languaging protocols containing Metalinguistic Related Episodes [MREs] and Pedagogically Related Episodes [PREs].

4.1.2.2.1. Lesson Plan: Rubrics scores

Lesson plans were analysed first quantitatively on the scores from the rubrics followed by qualitative analyses of the languaging participants uttered while they were doing the lesson plans as part of the treatment (*cf. Section 3.3.4. Data Collection Procedures*). The results for these were analysed on the basis of the two criteria, 1) Metalinguistic Knowledge (MLK) and 2) Pedagogical Knowledge (PDK). Table 23

summarizes descriptive statistics for Lesson Plans MLK; and Table 24 for Lesson Plans PDK.

Table 23: Descriptive statistics for Lesson Plans MLK (N=50)

	Mean	SD	Min	Max
Control group (N=22)				
Lesson plans MLK pre-test	2.00	.000	2	2
Lesson plans MLK post-test	2.32	.568	1	3
Experimental group (N=28)				
Lesson plans MLK pre-test	1.86	.356	1	2
Lesson plans MLK post-test	2.21	.686	1	3

A repeated measures ANOVA comparing the mean pre-test and post-test of Lesson Plans Metalinguistic knowledge (MLK) scores yielded a significant effect of time with a small effect size, $F(1,48) = 20.430$, $p < .001$, partial eta squared = .299, a non-significant effect of group with a marginal effect size, $F(1,48) = .1.103$, $p = .299$, partial eta squared = .022 and a non-significant interaction between time and group with marginal effect size, $F(1,48) = .068$, $p = .795$, partial eta squared = .001.

Table 24: Descriptive statistics for Lesson Plans PDK (N= 50)

	Mean	SD	Min	Max
Control group (N=22)				
Lesson plans PDK pre-test	2.00	.000	2	2
Lesson plans PDK post-test	2.14	.468	1	3
Experimental group (N=28)				
Lesson plans PDK pre-test	1.86	.356	1	2
Lesson plans PDK post-test	2.21	.686	1	3

A repeated measures ANOVA comparing the mean pre-test and post-test Lesson Plans Pedagogical knowledge (PDK) scores yielded a significant effect of time with a marginal effect size, $F(1,48) = 13.070$, $p = .001$, partial eta squared = .214, a non-significant effect of group with a marginal effect size, $F(1,48) = .082$, $p = .776$, partial eta squared = .002 and a non-significant interaction between time and group with marginal effect size, $F(1,48) = 2.616$, $p = .112$, partial eta squared = .052.

Results from both descriptive statistical analyses and repeated measures ANOVA reported no significant difference between groups' performance on lesson plans reflecting the pedagogical application of the concepts of tense and aspect.

4.1.2.2.2. Lesson Plan: Linguaging Episodes

Linguaging episodes, i.e., fragments of dialogue where language is used for cognitive purposes (*cf. Section 3.3.5.3*) were analysed both quantitatively and qualitatively. Once Metalinguistic Related Episodes (MREs) and Pedagogically Related Episodes (PREs) were identified, coded and counted, I proceeded to generate the descriptive statistical analyses. The qualitative analyses served to identify the precise allusion, i.e. context and timing where MREs or PREs choices from participants were taken while interacting collaboratively with their peers.

Once each protocol of verbalisation was scrutinized and the linguaging episodes identified *Metalinguistic Related Episodes* and *Pedagogically Related Episodes* (MREs and PREs) were analysed through microgenetic analyses (*cf. Section 3.3.5.3*). MREs were explicit metalinguistic allusions to choices or construction of grammatical structures of participants while speaking to each other; while PREs were considered explanations, decision making, negotiation of content, provision of feedback as defined in the data analyses section (*cf. Section 3.3.5.2.2. Lesson Plan: Verbalisation*).

Since the data did not meet the assumptions of normal data distribution, non-parametric statistics were used. One of the participants in the control group was excluded from subsequent analysis due to the absence of a partner he was paired with.

Table 25 provides descriptive statistics for metalinguistic related episodes (MREs) and pedagogically related episodes (PREs).

Table 25: Descriptive Statistics for Linguaging Episodes (N total = 49)

	Mean	SD	Min	Max
Control group (N=21)				
MREs	2.48	1.03	2	5
PREs	2.90	.944	2	5
Experimental group (N=28)				
MREs	2.29	1.24	0	4
PREs	3.36	1.19	2	5

The scrutiny of descriptive statistics as displayed in Table 25 suggests that there does not seem to be a difference between the control and the experimental group in terms of the metalinguistic and pedagogically related episodes they produced. Participants in both groups produced more PREs than MREs.

Since the data pertaining to the MREs and PREs was found to significantly deviate from normal data distribution, a non-parametric test (Mann-Whitney U) was conducted to compare the control and experimental groups. All the assumptions for the test were met. A Mann-Whitney U test performed on the MREs did not reveal a significant difference between the control and experimental group; $z = -.349$, $p = .727$. The results indicate that the intervention did not lead to higher production of MREs by the experimental group. A Mann-Whitney U test performed on the PREs, did not yield a significant difference between the control and experimental group, $z = -1.264$, $p = .206$, suggesting that the intervention did not result in higher production of PREs by the experimental group either. Table 26 shows descriptive statistics for the MREs and PREs produced by the control and experimental groups by semester.

Table 26: Descriptive statistics for the MREs and PREs by semester (N total = 49)

	Mean	SD	Min	Max
Control group				
Semester 5 (N=10)				
MREs	2.60	1.27	2	5
PREs	2.80	.79	2	4
Semester 7 (N=7)				
MREs	2.57	.98	2	4
PREs	3.57	.98	3	5
Semester 9 (N=4)				
MREs	2.00	.00	2	2
PREs	2.00	.00	2	2
Experimental group				
Semester 5 (N= 10)				
MREs	2.60	.84	2	4
PREs	3.20	1.23	2	5
Semester 7 (N=10)				
MREs	1.00	.67	0	2
PREs	2.60	.84	2	4
Semester 9 (N=8)				
MREs	3.50	.54	3	4
PREs	4.50	.54	4	5

The overview of descriptive statistics by semester suggests that, while the control and experimental groups seem to have produced comparable number of MREs, the experimental group produced slightly more PREs. The groups appear to vary more in the amount of MREs and PREs in semesters 7 and 9, with the control group seemingly producing more MREs and PREs in semester 7 and the experimental group producing more MREs and PREs in semester 9.

Mann-Whitney tests were conducted to verify if there was a significant difference between groups in terms of production of MREs and PREs. Table 27 displays the results drawn from these tests:

Table 27: Mann-Whitney test results on MREs and PREs per level

	<i>z</i>	<i>p</i>
Semester 5 (N=20)		
MREs	-.560	.575
PREs	-.637	.524
Semester 7 (N=17)		
MREs	-3.110	.002
PREs	-2.074	.038
Semester 9 (12)		
MREs	-2.872	.004
PREs	-2.872	.004

As shown in Table 27 above, 5 semester showed no significant difference on either MREs or PREs between the control and experimental groups. 7 semester revealed a significant difference between the control and experimental groups; the control group had a higher production of both MREs and PREs compared to the experimental group. 9 semester yielded a significant difference for control and experimental groups registering a higher production of both MREs and PREs for the experimental group. Overall 9 semester produced the highest number of both MREs and PREs from the three different levels. The Kolmogorov-Smirnov test and the *p* values for both MREs and PREs in semester 9 (control and experimental) were the same as shown in Table 27.

To explore if there were any relationships between the results from the lesson plans and the languaging episodes, Pearson correlations were conducted. The control group registered two positive correlations. The first was between Metalinguistic Related

Episodes (MREs) and Pedagogical Related Episodes (PREs) ($r = .76, n = 21, p < .001$) which means that the more MREs they produced, the higher the number of PREs. The second correlation for the control group was between the Lesson Plans MLK and Lesson Plans PDK ($r = .72, n = 22, p < .001$) suggesting that the amount of MLK deployed in the lesson plans positively correlated with the degree of MLK deployed pedagogically in the lesson plans. With regard to the experimental group, there were more correlations than for the control group. Findings indicated that, a positive relationship was found between Metalinguistic Related Episodes (MREs) and Pedagogical Related Episodes (PREs) ($r = .72, n = 28, p < .001$), meaning that participants who verbalised more about MREs reflected more production of PREs. In the same vein, MREs positively correlated with Lesson Plan MLK and Lesson Plan PDK ($r = .44, n = 28, p = .017$). Similarly, a positive relationship was observed between PREs outcomes and Lesson Plan MLK and Lesson Plan PDK ($r = .53, n = 28, p = .003$). In sum, Lesson plans scores on how participants deployed MLK and PDK were positively aligned with the amount and type of verbalisation produced.

Overall, the overview of descriptive statistics suggests a trend towards higher production of the PREs by the experimental group, and the inferential statistics point to significantly higher production of MREs and PREs of the experimental group in semester 9 but not semester 7 where the control group produces a significantly higher number of the MREs and PREs episodes.

Following the quantitative analyses of the languaging episodes both metalinguistic and pedagogical, I proceeded to conduct qualitative analyses of these as a way to better understand the results.

4.1.2.2.2.1. Metalinguistic Related Episodes (MREs)

As previously indicated, MREs were considered instances in which participants evidenced their acquaintance with metalinguistic knowledge of tense and aspect. An analysis of the protocols from a qualitative perspective showed that the MREs found referred specifically to grammatical allusions or discussion of choices of MLK with regard to the construction of tense and aspect that participants expressed while interacting during the communicated thinking phase. The following are excerpts of

linguaging episodes that emerged from the communicated thinking phase which show evidence of how participants used language for cognitive purposes (Swain, 2006a) while talking about metalinguistic aspects. Due to space constraints, only a few examples per group are presented (Table 28).

Table 28: Metalinguistic Related Episodes (MREs)

CONTROL				EXPERIMENTAL			
	Turns	Ptcpt	Languageing		Turns	Ptcpt	Languageing
Expn.01	06	SM	Will you explain the structures of how to form the past tense? while I write the sentences I will be explaining the structure of the past tense... that for affirmative sentences we use the verb in past and for negatives and questions we use the auxiliary did...	Exp 06	84	CG	Verbs... ehh some were ehh... <u>some indicated 'events' and 'states', right?</u> Yes... besides they are regular and irregular <u>verbs can be classified in events and states...</u>
	07	DC			85	PB	
Expn.02	05	CB	Ahh ahh ahh, past tense so in the simple how is formed; ...the four different aspects that exist in the past and give, and provides the patterns that they need to follow the different past tenses in the past; so we have simple that is subject plus verb in the past plus complement, right? Yes ok showing how to do it following the examples of the teacher...	Exp 07	52	ES	<u>So, progressive; it is the tense, right?</u> <u>No no no, it's not like that, look, it is...it is... aspect progressive is how we see the events happening... and perfect is how things happened... like in the tutorial... do you remember? If they finished or they were happening...</u> <u>Ohh, I see, I got it...</u>
	06	CD			53	NM	
Expn.03	09	CR	Ok... the regular and irregular formation of verbs... that the regular only add 'ed' and the irregular change their form... Exactly! Yes... and we also show the structure how to form sentences in past tense with the verbs in past for affirmative sentences by using the auxiliary did for negatives and questions.	Exp 08	105	PB	...here we place the 'do' and now <u>we are going to talk about the past with 'did' looking backwards to the past in the timeline so they can understand that is something about the past ...</u> And I think we could put 'did' as it is verb 'do' <u>This would serve to understand what are 'states' and 'events', for example "I am Mexican" ahh that's a 'state'...</u>
	10	AC			106	CG	
Expn.04	04	TB	You know? ...what is the past tense for, and the grammar structures and the rules for the regular and irregular verbs... that the regular verbs only add 'ed' at the end and the rules like when the verb finish in 'y' the 'y' changes for 'e' and you only add the 'd' and that is your 'ed' at the end of the verb... Yes... all the grammatical rules the construction of positive using the verbs in past and the negative and questions using the auxiliary 'did' all is part of the explanation we are going to give them in the first part of the presentation...	Exp 09	102	MD	... We could also <u>put a little explanation at the beginning stating that the past 'had a beginning but has finished'... you see? is something that is not happening anymore... that is in reality the aspect when we say that it finished!... that is when we are referring to the aspect...</u> ... <u>I know... I know that... that aspect tells like the duration of the action... like in the power point... so... how do we put that? How do we explain that?...</u>
	05	CM			103	CM	
Expn.05	08	BR	First we explain the structure in affirmative that the verb carries in infinitive, then from there we pass to the negative form and we explain how 'did' is what is used to make the negative with the 'not' particular an verb stays in infinitive... Yes, and finally we explain the interrogative form and how to pass the did at the beginning of the sentence and the verb goes back to infinitive...	Exp 10	79	GC	We are also going to <u>tell the students the 'limits' of that action to indicate that the action is finished and the action does not continue in the present or the future...</u> Yes...
	09	BC			80	PB	

In looking for evidence of how participants might have made the 'transition' from prescriptive grammatical rules to a more holistic understanding of the concepts of tense and aspect as STI aims (Arievitch & Haenen, 2005; Lantolf & Poehner, 2014; Negueruela-Azarola, 2003; Negueruela-Azarola & García, 2016), excerpts identified from both groups were compared. Important to highlight, is the fact that although quantitatively the control group produced slightly more MREs than the experimental group (*cf. section 4.2.2.2. Table 25*); qualitatively, the MREs the experimental group produced suggested a more *semantically grounded understanding* of the concepts of tense-aspect marking in a holistic manner as the results show; and which was what we were expecting to happen. Overall results of the qualitative comparison of MREs between the two groups evidenced how participants from the experimental produced MREs of a different quality as opposed to the control group's which were clearly based on prescriptive grammar rules. Table 28 displays excerpts of the results from both groups, with the experimental group's MREs showing a clear allusion to the targeted concepts. The excerpts show the discussion (languaging) of participants trying to understand in a more holistic way the concepts of tense and aspect as opposed to the control group's which remain alluding to general prescribed grammar rules.

4.1.2.2.2. Pedagogically Related Episodes (PREs)

In a similar fashion to MREs, PREs were also analysed qualitatively to trace if any of the newly learnt concepts of tense and aspect were transferred or reflected in their pedagogical thinking while doing their lesson plans. Thus, any allusion to fragments of dialogue referring to *how to teach or explain* the target concepts to others was considered as PREs. In doing so, *pedagogical considerations, explanations, rules, decision making and negotiation of content, provision of feedback, and wrap-up or closure of their languaging* were identified. Detecting these types of episodes gave us a 'footprint' of what exactly participants said regarding the application of the targeted concepts of tense and aspect within a pedagogical context.

Results from the comparative analyses on PREs demonstrated that the experimental group produced more episodes alluding to the concepts of tense and aspect from a holistic and cognitive grammars perspective as aimed through STI, (see Table 29 -highlighted). PREs from the control group did not show a significant allusion to the concept of aspect as the experimental group did. Table 29 shows a detailed account of

PREs from both groups which seem to have been transferred as pedagogical thinking while doing their lesson plans after intervention (due to space constraints only a few excerpts are presented). Pedagogical considerations, explanations, and negotiation of context alluding to the target concepts, were some of the types of PREs identified. The discussion of these is carried out in chapter 5 (*cf. section 5.3.2.2.2*).

Table 29: Pedagogically Related Episodes (PREs)

CONTROL				EXPERIMENTAL			
	Turns	Ptcpt	Languing		Turns	Ptcpt	Languing
Expn.01	12	DA	...and once the students have seen the change in the form of the verbs, then the teacher gives the explanation of the grammatical rules...to show them the structures like the formulas to make the past ...	Exp 06	110	CG	... after, more ahead we are going to say we are going to explain them the 'states and events' ...
	13	ZA	... so they write their story in the past tense following the format and the rules for the past...		111	PB	...it is important to mention that they have 'a beginning and an end', from there we go to the next; here maybe it's important to demonstrate that verbs have conjugations, isn't it? ...
Expn.02	08	SH	Yes, we have to explain the three basic forms of the simple past: affirmative sentences, negative and interrogatives.	Exp 07	112	GC	And that verbs have classifications and conjugations, isn't it?
	09	AR	Yes, I think the same, we have to give them the grammatical structures of how to form sentences...that sentences in past simple in affirmative conjugate the verb in its past form... and there are two types of verbs: regular and irregular and explain them how they are formed...		113	PB	... That's right and there to 'make a timeline' ...
Expn.03	03	CM	Ok... I think is ok ... ok ok ... so 'first of all... as a teacher we can tell a little story or passage of a moment in the past... the PPP for the uses, characteristics, the grammar structures and the rules of irregular verbs...	Exp 08	02	PC	We can make a lesson plan that shows us how we can describe perception ...
					05	ES	We can start by putting the verbs that can describe events and states and... for example in events we can say the verb like eh 'construir' because it is 'to build' and it is just a verb that implies internal development and is dynamic because requires movement...
Expn.04	55	SA	And to explain... and to make a comparison of the simple past and past continuous, when and in which cases to use the past continuous, mmh, give them examples and to teach them that they can use, make 'combos' with these two grammatical structures...	Exp 09	06	PC	Ok, but how could we teach that? How should we include that in a lesson plan?
	58	DC	...I think they could have a conversation only talking in the past tense and later when they are at a more advanced level they can blend all the tenses ...		104	EC	We can do activities where it requires movement in a dynamic way...
Expn.05	103	BC	...teacher introduces the past tense in general terms, this means that teacher explains that the student can use this tense to express actions that took place in the past, ok? Then teacher explains the four different aspects that exist in the past, so we can change this table and we can have here the simple, the progressive, the perfect and perfect progressive...	Exp 10	105	EP	...and that's it, we could put some examples of which ones are events and which ones are states Uhu, 'we could teach them that 'did' is the auxiliary for the past... and maybe at this point we could add the part on 'perspective of the time' and for example add a timeline...
	105	CD	and provide the students the patterns that they need to follow the different past tenses in the past; so we have simple that is subject plus verb in the past plus complement...		09	BR	You know... but we should not just use grammar rules on the board, we can use some pictures to make it more realistic... right?
					10	OS	Like in the slides, the students have to see the real difference between tense and aspect, they have to see that aspect is more of how they perceive the action happening, we have to explain that to them, they need to know that...
					11	BR	But we have to explain them the grammar like the use of the auxiliary 'did' which is what they need to use to form interrogative and negative statements... isn't it?
					12	SH	Yes... but we want the students to go bit by bit and we cannot bombard them with just grammatical explanations... I think the idea of images is good and entertaining for them...
					13	BL	We also are going to include the explanation of aspect in this section... what do you think?... they need to know that tense and aspect are two different things but work together, well I guess that's it Yes... we have to explain them that aspect is how we see the things occurring and that it can be simple or progressive...
							Ok, so, like for example "I was riding my bike last week" is like if the action never finished but within the past ... and don't forget also to explain that verbs tell 'states and events' ...
							For that we can include a timeline, like we saw in the tutorial for the explanation to exemplify how the action was happening, do you agree?
							Yes ...

Analysing the data from these two perspectives, quantitatively and qualitatively allowed us to have a more holistic view of the results of this section of the study (Creswell, 2012). In a similar way as occurred with MREs, quantitative statistical analyses determined that it was only participants from the experimental group 9th semester the ones that seemed to have performed better with regards PREs (*cf. Section 4.2.2.2.2.*). However, qualitative analyses broadened the scope of view of participants' from 9th semester answers and demonstrated a more holistic and semantically grounded understanding of the concepts of tense and aspect than the experimental group after intervention as displayed in Table 29.

Overall, results from these previous sections from both quantitative and qualitative perspectives, provide evidence that the experimental group produced more MREs and PREs than the control group. It seems that participants from the experimental group used language more for cognitive purposes bringing into the discussion with each other the concepts of tense and aspect with pedagogical purposes (PREs) particularly. With regard to metalinguistic related episodes (MREs), there was not a considerable difference registered between groups, which was also confirmed through the qualitative scrutiny of the data. In sum, both types of analysis combined served to provide a view of participants' performance from different but complementary perspectives. The discussion of these is carried out in the sections following (*cf. Sections 4.2.3 and 4.2.4.*).

4.2. Discussion RQ1 and RQ2

Introduction

The discussion section is organized in relation to RQ1 and RQ2; thus, it is divided into two main sections as follows: Section 4.2.1. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' linguistic knowledge (MLK and language use) regarding aspectual distinctions in English. Section 4.2.2. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' ability to apply linguistic knowledge to pedagogical practice.

4.2.1. RQ1. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' linguistic knowledge (MLK and language use) regarding aspectual distinctions in English.

In order to answer RQ1: "Is STI more effective than TI for enhancing EFL teacher trainees' linguistic knowledge (metalinguistic knowledge and language use) regarding the aspectual distinctions conveyed by simple past, past continuous and present perfect in English?" (*cf. Section 3.2. Research Rationale*) two variables were considered: 1) participants' level of metalinguistic knowledge; and 2) use of the target forms in context.

4.2.1.1. Metalinguistic Knowledge

The results from repeated measures ANOVA confirmed that there was an evident improvement from pre to post and delayed times where the experimental group outperformed the control group. These results suggest that the experimental treatment (STI) was more effective than the control treatment (TI) for enhancing the participants' level of MLK (*cf. Section 4.2.2.*).

An attrition effect also confirmed by repeated measures ANOVA was reflected on the MLK test results when comparing post and delayed times for both groups. This indicates there was a decrease in the gains that MLK participants had achieved from pre to (four week) delayed post testing particularly for the control group.

This drop in the control's delayed scores indicates that the effect of treatment based on Traditional Instruction may not have had a lasting effect on participants. This could be due to the fact that input was supported only by the use of discrete grammatical rules presented in an isolated manner with exclusively grammar exercises to re-enforce practice. It could be that because of this type of instruction, learners did not have anything memorable to rely on and therefore their learning process was not meaningful enough to retain the new knowledge in the longer term. Moreover, the control group did not rely on other pedagogical resources such as verbalisation in any of the forms STI suggests (i.e. dialogic and collaborative) as the experimental group did, which could also be considered as another factor as to why the instruction did not have as lasting an effect as was the case for the experimental group. In using verbalisation as a way of

enhancing the learning of the grammatical concept of voice, Swain et al. (2009) found that “the more the participants externalized their thoughts, the more able they were to monitor and self-assess their own learning process, transforming it from a surface understanding to a deeper conceptual one” (p.21). It seems that our findings resemble those of Swain and colleagues’; that is to say, one potential reason for participants in the experimental group to outperform the control group on both post and delayed times may have been that by externalising their thoughts to mediate their cognitive process when dealing with the new knowledge through languaging they managed to grasp it and retain it to a deeper level. In addition to verbalisation, the materialization of the new concepts through the SCOBAs might have played a role in helping the students understand the grammatical concepts of tense and aspect to a deeper level.

Interestingly, the findings indicated that most advanced participants, the experimental group (9th semester), were the ones who, on average, scored the highest from the three levels/semesters (pre 27.6 to post 39.4 diff= 11.8 pts = 30% gains). At first this appears to indicate that the higher the proficiency of the participants the more they benefited from the treatment and therefore we could assume that with STI intervention their previous knowledge was better restructured and consolidated. However, the highest proportional difference in improvement when comparing results from pre to post within the three experimental groups was for the 7th semester (pre 19.2 to post 33.6 diff= 14.3 pts = 42% gains) and 5th semester, which also showed substantial improvement (pre 18.3 to post 29.3 diff= 11.0 pts = 38% gains). These results suggest that not only the advanced learners from 9th semester benefited from STI, but learners from intermediate and lower proficiency levels also benefited considerably more from STI as the proportional difference in gains/improvement showed for the 7th and 5th semesters was even higher than that for 9th semester.

The overall findings are consistent with other studies (see Negueruela-Azarola, 2003; García, 2012; 2017; Gánem-Gutiérrez & Harun, 2011; Gánem-Gutiérrez, 2016; Kim, 2013; Lee, 2012; Yáñez-Prieto, 2008; Polizzi, 2013; Walter & van Compernelle, 2017) that have looked at the implementation of STI and CBI. Their findings have demonstrated the effectiveness of these pedagogical approaches in language teaching on various grammatical features (e.g. tense-aspect-mood system, voice, phrasal verbs, literary metaphor). Negueruela-Azarola's (2003) study, in particular, served as a crucial reference for our study, as he has been one of the pioneers in implementing the full

Gal'perian cycle of STI, which is what we aimed to do. Negueruela-Azarola demonstrated that after a period of treatment (being exposed to a didactic design where participants were engaged in activities to reflect and promote the concept of aspect) they gained conceptual understanding of the target concepts being internalized through materialization (SCOBAs) and verbalization. The findings in the studies conducted by Gánem-Gutiérrez & Harun (2011) and Gánem-Gutiérrez (2014, 2016) are also key references to our study as they also aimed to test the effectiveness of CBI, relying on the use of SCOBAs and verbalization as regulatory tools to teach the grammatical features of tense and aspect. These studies provide evidence of the positive effect of this pedagogical approach in enhancing learners' metalinguistic knowledge contributing to the development of cognitive processes and gaining deeper understanding of these grammatical concepts. As discussed in the literature review chapter, however, none of these studies compared STI/CBI to other pedagogical treatments, i.e. traditional instruction as we did; in other words, they did not rely on experimental designs.

In order to contextualise the present study's findings it is, therefore, necessary to look beyond SCT. A number of studies have investigated the teaching and learning of metalinguistic knowledge from different approaches; e.g. comparing two or more different treatments, i.e. implicit vs. explicit instruction; classroom and non-classroom settings, length of instruction, etc. (e.g. Bell, 2017; Eskildsen & Theodórsdóttir, 2017; Fordyce, 2014; Ellis, 2009; DeKeyser, 2003; Roehr, 2010;). The results drawn from these studies suggest that explicit instruction for grammar features can be effective and contribute to fostering learning, as our findings also suggest. In our case, it was through STI that the concepts of tense and aspect were taught explicitly with significant effective results (*cf. Section 4.2.2.*). These assumptions are also corroborated by the findings of Fordyce (2014) in which the linguistic focus of the study was to test the effectiveness of explicit vs implicit instruction to teach epistemic stance forms.

"Epistemic stance markers are used to present speaker comments on the status of information in a proposition. They can mark certainty (or doubt), actuality, precision, or limitation... they are typically expressed through a variety of lexical and grammatical forms; i.e. cognitive verbs, modal adverbs, modal verbs, modal expressions..." (p. 8). The results from Fordyce (2014) made it evident that explicit instruction of epistemic stance forms in short and long term was considerably more effective than implicit intervention at different levels of proficiency. Although Fordyce's instructional

approaches differed from ours (i.e., both STI and TI involve explicit attention to grammar features) the pattern of improvement in the gains participants showed during post and delayed testing times was similar to our study's (p.20). Furthermore, the 18% decrease in the gains during delayed testing reported in Fordyce's study for both groups (implicit and explicit) resembled the trajectory the MLK tests results showed in our study between control (TI) and experimental (STI) groups with a similar level of decrease of 19% from post to delayed testing (*cf. Section 4.2.2.*). We agree with Fordyce (2014) that perhaps, if further enriched input had been provided for instance as part of practice activities, participants may have retained more of the gained knowledge and the attrition effect reflected on the delayed test may have been less.

Length of exposure may have been another reason that contributed to the effectiveness of STI to teach the concepts of tense and aspect in English. On testing the effectiveness of treatments in simultaneous explicit and implicit learning, Bell (2017) found that quantity of input and time seemed to be inter-related components that favoured explicit learning. Thus, in our study, it appears to be that having exposed participants to a longer instructional treatment ($x > 7$ hrs) (Norris & Ortega, 2000) plus the amount and perhaps in our case, type of input (working with the tutorials and materialization through the SCOBAs plus verbalisation) produced a longer lasting effect for participants to retain the newly learnt concepts as the durability effect for the delayed test scores demonstrated, even when these decreased partially during the delayed testing compared to the immediate post-test results.

Thus, we believe that in our case, the results drawn regarding metalinguistic knowledge enhancement of participants through STI were because, 1) they received instruction to understand the concepts of tense and aspect targeted as the minimal conceptual units; 2) the mediational tools used for materialization (SCOBAs) and, 3) verbalisation phases (languageing both individually and collaboratively) created opportunities to engage in meaningful dialogue and, thus, contributed to enhancing the internalisation of the concepts as Gal'perin (1969) suggested (see also Fogal, 2017; Lantolf & Poehner, 2014; Negueruela-Azarola, 2003). As Negueruela-Azarola & Garc'ia (2016) put it, the impact of STI on participants' metalinguistic knowledge improvement may have also been due to the powerfulness principles of SCT, i.e. mediation which contributed to take learners from interaction and explanation to internal conceptual understanding attaining internalization (p. 267). Furthermore, the

authors believe that language teaching can be interpreted from a *transformative* approach inspired in SCT principles whose ultimate goal is to

“promote conceptual reflection (i.e. the internalization, and thus transformation, of new ideas through thinking about these new ideas)... where ELT as a transformative participation is about mediation, as mediation through language in social communicative activity promotes understanding. Consequently, learners’ knowledge of language is also transformed as they internalize new ideas and knowledge” (p. 300).

As the authors suggest, the treatment participants received aimed to promote systematic conceptual communication through reflection and verbalisation (individually and collaboratively) using concepts which promoted internalization helping them to eventually foster development and learning (ibid).

Overall, the results addressing RQ1 demonstrate the comparative effectiveness of STI as a pedagogical approach to promote learning and foster development of MLK as evidenced in the findings. It seems to be that the intervention successfully mediated learning in different ways. The treatment seemed to have helped to shape and transform learners’ understanding and seems to have contributed to the learning of the targeted features (Negueruela-Azarola & García, 2016).

4.2.1.2. Language Use

We also measured the potential effectiveness of STI to help participants when selecting target forms (simple past, past continuous or present perfect) for use in context. To measure it, participants completed a Language in Use test pre- and post-treatment which allowed to determine if there had been any improvement as a result of the treatment. The results on the means of this test indicated there was an improvement in both groups’ scores from pre to post testing; however, the difference was not statistically significant. This result was in part expected, since, as discussed previously (*cf. Section 4.2.1.1.*) the materials (and treatment) were specifically designed to enhance participants metalinguistic knowledge, as opposed to their ability to use that knowledge in context, i.e. language use. The latter is of course the ultimate aim in language learning, but would require an expansion of the approach which, given its already

ambitious nature, was beyond this particular project. Nonetheless, I considered it important to include the 'language in use' test as a complementary and exploratory element in the study (see Gánem-Gutiérrez, 2016, p. 43).

To date we do not know of studies on CBI or STI which are aimed exclusively at enhancing language use; most of the studies reviewed focus on the development of metalinguistic knowledge. Thus, looking at the use of the target forms in context in the present study -albeit at an exploratory level can provide some insight into its potential to help learners with the use of the target forms in context after receiving training based on STI instruction.

