A systemic functional analysis of students'oral production to determine the effectiveness of cooperative learning to enhance students' English language resources for communication

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#### **Abstract**

Cooperative learning is claimed to be an effective methodology in second language teaching over traditional teacher-centred methods (Johnson & Johnson, 1994; Slavin, 1995), since it provides students with comprehensible input, feedback and opportunities to produce modified output in a meaningful context (García Mayo & Pica, 2000; Keck et al., 2006; Mackey & Goo, 2007). Nevertheless, there is a lack of studies that measure the effects of this approach on secondary school students' linguistic production applying a linguistic model that allows to measure language resources used for meaningful purposes.

The aim of this paper is to explore the effects of cooperative learning on ESL students to enhance their communicative ability by measuring the linguistic resources they use when communicating in English. In order to meet this aim, a study involving two groups of students, an experimental group of 26 subjects and a control group of 16, has been conducted in a high school in Madrid during a three-week intervention period. For the influence of cooperative learning to be traced down more effectively, cooperative structures were only implemented in the experimental group. The outcomes of the application of these structures were contrasted with the ones produced by the group in which cooperative structures were not put into practice. Data were collected through pre- and post-oral tests administered before and after the research period to both groups and consisting of three types of tasks: (1) describing a picture, (2) giving an opinion about a topic studied in class and (3) interacting with a partner to reach an agreement. Apart from a general analysis based on Wolfe-Quintero et al. (1998), which was applied to students' oral production in all the tasks, different systemic-functional models were used to analyse them: Halliday & Matthiessen's (2004) description of clause complexes for Task (1), Martin & White's (2005) framework of Appraisal Theory for Task (2), and Eggins & Slade's (1997) model of speech functions for Task (3). The findings reveal significant development of students' fluency and accuracy as well as in their linguistic resources in some of the features analysed in each of the activities.

**Keywords:** Cooperative Learning (CL), Systemic-Functional Linguistics (SFL), clause complexes, Appraisal Theory, speech functions.

#### Resumen

El aprendizaje cooperativo se considera un método eficaz en la enseñanza de lenguas extranjeras sobre los métodos tradicionales (Johnson & Johnson, 1994; Slavin, 1995), ya que proporciona a los alumnos input comprensible, feedback y oportunidades para generar producción modificada en un contexto significativo (García Mayo & Pica, 2000; Keck et al., 2006; Mackey & Goo, 2007). Sin embargo, son escasos los estudios que miden los efectos de esta metodología en la producción lingüística de estudiantes de secundaria aplicando un modelo que permita medir los recursos lingüísticos utilizados con fines significativos.

El objetivo de este trabajo es investigar los efectos que el aprendizaje cooperativo tiene en estudiantes de inglés como segunda lengua para mejorar su capacidad comunicativa mediante la medición de los recursos lingüísticos que utilizan al comunicarse en inglés. Con el fin de cumplir este objetivo, se ha realizado un estudio con dos grupos de estudiantes, un grupo experimental de 26 alumnos y un grupo de control de 16, en un instituto de Madrid durante tres semanas. Para poder sacar conclusiones de manera más efectiva, las estructuras cooperativas sólo se aplicaron en uno de los dos grupos y se compararon los resultados obtenidos por ambos grupos. Los datos se recopilaron por medio de las pruebas orales administradas antes y después del período de investigación a ambos grupos y que constan de tres actividades: (1) describir una imagen, (2) dar una opinión sobre un tema estudiado en clase e (3) interactuar con un compañero para llegar a un acuerdo. Además de un análisis basado en Wolfe-Quintero et al. (1998), que se ha aplicado a la producción oral de los estudiantes en todas las actividades, se han utilizado diferentes modelos sistémico-funcionales para analizarlas: la descripción de Halliday & Matthiessen (2004) de complejos de cláusulas para la Actividad (1), el modelo de Martin & White (2005) de la Teoría de la Valoración para la Actividad (2), y el modelo de las funciones de habla de Eggins & Slade (1997) para la Actividad (3). Los resultados revelan un desarrollo significativo de la fluidez y la precisión de los estudiantes al hablar, así como de sus recursos lingüísticos en algunas de las características analizadas en cada una de las actividades.

**Palabras clave:** aprendizaje cooperativo, Lingüística Sistémico-Funcional (LSF), complejos de cláusulas, Teoría de la Valoración, funciones del habla.

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## 1. INTRODUCTION

Interaction plays a fundamental role in second language learning. As Wells (1985) states, it is even central at an early age since only by interacting with other people in some specific situations "the child can discover the appropriate ways of deploying his resources to achieve particular intentions – or indeed discover the existence of the linguistic code in the first place" (p. 3). There are many studies supporting that learners' participation in conversational interaction facilitates the process of second language acquisition (Gass & Mackey, 2007; Keck et al., 2006; Mackey & Goo, 2007; Pica, 2013). However, "social interaction requires the development of sophisticated communication skills", which, in turn, involve the development of "cognitive schemes about oneself and others, and about the ways in which people and objects can be related in an inter-subjective field of attention" (Nicholls & Wells, 1985, p. 6), meaning that language development is promoted by interaction, but successful interaction depends on the communicative ability of interlocutors. Therefore, within the classroom, a methodology that fosters communication is necessary in a second-language learning context in order to achieve the development of students' language resources.

From the 1970s onwards, teaching methods have evolved by prioritising oral expression or, broadly speaking, communicative competence, understood as the set of linguistic resources and skills that enable the use of language, taking into account psychological and sociocultural aspects, that is, the context in which the communicative act occurs (Larsen-Freeman, 2000). They have adopted the great shift from a teacher-centred learning model to a student-centred model, which gives students opportunities to express themselves within the classroom. Among these methodologies stands out cooperative learning (henceforth CL) which promotes social interaction among students in pair or group work activities in the classroom (Sharan, 1990; Slavin, 1990).

There are numerous studies using CL and conducted in a wide range of subject areas which conclude that CL activities lead to a higher achievement level than competitive and individualistic learning structures (Johnson & Johnson, 1991; Slavin, 1995; Kagan, 1999). In contrast to traditional approaches to learning, CL creates natural and interactive contexts in groups where students have to negotiate meaning through communication for more comprehensible input, to listen to each other and even to ask questions and to clarify issues (Jacobs & McCafferty, 2006). Moreover, students participating in CL activities also increase in higher order thinking, inter-group relations

and communicative skills, as well as in a range of affective variables, such as self-esteem, trust of peers and their attitude toward school work (see Elliott et al., 1999; Cohen, 1994; Patrick, 1994; Patterson, 1994; Sharan, 1980; Slavin, 1995). Recent studies in second language acquisition (SLA) reveal that peer interaction provides students with opportunities for *negotiation of meanings* (Long, 1983) and have addressed the way the participation structure and the power of each member of the group is negotiated (e.g. Ballinger, 2013; Donato, 1994; Guerrero & Villamil, 1994; Storch, 2002). Many studies have also found that interaction based on cooperation lead to more effective second language learning (e.g. Galazci, 2008; Kim & McDonough, 2008; Martín-Beltrán, 2010; Soriano, 2010; Watanabe & Swain, 2007).

CL is not just a methodology for language teaching but for encouraging communication among students in real-life situations (Kagan, 1995), and therefore it allows students to produce language in a functional manner at the same time they develop their social abilities (Al-Yaseen, 2014). This results not only in students' increased language use but also more varied language resources after having been working in CL groups (Johnson & Johnson, 1999; Webb, 1989).

In order to analyse language as a tool for communication, Systemic-Functional Linguistics (henceforth SFL) seems to be the most appropriate model since it studies how people use language from the point of view of meanings within context (Eggins, 2004; Halliday, 1985; Young, 2011). SFL sees language as a system of choices that accounts for the meanings that people make when using language in a specific context (Halliday, 1985). The systemic approach is a functional-semantic approach to language because it focuses on authentic and everyday social interaction in which people negotiate texts in order to make meanings with each other and to make sense of the world, which is the fundamental purpose that language has evolved to serve. This means that "the general function of language [in SFL] is a semantic one" (Eggins, 2004, p. 3) and "[...] each text we participate in is a record of the meanings that have been made in a particular context" (ibid, p. 11). Both SFL and CL are rooted in a social view of language and share the idea that language cannot be studied as a decontextualized identity but it must be considered a process affected by and affecting the social contexts in which it occurs. That is, they focus on how people interact and communicate with each other by using language "to get on with life" (Young, 2011, p. 631). Therefore, SFL and CL share the focus on a functional approach to grammar in context and on the practice of language in use.