The data collected in our study provide evidence that STI seems to be more effective to enhance MLK than language in context as the results for the language in use post-tests did not show a significant statistical difference between groups (control vs experimental). As pointed out above, the likely cause might be that the treatment focused specifically on helping learners understand the target concepts metalinguistically, not necessarily using STI components (e.g. SCOBAs, languaging, etc.) for practising on the use of the target forms. We could say then, that -extended practice- on language in use may have been the 'missing component' in our treatment and therefore no statistical improvement in this respect was registered. Stafford, Bowden, & Sanz, (2012) investigated the extent to which input exposure would enhance nonprimary (Latin) language learning. Participants in 4 experimental groups received specific treatment through efficient input processing strategies (input-based +/- explicit grammar, task-essential practice and +/- explicit feedback throughout the practice sessions). The study results confirmed that practice was key to trigger improvement; however, a noteworthy result was that, more explicit, metalinguistic feedback was necessary to promote improvement in production. The study by Stafford et al. (2012) suggests that practice can play a determinant role in fostering learners' improvement in production.

Another study that goes some way in supporting our assumptions, is that by Harun (2013) which implemented CBI to investigate the efficacy of verbalisation during individual and collaborative verbalisation. She aimed to test if through CBI Malay L1 learners of L2 English could enhance their understanding of the simple past, present perfect and past continuous. Results show that verbalisation helped learners to improve

their understanding of the target concepts; use of semiotic mechanisms, and a positive correlation between quantity and quality of verbalisation and learners' performance. Harun's findings seemed to confirm that CBI/STI offered more benefits in the learning of metalinguistic aspect of the language rather than use of language, due to its strong emphasis on explicit knowledge.

On testing different types of instruction to enhance language use in context, Bardovi-Harlig (2000) analysed the results of various studies that dealt with the teaching and learning of language use in context for preterite and imperfect forms in Spanish. One of these studies was Cadierno's (1995) which compared processing instruction vs. traditional instruction on teaching the past tense through elicitation tasks (processing instruction/experimental –grammar explanation and input-based practice). Participants were tested four times (pre, post-immediate after instruction, post-test one week after instruction and final post-test one month after instruction). Cadierno's (1995) findings demonstrated that both traditional and processing instruction helped learners encode the past, however, learners in the processing groups showed significant improvement and maintained their gains in the delayed post-tests, being able to recognize and rely on the use of the preterite in context (p.345). The author concluded that "...although the tense-aspect system is learnable in classroom settings, researchers cannot yet determine if this is due to the increased input or to the specific noticing activities..." (p. 351).

It is evident that during intervention in our study, not many practice exercises were included for the language in use skill. Practice, as has been demonstrated, contributes to internalization which as Larsen-Freeman (2010) points out, enhances fluency, increases automaticity and leads to restructuring, modifying and reorganizing underlying representations. Our design was more oriented towards the enhancement of metalinguistic knowledge which is in the *explicit knowledge* 'spectrum'. According to DeKeyser, (2003, 2007) and in support of the *interface* position, explicit and implicit knowledge and learning interact directly; consequently, through practice (repeated use), explicit knowledge could be converted into implicit knowledge. This premise allowed us to think that after intervention at least some improvement could have been gained by the participants. The results from the analyses on the LiU test indicated positive change from both groups after intervention; however, no statistically significant difference was

found. This suggests that for language use, intervention may have needed more practice for benefits to be evident in this respect.

The study by Negueruela-Azarola (2003) which is a 'benchmark' in STI research, provides evidence of extensive practice to foster development both metalinguistically and productively, that is language use in context (through learner's definitions of grammatical concepts; spontaneous learner performance comprising several written and oral language diagnostics; and verbalization consisting of student recordings explaining to themselves the use of specific grammatical features). As Negueruela-Azarola concluded, after intervention with STI his learners were able to attain higher levels of awareness and control over the L2, with the internalization of not only sophisticated semantic understanding of grammatical meanings, but also promoting learners' ability to effectively and creatively use the relevant grammatical features in spontaneously produced written and oral discourse (p.463). In trying to investigate how to promote the use of the tense-aspect morphology towards a more target-like-use of lexicalization patterns, Robinson, Cadierno, & Shirai, (2009) looked at language in use through comparing the dimensions of increasing tasks demands (high vs. low demanding). Their ultimate goal was to enhance language use and their results confirmed that through a specific type of instruction (conceptually demanding tasks) this could be attained. So, this is something to take into account in future studies which might aim to further refine the implementation of STI tasks and procedures.

In trying to place the concept of language 'practice' within Sociocultural theory, a key question arises: 'is it possible to implement "practice" through STI?'. Vygotsky insisted that theory could not be separated from practice (Vygotsky, 1926/2004). For Vygotsky the 'highest' test of theory was practice; hence, the dialectical unity of theory-practice is *praxis*. Gal'perin's STI model within its different phases, sees verbalisation in the form of *communicative thinking* as the opportunity to provide learners with the component of 'practice'. Lantolf (2011) points out that 'in the absence of intensive and extensive immersion, L2 learners are unlikely to develop implicit automatized competence (i.e., procedural knowledge) (p.37). Instead, L2 learners with primary and unique classroom L2 exposure, build up explicit/declarative knowledge, which through practice can result in "speed-up controlled use" (Paradis, 2009, p. 8). As Lantolf (2011) suggests, 'through speeded-up declarative knowledge, learners can become quite fluent and proficient in meeting their communicative needs' (p.37). Thus, it is through

verbalization, that learners get to the point to use language as they become engaged in *linguaging* (Swain, 2006a). As seen previously, among STI/CBI research, most of the research conducted has focused on developing features of language in terms of metalinguistic knowledge and not necessarily on language use as such. STI/CBI indeed aims for the component of practice; however, findings reported in the studies available to date (including the present one) suggest that practice, as advocated by alternative approaches such as Skill Acquisition Theory (DeKeyser, 2007a).

To conclude, my study design specifically targeted the fostering of metalinguistic knowledge rather than language use, i.e., the production of forms in context; which explains why we did not obtain significant results for this type of knowledge. What this could suggest is that the kind of conceptual, metalinguistic knowledge supported by STI in our study does not automatically translate into the ability to produce the targeted forms. Therefore, it is important that STI approaches specifically include the kind of practice activities that would hopefully lead to accurate use of the forms. As we saw in the studies by Cadierno (1995), Stafford et al. (2012), Robinson et al. (2009), and Negueruela-Azarola (2003), practice plays a crucial role in developing language in use.

4.2.2. RQ2. The potential effectiveness of STI compared to TI for enhancing EFL teacher trainees' ability to apply linguistic knowledge to pedagogical practice.

4.2.2.1. Awareness Interview

As reported in the methodology chapter (*cf. Section 3.3.3.3.*) awareness interviews (AI) served the purpose of providing additional information regarding participants' metalinguistic and pedagogical knowledge. Following the scoring scheme criteria (*cf. Section 3.3.5.2.1.*) and after analysing the results drawn from the three questions the findings revealed a consistency in the increased metalinguistic and pedagogical knowledge gains with regard to the concepts of tense and aspect pre and post treatment as reflected in the responses of the participants.

The repeated measures ANOVA comparing the mean of pre-test and post-test Awareness Interviews scores yielded a significant effect of time with a small to medium

effect size, a significant effect of group with a marginal effect size, and a significant interaction between time and group. Independent-samples t-test indicated that the experimental group outperformed the control group in the quality of their answers regarding the targeted concepts. These results confirm a clear improvement from pre to post interview responses reflected in the answers provided particularly in question 2 in terms of metalinguistic knowledge, quality and detail of the answers.

Therefore, it could be assumed that treatment led by STI had a positive effect on the experimental group overpassing the control group in the quality of their AI post intervention answers. When looking at these results in detail, qualitatively, it was found that from the three questions contained within the awareness interview, it was particularly question 2 that had a clearer and marked enhancement in the quality and content of information provided.

To explore in more depth the quantitative results, some of the most salient answers (scored high) from the Awareness Interviews were scrutinized in search of more insights that could give us a wider understanding of the improvement and nature of the participants' responses. In the following lines some excerpts of these responses from both groups are presented and discussed evidencing the improvement in the quality of participants' answers from pre to post AIs particularly for the experimental group. Due to space constraints we could only bring into discussion a few of them as a representative sample.

For almost every one of the participants in both groups, their responses for the AI-Q1 in the pre- testing were very basic and in some cases vague; no elaboration or details in metalinguistic terms were found in their answers. In contrast, during the post-testing, conceptualization and articulation of metalinguistic concepts were present in their answers specifically for the experimental group; this suggests that treatment had a positive effect on their knowledge of the concept as attested in both quantitative and qualitative analyses. This was evidenced in the provision of full answers displaying the different variants of the past tense (i.e. simple, continuous, perfect). The examples in Table 30 show how participants from both groups responded to AI-Q1 on both pre and post times. In the table, the difference in the quality of participants' answers can be observed; the control group provided less accurate and minimal answers with no considerable improvement from pre to post times (P09CTR5); on the contrary, the

experimental excerpt (P10EXP5) shows the evolution from a basic response to a metalinguistically more elaborated one providing a more complete explanation alluding to the past as a ‘grammatical tense’ and providing some of its forms (see Table 30).

Table 30: Excerpts from Responses of Awareness Interviews

	PRE	POST
1. What do you know about the past tense in English?	(P09CTR5) “The past tense is what happened and is finished now”	(P09CTR5) “Past tense is when we talk about events that happened in the past time”
	(P10EXP5) “It is a tense that indicates an action in past, something that was conducted and had an end in time”	(P10EXP5) “The past is a <u>grammatical tense</u> that we use to indicate <u>actions that took place in the past time</u> . <u>It can be in the form of simple past, past perfect and past progressive</u> ”

In analysing the data from a qualitative dimension, Awareness Interview question 2 (Table 31) was perhaps the most ‘revealing’ one from the three questions. The answers provided showed a radical change going from a simple ‘no’ for not knowing the difference between tense and aspect to providing more complete and accurate metalinguistic responses specifically for participants in the experimental group. From the responses, it was evident how participants displayed a more ample and detailed account for AI-Q2 answer. During the post AI, participants were able to explain that aspect was about the *perception* or *view* of events and how these could be considered as *having an ending point* (simple) or *being happening* (progressive) as shown in Table 31. This type of explanation reflects a more comprehensive understanding of the concepts, thus suggesting that intervention with STI may have been effective. That is, having a defined conceptual unit of instruction (tense and aspect), materialization through the use of the didactic models like SCOBAs, and having verbalized both individually and collaboratively provided learners with the opportunity to gain further and/or new knowledge (Gal’perin, 1969).

Table 31. Awareness Interview. Question 2 excerpts

	PRE	POST
2. Do you know the difference between tense and aspect in English?	(P05CTR7) “No”	(P05CTR7) “aspect is like the type of verb, I don’t remember what it is”
	(P04CTR9) “No”	(P04CTR9) “actually I’ve never thought about it; I don’t know the difference between tense and aspect”
	(P04EXP5) “No I don’t”	(P04EXP5) “tense is the way in which we can identify if the verb is in past tense and <u>aspect</u> are characteristics of <u>how we see the tenses as they can be perfect or progressive</u> ”

(P07EXP7)

"No"

(P07EXP7)

"tense can be progressive, continuous and simple, and aspect is divided in simple and progressive and it means that the sentence has a point when it starts and when it ends and another is when we do not know when it finishes and when it ends"

(P08EXP9)

"No"

(P08EXP9)

"the tense are the moments in which the activities occur, for example it could be present, future or past and the aspect is how we perceive those activities, they could be progressive, simple and past progressive also, they are related because according to those situations time and aspect is the way that people perceive an activity"

Responses from the post AI-Q2 take us to consider what cognitive linguistics aims proposing ‘constructional meaningful schemas’ rather than rules to capture formal patterns (Reif, 2012: 40). It could be possible that during the post AI, and after having been exposed to various sessions designed to mediate cognitive processes through verbalisation exploring the concepts, participants (from the three different levels 5th, 7th and 9th) gained deeper understanding of the concepts. Hopefully, the intervention went some way towards assisting participants in the development of meaningful concepts emanating from dynamic mental processes of conceptualization as Langacker (2008) points out.

The results of AI-Q2 in its pre and post versions, resemble in part the trajectory of those of the study by Gánem-Gutiérrez & Harun (2011) also framed within Sociocultural theory under the principles of CBI. The authors set out to investigate the extent to which participants could enhance their knowledge of the concepts of tense and aspect marking in English. Drawing on tests and protocols from individual (think-aloud) and dyadic (pair-work) activity their findings confirmed the effectiveness of CBI, especially verbalisation as a regulatory tool in helping most of the participants gain a deeper understanding of the concept of tense and aspect. As our participants, the students also showed considerable improvement from pre to post versions when tested after the intervention which aimed to enhance their metalinguistic knowledge about the concept of aspect.

Awareness Interview question 3 focused on how participants would incorporate the concepts of tense and aspect into their pedagogical thinking. Similarly to AI-Q1 and AI-Q2, responses for AI-Q3 specifically for participants from the experimental group showed a clear improvement and evolution going from simply considering the inclusion

of ‘explanation of grammatical rules’ to the implementation of using all-inclusive ‘*images, diagrams and structures*’ (-resembling SCOBAs as some of them mentioned during their communicated thinking stage) to teach the targeted concepts. In the same way that students improved the quality of their answers for AI-Q2, for AI-Q3 participants seemed to have gone from a prescriptive grammatical form of explaining concepts to a more holistic and meaningful way of considering their teaching as they included the idea of *perception* to explain the concept of aspect as ‘*how we view events*’. From these types of responses, it could be thought that intervention based on the pedagogical approach of STI served not only to make them understand the concepts from a different perspective (e.g. cognitive grammar) but also served as a model which might be followed to teach the concepts in question.

As previously mentioned (*cf. section 3.3.5.2.2.*), it is important to bear in mind that intervention with STI did not include any component on methodology or pedagogy. However, it was expected that due to treatment some positive effects of this may have been reflected in terms of pedagogical knowledge/understanding/thinking with respect to the concepts of tense and aspect and their application to their teaching. Thus, when looking at AI-Q3 post intervention, it was encouraging to notice that participants (from the experimental group) had moved from their awareness interview pre answers of not considering particularly the concept of aspect to include aspect as part of their teaching plan and even from a cognitive linguistics stance. For example, in their responses, they mentioned the use of ‘visuals, images, figures, diagrams’ as well as mentioning the key issue of ‘the view we have of events’ as part of the concept of aspect. Excerpts in Table 32 provide evidence of the evolution from pre to post intervention in participants’ answers to AI-Q3 with regard to their pedagogical thinking and the inclusion of the targeted concepts into this.

Table 32. Awareness Interview. Question 3 excerpts

	PRE	POST
3. If you were to teach someone the concept of tense and aspect in English, how would you do it pedagogically?	AI-EXCQ3B(P08EXP5) “I will begin with the structure, the subject then you have to put a verb in past tense and then complete sentence and then I will explain that there are regular and irregular verbs and how these change and I will explain the structure of the past tense and I will put examples of the real life and that’s all”	2 AI-EXCQ3A(P08EXP5) “First I will ask them about their recently activities they made, then I will write those examples in past tense, then I will explain them the structures with diagrams and images. I will explain the verbs regular and irregular and the forms in interrogative and negative. I will tell them that <u>tense is the time and aspect is how we view events.</u> ”

From both quantitative and qualitative analyses of the Awareness Interviews, participants from the experimental group seemed to have gained a better understanding of the concepts of tense and aspect. When they had to transfer these to a pedagogical plane participants from 7th and 9th semester provided more developed and complete answers as requested. Participants from 5th semester showed the least improvement in their AI responses in terms of pedagogical thinking after treatment. A possible reason for this may have been that lower proficiency constrained their ability to transfer newly emerging knowledge to its potential application to pedagogy. This clearly required deeper understanding and the ability to extrapolate different knowledge domains, i.e. metalinguistic and pedagogic. The following section will discuss in more detail how participants deployed the newly learnt concepts pedagogically.

4.2.2.2. Lesson Plans

Lesson plans served the purpose of testing if the treatment might have contributed to enhancing pedagogical knowledge/thinking of participants. Two lesson plans were written by participants, the first one at the beginning of the treatment, and the second one during the communicating thinking stage as part of the activities corresponding to this stage (*cf. Section 3.3.4.*). The purpose of doing the second lesson plan during that specific session was to have participants communicating with each other as the principle of *communicated thinking* part of the cycle of STI suggests, to make the concepts understandable to others (Lantolf & Poehner, 2014, p. 66) with a specific goal: creating a lesson plan with their peers aiming to teach the concepts of tense and aspect which they had to do it collaboratively. Thus, from lesson plans two types of analyses served for the discussion that followed: 1) the quantitative analyses of the lesson plan rubrics scores; and 2) the verbalisation uttered during the process of elaborating their lesson plans which was captured in protocols for this purpose (*cf. Section 3.3.5.2.2.*).

4.2.2.2.1. Plan Rubrics scores

Lesson plans had two main criteria on which they were evaluated: 1) Depth of Metalinguistic knowledge on tense and aspect (MLK), and 2) Evidence of MLK transfer

to Pedagogical thinking (PDK). For this purpose a rubric following these criteria containing a grading scale from 0 to 3 was designed that served as a guide to mark each lesson plan (*cf. Section 3.3.5.2.2.*); lesson plan scores were analysed first on the basis of MLK and second on PDK.

Analyses from repeated measures ANOVA of the *depth of MLK reflected in the lesson plans* yielded a significant effect of time with a small effect size, no-significant effect of group with marginal effect size, and no-significant interaction between time and group which indicates that there was an improvement from pre to post times in both groups, however this was minimal. These results indicate that treatment with STI did not have a marked improvement effect on MLK deployed in the lesson plans at least in quantitative terms on any of the two groups over the other (control vs. experimental). A possible reason for this may have been that treatment indeed aimed to enhance MLK on the concepts of tense and aspect, but did not focus on training participants to use these concepts for pedagogical purposes. Therefore, even when participants showed improvement in their test scores on MLK, this was not reflected as such in their lesson plans. By developing a lesson plan it was expected that incidentally participants could have shown some improvement deploying the newly learnt concepts in their lesson plans.

With regard to *metalinguistic knowledge transfer into Pedagogical Knowledge (PDK)*, repeated measures ANOVA comparing the mean pre-test and post-test scores yielded a significant effect of time with a marginal effect size, a non-significant effect of group with a marginal effect size; and a non-significant interaction between time and group. These results lined up with those of depth of MLK deployed in the lesson plans as neither criteria (MLK and PDK) showed any significant improvement over time, nor over group.

Quantitative analyses of lesson plan scores did not provide a detailed account of such minimal improvement in terms of pedagogical thinking. By looking at the analyses results, we could think that both groups ‘improved’ in the same manner as both were given a pedagogically oriented task, i.e. to write a lesson plan. It could have also been possible that the amount of input may not have been enough to be deployed in the lesson plans and that was the reason why no improvement was reported. The need of a longer and more specific component on the pedagogical application of the target

concepts could be another possible explanation. Perhaps, as Williams, Abraham, & Negueruela-Azarola (2013) found in their study examining the implementation of CBI/STI in pre-service and in-service teachers of French and Spanish, in some instances and for a variety of reasons -experienced, novice and pre-service teachers prefer materials, techniques and approaches that are more familiar to them, albeit not as potentially beneficial for learners, i.e. CBI/STI. The authors investigated the extent to which teachers would embrace or reject this pedagogical approach, and examined teachers' views on the use of learning tools developed under the principles of CBI. The case studies analysed demonstrated that for both sets of teachers (novice and experienced) the CBI approach focused on meaning did not fit well with their preconceived ways of teaching in which language is seen only as morphology and syntax (p.5). In our study, it was expected that during collaborative work the opportunity for participants to mediate their development would have promoted internalization and foster the learning of the concepts of tense and aspect and its subsequent application to pedagogy (van Compernelle & Williams, 2013); however, similarly to the study of Williams et al.(2013) it seems that participants did not manage to apply the principles of STI to their pedagogical thinking.

To broaden our discussion and our scope of view on the findings of the lesson plans data, we proceeded to conduct analyses of the languaging participants uttered while doing the lesson plan; the following section will address this discussion.

4.2.2.2.2. Languaging Episodes

A complementary way of analysing the lesson plans was through the verbalisation or languaging generated during their elaboration. When quantitative results of the lesson plans seemed to indicate that treatment did not have a substantial positive effect in terms of pedagogical knowledge/thinking enhancement, we conducted qualitative analyses on the verbalisation participants produced while elaborating the lesson plans in order to explore this in more depth. Thus, we looked at the number and type of instances of languaging participants uttered so we could learn more about the collaboration between participants as they developed their lesson plans: how they helped each other to understand the topic, how they negotiated the content of lesson plans, or how they planned to teach tense and aspect and why. On analysing the languaging episodes participants produced, we looked at two kinds of episodes:

Metalinguistic Related Episodes (MREs) and Pedagogically Related Episodes (PREs) (cf. Section 3.2.5.2.2.). We will first discuss MREs and second PREs.

The scrutiny of descriptive statistics, which were further analysed by Mann-Whitney tests, suggested that participants in both groups produced comparable number of MREs, with the experimental group producing slightly more PREs. Semesters 7 and 9 for both groups varied more in the amount of MREs and PREs. The control group produced more MREs and PREs in semester 7, and the experimental in semester 9. These results line up with those of *depth of MLK reflected on the lesson plans* and *metalinguistic knowledge transfer into Pedagogical Knowledge (PDK)*. The fact that semester 7 from the control group produced more MREs and PREs suggests that input through STI intervention was not enough to lead to a significant difference between groups; therefore participants in semester 7 in the control group outperformed their counterparts in this respect. It has to be remembered though, that both groups received the same task for enhancing their pedagogical knowledge/thinking and as discussed in the previous section, intervention with STI focused more on developing the MLK of the concepts of tense and aspect and not specific pedagogy to teach these. Enhancing participants' pedagogical knowledge/thinking was expected to happen only as an incidental 'plus' during treatment. Semester 9 from the experimental group may have been the most benefited ones most probably due to the fact that they were the most proficient ones and possibly may have felt more suited and more confident to use the newly learnt concepts than their peers in semester 7 and 5.

In conducting Pearson correlational analyses, a new window for exploring the results was open, as these provided additional evidence of the effectiveness of STI and how this apparent minimal difference between groups in reality returned a difference worth taking into account. Although descriptive statistics and Mann-Whitney analyses indicated that there was no statistical significant difference between groups' performance, Pearson Correlation analyses indicated that the experimental group had more correlations within the scores of the lesson plans (MLK and PDK) and amount and type of languaging episodes (MREs and PREs) than the control group. This suggests that even when apparently there was not much difference between groups, the effect intervention had on participants in the experimental group was indeed reflected in the way they languaged and deployed their knowledge of the concepts of tense and aspect in the lesson plans. Pearson correlations indicated that the higher the scores on MREs

the more PREs were produced. Thus, if the experimental group obtained higher scores on both measures that suggests that intervention had a degree of positive effect on participants on how they were able to deploy their pedagogical knowledge/thinking on the lesson plans. Pearson analyses confirmed that in terms of languaging, for the experimental group there was a positive correlation between the amount of languaging produced (Metalinguistic Related Episodes [MREs] and Pedagogically Related Episodes [PREs]) and how this was deployed in the lesson plans in terms of pedagogical knowledge (PDK) as opposed to the control group which did not register this tendency. These results could then be considered as evidence of the potential of *languaging* in second language learning, as it demonstrates that it can act as a mediation tool to regulate thinking and developing knowledge (Swain, 2006a); in this case, the concepts of tense and aspect into a pedagogical plane as was hoped through the design.

On reviewing the literature conducting studies based on CBI/STI for pedagogical reasons, we noticed these were slightly different in terms of design compared to ours. However we coincide in terms of what these studies report on pedagogical proposals based on STI/CBI and in that all studies aim to teach on the one hand, abstract and systematic linguistic concepts to mediate language learning (see García, 2017; Panhwar et al., 2016; van Compernelle & Williams, 2013; Williams et al., 2013) and on the other, to mediate language teachers' emotions, cognition and activity as Golombek & Doran (2014) and Golombek (2015) have done. In the following sections I will explore further the results in the quest of exploring the potential of STI for developing teacher trainees' cognition and pedagogical knowledge/thinking as this thesis aims to do.

4.2.2.2.1 Metalinguistic Related Episodes (MREs)

As mentioned previously, even when the quantitative statistical analyses suggested there was no significant difference which was interpreted as no considerable improvement on participants metalinguistic knowledge applied to pedagogical practice, analysing languaging episodes qualitatively provided more insight on this. Thus, through this qualitative perspective of the Metalinguistic Related Episodes (MREs) of participants while doing the lesson plans, we identified instances of languaging in which

they would make grammatical allusions or discuss choices of MLK constructions, clarifying, agreeing, giving each other 'hints' or 'clues' on tense and aspect.

The exploration in depth of MREs provided evidence that intervention with STI was indeed effective for some participants to understand the concepts of tense and aspect both in metalinguistic and pedagogical terms; qualitative analyses results of languaging episodes were very encouraging. It is important to mention that the languaging related episodes found and presented for evidence in this section were found among participants predominantly from 9th semester; thus the first assumption that could be made is that perhaps the level of proficiency of participants may have played a role in allowing participants to deploy their knowledge in such a way that would go some way towards improvement.

Another characteristic of the verbalisation phase during elaboration of the lesson plans, was that languaging pertaining to 5th semester registered almost their entire languaging episodes in their L1 Spanish. For 7th semester approximately two thirds of their languaging was conducted in their L1 and the remaining third in L2 English. For 9th semester every protocol was conducted in L2 English. In the case of lower proficiency participants, using the L1 was acknowledged as serving a communication function for learning purposes; as Antón & DiCamilla (1998) suggest "within the sociocultural tradition the use of the L1 as an important semiotic tool especially among L2 learners with the same L1 background and low level of proficiency in the second language" (p.316). Thus, the examples captured (*cf. Section 4.2.2.2.2*) in participants' L1 confirm the usefulness of the mother tongue when co-constructing their knowledge. Furthermore, and also pointed out by Antón & DiCamilla (1998) the L1 has both an *inter-psychological function* as it allows learners to scaffold new knowledge, access L2 forms, mediate cognitive processes, serve metalinguistic functions, evaluate understanding of the meaning of a text in L2, and *Intra-psychological functions* e.g. in the shape of private speech.

Hence, the analysis (*cf. Section 4.2.2.2.2.*) showed languaging episodes in which participants were able to deploy their knowledge of the concepts of tense and aspect and benefit from a cognitive linguistics perspective by starting to consider conceptual units more holistically rather than just alluding to discrete grammatical rules (Arievitch & Haenen, 2005; Gal'perin, 1989; Williams et al., 2013).

When comparing both groups' languaging episodes, participants from the control group who received treatment based on Traditional Instruction (TI) did not show evidence of having understood the concepts of tense and aspect in other form but on traditional grammatical rules explanations (see Table 33). Every protocol of the control group containing MREs alluded only to teaching formulas, grammatical structures, and memorization of rules in a traditional and prescribed way. No evidence of holistic conceptual understanding was found in their languaging, as they did not describe concepts in a way that would suggest that they understood these to raise their level of awareness/conceptual thinking as van der Veer (2000, p. 99) suggests.

Table 33 shows the difference between both groups and how they differed substantially in the way they 'languaged' their Metalinguistic Related Episodes (MREs). In the table, it is clear that participants from the control group did not go beyond rules to a more thoughtful way of understanding the targeted concepts and remained at all times providing strict grammar rules more from a prescribed grammars approach.

The following representative example MRE-Excerpt 04-Control illustrates how the participants just allude to forming the *past tense* in terms of morphological changes in verbs with no mention of any other conceptual clue.

(MRE-Excerpt 04-Control)

TB: *...what is the past tense for, and the grammar structures and the rules for the regular and irregular verbs... that the regular verbs only add 'ed' at the end and the rules like when the verb finish in 'y' the 'y' changes for 'e' and you only add the 'd' and that is your 'ed' at the end of the verb...*

CM: *Yes... all the grammatical rules the construction of positive using the verbs in past and the negative and questions using the auxiliary 'did'...*

By contrast, languaging from the experimental group MREs was characterized by showing understanding of the targeted concepts from a more holistic perspective probably inspired by the cognitive linguistics perspective underpinning the materials design. From their languaging, it seems that they understood the concepts at a deeper level and beyond simple memorisation of grammatical rules. Their MREs contained

evidence of discussion and thoughtful thinking as they would 'negotiate' the meaning or how they should interpret or understand the concepts:

(MRE-Excerpt 08-Experimental)

PB: ...we are going to talk about the past with 'did' looking backwards to the past in the timeline so they can understand that is something about the past ...

MRE-Excerpt 08-Experimental suggests that learners are visualizing *time* within *tense* as a more ample concept and as something longitudinal, i.e. a time line which resembles chronological time passing; a 'mental space' or 'base space' (Fauconnier, 1997, 2007) (it is noteworthy that no example like this one was found in the control group excerpts). This example lead us to consider what Arieviditch & Haenen (2005) point out in explaining Gal'perin's Three Levels of action, where in '*Acting at the Material Level*' (first level), ideally, learners should act on concrete, tangible, representations, i.e. models, pictures, diagrams, displays, as actions are based on figurative and operative thinking (p. 158). In this example, participants allude to a 'time-line' to exemplify and to figure how to understand better the concept of tense as opposed to aspect. In the tutorials used for the experimental group (see Appendix 9), a time-line was one of the key elements to help students understand the concept of time in a more holistic way rather than just providing them with the only resource of a set of grammatical rules. Moreover, this example shows that participants are exchanging ideas about the concepts being learnt through interaction, i.e. verbalising according to Gal'perin's Three Basic Levels of the Action, '*Acting at the Verbal Level*' (second level) (ibid).

MRE-Excerpt 09-Experimental shows how participants talk about the concept of *past tense* as having a 'temporal-relation' between the communicative situation and the situation communicated (Reif, 2012, p. 70); as both participants talk about the concept they are acknowledging that the concept of past tense is a temporary one. The concept is being explained and 'communicated' between participants from a more ample conceptualisation as they refer to 'something that had a beginning but has finished'. Instead of only relaying on grammatical rules, participants are explaining to each other the concepts in a more holistic way, situating the concept of tense on the basis of a 'temporal-relation' with regard to the present moment.