The functional focus of SFL allows researchers to analyse texts and to explain why they mean what and how they do so, by giving account of the choices of language use or, in Eggins' (2004) words, giving a "detailed and systematic description of language patterns" (p. 21). As Young (2011) states,

SFL is a perspective for describing language both externally as a social and cultural phenomenon and internally as a formal system for expressing meanings. It does so through a theory designed not only to explain how people interact with each other through language but to provide a methodology for the analysis of many types of discourse. (p. 627)

Within the area of second language learning, there are very few studies applying a SF model to analyse classroom interaction in pair or group work. Jacobs & Ward (2000) examined how to facilitate student-student interaction in an elementary school from both a pedagogic (through CL) and a linguistic (through SFL) perspective, focusing on how students can interact successfully and how they use language to achieve certain goals, respectively; and Pastrana (2017), as well as Pastrana et al. (2017), analysed students' language use and co-construction of knowledge during group work activities in Content and Language Integrated Learning (CLIL) and L1 primary classroom settings. Moreover, there seems to be a lack of studies analysing the progress in students' language oral production through a SF approach after implementing an interactive methodology such as CL in secondary education. Some research has shown the positive effects of CL to improve students' speaking performance (e.g. Al-Tamimi, 2014; Ning & Hornby, 2010; Pattanpichet, 2011; Talebi & Sobhani, 2012; Yang, 2005), but it has not done it using a solid functional linguistic framework like SFL.

For these reasons, this paper aims at analysing the effects of CL on ESL secondary school students' linguistic competence. The analysis will focus on students' performance of the ideational and interpersonal macrofunctions as well as their speech functions in different tasks. In other words, this paper will analyse whether CL has positive effects on students' development of language resources at a secondary education level. As no previous research seems to have been carried out by applying a systemic-functional analysis to measure the effects of CL on language use at a secondary education level, this paper can be considered as innovative and worth reading.

In order to reach these aims, two classes at the same educational level received the same instructional material implemented through different methodologies: while the experimental group was taught by the researcher using CL strategies, the control group was taught by their English teacher following the traditional methodology typically used in their regular classes. In order to measure students' progress, a pre- and post-test were done with both groups and students' voices were audio-recorded and consequently transcribed. The present study can be considered an extension of Romero-Arcas (2017), where the role of CL to enhance students' oral communication skills was examined by using a scoring rubric based on four criteria: range, grammatical and vocabulary accuracy, fluency and knowledge/understanding. This paper goes further and carries out a more accurate linguistic analysis by applying, firstly, a general measurement of compositions based on Wolfe-Quintero et al. (1998) in order to measure fluency, accuracy and grammatical complexity of students' language in an objective way in all the tasks under analysis; and, secondly, the systemic-functional model developed by Halliday (1985), focusing on clause complexes, Appraisal Theory and speech functions to measure students' language resources in oral practice when describing a picture, giving an opinion about a particular topic and interacting with a partner, respectively. Both the measurement of general production and the SFL model are used to carry out a linguistic analysis in the present study. Hence, the research questions it seeks to answer are the following:

- 1. Is CL more effective than a traditional methodology at a fluency, accuracy and grammatical complexity level in all the tasks under analysis?
- 2. Is CL more effective than a traditional methodology in terms of the variety of logical relations used when describing a picture?
- 3. Is CL more effective than a traditional methodology in terms of the variety of interpersonal language used when giving opinions about a specific topic?
- 4. Is CL more effective than a traditional methodology in the types of speech functions used when students interact with each other?

The hypothesis of the study is that students who were instructed under a CL methodology during three weeks will improve their use of language resources in the L2 to a greater extent than those students instructed under a traditional methodology, as the former will be able to successfully develop their linguistic resources by working and negotiating meaning with their classmates in groups. After the key aspects of the research have been presented

in this introduction, the present study is divided into other two parts. The first part is the theoretical framework, which deals with an overview of CL and task-based learning in second language use and also focuses on SFL theory and, more specifically, clause complexes, Appraisal Theory and speech functions, which are the basis for the SF analysis carried out in this paper. The second part is the study itself, which includes the methodology section, presents the analysis and discussion of results and draws the main conclusions.

## 2. COOPERATIVE LEARNING

# 2.1. Cooperative Learning vs. traditional approaches to learning

CL is rooted in the dynamic teaching style which emerged in the 1950s in opposition to individualist and competitive learning in which students focused on individually achieving their task and on pursuing what was beneficial for them and harmful for their peers in order to achieve the highest reward, respectively (Johnson & Johnson, 1991; Gillies, 2007). By contrast, in CL, benefits are not sought for oneself but for the group as a whole (Johnson & Johnson, 2003). This was a major change in education since the student ceased to have a passive role to become the co-driver of his development and learning, and teachers turned from being "boat captains" into more "facilitators" (Jacobs et al., 2006). However, it was not until the 70s when CL was applied to classroom teaching in the United States and researchers began to develop many CL strategies and approaches (Johnson & Johnson, 1994).

In CL, students work together in pairs or small groups in order to accomplish shared goals for which all members are responsible (Kagan, 1994). Johnson et al. (1994) also define this learning method as "the instructional use of small groups so that students work together to maximize their own and each other's learning" (p. 4). Moreover, regarding second language classrooms, whereas the traditional approaches consider grammar and vocabulary learning should be the main objective of language teaching in the L2 classroom, CL is considered an extension of the principles of communicative language teaching and has been embraced as a way of promoting communicative interaction (Richards & Rodgers, 2001). According to many scholars, this creates a low-risk, stress-reduced environment which leads to a higher level of productivity and achievement (Johnson & Johnson, 1994; Jacobs et al., 2006; Gillies, 2007; Zhang, 2010).

All these views of CL emphasise the interaction that takes place among students to achieve educational objectives and reflect Vygotsky's (1978) ideas of the relationship between an individual's level of development and his or her learning ability. According to Vygotsky (1978), learning takes place on a social level before it takes place at the individual level because individual's psychological development is the result of their constant interaction with the socio-cultural context in which they coexist. This interaction is not only beneficial to encourage students' second language development but also students' social and personal learning. According to Johnson & Johnson (1999), this results in "more higher level reasoning, more frequent generation of new ideas and solutions (i.e.

process gain), and greater transfer of what is learned within one situation and another (i.e. group-to-individual transfer) than [do] [...] competitive or individualistic learning" (p. 72). Among the studies carried out to empirically determine which interaction approach to learning is more effective, Johnson et al. (1981) concluded that CL produces greater achievement than competitive or individualistic structures.

# 2.2. Main principles of cooperative learning

As Jacobs et al. (2006) point out, "[...] not all group work constitutes cooperative learning" (p. 6) and the mere fact that students work together in groups does not guarantee cooperative work and does not ensure that there is a fruitful interaction among students. For this reason, it is essential that students' interaction is structured by teachers taking into account some basic elements that distinguish CL from other forms of group learning (Johnson et al., 1994).

Firstly, positive interdependence, which exists when students believe they "sink or swim together" (Johnson & Johnson, 1990, p. 28) and when they know they must coordinate their efforts to ensure that everyone completes their specific goal. If one member of the group fails, it will be impossible for the group to reach the ultimate goal (Deutsch, 1949). This way, the knowledge and work of all members is essential for the group. Secondly, promotive interaction, which involves working in small groups where students are sitting in close proximity to their group members to be able to participate in discussions with their peers and to hear what is said (Gillies, 2007). When students talk together while they are working in groups, they learn from each other to use language to explain their ideas, negotiate meaning around a task and develop new ways of thinking (Mercer, 1996). Thirdly, individual accountability involves group members accepting personal responsibility for their own as well as for their group mates' contributions to achieving the task. Therefore, students must complete one's share of the work and demonstrate their competence as well as help other group members to complete the task (Johnson & Johnson, 1994)

Furthermore, *social skills* are necessary for the good functioning and harmony of the group because the more socially skillful students are, the higher achievement CL groups will obtain (Johnson & Johnson, 2003). Therefore, students should be taught social skills such as "asking for help, giving reasons, speaking at an appropriate volume level, disagreeing politely, paraphrasing, asking for repetition, making suggestions [...]" (Jacobs,

2006, p. 36) in order to achieve high-quality collaboration. Finally, *group processing* has a fundamental role because it allows students to maintain effective working relationships by discussing which actions they would like to preserve or which they would like to change because they have not been so helpful for achieving their goals (Johnson & Johnson, 1994).