(MRE-Excerpt 09-Experimental)

MD: ...*the past 'had a beginning but has finished' ...you see? is something that is not happening anymore...*

Another example of the effects of intervention with STI was captured in the way participants were able to acknowledge the concept of *aspect*. When alluding to aspect, it was noticeable that the idea of '*duration*' and '*boundness*' was present for the learners as they were able to explain to each other that aspect was about the '*duration*' of the action: '*if the action had a beginning and an end point*'. It is the idea of perceiving and seeing events as *completed/bounded* or *in progress/unbounded* that cognitive linguistics proposes to better capture the concept of *aspect* which determines *if the action is seen from a distant or outside perspective* (Fauconnier, 1997, 2007; Reif, 2012; Niemeier & Reif, 2008). This is clearly observed in the MREs deployed in example MRE-Excerpt 10-Experimental in which participants are talking about the '*limits of the action*' alluding to its duration:

(MRE-Excerpt 10-Experimental)

GC: ...*to tell the students the 'limits' of that action to indicate that the action is finished and the action does not continue in the present or the future...*

PB: ... *Yes...*

Excerpts like these ones suggest that, although quantitative analyses did not report a statistically significant difference among groups; from a qualitative perspective it is evident that intervention with STI had some positive effect on participants, which will hopefully lead to a better understanding of the concepts of tense and aspect. Throughout these excerpts we can observe participants discussing the concepts at a deeper level of thought giving more holistic explanations of the targeted concepts as deployed in their languaging episodes. Another insight on this is MRE-Excerpt 09-Experimental which carries on from the previous excerpt and which is shown next. In it, it is noticeable how participant MD explains to his peer PB what aspect is about and PB replies with a '*I know, I know that...*' and provides the definition demonstrating he has understood the concept:

(MRE-Excerpt 09-Experimental- continuation)

MD: ...*that is in reality the aspect when we say that it finished!... that is when we are referring to the aspect...*

PB: ... *I know... I know that... that aspect tells like the duration of the action...*

Some other examples such as MRE-Excerpt 07-Experimental (below) provide more evidence of the potential of STI, showing participants' deployment of the concepts as noticing the difference between tense and aspect describing them as conceptual units rather than as exclusively grammatical rules of patterns or structures. This is shown in the interaction participants are having as participant ES first puts forward the definition of the concept of aspect seemingly for his peer to 'approve it', hoping to be assured that what he is posting is ok. Subsequently, participant NM provides a more accurate and explicit correction with a more cognitive linguistics conceptual explanation. Evidently, in questioning and answering both participants are immersed in the dynamics of co-constructing and developing their knowledge about how the concept of aspect does work. Participant ES answers confirming he has 'got it' (understood) which suggests that the explanation of his peer (NM) helped him (ES) to understand the difference between one concept and the other.

(MRE-Excerpt 07-Experimental)

ES: *So progressive, it is the tense, is that right?*

NM: *No, no, no, it's not like that, look, it is.... it is... aspect progressive is how we see the events happening... and perfect is how things happened... like in the tutorial... do you remember? If they finished or they were happening...*

ES: *Ohh, I see, I got it...*

As Fortune & Thorp (2001) point out, "...through collaborative work dialogue triggers developmental processes, such as language development... thus ...all learning derives from social interaction, taking place first on an interpersonal level before becoming intrapersonal..." (p.143). In this case, learners were clarifying and working collaboratively on understanding the concepts of tense and aspect.

Another interesting finding regarding the holistic understanding of conceptual units as STI aims was participants' understanding of the categories of *states* and *events*. In MRE-Excerpt 06-Experimental we can see participant CG seeking 'confirmation' from his peer PB about the query he has just posted on verbs classifications. In it, we can see how participant PB answers CG's query, confirming what CG was not sure about.

(MRE-Excerpt 06-Experimental)

CG: *Verbs... ehh some were ehh... some indicated 'events' and 'states', right?*

PB: *Yes... besides they are regular and irregular verbs can be classified in events and states...*

In the next example we can see how participant PB is providing his peer with an example for a better understanding of the difference between 'states' and 'events'. It seems as if he was trying to make sure that his peer would understand this difference; again, it is in collaborative work that learners seem to be co-constructing their knowledge (Swain, 2006; Fortune & Thorp, (2001).

(MRE-Excerpt 08-Experimental-continuation)

PB: *...this would serve to understand what are 'states' and 'events', for example "I am Mexican" ahh that's a 'state'...*

On seeing how participants went from not being able to identify the concept of aspect at all, to at least beginning to explain it and describe in terms of more conceptual units we can see that intervention with STI was positive. These findings confirm that learners started to understand the targeted concepts and were able to apply them in their pedagogical thinking. Our results seem to be in line with those of Swain et al. (2009) where participants receiving treatment which consisted of mediation through verbalisation, i.e. languaging on the grammatical concept of voice, participants tested before and after intervention demonstrated gains in their understanding of the concept of voice. Moreover, Swain et al. (2009) identified a pattern that suggested a positive relationship between the quantity of students' languaging and the ability to correctly identify the voice in a sentence and provide reasons for their identification. In a similar way, the positive patterns we found in the correlations between metalinguistic knowledge (MLK) deployed in their lesson plans and the amount of metalinguistic

related episodes (MREs) produced while elaborating these seem to be consistent with those of Swain et al. (2009).

In sum, qualitative analyses of MREs suggested positive moves between pre and post intervention, which indicates that, even at a small scale, some participants seemed to have evolved and gained more insight of the concepts of tense and aspect as registered in their languaging episodes. I will now proceed to the qualitative analyses and discussion of the PREs in the following section.

Table 33: Metalinguistic Related Episodes (MREs)

CONTROL				EXPERIMENTAL																																															
	Turns	Ptcpt	Languageing		Turns	Ptcpt	Languageing																																												
Expn.01	06	SM	Will you explain the structures of how to form the past tense? while I write the sentences I will be explaining the structure of the past tense... that for affirmative sentences we use the verb in past and for negatives and questions we use the auxiliary did...	Exp 06	102	CG	Verbs... ehh some were ehh... <u>some indicated 'events' and 'states', right?</u> Yes... besides they are regular and irregular <u>verbs can be classified in events and states...</u>																																												
	07	DC			103	PB		Expn.02	05	CB	Ahh ahh ahh, past tense so in the simple how is formed; ...the four different aspects that exist in the past and give, and provides the patterns that they need to follow the different past tenses in the past; so we have simple that is subject plus verb in the past plus complement, right? Yes ok showing how to do it following the examples of the teacher	Exp 07	52	NM	Isn't it? the tense is 'past progressive' No, present, past and future; and <u>the aspects are progressive and perfect..... aspect progressive is how we see the events happening... and perfect is how things happened... like in the tutorial... do you remember? If they finished or they were happening...</u> Ohh, I see, I got it...	06	CD	53	ES	Expn.03	09	CR	OK... the regular and irregular formation of verbs... that the regular only add 'ed' and the irregular change their form... Exactly! Yes... and we also show the structure how to form sentences in past tense with the verbs in past for affirmative sentences by using the auxiliary did for negatives and questions.	Exp 08	105	PB	...here we place the 'do' and now we are <u>going to talk about the past with 'did' looking backwards to the past in the timeline so they can understand that is something about the past ...</u> And I think we could put 'did' as it is verb 'do' <u>This would serve to understand what are 'states' and 'events', for example "I am Mexican" ahh that's a 'state'...</u>	10	AC	106	CG	Expn.04	04	TB	You know? ...what is the past tense for, and the grammar structures and the rules for the regular and irregular verbs... that the regular verbs only add 'ed' at the end and the rules like when the verb finish in 'y' the 'y' changes for 'e' and you only add the 'd' and that is your 'ed' at the end of the verb... Yes... all the grammatical rules the construction of positive using the verbs in past and the negative and questions using the auxiliary 'did' all is part of the explanation we are going to give them in the first part of the presentation...	Exp 09	102	MD	... We could also <u>put a little explanation at the beginning stating that the past 'had a beginning but has finished'...</u> ... We need to put an auxiliary in negative to create negative little sentences...	05	CM	103	CM	Expn.05	08	BR	So then we first explain the structure in affirmative that carries the verb in infinitive, then from there we pass to the negative form and we explain how the 'did' is the one used to make a negative statement with the 'not' and that the verb remains in infinitive... Yes, and finally we explain the interrogative form and how to pass the 'did' to the beginning of the sentence and the verb goes back to its infinitive form..	Exp 10	79	GC	We are also going to <u>tell the students the 'limits' of that action to indicate that the action is finished and the action does not continue in the present or the future...</u> Yes...
Expn.02	05	CB	Ahh ahh ahh, past tense so in the simple how is formed; ...the four different aspects that exist in the past and give, and provides the patterns that they need to follow the different past tenses in the past; so we have simple that is subject plus verb in the past plus complement, right? Yes ok showing how to do it following the examples of the teacher	Exp 07	52	NM	Isn't it? the tense is 'past progressive' No, present, past and future; and <u>the aspects are progressive and perfect..... aspect progressive is how we see the events happening... and perfect is how things happened... like in the tutorial... do you remember? If they finished or they were happening...</u> Ohh, I see, I got it...																																												
	06	CD			53	ES		Expn.03	09	CR	OK... the regular and irregular formation of verbs... that the regular only add 'ed' and the irregular change their form... Exactly! Yes... and we also show the structure how to form sentences in past tense with the verbs in past for affirmative sentences by using the auxiliary did for negatives and questions.	Exp 08	105	PB	...here we place the 'do' and now we are <u>going to talk about the past with 'did' looking backwards to the past in the timeline so they can understand that is something about the past ...</u> And I think we could put 'did' as it is verb 'do' <u>This would serve to understand what are 'states' and 'events', for example "I am Mexican" ahh that's a 'state'...</u>	10	AC	106	CG	Expn.04	04	TB	You know? ...what is the past tense for, and the grammar structures and the rules for the regular and irregular verbs... that the regular verbs only add 'ed' at the end and the rules like when the verb finish in 'y' the 'y' changes for 'e' and you only add the 'd' and that is your 'ed' at the end of the verb... Yes... all the grammatical rules the construction of positive using the verbs in past and the negative and questions using the auxiliary 'did' all is part of the explanation we are going to give them in the first part of the presentation...	Exp 09	102	MD	... We could also <u>put a little explanation at the beginning stating that the past 'had a beginning but has finished'...</u> ... We need to put an auxiliary in negative to create negative little sentences...	05	CM	103	CM	Expn.05	08	BR	So then we first explain the structure in affirmative that carries the verb in infinitive, then from there we pass to the negative form and we explain how the 'did' is the one used to make a negative statement with the 'not' and that the verb remains in infinitive... Yes, and finally we explain the interrogative form and how to pass the 'did' to the beginning of the sentence and the verb goes back to its infinitive form..	Exp 10	79	GC	We are also going to <u>tell the students the 'limits' of that action to indicate that the action is finished and the action does not continue in the present or the future...</u> Yes...	09	BC	80	PB								
Expn.03	09	CR	OK... the regular and irregular formation of verbs... that the regular only add 'ed' and the irregular change their form... Exactly! Yes... and we also show the structure how to form sentences in past tense with the verbs in past for affirmative sentences by using the auxiliary did for negatives and questions.	Exp 08	105	PB	...here we place the 'do' and now we are <u>going to talk about the past with 'did' looking backwards to the past in the timeline so they can understand that is something about the past ...</u> And I think we could put 'did' as it is verb 'do' <u>This would serve to understand what are 'states' and 'events', for example "I am Mexican" ahh that's a 'state'...</u>																																												
	10	AC			106	CG																																													
Expn.04	04	TB	You know? ...what is the past tense for, and the grammar structures and the rules for the regular and irregular verbs... that the regular verbs only add 'ed' at the end and the rules like when the verb finish in 'y' the 'y' changes for 'e' and you only add the 'd' and that is your 'ed' at the end of the verb... Yes... all the grammatical rules the construction of positive using the verbs in past and the negative and questions using the auxiliary 'did' all is part of the explanation we are going to give them in the first part of the presentation...	Exp 09	102	MD	... We could also <u>put a little explanation at the beginning stating that the past 'had a beginning but has finished'...</u> ... We need to put an auxiliary in negative to create negative little sentences...																																												
	05	CM			103	CM																																													
Expn.05	08	BR	So then we first explain the structure in affirmative that carries the verb in infinitive, then from there we pass to the negative form and we explain how the 'did' is the one used to make a negative statement with the 'not' and that the verb remains in infinitive... Yes, and finally we explain the interrogative form and how to pass the 'did' to the beginning of the sentence and the verb goes back to its infinitive form..	Exp 10	79	GC	We are also going to <u>tell the students the 'limits' of that action to indicate that the action is finished and the action does not continue in the present or the future...</u> Yes...																																												
	09	BC			80	PB																																													

4.2.2.2.2 Pedagogical Related Episodes (PREs)

Pedagogically Related Episodes (PREs) provided insights into how participants orally displayed and showed evidence of being able to transfer the metalinguistic knowledge gained through treatment into a pedagogical plane by means of a lesson plan done collaboratively with their peers. In this section, I will discuss these episodes following the pattern I used for Metalinguistic related Episodes (MREs).

As previously explained in the methodology chapter (*cf. Section 3.3.5.2.2.*) through microgenetic analyses we identified instances of language uttered by participants for pedagogical purposes (PREs) which alluded to basically: 1) *pedagogical considerations, explanations and rules*; and, 2) *decision making and negotiation of content*.

Although quantitative analyses of Pedagogical Related Episodes (PREs) returned no significant statistical difference between groups from pre to post intervention, to further understand these results, qualitative analyses were conducted to explore in greater depth the content and type of the Pedagogical Related Episodes (PREs). Due to space constraints it was only possible to select a few excerpts for the discussion in detail; these are all displayed in Table 34 at the end of this section.

Similar to the findings in MREs, qualitative analyses of PREs indicated that the excerpts containing more evidence of effectiveness of intervention with STI for pedagogical purposes were concentrated predominantly in 9th semester in the experimental group. These results could suggest that likewise to the case of MREs, the proficiency level of participants may have influenced the degree of benefit learners could achieve with regard to the production of PREs. Thus, the first type of Pedagogical Related Episodes (PREs) found among participants' languaging alluded to *pedagogical considerations*, which referred particularly to how to explain and exemplify the concepts of tense and aspect as shown in PRE-Excerpt 06-Experimental:

(PRE-Excerpt 06-Experimental)

CG: ... *after, more ahead we are going to say we are going to explain them the 'states and events' ...*

PB: ...*it is important to mention that they have 'a beginning and an end', from there we go to the next; here maybe it's important to demonstrate that verbs have conjugations, isn't it? ...*

GC: *And that verbs have classifications and conjugations, isn't it?*

PB: ... *That's right and there to 'make a timeline' ...*

As can be observed in PRE-Excerpt 06-Experimental above, participants are trying to arrive to an agreement on 'what to teach', i.e. what to include in their lesson plan. Participant CG indicates that *they should explain the states and events*. Furthermore, participant PB points out the idea of *duration* and the 'importance' of mentioning that verbs have a *beginning* and an *end*. From a pedagogical point of view, participants seem to be transferring (at least to a certain extent) the metalinguistic knowledge on tense and aspect to a pedagogical plane in the most suitable form. Based on these types of PREs found in the data, it could be assumed that considering metalinguistic explanations of this nature was the result of intervention based on STI, as these were precisely the concepts targeted by the means of the materials. Another noteworthy point is the fact that participants did not receive specific pedagogical training for teaching the concepts of tense and aspect. Talking about verbs and how these are classified as states and events and their duration is a holistic view drawing on cognitive linguistics (Fauconnier, 1997; Langacker, 2008; Radden & Dirven, 2007; Reif, 2012). PRE-Excerpt 06-Experimental shows evidence of how participants tried to incorporate the notions of *states*, *events*, and *duration* into their lesson plans, which was ultimately a desired outcome even when no specific pedagogical training had been implemented. Thus, pedagogical knowledge/thinking was only expected to happen incidentally and naturally after intervention. Trying to consider the element of pedagogical knowledge/thinking within the sphere of influence of STI was perhaps too ambitious; however, we have some glimpses of STI being promising enough to trigger this type of knowledge/thinking into transfer to a pedagogical plane. A further illustration of this is shown in the following example:

(PRE-Excerpt 07-Experimental)

PC: *We can make a lesson plan that shows us how we can describe perception...*

We can start by putting the verbs that can describe events and states and... for example in events we can say the verb like ehh 'construir' because it is 'to build' and it is just a verb that implies internal development and is dynamic because requires movement...

ES: *Ok, but how could we teach that? How should we include that in a lesson plan?*

PC: *We can do activities where it requires movement in a dynamic way...*

PRE-Excerpt 07-Experimental provides more evidence of the potential effectiveness of intervention in terms of pedagogical thinking. The example shows how participants are beginning to incorporate metalinguistic explanations from a more holistic perspective into a pedagogical plane, as they bring other features to consider as part of their strategy for teaching the concepts of tense and aspect. Participant PC alludes to the incorporation of the concept of 'perception' in addition to the concepts of 'states and events' as an important element to explain within their lesson plan. He goes further, suggesting the incorporation of verbs to exemplify this as 'construir' (he cites the example in Spanish) comparing it with its equivalent in English 'to build' as this verb implies having an internal development and dynamicity as it requires movement. When asked by his peer participant ES 'how they would teach that' PC suggests doing this through the use of activities which require movement in a dynamic way. These examples suggest that the idea of relying on conceptual units as the means for fostering internalization for further development (Negueruela-Azarola, 2003) may have been effective with this set of participants, as their languaging episodes allude to holistic ideas and concepts they are beginning to use. This type of languaging was not found in any protocol from the control group.

Other examples of Pedagogical Related Episodes (PREs) allude to 'decision making' and 'negotiation of content' of the targeted forms. Excerpts found within the experimental group seemed to indicate that participants were aware of the importance of making their potential learners understand the *perspective of time* in the most realistic possible way. The concern from part of these potential language teachers on making sure their learners understood the *perspective of time* in a broader and more holistic way

possible appears as important when they suggest for instance, the use of a *timeline* in PRE-Excerpt 08-Experimental. Similarly, in PRE-Excerpt 09-Experimental they seem to become aware (perhaps unconsciously) of the importance of the Schema of Complete Orienting Basis of Action (*SCOBAs*) during intervention as they consider this element crucial within the design of their lesson plans and they seem to be moving away from the exclusive use of grammatical rules, thus, prescribed grammars did not seem as an option for these participants.

(PRE-Excerpt 09-Experimental)

BR: *You know... but we should not just use grammar rules on the board, we can use some pictures to make it more realistic... right?*

Like in the slides, the students have to see the real difference between tense and aspect, they have to see that aspect is more of how they perceive the action happening, we have to explain that to them, they need to know that...

BR: *... Yes... but we want the students to go bit by bit and we cannot bombard them with just grammatical explanations... I think the idea of images is good and entertaining for them...*

Seeing participants taking into consideration these elements, suggests that during intervention they were able to notice the importance of having mediational tools, i.e. *SCOBAs* in the form of visual aids demonstrating the concepts as whole ideas, and that seems to have resulted in a desire to incorporate them within their lesson plan's design.

Even though the excerpts containing some evidence of effectiveness of the incorporation of the concepts of tense and aspect into pedagogical thinking were few (quantitatively speaking); the quality these showed indicate intervention worked. As shown in Table 34, the contrast between control and experimental group languaging episodes alluding to the target concepts was evident.

Table 34: Pedagogically Related Episodes (PREs)

CONTROL				EXPERIMENTAL			
	Turns	Ptcpt	Languageing		Turns	Ptcpt	Languageing
Expn.01	12	DA	...and once the students have seen the change in the form of the verbs, then the teacher gives the explanation of the grammatical rules...to show them the structures like the formulas to make the past ...	Exp 06	110	CG	... after, more ahead we are going to say we are going to explain them the 'states and events' ...
	13	ZA	... so they write their story in the past tense following the format and the rules for the past...		111	PB	...it is important to mention that they have 'a beginning and an end', from there we go to the next; here maybe it's important to demonstrate that verbs have conjugations, isn't it? ...
Expn.02	08	SH	Yes, we have to explain the three basic forms of the simple past: affirmative sentences, negative and interrogatives.	Exp 07	112	GC	And that verbs have classifications and conjugations, isn't it?
	09	AR	Yes, I think the same, we have to give them the grammatical structures of how to form sentences...that sentences in past simple in affirmative conjugate the verb in its past form... and there are two types of verbs: regular and irregular and explain them how they are formed...		113	PB	... That's right and there to 'make a timeline' ...
Expn.03	03	CM	Ok... I think is ok ... ok ok ... so 'first of all... as a teacher we can tell a little story or passage of a moment in the past... the PPP for the uses, characteristics, the grammar structures and the rules of irregular verbs...	Exp 08	02	PC	We can make a lesson plan that shows us how we can describe perception ...
					05	ES	We can start by putting the verbs that can describe events and states and... for example in events we can say the verb like eh 'construir' because it is 'to build' and it is just a verb that implies internal development and is dynamic because requires movement...
Expn.04	55	SA	And to explain... and to make a comparison of the simple past and past continuous, when and in which cases to use the past continuous, mmh, give them examples and to teach them that they can use, make 'combos' with these two grammatical structures...	Exp 09	06	PC	Ok, but how could we teach that? How should we include that in a lesson plan?
	58	DC	...I think they could have a conversation only talking in the past tense and later when they are at a more advanced level they can blend all the tenses ...		104	EC	We can do activities where it requires movement in a dynamic way...
Expn.05	103	BC	...teacher introduces the past tense in general terms, this means that teacher explains that the student can use this tense to express actions that took place in the past, ok? Then teacher explains the four different aspects that exist in the past, so we can change this table and we can have here the simple, the progressive, the perfect and perfect progressive...	Exp 10	105	EP	...and that's it, we could put some examples of which ones are events and which ones are states Uhu, 'we could teach them that 'did' is the auxiliary for the past... and maybe at this point we could add the part on 'perspective of the time' and for example add a timeline...
	105	CD	and provide the students the patterns that they need to follow the different past tenses in the past; so we have simple that is subject plus verb in the past plus complement...		09	BR	You know... but we should not just use grammar rules on the board, we can use some pictures to make it more realistic... right?
					10	OS	Like in the slides, the students have to see the real difference between tense and aspect, they have to see that aspect is more of how they perceive the action happening, we have to explain that to them, they need to know that...
					11	BR	But we have to explain them the grammar like the use of the auxiliary 'did' which is what they need to use to form interrogative and negative statements... isn't it?
					13	AL	Yes... but we want the students to go bit by bit and we cannot bombard them with just grammatical explanations... I think the idea of images is good and entertaining for them...
					09	AL	We also are going to include the explanation of aspect in this section... what do you think?... they need to know that tense and aspect are two different things but work together, well I guess that's it
					12	SH	Yes... we have to explain them that aspect is how we see the things occurring and that it can be simple or progressive...
					13	AL	Ok, so, like for example "I was riding my bike last week" is like if the action never finished but within the past ... and don't forget also to explain that verbs tell 'states and events' ...
							For that we can include a time line, like we saw in the tutorial for the explanation to exemplify how the action was happening, do you agree?

As I hope I have illustrated, qualitative scrutiny of the languaging episodes, suggested, that even when few, the results were noteworthy and go some way towards demonstrating that STI was effective in enhancing metalinguistic knowledge. In this respect, our results, both quantitative and qualitative are consistent with those of van Compernelle (2018). When looking at his data from a quantitative point of view no statistical differences were found; however, differences were observed in participants' understanding of the target forms when seen through qualitative analyses of the data. Thus, an analysis of the data from both perspectives (quantitatively and qualitatively) confirmed that intervention contributed to a certain degree to enhance participants' conceptual understanding of the concepts of tense and aspect on the basis of STI instruction.

Overall, the findings drawn from lesson plans' data, i.e. MLK and PDK deployed in these, along with the languaging episodes (MREs and PREs) confirmed what Swain and colleagues have been advocating for some time now. That is, from a Sociocultural theory perspective, languaging is one of the most powerful mediation tools for co-construction of knowledge and to foster development in second language learning (Brooks, Swain, Lapkin, & Knouzi, 2010; Swain, 2006b; Swain & Lapkin, 2013; Swain, Lapkin & Deters, 2013; Swain et al., 2009).

4.3. RQ3. What insights into STI can be derived from a case study approach to *languaging*? The case of the top scorers (Results and Discussion)

Previous sections of this chapter, that is, the results and discussion relating to research questions 1 and 2, adopted a global or group based approach to the data. In what follows, I have adopted a case study stance in order to gain an in-depth perspective into STI generally, and languaging, more specifically. The aim of this approach was to explore the relative value of the two STI components (the SCOBAs themselves and verbalisation) as a means to also contribute to a crucial question pertaining to studies of interaction as a key environmental factor in L2 learning (see, for example, Mitchell, Myles, & Marsden, 2013,

pp. 229-249): What specific mechanisms, activated during interaction, appear to promote L2 development¹? To that end, and as mentioned in Chapter 3, I conducted descriptive microgenetic analyses of the languaging between top scorer participants, Belem and Alexander and their respective partners Shirley and Oscar (all names are pseudonyms). This is so that I could trace emergent, moment-to-moment, developmental processes (Lantolf & Poehner, 2014, p. 24) activated during two of the verbalisation events which took place as part of the STI intervention. Please note the verbatim full transcription (and gloss) of the ‘communicated thinking’ events (henceforth CTEs) in focus can be found in Appendix 14.

At the heart of this events lie two central and interrelated points regarding the target concept and which were mentioned in the SCOBAs: 1. Grammatical aspect (the tool which allows us to convey a particular view of a situation) and 2. Trying to help students realise that verbs intrinsically evoke certain characteristics in our minds (lexical aspect). In this particular instance, the SCOBAs the students were referring to highlight distinctions between events and states. In this section, I argue that there is evidence in the data of the potential of STI for helping students better understand aspectual distinctions in English, in other words, evidence of microgenesis in relation to these two points.

As outlined in the Method chapter (*Section 3.3.5.3*), in order to contextualise the case studies chosen for the qualitative (microgenetic) analysis of their languaging activity, I will first present a quantitative comparison between the two top scorers from the experimental group and the two top scorers from the control group. This will help to see the contrast and differences between them. These participants were “Janet” and “Roxana” from the control group and “Belem” and “Alexander” from the experimental group (section 4.3.1). I will then proceed with microgenetic analyses whose primary aim is to contribute to the L2 learning field by further understanding the characteristics and mechanisms which form the basis of L2 learners’ languaging activity (section 4.3.2). This, in turn, is important

¹ In this section, I have adopted and adapted Gánem-Gutiérrez & Gilmore’s definition of L2 development to refer to an “increasing and transformative ability to make use of [language, in this case L1] to communicate as well as to mediate our understanding of the world through the lens of our enriched linguistic repertoires and competencies” (Gánem-Gutiérrez & Gilmore, 2018, p. 22). In other words, although languaging between Belem and Shirley takes place in the L1 (Spanish), I argue that we are evidencing L2 development (albeit at a metalinguistic level).

if we are going to better understand how and why interaction and collaboration are important for L2 development.

4.3.1. Comparison between the top scorers from control and experimental groups: Language in Use test, Metalinguistic Knowledge test, Awareness Interview, Lesson Plan scores; type and number of Languageing episodes

Table 35 shows the scores and percentages of participants per case from each group (control and experimental) contrasting their Language in Use (LiU) test results. Jannet (ctrl) and Belem (exp) registered a similar improvement on their LiU scores. Roxana (ctrl) did not register any improvement on her LiU scores; and Alexander (exp) improved by 10% from pre- to post- test which was the highest gain reported for this test not only for the case studies, but among all participants.

Table 35: Comparative table of LiU per case

		LiU		
		PRE	POST	Difference
<i>Ctrl</i>	Jannet	(21) 67%	(23) 74%	+7%
	Roxana	(21) 67%	(21) 67%	0%
<i>Exp</i>	Belem	(25) 80%	(27) 87%	+7%
	Alexander	(15) 48%	(18) 58%	+10%

Note: All names are pseudonyms. Numbers in parenthesis are the actual points scored in the test.

The results of the Language in Use test indicated a minimal improvement of 3.5% on average for the control cases; and 8.5% for the experimental cases. As the degree of improvement registered was marginal, we cannot say that SCOBAs and verbalisation had an impact on this measure especially when the whole sample of the study registered a similar pattern with no considerable improvement. Thus, it could be assumed that intervention –including both components of STI (SCOBAs and verbalisation) -did not contribute much in this respect, a result which was not surprising (*cf. Section 4.2.1.3.*).

When looking at the Metalinguistic knowledge (MLK) test scores per case as displayed in Table 36, all cases of participants registered an improvement during the post

test. However, the experimental set shows a higher improvement, above 25.5% on average as opposed to the control set, where we can see 4.5% of improvement on average from pre- to post- testing times. For the delayed test, both sets of participants registered an attrition effect from post to delayed testing times. The control set decreased 6% on average in their scores; Janet's scores went back to the same level she got during the pre-test and Roxana's went lower than her pre-test scores. For the experimental set, the attrition effect registered was 4.5% on average; both Belem's and Alexander's delayed scores remained higher than their pre-test scores which is relatively low compared to the gains obtained from pre- to post- testing (25.5% on average).

Table 36: Comparative table of MLK scores per case

		MLK				
		PRE	POST	Difference	Delayed	Difference (b/w post & delayed)
<i>Ctrl</i>	Jannet	(30) 52%	(31) 54%	+2%	(30) 52%	-2%
	Roxana	(25) 43%	(29) 50%	+7%	(23) 40%	-10%
<i>Exp</i>	Belem	(35) 61%	(45) 79%	+18%	(43) 75%	-4%
	Alexander	(23) 40%	(42) 73%	+33%	(39) 68%	-5%

Note: Numbers in parenthesis are the actual points scored in the test (maximum possible score was 57 pts =100%).

Metalinguistic tests were the most direct instrument by which the effectiveness of STI could be measured, since these were exclusively designed to test the degree of MLK participants had prior to intervention, post intervention and in delayed testing a month after intervention. Thus, results drawn from MLK tests reflected the degree of impact intervention had on participants as the information contained within was explicit metalinguistic knowledge regarding the target concepts of tense and aspect. These results therefore suggest that treatment had a positive impact in enhancing participants' metalinguistic knowledge.

Previous studies based on the implementation of SCOBAs as one of the central elements of STI (see Golombek & Doran, 2014; García-Frazier, 2013; González & Melón, 2013; Lee, 2012; 2016; Navajas & Ferrer, 2012; Negueruela-Azarola, 2003; Ohta, 2017), have suggested positive effects of this pedagogical tool to teach a variety of linguistic features, i.e. prepositions, tense and aspect, phrasal verbs or Spanish modality amongst

others. It is evident that in our study this didactic model also appears to have contributed to a better understanding of a complex concept such as aspect and which hopefully might contribute to its eventual internalisation. In particular, our results resemble those of Gánem-Gutiérrez (2016) who set out to investigate the extent to which a group of six students would benefit from the use of SCOBAs to enhance their understanding of the tense-aspect system in a Spanish L2 context.

The results from the awareness interviews (AI) showed a difference between both control and experimental cases as displayed in Table 37. Jannet and Roxana from the control set did not show any change in the type of answers they provided from pre- to post-interviewing. By contrast, Belem and Alexander’s answers from the experimental set suggested changes from pre to post- interviewing; the former increased her post- AI responses scores by 44% and the latter by 33%.

Table 37: Comparative table of Awareness Interview scores per case

		<i>Awareness Interview</i>		
		PRE	POST	Difference
<i>Ctrl</i>	Jannet	(4) 44%	(4) 44%	0
	Roxana	(4) 44%	(4) 44%	0
<i>Exp</i>	Belem	(4) 44%	(8) 88%	+44%
	Alexander	(3) 33%	(6) 66%	+33%

Note: Numbers in parenthesis are the points scored in the interview.

The Awareness Interviews results provided further evidence of the SCOBAs’ potential, particularly when we look at AI question two (AI-Q2) since this one was directly related to the definition of the metalinguistic concepts of tense and aspect. This specific item echoes similar results to those reported in Gánem-Gutiérrez (2016) and where results appear to reflect a clear cut transition from pre- to post- intervention in their understanding of the target linguistic concepts. Furthermore, Ohta (2017) investigated the implementation of SCOBAs on teaching Japanese addressee honorifics which are clause-final forms that express modes of self also guided by Japanese wakimae rules. Her study was conducted on adult learners in a summer intensive third-year Japanese class; from this poll of students, she selected one case study (Felicia) for analysis. Her findings also confirmed the

effectiveness of SCOBAs on the principle that SCOBAS provide learners with opportunities to interact with the materials working either individually or collaboratively verbalising (speaking or writing) their understanding of a concept. The case of Felicia provided insightful information with regard to the effectiveness of intervention with the SCOBAs as she was able to report an understanding of the concept by providing a complete definition and use of it. The author reported Felicia's post-performance reflections as 'strikingly' different from the doubtful assessment of her first performance. Felicia demonstrated a solid understanding of the modes of self framework as a very complex speech style in Japanese with its own uses for politeness related to peoples' age and social status. Felicia's reflections on her pre- and post- –instruction performances were compared in terms of how specifically she evolved from a lack of confidence in her understanding of wakimae leading to the potential of offending Japanese people. Post treatment, she was able to share appropriate examples of how to properly use modes of self might mix and she was able to comfortably express herself choosing appropriate forms.

Prior to intervention, the experimental cases were not able to explain or even mention a minimal characteristic which would differentiate the concept of tense from aspect. While all four cases started from no knowledge, after intervention, the responses given by participants in the experimental cases provided more elaborate, accurate and complete explanations. Participants went from not being able to identify the concept of aspect to giving examples of it, explaining the concept from a holistic point of view and being able to elaborate on the idea of perception, point of view and duration in relation to aspect. Explaining the types of aspect as simple or progressive became clear not only for the case studies from the experimental set, but for the whole experimental group (*cf. Section 4.3.1.*). All in all, the participants were able to at least start grasping some of the essence involving aspectual distinctions, i.e. grammar as a tool which allows us to signal contrasting views of “the internal temporal constituency of a situation” (Comrie, 1976, p. 3).

This is specifically exemplified in the case of Belem who made the transition from knowing nothing of the concept of aspect to being able to discern more clearly between the concepts of tense and aspect and providing definitions from a more holistic view as

cognitive linguistics suggest. She defined aspect in terms of duration and completeness as it was explained in the SCOBAs.

(AI- Excerpt-Case Study 1-EXP)²

Belem² (PRE-AI-Q2): *Tense is the way a verb is conjugated, aspect I don't know.*

Belem² (POST-AI-Q2): *The tense tell us the time in which the activity happened like present, past or future; aspect is the perception we have of the activities like the duration if it is in progress or if it concluded.*

The SCOBAs seem to have provided the participants with the opportunity to explore and understand these concepts from a different approach, e.g. enabling them to visualize through the materialization of the concept. The grammar explanations and exercises the control group depended on did not appear to have rendered similar results; these participants were not able to provide even a minimal account of aspect as some examples demonstrate in Table 38.

Table 38: Comparative table of Awareness Interview responses per case

<i>Awareness Interview answers</i>			
		PRE	POST
<i>Ctrl</i>	Jannet	Q1. It is used for actions that started and finished in the past in a specific time, in the verbs there are two types: regular and irregular. Q2. Tense is when the action was done.	Q1. The past tense is what we use to speak of actions that happened in the past in a time that is no more happening. It uses the verbs in past tense regular and irregular Q2. I don't remember
	Roxana	Q1. Regarding the past tense I know that it is used for actions that occurred in the past and were completed in the past and have no relation with the future. Q2. NO ANSWER PROVIDED Q3. I would write on the board the verb first in present and then in past form and teach them the pronunciation and make sentences using these same verbs and after they'll have to do a writing activity with these verbs and others.	Q1. The past tense indicates actions that happened in the past, actions that are not occurring anymore. Q2. Uhh I don't remember Q3. I will show them that in past tense we write sentences with the verbs in a different way like the verbs conjugations; and then I will show them how to write sentences in past tense like the structure and the verbs (regular and irregular). Then I will ask them in pairs to do some sentences.
<i>Exp</i>	Belem	Q1. Well, it is used for past actions, regular verbs are formed with an 'ed' at the end of the verb and the regular verbs can change depending on the verb. Q2. Tense is the way a verb is conjugated, aspect I don't know.	Q1. The past tense is to refer to actions that happened in the past and that have finished. It is formed with the verbs in past form regular (ed) and irregular that change their form. Q2. The tense tells us the time in which the activity happened like present, past or future; aspect is the perception we have of the activities like the duration if it is in progress or if it concluded.

² Please note that the AI took place in L1 (Spanish), but in this section I am providing translations into English for ease of reference.

	Alexander	Q2. NO ANSWER PROVIDED Q3. Well, I'll write the structure of how to write the verb on the board and I would explain the functions, how it is pronounced, I think that's all.	Q2. Aspect is the form in which the action is done, how people see the action if it is in progress or if it is concluded. Q.3.I will try to teach the past tense in dynamic way like for example using games of flash cards so they can explore the formation of the past, I will put them to work in teams.
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Similar to the awareness interviews, the scores for the lesson plans (maximum of 6 points) for the control cases did not show evidence of any change from pre to post which only reached 4pts. In contrast, both cases in the experimental set increased the scores of their lesson plans from pre to post by 44%, (from 4 to 6 points) as shown in Table 39, which was also confirmed when we looked at the amount and type of languaging episodes (MREs and PREs) as shown in Table 40.

The type of answers the top scorers provided during the post Awareness Interviews were in line with their lesson plans in which they were able to use more accurate and complete definitions of the concepts of tense and aspect. That is, they were able to consider these in their pedagogical thinking while elaborating their lesson plans as evidenced in the amount and type of languaging episodes (metalinguistic related episodes, MREs and pedagogical related episodes, PREs) as shown in Table 40.

Table 39: Comparative table of Lesson Plan scores per case

		<i>Lesson plan</i>		
		PRE	POST	Difference
<i>Ctrl</i>	Jannet	(4) 66%	(4) 66%	0
	Roxana	(3) 50%	(3) 50%	0
<i>Exp</i>	Belem	(4) 66%	(6) 100%	+44%
	Alexander	(4) 66%	(6) 100%	+44%

Note: Numbers in parenthesis are the points scored in the lesson plans.

Turning to the languaging episodes produced during the Communicated Thinking sessions 1 and 2 (working with the SCOBAs and developing their lesson plans respectively) as the tasks in which participants had to carry out collaborative work, there was no difference within the control cases in the amount and type of languaging episodes produced (Table 40). Taking as a baseline the maximum total number (5) of languaging episodes for MREs and PREs found throughout these sessions, the control cases produced what represents 40% for both types of languaging episodes. In contrast, the experimental

cases produced a higher number of languaging episodes compared to the control cases. In both cases participants from the experimental group produced more MREs than PREs with a difference of 20%.

Table 40: Comparative table of Languaging episodes scores per case

<i>Languaging episodes</i>				
		MREs	PREs	Difference
<i>Ctrl</i>	Jannet	(2) 40%	(2) 40%	0
	Roxana	(2) 40%	(2) 40%	0
<i>Exp</i>	Belem	(4) 80%	(5) 100%	+20%
	Alexander	(3) 60%	(4) 80%	+20%

Note: Numbers in parenthesis are episodes generated per dyad.

Both of the activities during the Communicated Thinking sessions (working with the SCOBAs and developing their lesson plans) generated the production of languaging episodes of various types. Table 41 provides representative samples of languaging for illustration purposes.

Table 41: Comparative table of Languaging episodes during lesson plan session

<i>Languaging episodes</i>			
		MREs	PREs
<i>Ctrl</i>	Jannet	Ok... the teacher explains the regular and irregular formation of the verbs... that the regular only add 'ed' and the irregular change their form...	Students will have to write stories in the past tense and then they can read it to the class and they can practise their pronunciation of the verbs...
	Roxana	... And we also show the structure how to form sentences in past tense with the verbs in past for affirmative sentences using the auxiliary did for negative questions...	Put the students to read stories aloud... so after the stories the teacher will have to explain the grammatical structures and how to form the past tense to the students...
<i>Exp</i>	Belem	Yes... we have to explain them that aspect is how we see the things occurring and that it can be simple or progressive...	We also are going to include the explanation of aspect in this section... what do you think?... they need to know that tense and aspect are two different things but work together, well I guess that's it...
	Alexander	...but we have to explain the grammar like the use of the auxiliary 'did' which is what they need to use to form interrogative and a negative statement... isn't it?	...we cannot forget to include aspect... it is very important they see how it makes the difference if a verb finishes or is a continued action... it is about the perspective what they need to understand that aspect is about...

As Table 41 shows, the languaging episodes produced by participants in the experimental group while elaborating the lesson plans represent more elaborated and accurate responses than those from the control group. Through these verbalisation activities

we witnessed how participants were able to deploy their newly acquired knowledge on the target concepts relying on different semiotic tools which appeared to have helped them to develop their L2. Our results seem to be consistent with those of Gánem-Gutiérrez (2008); Gánem-Gutiérrez & Gilmore (2018); Gánem-Gutiérrez & Roehr (2011) as we will now discuss more in depth.

4.3.2. A case study approach to languaging: Specific mechanisms activated during interaction

As outlined in the methodology chapter, to better understand verbalisation, specifically *languaging* and its potential as a developmental tool within STI, I carried out qualitative (microgenetic) analyses which served to trace back the course of talk between participants. As Gánem-Gutiérrez (2008) pointed out, microgenetic analyses serve to investigate how learning unfolds during interaction through collaborative dialogue in revealing moment-to-moment co-construction of knowledge and language learning (p.121). Thus, this section specifically focuses on what I called a *Communicating Thinking Event* (CTE) to include selected languaging episodes from communicated thinking sessions 1 and 2 (working with the SCOBAs and developing a lesson plan respectively).

While working collaboratively, languaging of different types emerged from participants' verbalisations while they were *co-constructing their understanding* on the difference between *events* and *states* and *expressing the view/perception of an event*. According to Ohta (2001) co-construction is “an explicit form of assistance... co-construction sometimes results in vertical construction, in which peers collaborate to produce an utterance, alternately providing words or phrases to the growing utterance” (Ohta, 2001, pp. 88-89).

Participants centred their languaging in the co-construction of their understanding on *expressing view* or *perception of an event*. To achieve this goal, they relied on different strategies which were based on the analyses of their languaging in their CTEs, allowed them to grasp the target concepts of tense and aspect. Thus, it was possible to identify the use of an array of learning strategies through the use of semiotic tools such as, for example,

discourse markers, reasoning markers, which contribute in building intersubjectivity, joint attention, regulation, thinking space, play, use of metalanguage, active reception and participation. It seems that relying on these may have contributed in the co-construction of their understanding, also allowing us to trace the origin and trajectory of their learning process. (Gánem-Gutiérrez, 2008; Antón & DiCamilla, 1998; DiCamilla & Anton, 1997; Gánem-Gutiérrez & Roehr, 2011; Ohta, 2001; Swain & Lapkin, 2000).

Thus, microgenesis instances allowed us to signal when participants were *co-constructing their understanding on the difference between events and states*. In so doing, we were able to trace the genesis of various events in which participants collaboratively were trying to understand the target concepts. EXCERPT 1 B+S MGA is an example of how the microgenesis affordance occurred where it is noticeable how Belem is trying to understand the difference between events and states at the same time as she is consulting and perhaps searching for approval from her peer to confirm she is right in her understanding of the concepts in question; i.e. ‘¿tú qué piensas?’ (what do you think?), or ‘¿ves?’ (do you see?). Belem first tries to explain why ‘events are dynamic’ as opposed to ‘states that don’t change’; by doing so, she reflects on the fact that events are activities which imply certain action or dynamicity. She further alludes to how, thanks to the SCOBAs, it is easier for her to understand the difference between these concepts, which suggests that the instruments were effective for helping the participants better understand the concepts in question. Finally, she *incorporates* the notion of events as being durative by providing examples with verbs that imply a certain type of dynamicity.

EXCERPT 1 B+S MGA

T	P	L	Transcription
15	B	52	OK (.) entonces, si son eventos son actividades por eso supongo que dice que los eventos son
		53	dinámicos (.) y los estados no cambian (.) tú qué piensas? (reading quietly)
		54	con las imágenes es más claro entenderlo (.) ves? (reading quietly) dice que los eventos son
		55	durativos como por ejemplo leer un libro como cantar una canción supongo no?

Note: T= turn; P=participant; and L=line

T	P	L	Gloss
15	A	52	OK (.) <i>so if they are events they are activities that's why I think that it says that events are</i>
		53	<i>dynamic</i> (.) and <i>states don't change</i> (.) what do you think? (reading quietly)
		54	with the images it's easier to understand (.) you see? (reading quietly) <i>it says that events are</i>
		55	<i>durative like for example to read a book such as to sing a song I assume no?</i>

It has been argued (see for example Gánem-Gutiérrez & Roehr, 2011; Gánem-Gutiérrez, 2008) that *discourse markers* (e.g., ok, all right, so, then, ahh! ¡bueno!) appear to be a recurrent semiotic tool while interlocutors are trying to understand something which is challenging for them, in this case, the contrast between events and states. One of these markers, ‘OK’, can play a dual role; on the one hand it can be a tool that helps to co-construct *intersubjectivity*, that is, to enable interlocutors to build up a shared perspective of a task or help ‘two voices coming into contact and interanimating one another’ (Wertsch, 1991; DiCamilla & Anton, 1997, p. 623). On the other hand, ‘OK’ can be a particle that brackets changes in understanding (microgenesis), see (Gánem-Gutiérrez & Roehr, 2011).

EXCERPT 2 B+S MGA

T	P	L	Transcription
1	B	1	OK (.) (reading quietly) vamos a ver (.) ¿tú le entiendes de qué es todo esto? (.)
		2	vamos a ver (reading quietly)

T	P	L	Gloss
1	B	1	OK (.) (reading quietly) <i>let's see</i> (.) ¿do you understand what is all this about? (.)
		2	let's see (reading quietly)

Another example of how discourse markers within learners’ languaging appear to signal changes in understanding, is presented in EXCERPT 3 B+S MGA, line 46, where the marker ‘*ahh*’ is signalling the participant is getting the point in question. This is immediately confirmed by her saying ‘I’m seeing it like you say’, ‘it’s clear in the picture’. These changes as expressed in their L1 ‘*ya le estoy agarrando la onda*’ (‘I’m starting to get it’), referring to the fact that they have noticed what the specific features that differentiate events from states are, in this case alluding to the difference between these two concepts discussed in the previous turns.

EXCERPT 3B+S MGA

T	P	L	Transcription
12	S	45	No (.) no lo había visto así (.) (reading quietly) si (.) si le estoy agarrando la onda (...)
		46	ahh (.) ya lo estoy viendo como dices (...) (reading quietly) está claro en la imagen (...) velo

T	P	L	Gloss
12	S	45	No (.) I hadn’t seen it like this (.) yes (.) I understand (...)
		46	ahh (.) <i>I’m seeing it like you say</i> (...) (reading quietly) <i>it’s clear in the picture</i> (...) <i>look at it</i>

Intersubjectivity has also been found to be crucial in helping learners orienting themselves towards a common goal, that is ‘creating an atmosphere of cooperation and

understanding that allows them to implement the task...’ (Gánem-Gutiérrez, 2004, p.24). Discourse markers (and phrases) which helped with creating an environment of confidence and mutual support among learners, thus supporting *intersubjectivity*, were found among the communicative thinking events. Some of these were ‘*let’s see*’, ‘*do you understand all this?*’, ‘*ok, let’s go slowly so we can read one by one*’ (see EXCERPT 4 B+S MGA), which in sum contributed to create an atmosphere of inter-reliance in each other allowing the participants to further their understanding of the target concepts.

EXCERPT 4 B+S MGA

T	P	L	Transcription
1	B	1	OK (.) (reading quietly) vamos a ver (.) ¿tú le entiendes de qué es todo esto? (.)
		2	<i>vamos a ver</i> (reading quietly)
2	S	3	Ok (.) <i>vamos a ir despacito para que podamos leer una por una</i> (reading quietly)

T	P	L	Gloss
12	B	1	OK (.) (reading quietly) <i>let’s see</i> (.) ¿do you understand what is all this about? (.)
		2	<i>let’s see</i> (reading quietly)
2	S	3	Ok (.) <i>let’s go slowly so we can read one by one</i> (reading quietly)

The previous excerpt shows how intersubjectivity was co-constructed and this might have played an important role in helping learners develop empathy and reciprocity while trying to understand and grasp the target concepts. For DiCamilla & Antón (1997) intersubjectivity has a special importance among semiotic tools as it is considered essential for successful collaborative activity as a strategic component for the co-construction of knowledge, regulation and scaffolding.

Play is another feature which can function as a mediational tool to build and/or strengthen intersubjectivity (Gánem-Gutiérrez & Gilmore, 2018). Swain (2013) argues that Vygotsky saw the two (emotions and cognition) as being inextricably interconnected; in other words, emotions are an integral part of cognition, interdependent and inseparable from it. My data, as evidenced in the focal CTEs, also shows instances of ‘play/joking’ language. I found instances of *play* that reflected a strong level of intersubjectivity and allowed participants to continue working on the tasks as well as enhancing their understanding of the concept. That is, through *play* participants (Belem and Shirley) were able to discern and clarify the concept of duration when discussing states as shown in

EXCERPT 4B B+S MGA in which, while trying to explain the idea of ‘states’, Belem jokes with Shirley and this seems to be effective for Belem to get the gist.

EXCERPT 4b B+S MGA

T	P	L	Transcription
16	S	56 57 58 59 60	Sí (reading quietly) eso es lo que aquí dice (...) que los eventos pueden durar (...) y los estados pueden ser permanentes como por ejemplo ser europeo (.) que es una nacionalidad (.) eso no lo cambiamos tan fácilmente y es algo que lo tenemos toda la vida (...) podemos tener otras nacionalidades (.) pero la que sea la nacionalidad es para toda la vida (.) una (.) dos (.) tres nacionalidades pero son para toda la vida (...) ¿como por ejemplo ser mexicano (...) es así no?
17	B	61 62	Bueno (...) si es un estado entonces es el ‘estado’ en el que uno se encuentra (.) ¿no? Puedo decir (.) ¿mi estado es estar enamorada?
18	S	63	Jajajajaja sí (.) yo creo que sí (...) jajajajaja
19	B	64	Ahorita no tengo novio (.) ehh? Jajajajaja sólo lo usé como ejemplo jajajajaja
20	S	65	Yo tampoco jajajajaja

T	P	L	Gloss
16	S	56 57 58 59 60	Yes (reading quietly) that is what it says here (...) that events can last (...) and states can be permanent like for example ‘to be European’ (.) that is a nationality (.) that we do not change so easily and is something that we keep all our life (...) we can have other nationalities (.) but whatever the nationality is it is forever (.) one (.) two (.) three nationalities but they are forever (...) like for example be Mexican (...) isn’t it?
17	B	61 62	Well (...) if it is a state then it is ‘the state’ in which we are (.) isn’t it? Can I say (.) my state is to be in love?
18	S	63	Hahahahah yes (.) I think so (...) hahahaha
19	B	64	Right now I don’t have a boyfrien (.) ehh? Hahahahaha I only used it as an example hahahaha
20	S	65	Me neither hahahahaha

Another linguistic feature among the semiotic tools used to co-construct knowledge which is associated to intersubjectivity is that of *joint attention*. As previously discussed, as *intersubjectivity* relies on empathy and reciprocity between learners collaborating together during verbalisation, *joint attention* helps to achieve intersubjectivity by focusing and orienting attention towards a common aim. Mechanisms that enable the achievement of *joint attention* include the use of language to point (deictics), this can sometimes be accompanied by pointing gestures. As Gánem-Gutiérrez & Gilmore (2018) highlight, “ ‘deictic’ (pointing) gestures seem to [help] interlocutors enhance comprehension and scaffold the co-construction of meaning by reducing ambiguity or referencing objects in the environment facilitating communication and leading to intersubjectivity and, ultimately, self-regulation” (p. 24). My data echoes such findings as evidenced in EXCERPT 5 B+S MGA where Belem uses language to point towards crucial information thus guiding her

partner, Shirley, to the definitions presented in the SCOBAs. *Joint attention* could eventually, and hopefully, lead to a better understanding of the SCOBAs' content.

EXCERPT 5 B+S MGA

T	P	L	Transcription
9	B	27	<i>Mira</i> (...) (reading quietly) (...) <i>aquí dice</i> (...) <i>aquí dice</i> (...) <i>que las situaciones pueden ser</i>
		28	<i>eventos y estados</i> (...) <i>¿tú lo sabías?</i> Yo no (...) primera vez que lo veo así (...) nunca se me
		29	había ocurrido de esa forma (...) yo pensaba que los verbos nadamás se referían a acciones y
		30	ya (...) nunca se me ocurrió que los verbos servían para señalar eventos ó estados (...) uno no
		31	piensa en esas cosas (...) cuando te explican las reglas gramaticales no vemos eso (...) yo sólo
		32	recuerdo haber aprendido las estructuras, como formar los tiempos gramaticales

T	P	L	Gloss
9	B	27	<i>Look</i> (...) (reading quietly) (...) <i>here</i> it says (...) <i>here</i> it says (...) <i>that situations can be events</i>
		28	<i>and states</i> (...) <i>did you know that?</i> I didn't (...) first time I see it like that (...) I have never
		29	thought about it in that way (...) I had only thought that verbs referred to actions and that was
		30	it (...) I never would have thought that verbs served the function to distinguish between events
		31	and states (...) you don't think of that (...) when we are taught the grammatical rules we don't
		32	see that (...) I only remember having learnt the structures, how to form the grammatical tenses.

As well as using language (and possibly gesture although this type of data is not available for my study) for achieving *joint attention* Belem is using *paraphrasing* as a mediational mechanism to help clarify the content of the SCOBAs and to invite or encourage her peer to *self-evaluate*. In other words, through languaging, Belem is activating awareness regarding the difference between events and states. In one single turn (9) of languaging (lines 27-32) Belem's speech demonstrates the power of languaging as she is combining different semiotic tools and mediational mechanisms (*joint attention, self-evaluation, paraphrasing*) in order to make the concepts understandable for both herself and her peer.

Another example of how learners can achieve *joint attention* can be illustrated through the data from Alexander and Oscar's languaging and is presented in EXCERPT 5 A+O MGA. In this example, they specifically allude to elements in the SCOBAs where Alexander urges Oscar to pay attention, i.e. 'mira' (look), 'dice' (it says), 'mira el cuadro' (look at the framework) so that they can better understand the target concepts.

EXCERPT 5 A+O MGA

T	P	L	Transcription
34	O	64	(reading quietly) real (...) sin límites (...) entonces ¿las situaciones <i>pueden verse así?</i> (...) ¿no?
35	A	65 66 67	si (...) <i>mira a los muñequitos</i> (...) aspecto no progresivo <i>dice que</i> es una situación sin límites (.) habitual (.) permanente (.) supongo que es algo que no tiene fin (...) es algo que pasa y no se sabe cuando termina (...) bueno eso creo (...)
36	O	68 69 70	Aspecto progresivo <i>dice</i> ‘mi hermana está trabando actualmente para la universidad (reading quietly) (...) dice que le imponemos límites (...) y <i>mira el cuadro</i> (.) <i>es como que se ‘encapsula’ en un determinado tiempo</i> (.) isn’t it?
37	A	71 72	<i>Sí</i> (...) <i>mira el de las cabecitas</i> (.) ahí dice que cuando hacemos ‘zoom’ le ponemos límites (reading quietly)

T	P	L	Gloss
34	O	64	(reading quietly) real (...) without limits (...) so then situations can be seen like that (...) isn’t it?
35	A	65 66 67	Yes (...) look at the figures (...) non progressive aspect says it says it’s a situation without limits (.) habitual (.) permanent (.) I suppose it’s something that does not have an ending point (...) it’s something that happens and it does not say when it ends (...) well that is what I think so (...)
36	O	68 69 70	Progressive aspect says ‘my sister is currently working for the university’ (reading quietly) (...) it says ‘we impose’ limits (...) and look at the framework (.) it looks as if it was encapsulated in a given point in time (.) isn’t it?
37	A	71 72	Yes (...) look at the heads, it says there that when we make ‘zoom’ we impose limits (...) (reading quietly)

Reasoning markers were another type of semiotic tools found among the languaging produced by the top scorers. Taking as a reference the taxonomy of Centeno-Cortés & Jiménez Jiménez (2004) in which they identified three different stages on participants’ reasoning process: *initiation*, *progression* and *conclusion* (cf. Section 3.3.5.3.1.), I analysed this aspect of the top scorers’ languaging. Centeno-Cortés & Jiménez Jiménez investigated the expressions learners of L1 Spanish verbalized while working on the resolution of problem-solving tasks, i.e. *¡Bueno!* (‘Well!’), *vamos a ver* (‘let’s see’), *entonces* (‘then/so’). Following their framework, I was able to trace which type of reasoning markers the top scorers relied on while initiating, progressing or concluding their process of thinking regarding the target forms. These semiotic tools were found in the CTEs particularly to indicate ‘initiation’ and ‘progress’. For instance, the use of the marker ‘ok’ was found in one of the previous excerpts (EXCERPT 2 B+S MGA) signalling the *initiation* stage. Moreover, EXCERPT 6 B+S MGA shows Belem using the marker ‘entonces’ (so/then) as signalling *progression* in trying to understand the difference between tense and aspect as she and her peer are looking at the SCOBAs. By doing so, the marker ‘entonces’ serves to allow for the continuation of the explanation Belem is providing to her mate. Even when top scorers were not asked deliberately to rely on

reasoning, they did so as they were encouraged to verbalise, which allowed them to put into practice effective reasoning while languaging. However, it is important to mention that using language for reasoning purposes can be taught through collaborative activity when learners face cognitive challenges as the work by Mercer, Wegerif, & Dawes (1999) demonstrates.

EXCERPT 6 B+S MGA

T	P	L	Transcription
8	B	20	<i>Entonces</i> (...) (reading quietly) <i>entonces</i> (...) el tiempo y el aspecto no son la misma cosa? (reading quietly) (...) al menos eso es lo que estoy entendiendo de las diapositivas (...) yo veo que son dos cosas (reading quietly) (...) pero van juntas (...) ¿tú no lo ves así?

T	P	L	Gloss
8	B	20	<i>So</i> (...) (reading quietly) <i>so</i> (...) aren't time and aspect the same thing? (reading quietly) (...) at least that is what I am understanding from the slides (...) I see that it's two things (reading quietly) (...) but they go together (...) don't you see it like that?

Given the nature of the pedagogical intervention, i.e., STI, and its reliance on explicit metalinguistic knowledge, *metalanguage* was unsurprisingly a key mediational mechanism through many languaging episodes identified in the CTEs. This can be seen in several of the excerpts which I have been referring to in this section; for instance in excerpts 1, 4 and 5 above Shirley and Belem use terms such as events, states, durative, etc. since those concepts appear on the SCOBAs and are becoming part of their vocabulary. This is particularly welcome because the participants are teacher trainees and technical language can become an important foundation for enhancing their language awareness in general and their metalinguistic awareness, in particular (see Andrews, 2007; Roberts, 2011, for example). The languaging activity observed between Shirley and Belem shows how these participants used metalanguage to co-construct a common space where language of their future occupation as L2 teachers is allowing them to gain increasing knowledge of a challenging concept. An ultimate goal of supporting metalinguistic awareness for L2 teachers is that their understanding of language would eventually transfer into better pedagogical practice. This is not to suggest that technical language is necessarily used or essential in the L2 classroom, but by having more accurate and deeper knowledge themselves teachers might be able to provide more accessible explanations or activities to

their learners to hopefully become better users of the L2. In this context, I would like to argue that excerpts such as EXCERPT 10 below represent a positive step forward.

EXCERPT 10 B+S MGA

T	P	L	Transcription
9	B	31	(...) <i>cuando te explican las reglas gramaticales no vemos eso (...) yo sólo recuerdo haber</i>
		32	<i>aprendido las estructuras (.) como formar los tiempos gramaticales (...)</i>

EXCERPT 10 B+S MGA

T	P	L	Gloss
9	B	31	(...) <i>when you are explained the grammatical rules we don't see that (...) I only remember</i>
		32	<i>having learnt the structures (.) like forming the grammatical tenses (...)</i>

This excerpt shows that with our case study participants at least there is some evidence that the teachers -to -be have begun to realize differences between the type of pedagogical explanations they had been exposed to before and what approaches such as the ones derived from cognitive linguistics (as was the case in the SCOBAs designed for this study) have to offer. Thus, we see Belem externalizing an awareness of ‘grammatical rules’ as simply facilitating ‘learning the structures’ to conjugate verbs. For further discussion on similar issues contrasting the use of discrete pedagogical grammar rules versus the type of approach adopted in this study see Fernández (2011) Gánem-Gutiérrez (2016); and Niemeier & Reif (2008) among others.

A further characteristic evident throughout the languaging of participants was what Gánem-Gutiérrez & Gilmore (2018, p. 31) refer to as *thinking space*, those moments during dialogic activity where participants either take and/or give time to themselves or others to reflect on the task at hand. These moments, shown in the transcripts as pauses (...), seem to be important and tend to appear prior to paraphrases and elaborations based on what the participants are reading or looking at on the slides.