# 2.3. Second language development in group interaction

Jacobs & McCafferty (2006) argue that the student-centred conditions of CL lead to talking as a natural outcome of cooperative interaction for the construction of knowledge. This is fundamental for language acquisition and therefore for the acquisition of new language resources and forms. According to Kagan (1995), language acquisition is determined by the interaction of a number of input, output and context variables, which are positively influenced by CL.

# 2.3.1. Input

One of the most relevant requirements for language acquisition is that the input students receive must be comprehensible (Krashen, 1982). Krashen's input hypothesis (Krashen, 1985) arose in the 1970s and stated that the acquisition of a second language takes place when the learner access to what Krashen (1982) called "comprehensible input" or "I+1" in theoretical terms, that is, language that is slightly complex and challenging for the learner, containing structures that are ahead of the learner's current level of competence. This means students could benefit from each other's production of the language by bringing forth more input (Jacobs & McCafferty, 2006).

Through oral communication, students need to show they are able to exert agency over language input by considering all the functions of language instead of seeing it as isolated from its purposes. This is called the interaction hypothesis (Jacobs & McCafferty, 2006), which stresses the need for communication so that students can negotiate meaning and, consequently, the amount of comprehensible input increases and the acquisition of new meanings takes place (Crandall, 1999).

Not only must language be comprehensible but also in the Zone of Proximal Development (Vygotsky, 1978) and repeatedly received from a variety of sources (Kagan, 1995) to lead to language development. CL groups are appropriate for this because they are a natural source of redundant communication where students use a wide variety of phrases in their discussions. Moreover, although output is more accurate in the traditional

classroom than in CL because the teacher is the source of most speech, "frequent communicative output produces speech acquisition far more readily than formal accurate input" (p.13).

# 2.3.2. Output

According to Jacobs & McCafferty (2006), "in order for learners to increase their second language proficiency, they need to produce language via speech or writing, and to receive feedback on the comprehensibility of their output" (p. 20). CL offers an opportunity for groups to talk while they are working together since it creates natural and interactive contexts where students listen to each other, ask questions and clarify issues (Jacobs & McCafferty, 2006). This leads to a potential increase in the oral production of students compared to classes under a traditional methodology and to the so-called *simultaneity principle* (Kagan, 1995) since at least one person is speaking in each group at the same time. There is much research revealing more learner talk with CL in the second language classroom than in a teacher-fronted class (Deen, 1991; Doughty & Pica, 1986; Long & Porter, 1985; Mangee & Jacobs, 2011).

Apart from the amount of student output used, the variety of language functions that students perform also increases in group activities (Kagan, 1995), probably because students "find themselves involved in requesting, clarifying, making suggestions, encouraging, disagreeing, negotiating meaning, exchanging conversation during group work" (Zhang, 2010, p. 83). There is research revealing that students produce greater quantity and variety of speech in group work than in teacher-centred activities (Long et al., 1976).

### **2.3.3.** Context

First of all, in order to lead to language acquisition, the context must be communicative where students can talk about real events and objects and where they can accomplish real goals and use language in everyday situations, leaving behind the abstract "talking about" topics characteristic of a whole-class speech to practice formal and decontextualized speech (Kagan, 1995). CL creates real-life social settings in which language is naturally used, and therefore students can practice aspects of communicative language and achieve a better conversational management (Long & Porter, 1985).

Secondly, the context must be supportive, accompanied by a social and affective atmosphere. Communication in CL avoids the formal correction of the traditional

classroom, which leads to self-consciousness and anxiety, and encourages students to give feedback to each other by negotiating meaning and supplying missing words (Swain, 1993). This does not only reduces students' anxiety and inhibitions and increases their self-confidence and self-esteem to practice oral language (Crandall, 1999; Zhang, 2010) but also helps the acquisition of vocabulary and language forms (Kagan, 1995).

# 2.4. Developing cooperative learning through tasks: CL and TBLT

In this section, the interface between cooperative learning (CL) and task-based learning and teaching (TBLT) is explored, and therefore it is necessary to discuss the understanding of task that underlies both educational approaches. Within the area of second language acquisition, on the one hand, Nunan (1989) defined 'task' as "a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form" (p. 10). Moreover, Willis & Willis (1996, 2007) and Skehan (2008) emphasise the focus on authentic use of language for meaningful purposes as the most common characteristic of task-based learning. Ellis (2003) presents a series of criteria that are generally accepted as necessary for a classroom/learning activity to be considered as a task in the sense of TBLT:

- A task is a workplan.
- A task can involve any of the four language skills.
- A task involves a primary focus on (pragmatic) meaning.
- A task involves real-world processes of language use.
- A task engages cognitive processes.
- A task has a clearly defined (non-linguistic) communicative outcome.