Finally, I would like to conclude this exploration of the top scorers’ languaging by looking at their regulatory patterns and sub-stages: *object regulation*, *other-regulation* and *self-regulation* (Lantolf & Thorne, 2007). *Object-regulation* was evident when participants were dependent on the SCOBAs for understanding and focusing their attention to gain knowledge. As participants were working together with their peers to accomplish the tasks,

they sometimes had to rely on *other-regulation* as well to help each other understand better. Finally, the fact that learners (at least the ones who appeared to have benefited from pedagogical intervention) were able to show a better understanding of the target concepts during post-test stages suggests that *self-regulation* (Lantolf & Thorne, 2007, pp. 202-207) was achieved.

EXCERPT 7 B+S MGA below illustrates *object-regulation* and *other-regulation* patterns. The excerpt shows how, by relying on the SCOBAs and, more specifically in this instance, on the diagrams and explanations on the slides, Shirley and Belem were able to understand some differences between events and states. Crucially, they also depended on each other and helped each other throughout this process. In turn 12, the particle ‘ahh’ suggests a change in understanding (see use of *discourse markers* above); importantly, lines 45 and 46 suggest that Belem had previously helped Shirley (‘I hadn’t seen it that way’, ‘as you say, I can see that now’). They are both still reliant on both the diagrams and language (e.g., paraphrasing, re-reading) and on each other as regulatory mechanisms and aids supporting their reasoning and understanding. There are further and very explicit allusions to the value of the SCOBAs within this process, e.g., line 54 in turn 15 when Belem refers to the fact that ‘the images make it clearer’. This turn also suggests that Belem might be able to start transferring knowledge by expanding on the examples of verbs illustrating events (‘for instance reading a book’, ‘sing a song’); this in turn, could be argued to be an instance of microgenesis, particularly because we know her post-tests results show improvement over the pre-test.

EXCERPT 7 B+S MGA

T	P	L	Transcription
12	S	45	No (.) no lo había visto así (.) (reading quietly) si (.) si le estoy agarrando la onda (...)
		46	<i>Ahh</i> (.) <i>ya lo estoy viendo como dices</i> (...) (reading quietly) <i>está claro en la imagen</i> (...) velo
		47	(...) <i>lo dice claramente</i> (...) <i>cuando no hay cambio en la acción ó evento como que se cierra</i>
		48	<i>el cuadrito del diagrama</i> (.) no lo ves así? Supongo que eso significa que el evento es estático
		49	oséa que no cambió (...) bueno... eso creo... bueno, así lo veo.
13	B	50	Sí (...) pudiera ser así (...) ¿por qué no? Yo creo que sí (...) (reading quietly)
14	S	51	<i>Mira</i> (.) <i>según ésto</i> (.) <i>los verbos nos indican eventos y estados</i> (reading quietly)
15	B	52	OK (...) entonces (.) si son eventos son actividades por eso supongo que dice que los eventos
		53	son dinámicos (...) y los estados no cambian (...) ¿tú qué piensas? (reading quietly)
		54	<i>Con las imágenes es más claro entenderlo</i> (...) ¿ves? (reading quietly) <i>dice que los eventos</i>
		55	<i>son durativos</i> (.) como por ejemplo leer un libro, como cantar una canción supongo, no?

T	P	L	Gloss
12	S	45	No (.) I haven't seen it like this (.) yes (.) <i>I understand (...)</i>
		46	<i>Ahh (.) I'm seeing it like you say (...)</i> (reading quietly) <i>it's clear in the image (...)</i> look at it
		47	<i>(...) it says it clearly (...)</i> when there isn't change in the action or event it's like if the frame
		48	in the diagram was closed (.) don't you see it? I suppose that it means that the event is static
		49	meaning it did not change (...) well (...) that is what I think (...) well, that's how I see it
13	B	50	Yes (...) it could be (...) why not? I think so (...) (reading quietly)
14	S	51	<i>Look (.) according to this (.) verbs indicate events and states</i> (reading quietly)
15	B	52	Ok (...) so (.) if they are events they are activities that's why I suppose that's why it says
		53	events are dynamic (...) and states don't change (...) what do you think? (reading quietly)
		54	<i>With the images is clearer to understand it (...)</i> you see? (reading quietly) <i>it says events are</i>
		55	<i>durative (.)</i> like for example to read a book, like sing a song I suppose, isn't it?

Although, as I have remarked above, it is not quite possible to provide unequivocal evidence of *self-regulation*, there are some signs that the potential for achieving that is present in the data. This appears to be the case for Shirley, at least to some degree, when we look at EXCERPTS 8 B+S MGA and 9 B+S MGA. Shirley and Belem are focusing on tense and aspect and throughout these turns, Belem is simultaneously gaining understanding herself through the SCOBAs and providing strong other-regulation to Shirley (lines 73-76). In line 77, Shirley appears to respond to Belem's help by realizing that grammar is used to convey one's perspective on an event: "with the form of the verb? you mean if it is *ing* or simple past or something like that?" Then, particles "aha (...) aha" in line 84 suggest she might be experiencing understanding, but she continues reading quietly.

EXCERPT 8 B+S MGA

T	P	L	Transcription
26	S	71	Los tiempos (...) (reading quietly) (...) ok ya sé esto (...) pasado simple, progresivo, perfecto
		72	(...) mmhhh (reading quietly)
27	B	73	(reading quietly) (...) <i>ahh ok (...)</i> ok (...) <i>mira (...)</i> <i>ésto es de como vemos la diferencia</i>
		74	<i>entre el tiempo y el aspecto (...)</i> <i>aspecto es más (...)</i> <i>aquí dice que aspecto tiene que ver más</i>
		75	<i>con la visión y la perspectiva que tenemos de los verbos (.)</i> (reading quietly) <i>pero la</i>
		76	<i>perspectiva la indicamos con la forma del verbo (...)</i>
28	S	77	<i>¿Con la forma del verbo? Oséa ¿si es ing ó pasado simple ó así?</i>
29	B	78	<i>Bueno (...)</i> <i>eso es lo que entiendo (...)</i> éso es lo que dice aquí (...) <i>mira (...)</i> <i>aquí lo dice (...)</i>
		79	<i>yo creo que a eso se refiere (...)</i> (reading quietly)
30	S	80	<i>Sí (...)</i> todas las diapositivas dicen eso (...) sí (...) tiempo es el presente (.) pasado (.) futuro
31	B	81	<i>Sí (...)</i> <i>el tiempo, es el tiempo cuando pasaron las cosas (...)</i> <i>y el aspecto nos da la</i>
		82	<i>perspectiva (...)</i> <i>oséa que podemos tener presente ó pasado con progresivo que se refiere a</i>
		83	<i>que las cosas estuvieron sucediendo –en acción en el pasado (...)</i>
32	S	84	<i>Ajá (...)</i> <i>ajá (...)</i> (reading quietly)

T	P	L	Gloss
26	S	71 72	The tenses (...) (reading quietly) (...) ok I know this (...) simple progressive perfecto past (...) mmhhh (reading quietly)
27	B	73 74 75 76	(reading quietly) (...) <i>ahh ok</i> (...) ok (...) <i>look</i> (...) <i>this is how we see the difference between time and aspect</i> (...) <i>aspect is more</i> (...) <i>here says that aspect has to do more with the view and perspective we have from verbs</i> (.) (reading quietly) <i>but the perspective we indicate it with the form of the verb</i> (...)
28	S	77	<i>with the form of the verb? You mean ¿if it is ing or simple past or something like that?</i>
29	B	78 79	<i>Well</i> (...) <i>that is whai I understand</i> (...) that's what is says here (...) <i>look</i> (...) <i>it says it here</i> (...) <i>I think that's what it refers to</i> (...) (reading quietly)
30	S	80	<i>Yes</i> (...) all the slides in the tutorial say that (...) yes (...) tense is present (.) past (.) future
31	B	81 82 83	<i>yes</i> (...) <i>tense is when things happen</i> (...) <i>and the aspect gives us the perspective</i> (...) <i>meaning we can have present or past with progressive which refers to the things that were happening –taking action in the past</i> (...)
32	S	84	<i>aha</i> (...) <i>aha</i> (...) (reading quietly)

Some turns later, further characteristics of what Gánem-Gutiérrez (2003) and others have argued to be signs of microgenesis (see also Lantolf & Thorne, 2006, p. 52) are in evidence. Particle ‘aha’ is uttered again, followed by an overt expression of understanding regarding tense and aspect.

EXCERPT 9 B+S MGA

T	P	L	Transcription
46	S	112 113	<i>aja</i> (...) esto está claro (...) lo de los tiempos (.) como los usamos (...) eso lo entiendo bien (...) y lo del aspecto igual ya está un poco más claro (...) ni idea de qué era eso! (reading quietly)

EXCERPT 9 B+S MGA

T	P	L	Gloss
46	S	112 113	<i>aha</i> (...) that's clear (...) tenses (.) how we use them (...) I understand that well (...) and aspect is also clearer (...) I didn't have a clue as to what that was! (reading quietly)

Similar patterns of such a regulatory journey from *object* and *other-regulation* to at least the path to *self-regulation* were observed in the languaging of other participants who were among the highest scorers. EXCERPT 9 A+O shows that by simply using synonyms, Alexander (the second highest scorer) is able to help his colleague Oscar understand key terms appearing on the SCOBAs.

EXCERPT 9 A+O MGA

T	P	L	Transcription
16	O	34	(reading quietly) <i>mh es que éso de durativo y transitorio es lo que veo como que me confunde</i> (.)
17	A	35 36	Pero si esta claro (...) transitorio algo que es temporal (...) permanente algo que es para siempre (...)
18	O	37	Bueno (...) si es así como me lo explicas pues como que ya va tomando sentido (...)

T	P	L	Gloss
16	O	34	(reading quietly) mmhhh that durative and transitory thing is what makes me confused (...)
17	A	35 36	But if it is clear (...) transitory is something that is temporal (...) permanent something that is forever (...)
18	O	37	Well (...) if it is like that as you are explaining it to me now it starts making sense to me (...)

In lines 41-42, Oscar asks Alexander for further help since the former is experiencing difficulties with other concepts on the slides. In this instance, Alexander is not as confident and appears to be using specific mechanisms, e.g., re-reading quietly and paraphrasing, to try and understand himself (turn 21). What is of particular interest here is that these turns show the interdependence brought about by collaboration and peer-peer dialogue which has been considered such an important developmental mechanism within Sociocultural theory (Kowal & Swain, 1997; Swain & Lapkin, 2001), particularly so when learners are engaged in problem-solving as is the case in the instance below.

EXCERPT 9b A+O MGA

T	P	L	Transcription
20	O	41 42	Oye (...) ¿ya viste éso de marcadores de tiempo de estados existencial? ¿qué es eso? Nunca lo había visto así (...) es el pasado (.) isn't it?
21	A	43 44 45	(reading quietly) (...) parece que está explicando como se forma el pasado (...) como que los tiempos del pasado son irreales (...) como que si ya no existen mas (...) ¿es obvio no? Pero cuando lo hablamos no lo pensamos así (...) ¿verdad?
22	O	46 47	Sí (...) es cierto (...) hablamos y no nos damos cuenta de que es algo que ya no existe (...) como dice aquí (...)

EXCERPT 9b A+O MGA

T	P	L	Gloss
20	O	41 42	Hey (...) have you seen those markers of tense of states existential? What is that? I have never seen it like that (...) it is the past these (.) isn't it?
21	A	43 44 45	(reading quietly) (...) it seems that it is explaining how the past tense is formed (...) like if the past tenses were unreal (...) like if they did not exist anymore (...) is kind of obvious isn't it? But when we speak it we don't think about it like that (...) do we?
22	O	46 47	Yes (...) it's true (...) we speak and we do not realize that it is about something that does not exist anymore (...) like it says it here (...)

The case of Alexander and Oscar is also interesting because it involved a rather asymmetrical partnership where Alexander was constantly stronger than Oscar, but the continued willingness of the former to assist and help his partner also paid dividends to himself. Alexander seemed to have been particularly sensitive and aware of his peer's needs. He constantly tried to interpret meaning and make connections across the target concepts as well as his own experience so his partner could understand (see Lantolf &

Poehner, 2014, p. 161). Due to space constraints I cannot elaborate on further examples, but such instances are available in the protocol reproduced in Appendix 15.

In sum, it could be said that the potential of verbalisation or *linguaging* as a developmental mechanism in interaction can be observed in dialogic activity. The data presented in this section attests, and provides further evidence, of specific mediational tools and mechanisms which have been identified in the Sociocultural theory tradition as key, e.g., *discourse markers*, *reasoning markers*, *play*, and *metalinguage*. It has been argued that the use of such mechanisms enables L2 learners to work towards *joint attention* and *intersubjectivity* which, in turn, will hopefully lead to (self-) *regulation* and the ultimate goal of pedagogy, *internalisation* of knowledge. In this particular study, this referred to explicit knowledge regarding the concepts of tense and aspect. The specific role of such knowledge for L2 use as such is currently the topic of important debates in the field of second language acquisition (see, for example, Roehr-Brackin, 2018). However, I would like to argue here that whatever the potential role of explicit knowledge about language might be in terms of actual L2 performance, for participants such as the ones that took part in this study (teacher trainees), such knowledge is essential.

I would like to conclude this chapter by highlighting some of the general characteristics observed in the linguaging activity of my top scorer participants and which have been previously hailed as important in the literature (Lantolf, 2007; Lantolf, 2011; van Compernelle, 2015; van Compernelle & Williams, 2013). More specifically, two essential traits of potentially successful *linguaging* in interaction are what Lantolf (2007; 2011) refers to as ‘active reception’ and participation and to achieve that participants need to:

- a) Show commitment and orientation to the task in hand;
- b) Express intentionality; this can be achieved by explaining reasons for actions;
- c) Show general willingness, e.g. making efforts to elaborate on comments;
- d) Show willingness (and ability) to engage in metacognitive activity, normally achievable through reflection on task and action;
- e) Make efforts to assign relevance and significance to things and events.

Both quantitatively and qualitatively, the results drawn from this study appear to suggest that STI with all its components (SCOBAs, and verbalisation –in both forms, i.e. communicated thinking and dialogic thinking) contributed to enhance learners' (EFL teacher trainees) knowledge of the target forms and concept: tense and aspect. In the final chapter of this thesis, I will reflect on the pedagogical implications of my study and provide an overall conclusion. Some important limitations will be also outlined.

Chapter 5. Conclusions

Introduction

This chapter is organized on the basis of the general findings and discussion drawn from the three research questions. I will first proceed to delineate in Section 5.1. the Pedagogical Implications following the thread of the three RQs. Section 5.2. will lay out the limitations of the study and possible recommendations for further research.

5.1. Summary of Findings and Pedagogical Implications

5.1.1. The potential effectiveness of STI to enhance metalinguistic knowledge

A key theoretical assumption underpinning Sociocultural Theory is that knowledge is not exclusively created in the mind, but is the result of human social interaction with the environment (Vygotsky, 1986). Under this premise, Gal'perin's pedagogical model, STI, was developed to mediate the internalization of material actions as a pathway towards cognitive development (Arievitch & Haenen, 2005).

Aiming to foster cognitive development, i.e. metalinguistic knowledge, language use in context and pedagogical thinking regarding the concepts of tense and aspect, I followed a methodological approach which implemented the complete cycle of STI, something which to my knowledge had not been conducted in published L2 research to date. Thus, the ultimate goal was to support participants' cognitive development through the internalisation of conceptual meanings (and its connectedness to developing forms) which as Negueruela-Azarola (2003) suggests lead to a transformative learning process (p. 457). In achieving this goal, participants worked on the three phases that STI suggests (*cf. Section 2.3.3.*) 1) materialisation through the SCOBAs, 2) verbalisation (individually and collaboratively); and 3) internalisation which from the results obtained seems to have had a positive effect on participants.

The results showed that STI contributed to the development of metalinguistic knowledge and, hopefully will eventually help participants fully internalise this knowledge

for accurate use of the target forms. Having received instruction on the basis of ‘minimal-conceptual-units’, materialization and verbalisation contributed substantially to participants’ performance regarding the target concepts. As the principles of SCT underline, mediation enabled interaction and explanation and in due course internal conceptual understanding translated into a *transformative* event leading to internalization (Negueruela-Azarola & García, 2016, p. 264).

These results therefore suggest that STI could be implemented as an effective tool to teach metalinguistic knowledge which can be particularly important in teacher education. Mediation carried out through materialization and verbalisation phases seems to have provided participants with different degrees of support for fostering language learning at a metalinguistic level.

5.1.2. The potential effectiveness of STI to enhance pedagogical practice

Pedagogical thinking was definitely one feature among participants that was influenced positively by intervention with STI. This was certainly evident among participants’ pedagogical performance measured through their lesson plans activity. Given that the participants will be future language teachers, testing the effectiveness of STI to explore how they would transfer the newly acquired concepts into their pedagogical thinking through the lesson plans was particularly relevant. In so doing, participants had ample opportunity to interact with their peers putting into practice the principles led by mediation through the materialisation of the concepts and verbalisation. With this evidence, we witnessed how STI can serve to tackle crucial aspects in the teacher training process for instance, to train participants to understand and use key grammatical knowledge, at the same time as they practise applying that knowledge to their pedagogical thinking. These results are particularly relevant because pedagogical knowledge/thinking was only expected to happen incidentally; this renders STI as a promising mechanism to help learners transfer this type of knowledge to a pedagogical plane.

Another key point to bear in mind, is the fact that, the most pervasive concepts, are found in language, i.e. lexical, figurative -metaphor, metonymy, grammatical meanings,

such as tense, aspect, mood, voice and anaphora (Lantolf, 2011, p.32), and STI has seemed to prove effective in teaching specifically. Scientific knowledge (concepts) are appropriated through “the intentional introduction of signs... designed and introduced by an external agent” such as a teacher and these are crucial for potential language teachers to master (ibid). Undoubtedly, STI as a pedagogical approach allowed us to evaluate the effectiveness of teaching grammatical concepts on the basis of mediation through materialization, (SCOBAs, i.e. imagery, diagrams) and verbalisation that enabled participants to grasp abstract and complex concepts. We evidenced the importance of bringing these mediation tools into pedagogical practice. Traditional instruction needs to explore novel pedagogical approaches to move beyond the conventional in search of alternative effective ways of teaching, as we aimed. As Gánem-Gutiérrez (2016) suggested, STI/CBI allow us to a non-linear approach to explicit L2 input and thus move away from presenting discrete pedagogical grammar rules in a sequential way which assumes that learning will take place in a relatively linear, cumulative manner (e.g. the preterite presented before the imperfect, followed by contrasts between the two forms).

However, it has also been acknowledged in this thesis that promising as STI appears to be (at least as implemented in studies to date), there continues to be a need to further explore -both methodologically and practically- how we can design, use and implement SCOBAs and verbalisation to foster the mapping of form and meaning for communicative purposes. Two specific suggestions are: (1) to create SCOBAs which target the explicit understanding of grammar at a conceptual level, and which is what most scholars have done to date, and to complement these with SCOBAs which are specifically used to mediate the transfer of conceptual understanding to accuracy in form. This was pioneered by Negueruela-Azarola (2003) to some extent, but further work needs to be done; (2) to use SCOBAs of the type developed for this study to help L2 learners and L2 teacher trainees grasp the relevant concepts and help them see form-meaning relationships at an explicit level, but then make use of the kind of practice which has been implemented through different pedagogical models see (DeKeyser, 2007b; Richards, 2002) in order to achieve the kind of automatization necessary to succeed in communication, particularly during conversation when L2 users ultimately need to convey their meaning accurately and in real time to succeed. These considerations inevitably require experimental work in order for

scholars and educators to ascertain whether or not use of SCOBAs within an STI programme help to accelerate the process, which is clearly a key goal for instruction in the L2 classroom.

Our study represents an example of how we can make changes in the language classroom and, importantly, of how we can implement the full STI cycle. This allowed us to gain further evidence of its potentials in terms of explicit, metalinguistic knowledge development. Pedagogical practice can be taken to the next level, the level in which we do not necessarily have to follow sequential pre-established ways of teaching (at least not exclusively), but where teachers can explore and innovate ideally pushing creativity to develop approaches that ultimately lead to language use in real-time.

5.1.3. STI and verbalisation: Microgenesis affordances

Microgenesis affordances resulting from the verbalisation phase were perhaps the most insightful data gathered through the study as they revealed in detail the 'moment-to-moment- co-construction' of knowledge among participants. The verbalisation phase which entailed collaborative work, seemed to have been very important in activating the most effective use of semiotic tools. This seems to have allowed participants to gain a deeper level of understanding by externalising their thoughts, exploring and discussing the target concepts while internalising them. It all seemed that while being able to complete the whole Gal'perian cycle (materialization, verbalisation, and internalisation) participants worked with their peers promoting the semantic understanding of the abstract concepts as evidenced in the level of collaboration they achieved and their results during the post and delayed tests.

Languaging as a developmental mechanism in interaction was a very powerful mediation tool as it allowed participants to deploy their understanding through the diverse semiotic tools they relied on. Relying upon *discourse markers*, *reasoning markers*, *play* and *metalinguage* paved the way to deploying mechanisms enabling *joint attention* and *intersubjectivity* allowing participants to attain self and other *regulation* and ultimately

internalization of the target concepts of tense and aspect. It could be said that what Lantolf (2011; 2007) alludes to as ‘active reception’ which implies in general terms, awareness, commitment, empathy and willingness to learn were activated and reflected in the top scorers’ achievements and the amount and type of languaging they engaged in. These elements were particularly evident throughout the microgenesis affordances found. The microgenetic analyses also confirmed the effectiveness of STI as a promising pedagogical model when implemented in full. That is, in order to gain maximum benefit from STI, the whole pedagogical cycle should be implemented; this observation is especially pertinent because previous work in this area has been primarily concerned with either the use of SCOBAs and/or verbalisation, but not necessarily both as envisaged by Gal’perin (see *cf.* Section 2.3 for details).

5.2. Limitations of the study and recommendations for further research

The overall goals of the study were achieved. Nonetheless, this study inevitably has various limitations. As mentioned above, two important contributions of my project were that (a) I was able to compare STI with instruction as it is typically implemented in the context of my study, i.e., traditional instruction at the University of Quintana Roo; and (b) unlike previous STI/CBI research, I implemented the full STI cycle. The latter aspect had implications such as some participants dropping out, which resulted in uneven sets of data. Somewhat linked to this and notwithstanding the fact that the number of participants in this study was larger than in previous, similar, studies, an even larger pool would have strengthened the design. Having drawn the participants from three different levels/semesters at some point resulted in very small samples for statistical analyses which did not allow to further inferences. However, with the number of participants in the study it was possible to identify that the ones who most benefited from STI/CBI intervention were the most advanced ones, i.e. 9th semester. It would, therefore, be worth replicating the study with similarly advanced levels. Unfortunately, time and resource intensive projects such as this lead to certain constraints. There is no doubt that, conducting further comparisons (e.g. including whole cohorts at each level) as well as implementing STI during longer periods (e.g., a full academic year) may provide more insights and evidence towards the potentialities STI could bring to the field of ELT. Hopefully, my study will inspire

colleagues at the University of Quintana Roo and elsewhere to try out the pedagogical model as an intrinsic part of their curriculum and maybe get engaged in action research to further ascertain the potential value of STI.

The project focused exclusively on enhancing metalinguistic knowledge and so it is evident that regarding language use, my study did not provide much insight. We conclude in this respect, that a noticeable limitation of the methodological design was the lack of focus on activities aiming to enhance language use in context. The SCOBAs used for the materialisation phase were mostly oriented towards the concepts of tense and aspect from a metalinguistic approach and participants did not have any chance to practise the use of the target forms as such. Thus, I believe that not having implemented activities/tasks specifically oriented towards this type of activity resulted in a limited transfer of knowledge. This is something which can be addressed in further studies in order to help learners improve both their metalinguistic knowledge as well as their ability to become increasingly accurate in their use of the forms; clearly, the ultimate aim of L2 learning and teaching.

Another limitation found in the study is that the case studies where I conducted microgenetic analyses were only centred on the top scorers. This was primarily due to practical constraints in relation to time and writing space. It would, therefore, be important to conduct similar analyses of low scorers in future so that pertinent comparisons can be made.

My project only included the concept of tense/aspect in relation to present perfect, past continuous and simple past. We need to know whether or not STI can be as useful for learning/teaching other language features. A similar observation can be made regarding the potential contribution of Cognitive Linguistics for providing key input in the development of pedagogical materials.

Thus, among the recommendations for further research drawn from this study is that of the need for activities/tasks (based on the principles of STI) oriented towards the development of the target language concepts for use in context. The concepts of tense and aspect have been the central debate on an ample array of studies from different theoretical

approaches (for example, Bardovi-Harlig, 1995; Matsumoto & Dobs, 2017; Gaspar-García, 2012; Roberts & Liszka, 2013; Collins, 2007, etc.); however, there is still room for more research on these topics, as the need is also regarding their use in context but from an STI perspective. On this respect, Robinson, Cadierno, & Shirai (2009) have worked on the development of increasing task demands (high vs. low) and how these have promoted the use of tense-aspect morphology towards a more target-like-use of lexicalization patterns. Although Robinson et al's. (2009) proposal was for a specific type of instruction (conceptually demanding tasks) their proposal could serve as a model that may be suitable to adapt within the STI criteria developed on the basis of SCOBAs and activities encouraging verbalisation. We have taken the study by Robinson, Cadierno, & Shirai (2009) as an example, as task-based instruction has at its heart communication and interaction and could therefore represent an avenue for building upon *linguaging* premises.

As recommendations for further research, I would like to conclude with what I consider to be a first step to (a) start disseminating my research results among colleagues to create awareness of this alternative pedagogical approach and its potential benefits; and (b) simultaneously begin to promote the idea of considering action research. First of all, invited my colleagues (teacher trainers) to a presentation of my research results and they immediately became very interested, asking for information about the model and details about its possible implementation. Secondly, I have begun to promote action research (by inviting colleagues to become engaged in such a process) while attending a workshop with teacher trainees from 9th and 7th semesters of the Bachelors in English Language at the University of Quintana Roo (where the study took place two years ago). The participants (N=40) are studying pedagogical grammar and practicum. In answer to my initial question: "do you know the difference between tense and aspect?", all of them answered 'no'. I then proceeded to introduce STI and exemplify the model with relevant materials.

The two-hour workshop focused on a single conceptual unit: tense and aspect. I gave them the tutorials with SCOBAs and asked them to verbalise with their peers for 25 minutes; participants were divided into control and experimental groups. After they finished the materialization and verbalisation phases (altogether) I asked the initial question again. The control group participants were not able to explain the concept of aspect; they

were just able to quote grammar rules from what they remembered. By contrast, about a dozen participants from the experimental group managed to provide fuller explanations of the concept of aspect and demonstrated a clear grasp of key issues such as the importance of speaker's view on a given situation and verbal differences, e.g., events versus states. At the end of the workshop more than one participant approached me and asked to me for more information, and a few of them expressed a strong interest for further information and advice.

Through this mini-training/workshop I have succeeded in creating interest among fellow practitioners who are willing to take this further and shown an interest in learning more about the approach so that they can consider trying it out with their students. This is particularly important as the initiative also represents an opportunity to potentially work with in-service teachers who have not had access to pedagogical alternatives for some time. Being a leading higher education institution in the state of Quintana Roo, we are placed in a particularly strong position to inspire innovation in current professional practice. It has to be acknowledged, of course, that the findings of my study and those of preceding ones which inspired it must be read cautiously given their limitations, but the research designs are becoming more robust. We now need to ensure further attention is given to the question of transfer from conceptual understanding at a metalinguistic level to the production and use of L2 in communicative activity.

Finally, as a current teacher educator, I strongly advocate to continue exploring the implementation of STI as a potentially effective pedagogical approach to enhance the teacher training process. Throughout the exploration of the literature and from the experience drawn from this study, I have confirmed that it could contribute to the expansion of knowledge on any topic we educators aim to teach. Its completeness with its full cycle of mediation forms (materialisation, verbalisation and internalisation) promises to maximise the potentialities a learner can bring to the classroom.

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Appendixes

Appendix 1. Bachelors in English Language Programme layout

1	2	3	4	5	6	7	8	9	10
AG-107 LOGICA S/R Cred.6	ACPLE-107 IDIOMA INGLÉS I S/R Cred.12	ACPLE-108 IDIOMA INGLÉS II REQ: ACPLE-107 Cred. 12	ACPLE-109 IDIOMA INGLÉS III REQ. ACPLE-108 Cred. 12	ACPLE-110 IDIOMA INGLÉS IV REQ. ACPLE-109 Cred. 12	ACPLE-111 IDIOMA INGLÉS V REQ. ACPLE-110 Cred. 12	ACPLE-112 IDIOMA INGLÉS VI REQ. ACPLE-111 Cred. 12	ACPLE-113 IDIOMA INGLÉS VII REQ. ACPLE-112 Cred. 6	ACPLE-114 IDIOMA INGLÉS VIII REQ. ACPLE-113 Cred. 6	ACPLE-154 SEMINARIO DE TITULACIÓN S/R Cred. 5
AG-109 MATEMÁTICAS S/R Cred. 7	ACPLE-138 GRAMÁTICA DEL ESPAÑOL S/R Cred. 6	ACPLE-117 ESCUCHAR Y HABLAR EN INGLÉS REQ. ACPLE-107 Cred. 10	ACPLE-118 LEER Y ESCRIBIR EN INGLÉS REQ. ACPLE-117 Cred. 10	ACPLE-140 FILOSOFÍA DE LA EDUCACIÓN REQ. ACPLE-109 Cred. 8	ACPLE-141 TECNOLOGÍA EDUCATIVA REQ. ACPLE-140 ACPLE-110 Cred. 6	ACPLE-142 MET. TCA\$. ENSEÑ. DEL INGLÉS REQ. ACPLE-111 Y ACPLE-140 Cred. 7	ACPLE-143 ELAB. MAT. DIDÁCTICO REQ. ACPLE-112 Y ACPLE-142 Cred. 6	ACPLE-144 PRACTICA DOCENTE I REQ. ACPLE- 113 Cred. 4	ACPLE-145 PRACTICA DOCENTE II REQ. ACPLE- 144 Cred. 4
AD-146 PRINCIPIOS DE PSICOLOGÍA CONT. S/R Cred.8	AD-145 LITERATURA UNIVERSAL CONT. S/REQ. Cred. 8	ACPLE-139 TALLER AVANZADO DE REDACCIÓN REQ. ACPLE-138 Cred.6	ACPLE-129 LINGÜÍSTICA GENERAL REQ. ACPLE-108 Cred. 8	ACPLE-130 PSICOLINGÜÍSTICA O ACPLE-132 MORFOLOGÍA REQ. ACPLE-129 Cred. 8	ACPLE-131 SOCIOLINGÜÍSTICA O ACPLE-133 SEMÁNTICA REQ. ACPLE-130 Cred: 8	ACPLE-130 TRADUCC. I REQ. ACPLE-111 Cred. 6	ACPLE-151 TRADUCC. II REQ. ACPLE-112 Y ACPLE-150 Cred. 6	ACPLE-152 TRADUCC. II REQ. ACPLE-113 Y ACPLE-151 Cred. 6	ACPLE-153 TRADUCC. II REQ. ACPLE-114 Y ACPLE-152 Cred. 6
						ACPLE-125 L. FRANCÉS I S/R Cred. 6	ACPLE-126 L. FRANCÉS I REQ. ACPLE-125 Cred. 6	ACPLE-127 L. FRANCÉS I REQ. ACPLE-126 Cred. 6	ACPLE-128 L. FRANCÉS I REQ. ACPLE-127 Cred. 6
AD-142 METODOLOGÍA DE LA INVESTIGACIÓN EN CIENCIAS SOCIALES Y HUM S/R Cred.6	AD-143 SOCIEDAD Y CULTURA EN EL MÉXICO CONTEMPORÁNEO S/REQ. Cred. 6			ACPLE-134 GRAMÁTICA DEL INGLÉS I REQ. ACPLE-109 Cred. 7	ACPLE-135 GRAMÁTICA DEL INGLÉS II REQ. ACPLE-134 Cred. 7	ACPLE-136 FONOLOGÍA Y FONÉTICA DEL INGLÉS REQ. ACPLE-111 Cred. 7	ACPLE-137 ANÁLISIS COMPARAT. ESP-INGLÉS REQ. ACPLE-135 Y ACPLE-138 Cred. 7	ACPLE-148 LITERATURA I REQ: ACPLE-113 Cred. 7	ACPLE-149 LITERATURA I REQ. ACPLE-148 Cred. 7
AG-108 ESCRITURA Y COMPRESIÓN DE TEXTOS S/R Cred.6					AG-111 SEMIN. DE PROBLEMAS REGIONALES REQ: 143 CRED. Cred. 8		ACPLE-147 VIDA Y CULT. EU Y GRAN BRETAÑA REQ. ACPLE-112 Cred. 8	ACPLE-146 HIST. DE LA LENGUA INGLESA REQ. ACPLE-113 Cred. 7	AG-110 ÉTICA REQ-173 CRED. Cred. 6
AG-151 INGLÉS INTRODUCTORIO S/R Cred.6	AG-152 INGLÉS BÁSICO REQ: AG-151 Cred.6	AG-153 INGLÉS PRE-INTERMEDIO REQ: AG-152 Cred.6	AG-154 INGLÉS INTERMEDIO REQ: AG-153 Cred.6	***PET	PET	***FCE	FCE	***CAE	
39	38	34	36	35	41	32	33	30	28
TOTAL DE CRÉDITOS: 335 *** A partir de la generación 2003									

Appendix 2. Teacher's manual Grammar Rules

3 GRAMMAR FOCUS

Learning objectives: practice talking about the past; ask and answer questions using *Wh*-questions with *was/were* and *did*

 [CD 1, Track 2]

Past tense questions

- Books closed. Write these questions on the board. Ask Ss to complete them:
 - Where _____ you born?
 - When _____ you move to Los Angeles?
- Focus Ss' attention on the Grammar Focus box. Then ask them to check their answers.
- Ask: "What is the difference between column 1 and column 2?" (Answer: Column 1 contains questions with *be*; column 2 contains questions with *did*.)
- Point out that we say "to *be* born" (not "to born") and "to die" (not "to be died").
- Elicit the rule for the two types of questions:
To be: *Wh*- + ***was/were*** + subject + (rest)?
Other verbs: *Wh*- + ***did*** + subject + **infinitive** + (rest)?
- Books open. Focus Ss' attention on the Grammar Focus box. Play the audio program to present the questions and statements.
- Option:** Play the audio program again. Divide the class into two groups: One group repeats the questions and the other repeats the responses. For additional practice, switch roles.

A

- Read the instructions and model the task with the first question. Ss complete the exercise individually and then go over answers in pairs.

- Elicit Ss' responses to check answers.

Answers

- A: Could you tell me a little about yourself?
Where **were** you born?
B: I **was** born in Korea.
A: **Did** you grow up there?
B: No I **didn't**. I **grew** up in Canada.
- A: Where **did** you go to high school?
B: I **went** to high school in Ecuador.
A: And when **did** you graduate?
B: I **graduated** last year. Now I work as a salesperson.
- A: **Did** you have a favorite teacher when you **were** a child?
B: Yes, I **did**. I **had** an excellent teacher named Mr. Woods.
A: What **did** he teach?
B: He **taught** English.

- Ss practice the conversations in pairs, then change roles and practice again.

 For another way to practice this Conversation, try **Look Up and Speak!** on page T-150.

B Pair work

- Read the instructions. Model the task with one or two Ss by asking them these questions in part A: "Where were you born? Did you grow up there?"
- Ss work in pairs to take turns asking the questions and responding with their own information.
- Go around the class and give help as needed. Note any common grammatical problems. After pairs finish, go over the errors you noticed.

Appendix 3. Grammar Exercises (snap-shot & dialogs)

3 GRAMMAR FOCUS

Past tense

Where **were** you born?

I **was** born in Argentina.

Were you born in Buenos Aires?

Yes, I **was**.

No, I **wasn't**. I **was** born in Córdoba.

When **did** you **move** to Los Angeles?

I **moved** here ten years ago. I **didn't speak** English.

Did you **take** English classes in Argentina?

Yes, I **did**. I **took** classes for a year.

No, I **didn't**. My aunt **taught** me at home.

A Complete these conversations. Then practice with a partner.

1. A: Could you tell me a little about yourself?

Where you born?

B: I born in Korea.

A: you grow up there?

B: No, I I up in Canada.

2. A: Where you go to high school?

B: I to high school in Ecuador.

A: And when you graduate?

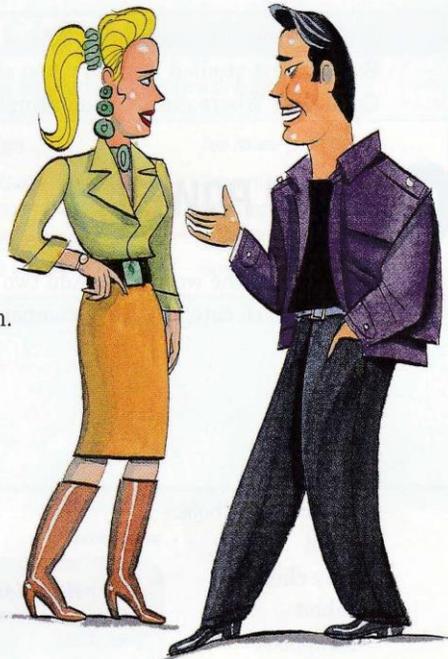
B: I last year. Now I work as a salesperson.

3. A: you have a favorite teacher when you a child?

B: Yes, I I an excellent teacher named Mr. Woods.

A: What he teach?

B: He English.



B Pair work Take turns asking the questions in part A. Give your own information when answering.

Appendix 4. Consent form

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

TO TAKE PART IN A RESEARCH PROJECT

Department of Language and Linguistics

Researcher's name: Magnolia Negrete Cetina (contact email: mnegre@essex.ac.uk)

Supervisor's name: Adela Gánem-Gutiérrez (contact email: aganem@essex.ac.uk)

Project title: *Enhancing EFL teacher trainees' cognition through Systemic Theoretical Instruction*

What is the project about? The study aims to investigate the extent to which EFL teacher trainees' cognition, specifically linguistic and pedagogical knowledge can be enhanced and developed through the implementation of *Systemic Theoretical Instruction (STI)* (Lantolf & Poehner, 2014) compared to *traditional instruction (TI)* during training at university.

What does participating involve: You will be asked to complete a questionnaire about your English education and participate in a short interview which will be audio-recorded. You will also be asked to complete a computer-based tutorial; finally, you will be asked to complete two types of tests so that I can evaluate the effectiveness of the tutorial. Overall, you will need to be available for approximately 12 hours over various days.

Please tick the appropriate boxes.

- | | Yes | No |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| • I have read and understood the project information given above | [] | [] |
| • I have been given the opportunity to ask questions about the project | [] | [] |
| • I agree to take part in the project. Taking part in the project will include being interviewed and audio/video-recorded during some sessions as agreed with the researcher. | [] | [] |
| • I understand that my taking part is voluntary. I can withdraw from the study at any time and I do not have to give any reasons for why I no longer wish to take part. | [] | [] |

Use of Information I provide for this project only

- | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|
| • I understand that my personal details such as name, e-mail address, and phone number will not be revealed to people outside the project. | [] | [] |
| • I understand that my words may be quoted anonymously in the report on this project. | [] | [] |

Name of Participant (printed) _____ Signature _____ Date _____

Researcher (printed) Magnolia Negrete Cetina Signature _____ Date _____

Appendix 5. Biodata Questionnaire

Biodata Questionnaire

1. Male or Female (circle your answer)
2. How old are you? _____
3. What is your mother tongue? _____
4. Which semester are you in? (please circle the one corresponding to you)
5^o 7^o 9^o
5. Have you ever lived in an English speaking country? (circle your answer)

YES

NO

If your answer is YES, for how long and where did you live in?

6. Apart from English, which other languages do you know or are currently studying?

Language _____ For how long have you studied it? _____

Language _____ For how long have you studied it? _____

Language _____ For how long have you studied it? _____

7. Do you have a special way of learning/studying new languages?
For example reading, watching movies with no Spanish subtitles, playing video games, surfing the internet, etc? Please share us your experience.

Thanks a lot for participating!!!

Appendix 6. Oxford Placement Test

Oxford Placement Test 1

Grammar Test PART 1

Name
Total Listening / 100
Total Grammar / 100
Grand Total / 200

Look at these examples. The correct answer is ticked.

- a In warm climates people like likes are liking sitting outside in the sun.
- b If it is very hot, they sit at in under the shade.

Now the test will begin. Tick the correct answers.

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1 Water <input type="checkbox"/> is to boil <input type="checkbox"/> is boiling <input checked="" type="checkbox"/> boils at a temperature of 100°C. | 1 _____ |
| 2 In some countries <input type="checkbox"/> there is <input checked="" type="checkbox"/> is <input type="checkbox"/> it is very hot all the time. | 2 _____ |
| 3 In cold countries people wear thick clothes <input type="checkbox"/> for keeping <input type="checkbox"/> to keep <input checked="" type="checkbox"/> for to keep warm. | 3 _____ |
| 4 In England people are always talking about <input type="checkbox"/> a weather <input type="checkbox"/> the weather <input checked="" type="checkbox"/> weather. | 4 _____ |
| 5 In some places <input type="checkbox"/> it rains <input type="checkbox"/> there rains <input checked="" type="checkbox"/> it raining almost every day. | 5 _____ |
| 6 In deserts there isn't <input type="checkbox"/> the <input type="checkbox"/> some <input checked="" type="checkbox"/> any grass. | 6 _____ |
| 7 Places near the Equator have <input type="checkbox"/> a warm <input type="checkbox"/> the warm <input checked="" type="checkbox"/> warm weather even in the cold season. | 7 _____ |
| 8 In England <input type="checkbox"/> coldest <input type="checkbox"/> the coldest <input checked="" type="checkbox"/> colder time of year is usually from December to February. | 8 _____ |
| 9 <input type="checkbox"/> The most <input type="checkbox"/> Most of <input checked="" type="checkbox"/> Most people don't know what it's really like in other countries. | 9 _____ |
| 10 Very <input type="checkbox"/> less <input type="checkbox"/> little <input checked="" type="checkbox"/> few people can travel abroad. | 10 _____ |
| 11 Mohammed Ali <input type="checkbox"/> has won <input type="checkbox"/> won <input checked="" type="checkbox"/> is winning his first world title fight in 1960. | 11 _____ |
| 12 After he <input type="checkbox"/> had won <input type="checkbox"/> have won <input checked="" type="checkbox"/> was winning an Olympic gold medal he became a professional boxer. | 12 _____ |
| 13 His religious beliefs <input type="checkbox"/> have made him <input type="checkbox"/> made him to <input checked="" type="checkbox"/> made him change his name when he became champion. | 13 _____ |
| 14 If he <input type="checkbox"/> has <input type="checkbox"/> would have <input checked="" type="checkbox"/> had lost his first fight with Sonny Liston, no one would have been surprised. | 14 _____ |
| 15 He has travelled a lot <input type="checkbox"/> both <input type="checkbox"/> and <input checked="" type="checkbox"/> or as a boxer and as a world-famous personality. | 15 _____ |

subtotal /15

Grammar Test PART 2

- 51 Many teachers **say to say tell** their students should learn a foreign language. 51 _____
- 52 Learning a second language is not the same **as like than** learning a first language. 52 _____
- 53 It takes **long time long a long time** to learn any language. 53 _____
- 54 It is said that Chinese is perhaps the world's **harder hardest more hard** language to master. 54 _____
- 55 English is quite difficult because of all the exceptions **who which what** have to be learnt. 55 _____
- 56 You can learn the basic structures of a language quite quickly, but only if you
are wanting will to are willing to make an effort. 56 _____
- 57 A lot of people aren't used **to the study to study to studying** grammar in their own language. 57 _____
- 58 Many adult students of English wish they **would start would have started had started**
their language studies earlier. 58 _____
- 59 In some countries students have to spend a lot of time working **on by in** their own. 59 _____
- 60 There aren't **no any some** easy ways of learning a foreign language in your own country. 60 _____
- 61 Some people try to improve their English by **hearing listening listening to** the BBC World Service. 61 _____
- 62 **Live Life Living** with a foreign family can be a good way to learn a language. 62 _____
- 63 It's no use **to try trying in trying** to learn a language just by studying a dictionary. 63 _____
- 64 Many students of English **would rather not would rather prefer not would rather not to** take tests. 64 _____
- 65 Some people think it's time we all **learn should learn learnt** a single international language. 65 _____
- Charles Walker is a teacher at a comprehensive school in Norwich. He **has joined joined joins** 66 _____
the staff of the school in 1998 and **has been working worked works** there ever since. 67 _____
- Before **move to move moving** to Norwich, he taught in Italy and in Wales. 68 _____
- and before that he **has been was was being** a student at Cambridge 69 _____
University. So far he **isn't wasn't hasn't been** in Norwich for as long 70 _____
as he was in Wales, but he likes the city a lot and **should would could** 71 _____
like to stay there for at least another two years, or, **how which as** he 72 _____
puts it, until his two children **have will have will be** grown up a bit. 73 _____
- He met his wife, Kate, in 1992 while he **was to live was living had been living** 74 _____
abroad for a while, and they got married in 1996.
- Their two children, Mark and Susan, **are were have been** both born in Norwich. 75 _____

subtotal /25

Appendix 7. MLK Test

Instructions: This test consists of two parts: part A and part B; when you finish answering part A, give the paper to the researcher who, in turn, will give you part B. Please answer the questions as fully as you can. You can answer in English or in Spanish.

Part A

1. Can you explain what *tense* is?
2. Can you explain what *aspect* is?
3. English verbs can be marked for two *aspects*, can you name them and explain how they are formed?
4. What would you say the relationship between *time* and *tense* is?
5. Can you give examples of how the following verbs inflect in past and non-past:

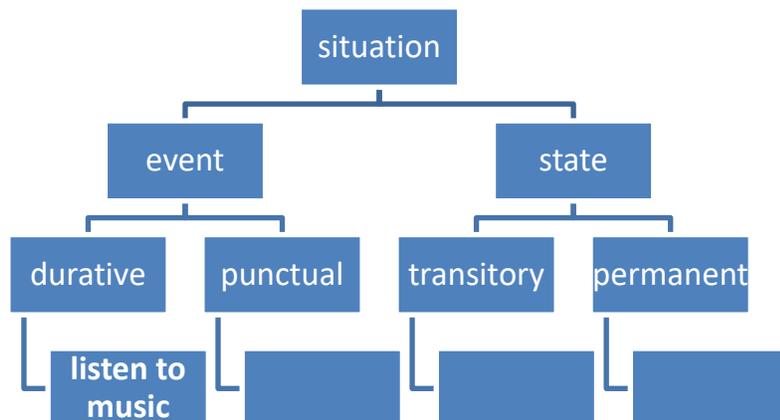
Past:

1. (work) Example sentence:
2. (leave) Example sentence:

Non-past:

3. (work) Example sentence:
4. (leave) Example sentence:

6. Verbs are words that enable us to talk about situations such as events and states and they intrinsically evoke certain characteristics in our minds; each of the verbs in ‘*be happy*’, ‘*live in London*’, ‘*listen to music*’, ‘*kick a ball*’ evoke specific inherent characteristics. Please write the four verbal phrases (‘*be happy*’, ‘*live in London*’, ‘*listen to music*’, ‘*kick a ball*’) in the appropriate box, one has been completed as an example:



7. Can you define the terms in *a-d* and give an example in English?

(a) *bounded* situation:

Example:

(b) *unbounded* situation:

Example:

(c) *maximal* viewing frame:

Example:

(d) *restricted* viewing frame:

Example:

8. We use the *present perfect* to communicate or convey four main meanings in English: experiential, resultative, recent and continuative. Can you complete the table with the information in the box? we have completed the first items for you:

Experiential / The focus is on the outcome of an event / She has climbed Mount Everest / Resultative / The focus is on a past event which remains relevant at the moment of speaking / I have worked for the University for 10 years (and still do) / Continuative / To focus on a past event which remains memorable / Tom has written two books on English history

Example	Focus	Meaning
She has just finished her essay.	We can use the perfect in combination with a lexical item such as 'just' to focus on the notion of recentness.	Recent

Part B

1. Describe the **difference in meaning** of the present perfect versus the simple past between the (a) and (b) members of the following pairs:

(i) a. I've been in the army for two years.

b. I was in the army for two years.

(ii) a. Have you seen Jill?

b. Did you see Jill?

(iii) a. It was the best meal I've had all week.

b. It was the best meal I had all that week.

(iv) a. She has gone to Moscow.

b. She went to Moscow.

(v) a. I've got the milk

b. I got the milk

2. Describe the **difference in meaning** between the (a) and (b) members of the following pairs:

(i) a. I cycle to work.

b. I am cycling to work.

(ii) a. When Tom called she phoned me.

b. When Tom called she was phoning me.

(iii) a. The train arrived.

b. The train was arriving.

(iv) a. You annoy me.

b. You are annoying me.

(v) a. He wrote an editorial.

b. He was writing an editorial.

END OF TEST

THANK YOU!

Activities for Part B taken from Huddleston and Pullum (2005: 62)

Appendix 8. Language in Use Test

Instructions: the following passage is missing some words that you must complete using either multiple choice or conjugating the infinitives.

Grandpa Emilio is 97 years old, he has had a nice life. He was born in the small town of Tinúm, Yucatán on August 8th, 1917 and arrived in Chetumal, Quintana Roo on February 10th 1956. Who could have said that it (1 to be/go) _____ to be a mix of destiny, fate and nature blended together?!

It was during the 1920's that he was brought by his uncle to live at the "Hacienda Henequenera X'nobó". His mother (2 decease) _____ when he was very little, so his father let him go to the hacienda to help his uncle, since he was educated. He always (3) _____ he was a very smart kid! If he had remained at his home town Tinúm, he might (4) _____ his love for music. It (5 to be) _____ at the hacienda where he knew a music teacher that used to be friends with his uncle who taught him the basics of music; how to read, write and play music particularly the trumpet.

Grandpa Emilio always says that it was all because of President Lázaro Cárdenas' nationalisation process that the big henequen haciendas became (6 disrupt) _____. He says that the Hacienda Henequenera X'nobó (7) _____ perfectly with a very high production of henequen for many years until it was nationalised and it all stopped. From his perspective, the locals (8) _____ enough money to invest in the infrastructure nor big machines needed for the production as the original owners did. Therefore, the whole production was ruined. He says, "If nationalisation (9) _____, I would (10) _____ there for many more years".

So, the events from X'nobó brought him back to Tinúm his hometown; where he (11 advance) _____ his musical knowledge and where he soon formed a musical band to play at local fairs, official events and private parties. In no time at all he (12) _____ with bands in Merida and all over the state of Yucatán and he started going on tour to Veracruz, Campeche, México city and even to Havana Cuba to play for bands like Benny Moré's band and Pérez Prado's band. Grandpa Emilio jokes saying "if I would (13 remain) _____ in Cuba, I would (14) _____ with a Cuban girl!

It was in 1945 that he (15 introduce) _____ to grandma Rita in Mérida, Yucatán. Grandma Rita (16) _____ by great-grandpa Pedro to Merida to meet her siblings and get to know the big city. Although she was born in Valladolid, Yucatán, her parents had decided (17) _____ to Chetumal when she was very little.

In Merida she lived with her sister Clara who took her to a ball where Rita met this skinny trumpet player boy from the band whom eventually was to (18 become) _____ her husband. Interestingly enough, Emilio was already engaged to someone else! But when he met Rita he changed his mind and soon they (19) _____ married, having asked the latter to be his bride!

Soon Emilio and Rita (20) _____ the knot at the Cathedral in Merida in May 1947 and started raising a family. They used to live on "Itzaes" avenue where Pedro Infante (the famous actor and singer) used to be their neighbour and good friend while he was dating actress Irma Dorantes. During their years in Merida they (21 bring up) _____ four children and Emilio kept playing with different bands.

One day, while Emilio (22) _____ the 'trumpet solo' of the famous "Macarena" a song of 'coplas españolas' which is typical of bull fighting events at the "Plaza de Toros" in Mérida, the Governor of Quintana Roo Margarito Ramirez saw him performing. Later when Governor Margarito went back to Chetumal he realised that because of Hurricane Janet on the 27th of September 1955 had caused devastation to the city of Chetumal many musicians of the local band (23 relocate) _____ to go to other towns. He thought then that it would be a great idea to invite that 'solo trumpeter' (grandpa Emilio) whom he (24) _____ to at the plaza de toros in Merida a few weeks earlier. The governor said to the musicians, "I saw this great trumpeter playing "The Macarena" in Mérida at the plaza de toros and I would like to invite him to join the band!" It turned out that Emilio was the son in law of great-grandpa Pedro who was also a musician (clarinetist) in the band of Chetumal! In that moment great-grandpa Peter told Governor Margarito "Hey! That is my son in law married to my youngest child Rita! I am sure he (25) _____ if you send him an invitation to be part of the band!"

A few weeks later grandpa Emilio received the letter from Governor Margarito Ramirez to join the band of the state of Quintana Roo and soon after he and his family (26) _____ to Chetumal. They took a plane from Merida to Chetumal and guess who (27) _____ the plane?!? The legendary Pedro Infante was the pilot that day! So, they flew to Chetumal and (28) _____ happily ever after.

Grandpa Emilio and grandma Rita had nine children in total. Grandma Rita passed away in 2005 and two of their children passed away recently. Grandpa Emilio lives in the same house and thank God he is healthy and in good shape. Everyday he (29 tend) _____ the garden, (30 scrutinise) _____ the newspaper and looks after himself and one of his sons that still lives with him. He says he is happy and satisfied with life and that he (31) _____ happy anywhere else.

1. *to be/go*
2. *decease*
- 3.
- a) insisting
b) insisted
c) Have insisted
d) Had been insisting
- 4.
- a) Has not developed
b) Is not developed
c) Was not developed
d) Have not developed
5. *to be*
6. *disrupt*
- 7.
- a) Had been operating
b) Was been operating
c) Have been operating
d) Will be operating
- 8.
- a) do not have
b) will not have
c) did not have
d) will not having
- 9.
- a) had not occurred
b) did not occur
c) have not occurred
d) will have not happen
- 10.
- a) have been staying
b) been staying
c) will have been staying
d) have stayed
11. *advance*
- 12.
- a) is performing
- b) performing
c) performed
d) was performing
13. *remain*
- 14.
- a) have end up
b) ends up
c) ending up
d) have ended up
15. *introduce*
- 16.
- a) had been sent
b) was sent
c) is sent
d) have sent
- 17.
- a) move
b) to move
c) have moved
d) had moved
18. *become*
- a) was become
b) will become
c) have become
d) has become
- 19.
- a) were being getting
b) were getting
c) will be getting
d) will get
- 20.
- a) tie
b) tied
c) had tied
d) will tied
21. *bring up*
- 22.
- a) had starred
b) was being starring
c) had star
d) was starring
23. *relocate*
- 24.
- a) have listened
b) has listened
c) was listened
d) had listened
- 25.
- a) did join
b) had join
c) will join
d) joining
- 26.
- a) moving
b) moved
c) did move
d) have moved
- 27.
- a) flew
b) have flown
c) will fly
d) was flying
- 28.
- a) lives
b) living
c) lived
d) was living
29. *tend*
30. *scrutinise*
- 31.
- a) had not been living
b) have not been living
c) will have not been living
d) would not have been

Appendix 9. Tutorial SCOBAs Experimental Group (52 SCOBAs in total)

Verbs

The tense/aspect system in English

- This tutorial aims to help you understand how our human minds make sense of the world and how we use language, more specifically grammar, to communicate our individual perspectives on **situations** and **time**.
- So, to understand how the tense/aspect system in a given language works we need to understand how **verbs** work, how we use grammar to describe a **particular view of a situation (aspect)** and how we ground or locate situations in time (non-retrospectively or retrospectively) by means of **tense**.
- In other words, grammatical markers (e.g., *past, progressive, perfect*) are tools that enable speakers to locate an event or a situation in time (direction from which a situation is accessed) and highlight the *speaker's view or perspective of a situation*.

1

First, let's talk about **verbs**

- We use **verbs** to describe situations such as:
 - **Events:** “build a house” or “kick a door”
 - OR
 - **States:** “be of British origin” or “go to the gym”
- Verbs inherently (intrinsically) **EVOKE** certain characteristics in our minds that have to do with how we perceive the world around us for example we see situations as more or less dynamic, punctual (repetitive), expected to come to an end at some point in time, etc.
- If we want to describe these verb characteristics in a visual way, we can use the following diagrams:

2

Inherent properties of situations	
events	states
Qualitative constitution	
undergo some internal development and are more <i>dynamic</i> than states	do not involve any internal change
	
Time contour	
have <i>inherent boundaries</i> : they are supposed to come to an end at some point	do not have inherent boundaries because they are <i>seen as</i> rather <i>permanent situations</i>
	

3

So, *verbs* help us express two types of situations: *events* and *states*



4

Verbs help us express two types of situations:
events and states

Examples		
Events 	Activity	<i>read a book</i>
	Accomplishment	<i>build a house</i>
	Process of change	<i>grow plants</i>
	(Repeated) act	<i>knock at a door</i>
	Achievement	<i>realize something</i>

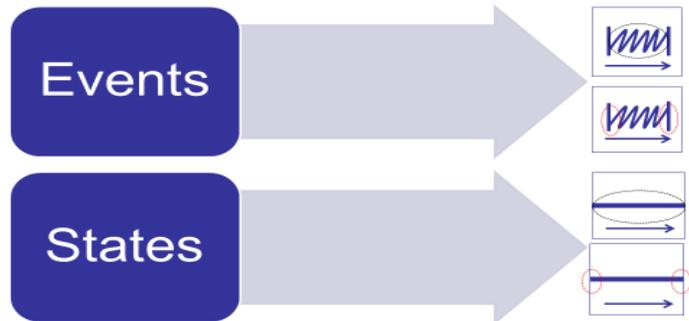
5

Verbs help us express two types of situations:
events and states

Examples		
States 	State of being	<i>be European</i> <i>be happy</i>
	Emotional state	<i>love working</i>
	Mental state	<i>believe in something</i>
	Perceptual state	<i>hear something</i>
	Habitual state	<i>work for the University</i>

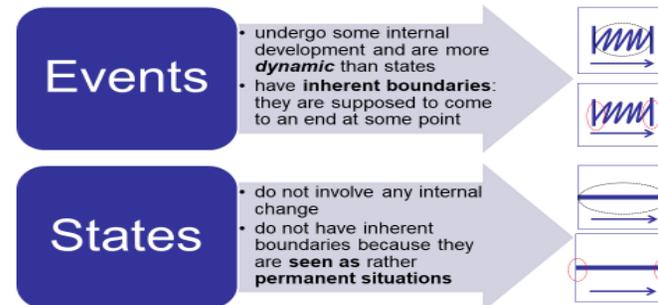
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Before you continue, do you remember the differences between 'events' and 'states'?



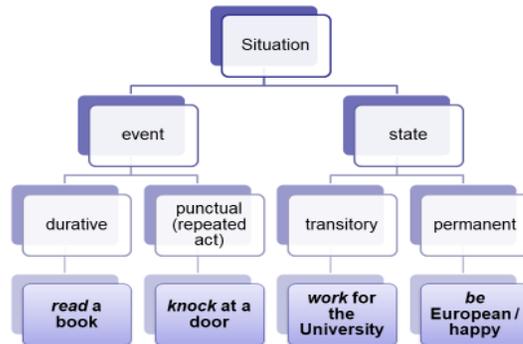
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How did you do?



8

Summary (describing situations)



9

The tense/aspect system in English

- As we said at the beginning, this tutorial aims to help you understand how our human minds make sense of the world and how we use language, more specifically grammar, to communicate our individual perspectives on **situations** and **time**.
- We said that to understand how the tense/aspect system in a given language works we need to understand how **verbs** work and that is what we have been looking at so far...to recap...

10

The tense/aspect system in English

- Grammar is a great tool which we use to describe a **particular view of a situation** (*aspect*) and how we ground or locate situations in time (non-retrospectively or retrospectively) by means of *tense*.
- In other words, grammatical markers (e.g., *past*, *progressive*, *perfect*) are **tools** that enable **speakers** to locate an event or a situation in time (direction from which a situation is accessed) and highlight the *speaker's view or perspective of a situation*.
- So, OUR choice of *grammar* markers interacts with the inherent (intrinsic) **characteristics of verbs** so that we can express meaning...so that WE can describe situations from **our own perspective**

11

The tense/aspect system in English

To put this differently, every time a language user wants to talk about a situation, s/he has to choose between the following dichotomies to communicate his/her meaning:

- In terms of a **tense** marker:
 - either proximal stance (present / reality) or distal stance (past / irreality)
- In terms of an **aspect** marker:
 - either non-retrospective viewing **direction** (straight) or retrospective viewing **direction** (backward)
and
 - either non-progressive viewing **scope** (maximal viewing frame) or progressive viewing **scope** (restricted viewing frame)

12

Tense marking examples

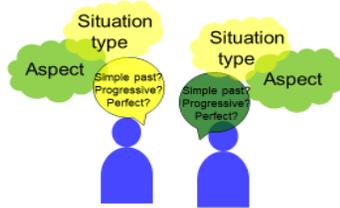
		existential status	
		real	unreal
relevance time	present	zero marking e.g. <i>walk(s); am/is/are</i>	'past tense' -ed morpheme/ irregular 'past tense' form e.g. <i>walked; was/were</i>
	past	'past tense' -ed morpheme/ irregular 'past tense' form e.g. <i>walked; was/were</i>	'double tense shift' / 'past perfect' form e.g. <i>had walked; had been</i>

13

Tense + Aspect

- As you can see, our language choices are influenced by how our human minds make sense of the world and the linguistic resources we use to communicate our individual *perspectives* on events and time.
- Notions such as *situation type* and *distance* play a role in communication.

14



As individuals, we all constantly choose from various language *alternatives* that allow us to convey what we perceive and how we interpret the world around us.

- For example, grammatical aspect (e.g., *simple past, progressive, perfect morphemes*) interacts with situation type (inherent verb properties) to signal specific *viewing positions*.
- Depending on the *context*, some verbs can have both *dynamic* and *stative* meanings.

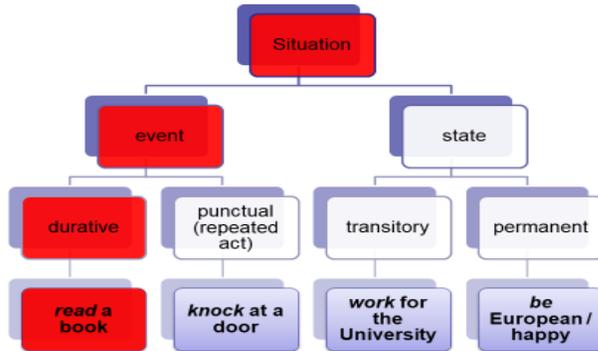
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Tense + Aspect

- Let's see how all this works in communication...
- First, we said that verbs have inherent (intrinsic) characteristics...

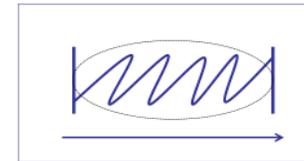
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Example: *read a book*



Abstract example: *read a book*

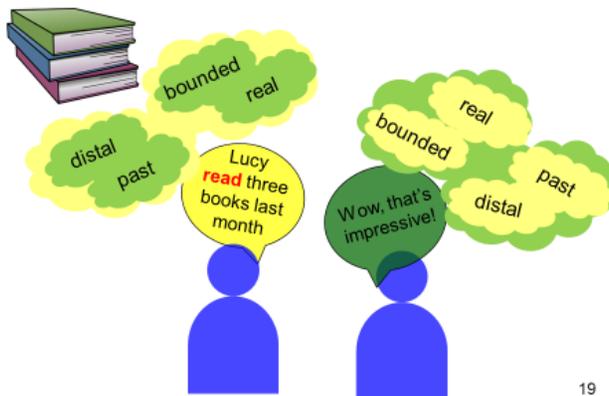
- In *abstract* terms, the situation described by '**read** a book' is a durative event which has *inherent boundaries*: it is supposed to come to an end at some point



17

18

...when thought meets language...
 however, when we describe a situation we do so from our own perspective, we *construe* what we want to communicate; for example, we can say...



19

The interaction between situation type & grammatical aspect

(i) *events and grammatical aspect*

non-progressive aspect

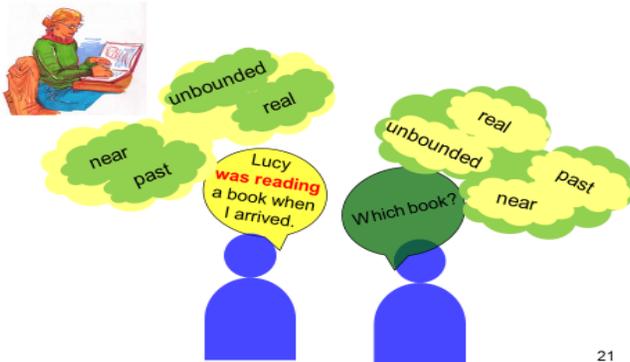
- Lucy **read** three books last month.
- By using the inflected verb form in the simple past, we choose a
- > **maximal viewing frame**:
- The situation is viewed in its entirety, from its beginning to its end.
- The boundaries of the situation are in focus.



maximal viewing frame

20

...by contrast we could also describe a situation as ongoing...



21

The interaction between situation type & grammatical aspect

(i) events and grammatical aspect progressive aspect

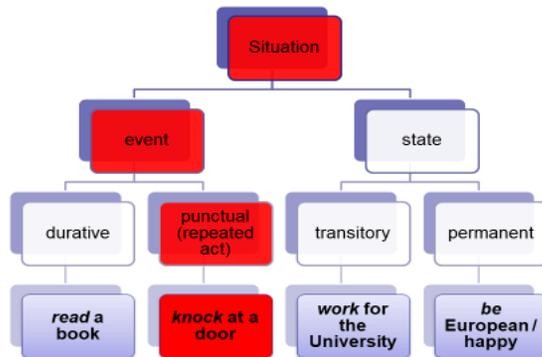
- Lucy **was reading** a book when I arrived.
- By using the progressive verb form, we choose a
- > **restricted viewing frame:**
- We 'zoom in' on the situation and view it as ongoing, as an 'unbounded' event. The inherent boundaries of the verb 'read' are *not* in focus.



restricted viewing frame

22

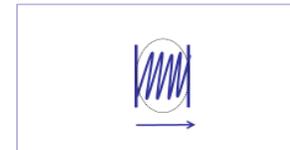
Example: *knock at a door*



23

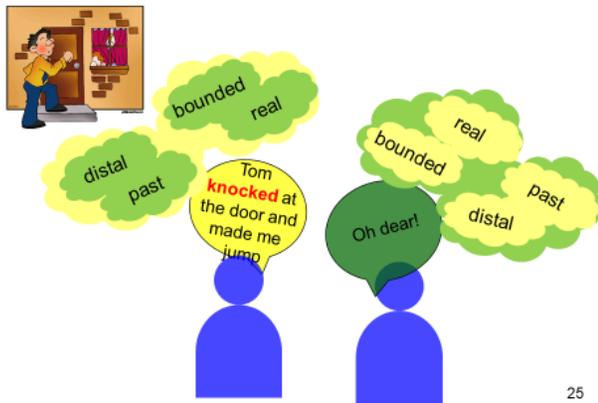
Abstract example: *knock at a door*

- In *abstract* terms, the situation '**knock** at a door' is a punctual event which has *inherent boundaries*: it is supposed to come to an end at some point, but unlike the *activity* of 'reading' in our previous example, the *act* of 'knocking' is inherently brief



24

...when thought meets language...
so when we can say...



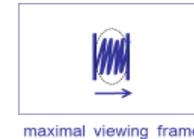
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The interaction between situation type & grammatical aspect

(i) *events and grammatical aspect*

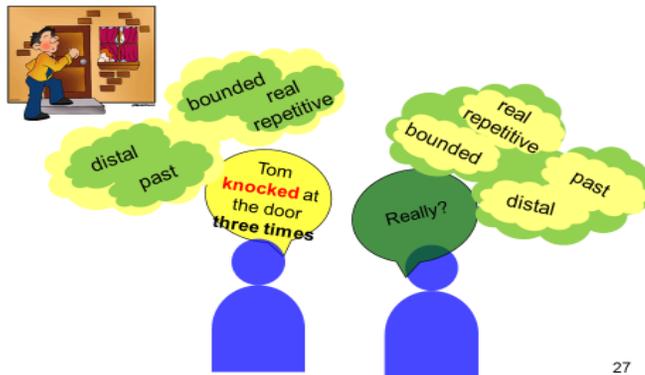
non-progressive aspect

- Tom **knocked** at the door and made me jump.
- By using the inflected verb form in the simple past with a punctual event, we choose a
- > **maximal viewing frame:**
 - The situation is viewed in its entirety, from its beginning to its end.
 - The boundaries of the situation are in focus.
 - We interpret the event **as a single act**.



26

...when thought meets language...
or when we can say...



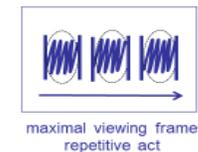
27

The interaction between situation type & grammatical aspect

(i) *events and grammatical aspect*

non-progressive aspect

- Tom **knocked** at the door three times.
- By using the inflected verb form in the simple past with a punctual event, we choose a
- > **maximal viewing frame:**
 - The situation is viewed in its entirety, from its beginning to its end.
 - The boundaries of the situation are in focus.
 - We interpret the event **as a multiple act**.



28

...when thought meets language...
or when we can say...



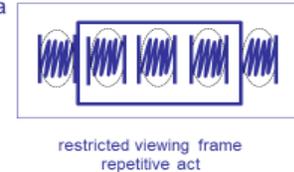
29

The interaction between situation type & grammatical aspect

(i) *events and grammatical aspect*

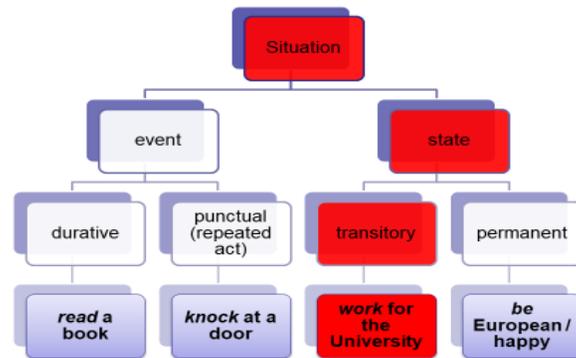
progressive aspect

- Tom **was knocking** at the door, but I couldn't hear.
- By using the inflected verb form in the *progressive* with a punctual event, we choose a
- > **restricted viewing frame:**
- We 'zoom in' on the situation and view it as repetitive, as an 'unbounded' event. The inherent boundaries of the verb 'knock' are *not* in focus instead...
- We interpret the event **as a continuous repetitive act.**



30

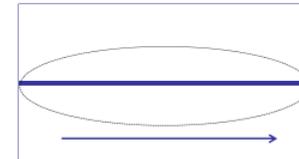
Example: *work for the University*



31

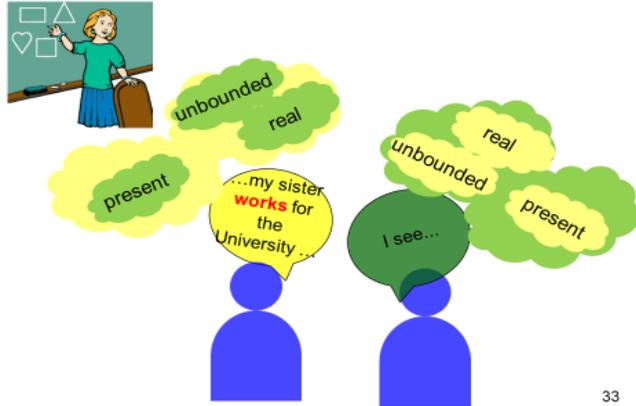
Abstract example: *work for the University*

- In *abstract* terms, the situation described by '**work** for the University' is a habitual state which has *NO inherent boundaries*. Although it is potentially a transitory situation (due to retirement or change of job) it can be *perceived* as rather permanent.



32

So let's see some of the ways in which we, as speakers, can construe situations described by the verb 'work'...



33

The interaction between situation type & grammatical aspect

(i) events and grammatical aspect non-progressive aspect

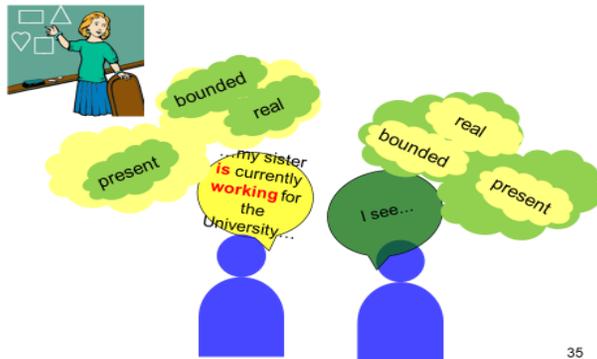
- My sister **works** for the University.
- By using the non-progressive verb form, we choose a
- > **maximal viewing frame:**
- The boundaries of the situation are NOT in focus.
- The situation is construed as an unbounded, habitual state, as being permanent.



maximal viewing frame

34

In contrast, the speaker can choose to construe a situation as being temporary by using the progressive aspect

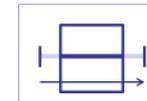


35

The interaction between situation type & grammatical aspect

(i) events and grammatical aspect progressive aspect

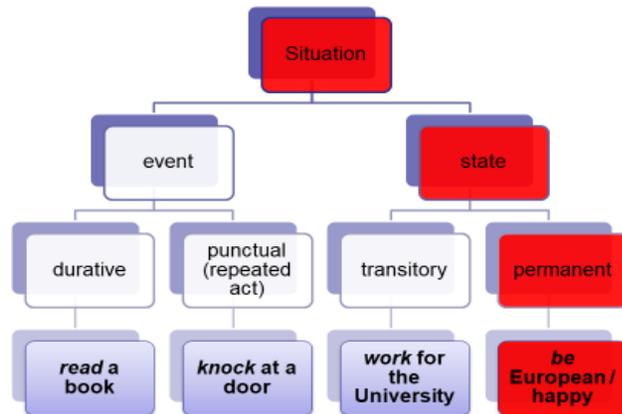
- My sister **is** currently **working** for the University.
- By using the progressive verb form, we choose a
- > **restricted viewing frame:**
- We 'impose' boundaries on an inherently unbounded habitual state and give it a temporary quality.



restricted viewing frame

36

Summary (describing situations)



37

The interaction between situation type & grammatical aspect

(ii) States and grammatical aspect

non-progressive aspect



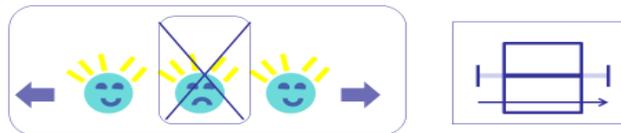
- Juan is a happy man.
- > maximal viewing frame:
- The state is seen as permanent.
- It does not have any boundaries because it is indefinitely lasting.

38

The interaction between situation type & grammatical aspect

(ii) States and grammatical aspect

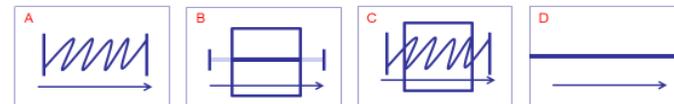
progressive aspect



- Yesterday, Juan **was being** miserable because he didn't feel well.
- > restricted viewing frame:
- The state is only temporary.
- We 'zoom in' on the state and thereby impose boundaries on it.

39

- The previous slides showed a few diagrams, before you continue, could you explain which terms and notions you'd associate with which diagrams and why? You can use the letters and numbers to say how you'd match the boxes and why.



1 Events
Simple past
> maximal viewing frame:
The situation is viewed in its entirety, from its beginning to its end.
The boundaries of the situation are in focus.

2 Events
Progressive
> restricted viewing frame:
We 'zoom in' on the situation and view it as ongoing, as an 'unbounded' event.
The boundaries are not in focus.

3 States
Simple past
> maximal viewing frame:
The state is seen as permanent.
It does not have any boundaries because it is indefinitely lasting.

4 States
Progressive
> restricted viewing frame:
The state is only temporary.
We 'zoom in' on the state and thereby impose boundaries on it.

40

- Were you right? These are the right matches:

			
<p>1 Events <i>Simple past</i> ➤ maximal viewing frame: The situation is viewed in its entirety, from its beginning to its end. The boundaries of the situation are in focus.</p>	<p>4 States <i>Progressive</i> ➤ restricted viewing frame: The state is only temporary. We 'zoom in' on the state and thereby impose boundaries on it.</p>	<p>2 Events <i>Progressive</i> ➤ restricted viewing frame: We 'zoom in' on the situation and view it as ongoing, as an 'unbounded' event. The boundaries are not in focus.</p>	<p>3 States <i>Simple past</i> ➤ maximal viewing frame: The state is seen as permanent. It does not have any boundaries because it is indefinitely lasting.</p>

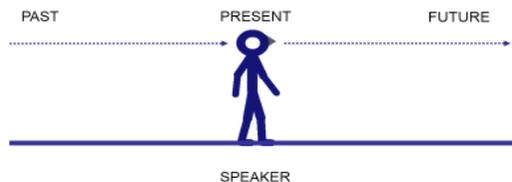
41

- So far, we have been considering 'viewing scope'. However, it is not just a question of perceiving events and states as either bounded or unbounded (**maximal or restricted viewing frame**), there are other notions in our mind which play a role as to how we conceptualize (and therefore communicate) a situation. We will now consider 'viewing direction' which is also related to the use of 'perfect' forms (or 'retrospective aspect', e.g., *present* and *past perfect*).

42

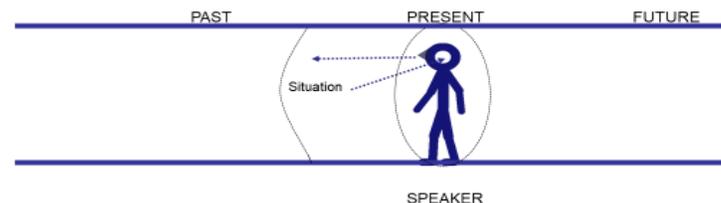
Thinking about time

A prevalent model for the way in which we conceptualise time (at least in Western cultures) can be shown as follows:



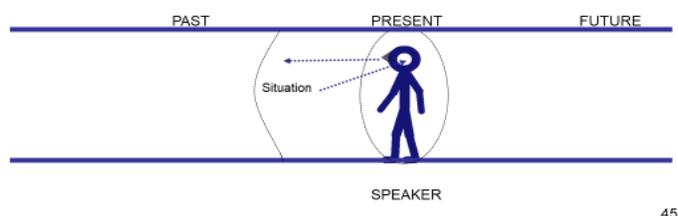
43

Another language tool we have to talk about past situations is the 'present perfect' or 'retrospective'. We use this form to 'look backward' on situations that **continue to have relevance** at the moment of speaking.



44

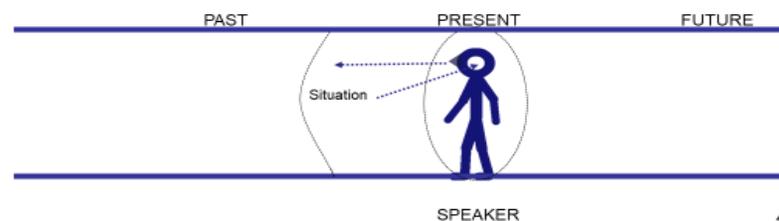
Another language tool we have to talk about past situations is the 'present perfect' or 'retrospective'. We use this form to 'look backward' on situations that **continue to have relevance** at the moment of speaking.



45

So, the main meanings we communicate when we use the 'present perfect' or 'retrospective' are:

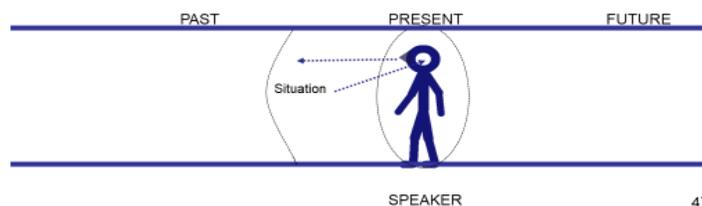
1. *Resultative*: When we want to **focus on the outcome of an event**; for example, "Tom has written two books on English history"



46

The main meanings we communicate when we use the 'present perfect' or 'retrospective' are:

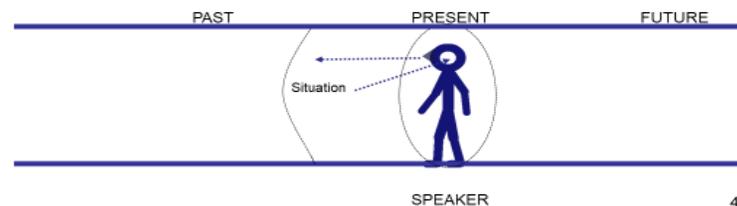
2. *Experiential*: When we want to **focus on a past event which remains memorable**; for example, "She has climbed Mount Everest"



47

The main meanings we communicate when we use the 'present perfect' or 'retrospective' are:

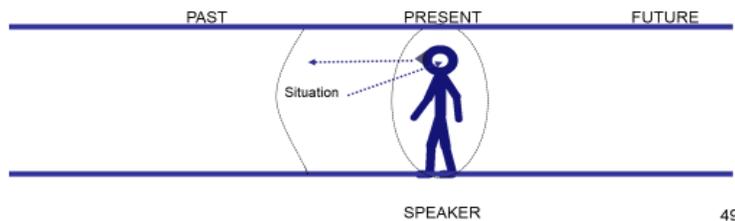
3. *Recent*: When we want to **focus on the notion of recentness** we can use the perfect in combination with a lexical item such as '*just*'; for example, "She has *just* finished her essay"



48

The main meanings we communicate when we use the 'present perfect' or 'retrospective' are:

4. *Continuative*: When we want to **focus on** a past event which remains **relevant** at the moment of speaking; for example, "I have worked for the University for 10 years" (and still do).



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Tense/aspect marking

- To conclude, there are various notions in our mind and in the way in which we perceive situations as speakers (conceptualizers) which influence our CHOICES when talking about events and situations.
- Aspectual contrasts are marked grammatically; in other words, when talking about past events we choose certain verb forms such as *simple past*, *past progressive* or *present perfect*.
- It is also important to remember that *contextual information* can alter aspectual interpretation and that the inherent aspectual value of verbs (e.g., *dynamicity*, *punctuality*, etc.) can be reversed by the morphological form used (*simple past*, *past progressive*, etc.).

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- So, as you can see we – as speakers – use and combine grammatical tools such as *tense* (present vs past) and *aspect* (perfect vs progressive) to convey and communicate specific meanings including distance with reference to the time-line or a situation. If we want to be polite, for example, we can use simple past to express *distance*. As in 'could you open the window?'

50

Tense/aspect marking

- This tutorial aimed at helping you understand how we use grammar to describe a *particular view* of a situation or event: this is what we call **aspect**;
- ... and we also discussed this with reference to how we locate (ground/anchor) situations in time by means of **tense**. We focused on situations and events that took place in the past so we focused on the contrasts conveyed by the **simple past**, the **past continuous** and **the present perfect**.
- Could you think about what you remember based on the tutorial? What would you say to a colleague who wants to help his/her English learners talk about situation that occurred in the past?

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Appendix 10. Transcription Convention

(Gánem-Gutiérrez, 2004)

Symbol	Explanation
J:	speaker
T:	teacher
(.)	brief pause
((pause))	longer pause
[overlapping
=	latching: when one starts speaking immediately another has finished
()	indecipherable
(())	any comments like ((cough)) ((sneeze))
,	slight rise in intonation
?	rising intonation
capital letters	to show speaker's emphasis
“ ”	reading aloud
<i>italics</i>	translation into English
→	to draw the reader's attention to something

Appendix 11. Tutorial Traditional Instruction Control Group

(36 slides in total)

Las formas de Tiempo & Aspecto

Simple

	Simple
	∅
Presente	write/writes walk/walks
Pasado	wrote walked
Futuro	will write will walk

Progresivo

	Progresivo	Progresivo Perfecto
	be+ing	have+en be+ing
Presente	am/is/are writing am/is/are/walking	has/have been writing has/have been walking
Pasado	was/were writing was/were walking	had been writing had been walking
Futuro	will be writing will be walking	will have been writing will have been walking

[1]

Tiempo y Aspecto

- **Tiempo gramatical** se refiere al **Tiempo cronológico**
 - Tiempo gramatical es lo que determina si una acción o evento ocurre en presente, pasado o futuro.
- **Aspecto** tiene que ver con la estructura interna de la acción que puede ocurrir **en cualquier momento** (tiempo cronológico).
 - En inglés hay cuatro tipos de aspectos: 1) el simple –a veces llamado 'aspecto cero', 2) el perfecto, 3) el progresivo, y 4) el progresivo perfecto.
- La combinación de los tres diferentes tiempos gramaticales (presente, pasado y futuro) y los cuatro aspectos permiten la creación de un total de 12 tiempos gramaticales en Inglés.
- Por lo tanto, cada tiempo gramatical: *presente, pasado y futuro* pueden utilizar los diferentes tipos de aspectos.

[2]

Tiempos y verbos

- Para cada tiempo gramatical hay una forma correspondiente de conjugar el verbo.

	ASPECTO			
TIEMPO	Simple	Perfecto	Progresivo	Progresivo Perfecto
	∅	have + -en	be+ing	have+en be+ing
Presente	write/writes walk/walks	has/have written has/have walked	am/is/are writing am/is/are/walking	has/have been writing has/have been walking
Pasado	wrote walked	had written had walked	was/were writing was/were walking	had been writing had been walking
Futuro	will write will walk	will have written will have walked	will be writing will be walking	will have been writing will have been walking

Table 1. Tenses and Aspect in English. Celce-Murillo & Larsen-Freeman (1999:119).

[3]

Tiempo y verbos [cont]

- Algunos verbos generalmente no son usados en forma de modo progresivo.

Algunos de estos verbos son:

- Have
- Know
- Like
- Love
- Want

[4]

Tiempo gramatical en tiempo cronológico

- Cada uno de los tiempos gramaticales, **presente**, **pasado** y **futuro** se encuentran ubicados en una línea del tiempo imaginaria.



- Como vimos anteriormente, cada uno de los tiempos gramaticales tiene una forma **simple**, **perfecta**, **progresiva** y **progresiva perfecta** que se conocen también como **aspecto**.

[5]

Verbos

- La mayoría de los verbos pueden ser conjugados en casi todos los tiempos gramaticales; en **pasado simple** se agrega el sufijo **ed** al final para los verbos regulares. En el caso de los verbos irregulares en algunas ocasiones **se cambia la forma** del verbo. Para el **pasado participio** los verbos regulares mantienen su forma en pasado para usarse en participio, en tanto que los verbos irregulares en la mayoría de los casos cambian su forma en modo participio. Por ejemplo :

- Look – looked - looked (regular)
- Study – studied – studied (regular)
- Buy – bought – bought (irregular)
- Think – thought - thought (irregular)
- Sing – sang- sung (irregular)
- Fly – flew – flown (irregular)

[6]

Aspecto en el tiempo gramatical

- Así, para cada tiempo gramatical, presente, pasado o futuro hay una forma de presentar sucesos con aspecto simple, perfecto, progresivo o progresivo perfecto que es básicamente **observar un suceso o evento desde una perspectiva más cercana**.
- De los cuatro tipos de aspectos , hay dos los cuales son utilizados con mayor frecuencia: el **simple** vs. El **progresivo**.

SIMPLE	PROGRESIVO
<ul style="list-style-type: none"> • Verbo en modo infinitivo/neutral; o cualquier forma no progresiva. • El evento/suceso es percibido como con un punto de inicio y final claros. 	<ul style="list-style-type: none"> • Verbo en modo progresivo (-ing) • El evento/suceso es percibido como en función/sucediendo al mismo tiempo que otros eventos estaban ocurriendo.

[7]

Aspecto

Simple

vs.

Progresivo

- El aspecto **Simple** se refiere a **eventos que son permanentes o que no cambian** (i.e. estados o hábitos) como se describen en el presente simple (e.g. She lives in Seattle; She teaches English).
- El aspecto **Simple** nos indica que **los eventos tienen un punto de inicio y fin específicos**. Los eventos han sido concluidos o se indica que ocurren de manera regular.
- El aspecto **Progresivo** se refiere a **eventos o acciones incompletos o en progreso**; (e.g. *they're visiting their parents* [right now]= they're there for only a few days, but they have to go home on Friday).
- El aspecto **Progresivo** se refiere a **eventos o acciones que están sucediendo al momento de hablar**, o a **acciones momentáneas; eventos en progreso aún sin concluir** (e.g. *I'm working in Japan* [right now]= I don't always work in Japan because I usually work in Seattle).

[8]

Las formas de Tiempo & Aspecto

Simple

	Simple
	∅
Presente	write/writes walk/walks
Pasado	wrote walked
Futuro	will write will walk

Progresivo

	Progresivo	Progresivo Perfecto
	be+ing	have+en be+ing
Presente	am/is/are writing am/is/are/walking	has/have been writing has/have been walking
Pasado	was/were writing was/were walking	had been writing had been walking
Futuro	will be writing will be walking	will have been writing will have been walking

{ 9 }

Tiempo Presente

ASPECTO				
	Simple	Perfect	Progresivo	Perfect Progressive
	∅	have + -en	be+ing	have+en be+ing
Presente	write/writes walk/walks	has/have written has/have walked	am/is/are writing am/is/are/walking	has/have been writing has/have been walking

El tiempo presente simple permite el uso de cuatro tipos diferentes de aspectos:

mira los ejemplos:

- **SIMPLE:** She **lives** in Seattle and teaches English at a language academy.
- **PERFECTO:** She **has taught** English for 10 years.
- **PROGRESIVO:** She **is teaching** beginners and intermediates this term.
- **PROGRESIVO PERFECTO :** She **has been thinking** in teaching abroad.

{ 10 }

Tiempo Pasado

ASPECTO				
	Simple	Perfecto	Progresivo	Progresivo Perfecto
	∅	have + -en	be+ing	have+en be+ing
Pasado	wrote walked	had written had walked	was/were writing was/were walking	had been writing had been walking

El pasado simple también utiliza los cuatro diferentes tipos de aspectos. Mira los ejemplos:

- **SIMPLE:** He **answered** the phone and **wrote** memos at work yesterday.
- **PERFECTO:** He **had started** the memo when the phone rang.
- **PROGRESIVO:** He **was writing** the memo when the phone rang
- **PROGRESIVO PERFECTO:** He **had been writing** all morning.

{ 11 }

Tiempo Futuro

ASPECTO				
	Simple	Perfecto	Progresivo	Progresivo Perfecto
	∅	have + -en	be+ing	have+en be+ing
Futuro	will write will walk	will have written will have walked	will be writing will be walking	will have been writing will have been walking

El futuro simple también utiliza los cuatro diferentes tipos de aspectos. Mira los ejemplos:

- **SIMPLE:** They **will visit** the grandparents next year.
- **PERFECTO:** They **will have visited** the grandparents by next summer.
- **PROGRESIVO:** They **will be visiting** the grandparents for three weeks.
- **PROGRESIVO PERFECTO:** They **will have been visiting** the grandparents by July.

{ 12 }

Aspecto Simple

El aspecto **Simple** se refiere a **eventos que son permanentes o que nunca cambian**. (i.e. **estados o hábitos**) como se describen con el presente simple.



She lives in Seattle



She teaches English



(13)

Aspecto Simple [cont]

El aspecto **Simple** se refiere a **eventos que son permanentes o que nunca cambian**. (i.e. **estados o hábitos**) como se describen con el presente simple.



They play football every Thursday.



The doctor sees his patients every morning. [It is a routine he must follow at the hospital].



This morning he read the newspaper while he took breakfast.

El **aspecto Simple** nos indica que los eventos, estados o hábitos tienen un punto de inicio y final definidos; el aspecto simple puede ocurrir en cualquier tiempo gramatical.



(14)

El aspecto **Simple** se refiere a **eventos que son permanentes o que nunca cambian** (i.e. **estados o hábitos**) como se describen con el presente simple.

Sujeto + verbo principal + complemento
(tiempo pasado)

EXAMPLE:

- 1) This morning **he read** the newspaper;
- 2) while **he took** breakfast.



El **aspecto Simple** nos indica que los eventos, estados o hábitos tienen un punto de inicio y final definidos; el aspecto simple puede ocurrir en cualquier tiempo gramatical.



(15)

Aspecto Progresivo

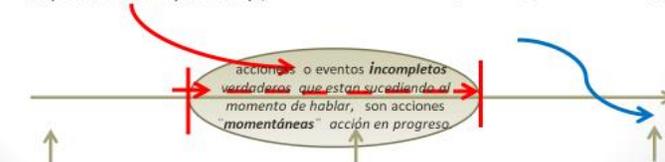
El aspecto **Progresivo** se refiere a acciones o eventos **incompletos que no han concluido aún**. Se refiere a **eventos verdaderos que están sucediendo al momento de hablar**; también considerados como acciones "**momentáneas**".



they're **re visiting** their parents [right now]= they're there for only a few days,



but they have to go home on Friday



Pueden suceder en el presente, pasado o futuro

(16)

Aspecto Progresivo [cont]

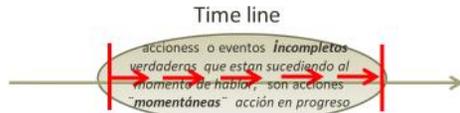
El aspecto **Progresivo** se refiere a acciones o eventos **incompletos que no han concluido aún**. Se refiere a eventos verdaderos que están sucediendo al momento de hablar; también considerados como acciones **"momentáneas"**.



He **was writing** the memorandum and **answering** the phone all morning. [Both activities are momentary].



He **is painting** the house this week. [it only takes a few days to paint the house].



Pueden suceder en el presente, pasado o futuro

[17]

El aspecto **Progresivo** se refiere a acciones o eventos **incompletos que no han concluido aún**. Se refiere a eventos verdaderos que están sucediendo al momento de hablar; también considerados como acciones **"momentáneas"**.

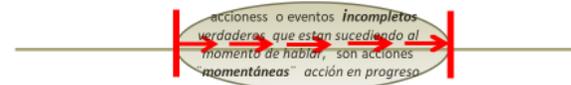


- 1) He **was writing** the memorandum and;
- 2) **answering** the phone all morning.

Sujeto + verbo auxiliar+ verb principal + complemento

(to be **was/were**) (-ing)

Línea del tiempo



Pueden suceder en el presente, pasado o futuro

[18]

Aspecto Perfecto

El aspecto **Perfecto** se refiere a eventos que iniciaron en el pasado y continúan sucediendo en el presente y aún son relevantes.



She **has lived** in Seattle since 2005
(She still lives in Seattle)



She **has taught** English for 10 years
(She still teaches English—until today)



[19]

El aspecto **Perfecto** se refiere a eventos que iniciaron en el pasado y continúan sucediendo en el presente y aún son relevantes.



She **has taught** English since 2005
(She still teaches English—until today)

Sujeto + verbo auxiliar + verbo principal + complemento

(**have/has**) (en **participio**)

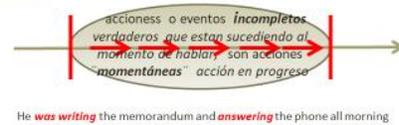


[20]

Aspecto Simple



Aspecto Progresivo



Aspecto Perfecto

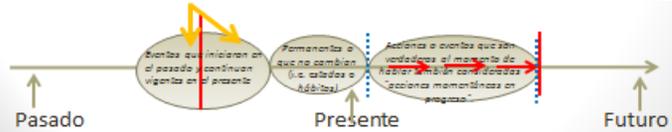


(21)

Como se mostró previamente, todos los tiempos gramaticales (presente, pasado y futuro) pueden tener los diferentes tipos de aspecto (simple, progresivo y perfecto).

TIEMPO	ASPECTO			
	Simple	Perfecto	Progresivo	Perfecto Progresivo
	Ø	have + -en	be+ -ing	have+en be+ing
Presente	write/writes walk/walks	has/have written has/have walked	am/is/are writing am/is/are walking	has/have been writing has/have been walking
Pasado	wrote walked	had written had walked	was/were writing was/were walking	had been writing had been walking
Futuro	will write will walk	will have written will have walked	will be writing will be walking	will have been writing will have been walking

Table 1. "Tenses and Aspect" in English. Coker-Hirsh & Larson-Freeman (1999:122).



(22)

Veamos algunos ejemplos utilizando los aspectos: simple, progresivo y perfecto.



- This is my friend Maria.
- **She lives** (live) in Rome because
 - **She has worked** (work) there since 2010.
 - **She is visiting** (visit) Chile this summer.
 - **She has** (have) a summer house there.



- These are my friend Maria's parents
- **They are** (am/is/are) retired now,
 - In the summertime **they live** (live) in England and the winter time they live in Mexico and right now
 - **they are spending** (spend) the summer time in England.

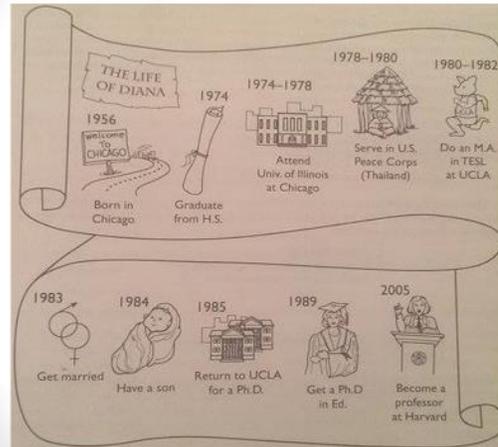


- This is Patrick, Maria's brother
- **He is** a professional photographer and
 - **He travels** around the world taking extreme photography in far and exotic places. **He has taken** photos to wild animals and dangerous natural events like volcanoes' eruptions.
 - **He is spending** the summer with Maria in Italy.

(23)

Adapted from Nichols (2005)

Pensemos retrospectivamente: "The Life of Diane"



Diane ha logrado muchas cosas a lo largo de su vida. Algunos eventos en su vida se traslapan con otros al haber ocurrido simultáneamente; otros sucedieron sólo una vez y otros permanecen en su vida hasta el día de hoy.

(24)

Adapted from Coker-Hirsh & Larson-Freeman (2003)

¿Qué eventos ocurrieron exactamente en el pasado, y cuáles siguen vigentes hasta hoy?

- It's 1974. For how long has Diane been living in Chicago?**
Diane has lived in Chicago for 18 years.
- For how long did Diane attend the University of Chicago?**
She attended the University of Chicago for four years.
- What was Diane doing during 1978?**
During 1978 she was studying at the University of Chicago and also serving at the U.S. Peace Corps in Thailand.
- What major events occurred during 1983 and 1984?**
During 1983 she got married and in 1984 she had a son.
- Since when has Diane had a PhD?**
She has had a PhD since 1989.

[25]

El calendario de actividades de Jill's

Estas son las actividades de Jill para el mes de enero; chécalas cuidadosamente para que puedas describir como transcurren sus actividades mensuales.

Year						
January						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
study	class work SICK	class SICK	class SICK	class	class test work	study <small>New Years Day 1</small>
study 2	class work 3	class 4	class work 5	class 6	class test work 7	study 8
study 9	Off for holiday 10	class 11	class work 12	class 13	class test work 14	study 15
study 16	class work 17	class 18	class work 19	class 20	class test work 21	study 22
30	31 <small>M.L. King Day</small>					
	23	24	25	26	27	28 29

[26]

Describiendo las actividades mensuales de Jill

During the month of January, Jill is very busy. She goes to class every weekday (except when holidays) and studies on the weekends too. She has tests once a week on Fridays. These days she is also working. She works on Monday, Wednesday, and Friday evenings after school. She is not working this evening (Wednesday), though, because she is not feeling well. She has been sick since Monday. She has missed school and work for two days...

[27]

Auto-reflexión

- **Ahora es momento de que reflexiones con respecto a las diapositivas que has estado viendo.**
- **¿QUÉ ENTIENDES con respecto a los nuevos conceptos de tiempo y aspecto que has repasado?**
- **Piensa al respecto y has tus propias conclusiones; ¿a qué conclusión llegaste con respecto a tiempo y aspecto en inglés?**

[28]

Ahora vamos a hacer algunos ejercicios utilizando los aspectos: simple, progresivo y perfecto. (ANSWER IN ENGLISH)



- These are my grandparents.
- _____ (live) in Spain; in the past _____ also _____ (stay) in Mexico for a period of time. At the moment _____ (stay) at my parent's house in London.
- _____ (to be) together for more than 50 years.



- This is my niece Christina.
- _____ (study) the primary school. _____ (like) history a lot and _____ also _____ (love) to write stories. Last year _____ (win) a contest of fairy tales writing in her town.
- _____ (want) to become a famous writer when she grows up that is why _____ (start) to write her own stories.



- This is my nephew Erick.
- _____ (love) music a lot. _____ already _____ (take) music lessons at the Conservatory of Music in London. At the age of twelve _____ (give) a concert of Spanish guitar!
- Last year _____ (win) a child talent music contest.

29

Tu vida, tu línea del tiempo

¿Nos puedes compartir algunos de los eventos más trascendentales en tu vida? Aquí te damos algunas ideas. Escribe tus momentos más importantes. (ANSWER IN ENGLISH)

Year _____

Si alguno de los eventos importantes de tu vida no se contempló aquí, por favor agrégalo.

30

Qué eventos ocurrieron exactamente en el pasado, y cuáles siguen vigentes hasta hoy? (ANSWER IN ENGLISH)

- Where were you born and where have you lived?

- What were you doing between the ages of 8-13 ?

- What were you doing during your teenage years?

- What major events occurred during high school and university?

- What other major events in your life can you remember?

31

Tu calendario de actividades

Rellena el calendario del mes de enero conforme a tus actividades diarias (si gustas puedes cambiar de mes). (ANSWER IN ENGLISH)

Year _____						
January						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						New Years Day 1
	2	3	4	5	6	7
	8					
	9	10	11	12	13	14
	15					
	16	M.L. King Day 17	18	19	20	21
30	31					
	22					
	23	24	25	26	27	28
						29

32

Describe tus actividades del mes

(ANSWER IN ENGLISH)

33

Compara and contrasta

Mira a los siguientes pares de enunciados, compara y contrastalos. Puedes indentificar los tiempos gramaticales y aspecto que utilizan? Cual crees que sea la diferencia principal entre ellos?

- a) I have read the book / I have been reading the book
- b) Stan sells vacuum cleaners / Stan is selling vacuum cleaners
- c) Did you go to Yankee Stadium / Have you gone to Yankee Stadium?
- d) They went on vacation / They have gone on vacation
- e) We are watching movies / We watch the movies

35

Pasado simple vs. Presente Perfecto "ENTREVISTA DE TRABAJO"

Estás a punto de realizar una entrevista de trabajo para la posición de acompañante de infantes para una aerolínea. Porfavor danos tus respuestas (lo más detalladamente posible) utilizando el pasado simple, el pasado y el presente perfecto en donde se requiera. (ANSWER IN ENGLISH)

- Have you ever dealt with children?
- When was your first experience with children? (if you have had one please provide details)
- Have you ever travelled with children? (if yes, please provide details)
- Have you ever experienced a difficult/emergency situation with children? (if yes, please provide details)
- What do you think is a good way to keep children calm and amused?

34

Entendiste los conceptos de tiempo and aspecto?

- Si tuvieras que explicar a un compañero de clase o a otra persona para que entendiera la diferencia entre estos dos conceptos (tiempo y aspecto) ¿cómo lo harías? ¿ qué les dirías?
- Con la ayuda de tu compañero, puedes pensar en una pequeña lección de cómo enseñar tiempo y aspecto?

Thank you !!!

36

Appendix 12. Oxford Placement Test Answer Key

produce a total score out of 200. It is this aggregate score from the two sections that should ideally be used to establish a rank order for placement or other purposes. Specifically, it is the overall score out of 200 which must be used to relate performance on the OPTs to other instruments and scales, as shown in the Levels Chart.

The OPTs offer an extremely reliable basis for the initial assessment of students of English. However, once students are known to an institution, the best possible evaluation of their overall language profile will often come from their teacher(s).

The Levels Chart shows levels relationships which represent broad statistical correlations. It therefore offers a very useful general guide as to where learners are on a number of widely recognized scales of overall language proficiency. However, the correlations are based on results from tests which, while claiming to be measures of overall language ability, have significant differences in content, formats and the weighting and reporting of scores. It could also be remembered that a single global test score cannot provide the detailed language profile that is needed if a fuller description of an individual's proficiency is required.

Theoretical introduction

Research background and validation of the Oxford Placement Tests

The OPT is a highly economical and easy-to-administer objectively reliable test, which provides consistently meaningful scores from level A1 upwards. It includes a unique listening test, which can be attempted by students of any level and is a sensitive and delicate measure of a number of important components of communicative performance, both knowledge and microskills. All the items in the Listening Test were derived from authentic situations and initially tested on groups of native speakers. Only those items which were consistently answered correctly by the trial groups of native speakers were included in the bank of items from which the final items for each Listening Test were drawn.

In all parts of the tests the lexis has been carefully controlled. Learning is inevitably and intentionally tested within the test, but the aim throughout has been to find out what the testee knows. The reliability across test populations is very high. The facility indices and discrimination indices of particular items show a high level of consistency from one large multilingual sample to another, in the same defined sample range and balance of levels within sample, though there are some test differences.

Answer Key

Listening Test

1 hearing	69 Finnish	34 would be
2 composition	70 trials	35 man
3 grows	71 armed	36 for
4 present	72 ill	37 on
5 Dennis	73 old	38 information
6 Friesian	74 Euston	39 are they
7 founded	75 crude	40 is coming
8 my own	76 barrel-	41 will
9 loathed	77 arrival	42 having
10 she's	78 inventory	43 are
11 chess	79 newer system	44 that
12 40p	80 J&B	45 For
13 clocks	81 HA	46 of
14 horrid day	82 hair-dryers	47 that
15 joys	83 women	48 flying
16 can	84 free	49 but
17 some kinds	85 bath day	50 I've realized
18 tearful	86 autistic	51 say
19 regain	87 scarred	52 as
20 Steve	88 oarsman rowed	53 a long time
21 Why	89 eternal	54 hardest
22 reading	90 Andean	55 which
23 glass	91 rod	56 are willing to
24 injured	92 personnel	57 to studying
25 can see	93 He and	58 had started
26 pictures	94 loyal	59 on
27 wouldn't	95 free	60 any
28 blended	96 precedent	61 listening to
29 notice	97 terrain	62 Living
30 collected	98 to date	63 trying
31 Consul	99 face	64 would rather not
32 washing	100 pirated	65 learnt
33 rarely		66 joined
34 glass		67 has been working
35 lash		68 moving
36 talk		69 was
37 texts		70 hasn't been
38 hatch		71 would
39 Penny's		72 as
40 two minibuses		73 have
41 buyable		74 was living
42 two days'		75 were
43 I reckon		76 who
44 shod		77 his
45 sealing tape		78 will be staying
46 persecution		79 younger
47 mental		80 used
48 'committee'		81 have moved
49 view		82 near
50 slot		83 to

Grammar Test

1 boils	68 has been working
2 it is	69 moving
3 to keep	70 was
4 the weather	71 hasn't been
5 it rains	72 would
6 any	73 as
7 warm	74 have
8 the coldest	75 was living
9 Most	76 were
10 few	77 who
11 won	78 his
12 had won	79 will be staying
13 made him	80 younger
14 had	81 used
15 both	82 have moved
16 all over	83 near

Appendix 13. Awareness Interview Example

Awareness Interview EXAMPLE OF ANSWERS (AI-9EXP-EF)			
	Question	Answer	Answer
1	1. What do you know about the past tense in English?	it describes past actions, it requires special conjugation of the verbs, we have regular which end in 'ed' and irregular verbs which doesn't follow a strict form	Definitely the past tense is related to all actions that happened in the past; it uses the conjugations in the verbs regular "ed" and irregular that change their form.
2	2. Do you know the difference between tense and aspect in English?	I don't know	The tense and the aspect are two different things but they complement with each other. Tense refers to when the action happens; it can be present, past or future. And the aspect is more about how that action happened, like how we perceive that action. like something that was happening or like something that happened and finished in a very specific moment; that is why the aspect can be progressive with the use of the verbs in gerund) or simple with the verb in past tense, or participle for example.
3	3. If you were to teach someone the concept of tense and aspect in English, how would you do it pedagogically?	I will start by showing the difference between the verbs in present and the verbs in past explaining how do we use the past with Spanish examples and then translating them into English, ahhm comparing tenses, we've got to start from a point so we can start from the present structure and then we go to the past structure so we learn a little verbs and then we learn how to make sentences with those verbs, then I will try to give them some examples of it for them to describe me later about their past events; the last holiday, what did you do last week, last night; some examples like that.	I will first give them some examples of my own life; like telling them a story of my and make them think of it. Then I will write on the board the sentences of my own story and ask them to identify what do they see new in the grammatical form of the verbs for example. Once they have identify that the verbs are a bit different from the present tense I will explain the that that form is the past tense and that for the past tense there are regular and irregular verbs and also aspects like progressive or perfect. then I will give them a list of the verbs and ask them to work in pairs some examples.

Appendix 14. Communicated Thinking working with SCOBAs

EXP 9 sem + BELEM & Shirley + COMMUNICATED THINKING (SCOBAS)

speaker		LANGUAGING
Alejandri	1 2	Ok (...) lets see... do you understand what is this about?... Let's see... (reading quietly)
Shirley	3 4 5 6 7 8	Ok, let's go slowly so we can read them one by one... ahh... it's about time and aspect in English... do you know what is aspect? I couldn't answer that question when we were asked about it the other day...I didn't know what to say... I don't remember it... maybe one day I was taught it but I don't remember anything about it...
Alejandri	9 10 11 12 13 14	Yes... it's about tense and aspect... No... I don't know,,... I don't remember what aspect is... maybe here it is going to tell us what is it... let's read carefully... (reading quietly) Mmhhh here it is... it's about the difference between tense and aspect... you see?
Shirley	15 16	Yes... it's how we can understand better how tense and aspect work together...
Alejandri	17 18	Yes... I have never seen it explained in this form... I hope now I understand it! I am glad I wasn't evaluated about it jajajaja
Shirley	19	Yes... I don't think anyone knows anything about aspect... (reading quietly)
Alejandri	20 21 22 23 24 25	Ahh... (reading quietly)now that I see the explanation like is clearer... do you see what it is about, do you? You see? It says aspect is different to tense because we see things how they happened, like the perspective from outside, like from a window, you see, it's like you see how things happen, that is what it says here... well, that is what I understand they are saying here... (reading quietly)
Shirley	26 27 28 29 30 31 32 33 34	So then... (reading quietly)... so then... time and aspect are not the same thing? (reading quietly)... at least that is what I am understanding from the slides... I see that they are two things...(reading quietly)but they go together... don't you see it like that? At least that is what I understand... you see? Look, it says it here "... aspect how we localize? Put? an event or situation in time... retro- retrospectively?" , like looking back?... it is here.. that is what it says... So I guess the aspect is about how we see and perceive things... isn't it? (reading quietly)
Alejandri	35 36 37 38 39 40	Look... (reading quietly) ...It says... it says.. that situations can be events and states... did you know this? I didn't ... first time I see it like this... I have never think about it... I only thought verbs indicated actions and that's it... never thought of verbs like marking events and states... you don't reflect on those things ... in the grammatical rules we don't see that...I only learned the structures, how to form the grammatical tenses...
Shirley	41 42 43 44 45 46	Yes... I only know the grammar rules, like the forms, that is how I know it... so, aspect is part of the tense? (reading quietly)... the aspect is like explaining how the verb works, how the aspect how we see the action... (reading quietly) Because that is what is explained in the pictures... look at the pictures, the lines have like a limit like if the event is stopped... maybe is about that... that is an state...
Alejandri	47 48 49 50 51 52 53	Mmhhh (reading quietly)... yes... is like explaining how the action happened... And you see the pointed circle is like circling the event... maybe that is what they refer to about events having a limit or being permanent... do you understand it like I do? Or maybe I am understanding another thing? I have never seen this before, I mean, the verbs and the aspect explained like this... but it's clear... that is how I see it... are you understanding what it says?
Shirley	54	No, I haven't seen it like this, yes, I understand it ...

	55 56 57 58	I see it like you... (reading quietly)... it's clear in the picture... look at it... it says clearly ... when the event has no internal change then the diagram is closed, that means that the event static... I guess, well I see it like that...
Alejandri	59	Yes... it could be like that... why not? I think so... (reading quietly)
Shirley	60	See the verbs express events and states... (reading quietly)
Alejandri	61 62 63 64 65	Ok... if they are events then they are like activity that's why it says events are dynamic... and states don't change... what do you think? With the pictures it's clear to understand... you see? Event, durative like read a book, like sing a song I guess, right?
Shirley	66 67	Yes, (reading quietly) that's what it says here... events can last ...and states can be permanent like be European, be Mexican... is like that? Yes?
Alejandri	68	Well if it is a state is the 'state' in which you are; can we say 'my state is to be in love?'
Shirley	69	Jajajajaja yes, I think so ...
Alejandri	70	I don't have boyfriend now jajajajaj I only used the example
Shirley	71	Jajajajaj I don't either jajajaja
Alejandri	72	Ok... let's continue... how much time do we have left?
Shirley	73	Like 15 minutes....
Alejandri	74	Ahh ok ok ...
Shirley	75	Ok... let's continue... (reading quietly) we almost finish...
Alejandri	76	Yes... a few more...
Shirley	77	The tenses... ok I know this.... Simple past, progressive, perfect.... mmmhhhh
Alejandri	78 79 80 81	(reading quietly)... Ahh ok I see... ok... look... this is about we see the difference between tense and aspect.. aspect is more... is more of the perspective vision of the verbs but we give the perspective with the form of the verb...
Shirley	82	With the form of the verb? You mean if it is ing or simple past? Right?
Alejandri	83 84	Well, that's what I understand... that's what it says... look, it says it here... I think is about that (reading quietly)that's what it says here... look at the images...
Shirley	85	Yes... all the slides say that... yes... tense is the time like present, past, future
Alejandri	86 87	Yes... tense is the time and aspect says the perspective; so we can have present or past with progressive that refers to events that were happening...
Shirley	88	Aha... aha... (reading quietly)
Alejandri	89	What is this 'zoom' thing?
Shirley	90 91 92	'Zoom in' it says... I guess is that ...(reading quietly)is like a close look at what happened... like in the cameras! When you make 'zoom' is because you are getting closer the view...
Alejandri	93	That is what it looks like...
Shirley	94 95 96 97 98	(reading quietly)) "the previous slides showed some diagrams... before you proceed could you explain which terms and notions would you associate with which diagrams and why? You can use the letters and numbers to find the pairs"... do we have to answer this? ..." Let's do this ones to see if we can answer correctly
Alejandri	99 100 101 102 103	If it is asking, I guess so Aahhh... let's see if we can (reading quietly)mmhhh A is 2 ... I guess... I am not sure... but look... you see the lines like zigzag, I understand for that a progressive thing... don't you think so? And B is 4 because is restricted perspective... what do you think?
Shirley	104 105 106 107	Mmmhhh (reading quietly) I think you answered it ok... so ok.. let's see now me.. ok... C is 3 then?? Look at the picture, maximum perspective with no limits and the last one has to be 1; do you agree?
Alejandri	108 109	I guess so... (reading quietly)I think so... let's look for the answer to see if we did it right...
Shirley	110	Aahhh no jajajaja we fail! Jajajajaaj that's means we don't learn it yet! Jajajaja
Alejandri	11 112	It is only one Lesson ! the first time we see it! I think two good answers is good ! jajajaajaja

Shirley	113	Mmhhh... mmmhhhh (reading quietly)
Alejandri	114 115	The time... like this doll is showing yes... present... past... future... (reading quietly) experience...
Shirley	116	Experience 'memorable events' ... ok ok
Alejandri	117 118 119 120	Ok.. in the past.. (reading quietly)...so if you climbed the Everest is memorable... I see... so if you continue doing something for a long time like working for the university that is continuity... mmhhh (reading quietly)
Shirley	121 122 123	Aha, ok this is clear....about the tenses how we use them, that I understand very clear... and now the aspect thing is clearer... I didn't have any idea about it! (reading quietly)
Alejandri	124 125	Haa... me neither...I didn't know what was aspect was... ! We finished now...
Shirley	126	There isn't more?
Alejandri	127	no
Shirley	128	ok
Alejandri	129	What do we do now? Do we close the file?
Shirley	130	Let's ask the teacher...

Appendix 15. Communicated Thinking working with SCOBAs

EXP 9 sem + BRYAN & Oscar + COMMUNICATED THINKING (SCOBAS)

speaker		LANGUAGING
Bryan	1 2	This is... (reading quietly)... the system of tense and aspect in English... have you seen it explained in this format?
Oscar	3 4 5	(reading quietly)... no but I see is about tense right? and the aspect thing, aspect... I don't remember that... that is what we were asked for, right?
Bryan	6 7 8 9	Yes, it looks like those are the two things these slides talk about... it says so here... look... (reading quietly)... to describe the particular vision/perception of an aspectual situation ... (reading quietly)and place or find situations in time through a grammatical tense... ohh ok...
Oscar	10 11	(reading quietly)tense-aspect... tools that allow people to place an event or situation in time
Bryan	12 13	(reading quietly)) yes... that what it seems to say... from what I am understanding here... that these two things give us details of the situation we are watching...
Oscar	14	So are they the same?
Bryan	15 16 17	Not exactly... (reading quietly)look... it explains it better here... grammatical markers of the past, progressive, perfect are to locate in time... and emphasize the perspective... (reading quietly)ouch... this issue looks a bit more complex... let's see...
Oscar	18	Tense is clear to me... but aspect is the one I see more about how we perceive things?
Bryan	19 20	Yes (reading quietly)exactly... that's it... it is clear here... I'm understanding now... you see? It says the verbs are events and states... (reading quietly)
Oscar	21	Mmmhh... events and states... here it gives some examples... ok
Bryan	22 23	Yes... in the slide says that verbs have to do with events like making something 'build a house' and states just like the verb 'to be' to be... be happy...
Oscar	24 25	(reading quietly)... so if it is a verb indicating that we are doing something physical or material then is it an event? Or how is it?
Bryan	26 27 28	(reading quietly) that's what it seems like; look at the verbs it's giving as examples: read a book, build a house, grow plants, knock a door, realize something... that is different to a state that is something like more personal... don't you think so?
Oscar	29	That is what I was thinking...
Bryan	30 31 32 33	(reading quietly)... describing situations... upps this looks more complex... it says events and states can be durative and punctual and transitory and permanent... let's see... let me check... (reading quietly)... ok ahb (reading quietly) ok it makes sense like this...look... follow the examples...
Oscar	34 35	(reading quietly)mmmhhhh that durative and transitory thing is what makes me confused...
Bryan	36 37	But is clear... transitory is something that is temporal... permanent something that is forever...
Oscar	38	Well... if it is like that as you are explaining it to me now it starts making sense to me...
Bryan	39 40	(reading quietly))... the system tense/aspect... (reading quietly)
Oscar	41 42	Hey... have you seen those markers of tense of states existential? What is that? I have never seen it like that; it is the past tense, isn't?
Bryan	43 44 45	(reading quietly)...it seems that it is explaining how the past tense is formed... like if the past tenses were unreal... like if they did not exist anymore... is kind of obvious isn't it? But when we speak it we don't think about it like that... isn't it?

Oscar	46 47	Yes... it's true... we speak and we do not realize that it is about something that does not exist anymore... like it says it here...
Bryan	48	(reading quietly)
Oscar	49	(reading quietly)
Bryan	50 51	you see that of Reading a book? Inherent limits...sure... reading a book has a beginning and an end... we don't read a book 24 hours throughout your life...
Oscar	52 53	That's it... the verb itself indicates that it is an action that finishes at some point... ah that is why they put it inside the circle, isn't it?
Bryan	54 55	It looks like... that's what it says... look... that is what it says about maximum perspective, with its limits but with maximum perspective...
Oscar	56	Ok... yes... so the maximum perspective is within the framework but it doesn't go out of it, isn't it?
Bryan	57	Yes... (reading quietly)
Oscar	58	Have you seen the one on restricted perspective? Or progressive aspect?
Bryan	59	Yes... (reading quietly)that's what I am looking at...
Oscar	60	So if it is progressive it doesn't have limits, right?
Bryan	61 62 63	Aha...yes (reading quietly)) knock the door... check it out what it says: maximum perspective framework, the situation is perceived in its totality... that means that the action does not tell you exactly if it finished or started... it only tells you it happened... you see?
Oscar	64 65	(reading quietly) real... without limits... so then situations can be seen like that... isn't it?
Bryan	66 67 68	Yes... look at the dolls... non progressive aspect says it's a situation without limits, habitual, permanent, I suppose it's something that does not have an ending point... it's something that happens and it does not say when it ends... well that is what I think so...
Oscar	69 70 71	Progressive aspect says "my sister is currently working for the university" (reading quietly)... it says 'we impose ' limits, and look at the framework, it looks as if it was encapsulated in a given point in time, isn't it?
Bryan	72 73	Yes... look at the heads, it says there that when we make 'zoom' we impose limits... (reading quietly)
Oscar	74	Yes
Bryan	75	We have to answer this...
Oscar	76	Mmhmm ok... (reading quietly)
Bryan	77	Did you 'nail' the answers?...
Oscar	78	... just one
Bryan	79	I was only able to 'nail' two... number 1 and 4 were ok... I think I have to study this more... hahaha
Oscar	80	I also need to have a review of this if I want to understand it well...
Bryan	81	(reading quietly)...mmhhh perspective of direction... ok...aja
Oscar	82	(reading quietly)...present perfect...
Bryan	83 84	(reading quietly)... that is how we understand the present perfect and the past perfect isn't it? Like something that started in the past and continues in the present...
Oscar	85	Yes... look at the doll it is in the present time but it is looking at the past...
Bryan	86	Yes... that is to look retrospectively...
Oscar	87	Did you see? It says that if we want to be polite we can use the simple past! I didn't know that!!
Bryan	88	This is over... what do we do now?
Oscar	89	I guess to inform that we have finished...