(Ellis, 2003)

In CL classrooms, the tasks used for instruction fulfil all the above criteria. With regard to the first criterion, as Johnson et al. (1994) state, although the result will be worth it, the implementation of CL requires much time on the part of the teacher to plan the tasks in advance as well as much effort to put them into practice in the class, especially if the students do not have much experience with cooperative tasks. Regarding the second criterion, CL tasks may involve listening to or reading a text to display students' understanding or producing an oral or a written text (Sachs, 2003). That is, they may combine receptive and productive skills. However, all of them will require students to produce oral language. With regard to the rest of criteria, which are interrelated, the

primary desired outcome of cooperative tasks is that students accomplish a task in groups by communicating and negotiating meaning among each other and, therefore, that they develop their communicative and cognitive skills by working in cooperation (Kagan, 1995). This way, cooperative tasks have a clear focus on meanings related to the concepts, notions and facts of the content-subject that students have to talk about.

The negotiation of meaning that takes place in cooperative tasks promotes learning because it provides learners with comprehensible input, feedback and opportunities to produce modified output (García Mayo & Pica, 2000; Keck et al., 2006; Mackey & Goo, 2007; Mackey et al., 2003). Moreover, it allows learners to engage cognitively in processing form-meaning relationships. According to Ramos & Pavón (2015), the objective of tasks must be "to attain linguistic or communicative competence as the result of the fusion between formal (linguistic) and instrumental (communicative) knowledge, two dimensions that have to be constructed in an interrelated way" (p. 141). Basterrechea & García Mayo (2013) argue that in cooperative tasks students do not only focus on meaning but also "reflect on their own language use and produce what has been referred to as language-related episodes (LREs)" (p. 25), which are described as "[...] any part of the dialogue in which students talk about the language they are producing, question their language use, or other- or self-correct" (Swain, 1998, p. 70).

To sum up, TBLT, an increasingly prominent instructional means to effectively promote learner second language development (Lee, 2000; Bygate et al., 2001; Ellis, 2003; Nunan, 2013), goes hand in hand with CL. This is because CL must be contextualized in a given communicative situation and guided by concrete tasks and in which the student has a role and a responsibility (Neira Martínez & Ferreira Cabrera, 2011). In the educational field, there are CL techniques that offer useful ways of structuring TBLT (Littlewood, 2009; Kagan, 1999; McCafferty et al., 2006; Sharan, 1999). According to Littlewood (2016), these cooperative techniques may enhance the effectiveness of task-based interaction.

## 3. SYSTEMIC-FUNCTIONAL LINGUISTICS

## 3.1. Overview

SFL is particularly associated to the Prague School of Linguistics founded in the 1920s in Czechoslovakia. In SFL theory, the term "functional" suggests that the structure of a language is conditioned by the uses that speakers and writers make of language, which will always be motivated by a purpose (Eggins, 2004). The term "systemic" refers to the fact that a language offers a complex of paradigmatic options which speakers can choose in linguistic interaction. Indeed, users of the language resort to a system of formally codified meanings and update them when they choose one of them in order to produce texts (i.e. communication units in contexts of situation) (Halliday, 1985; Young, 2011). Texts, therefore, exist because there is a grammar that makes them possible and, as they are communication units, they are inscribed in a context of situation and in a cultural context (Eggins, 2004). This way, SFL suggests that it is only possible to cover all the functions and components of meaning through the study of language in use.

In this sense, "functional" is opposed to "formal". A formal grammar, like those of generativist models (see Chomsky (2005)), seeks to describe and explain language through fundamentally syntactic rules which are out of context, and therefore it is independent of language use. It is based on the idea that all humans possess an inherent language learning faculty distinct from other learning faculties (Young, 2011). However, a functional grammar also constitutes an interpretation of the syntax (and of other linguistic levels), and it is particularly interested in texts, which are concrete manifestations of language use. Halliday (1985, 2004) argues that a functional grammar is "natural" because each element of a language can be explained by reference to how language is used. This means that the particular form taken by the grammatical system of language is intimately related to the personal and social needs that language has to satisfy. That is, Halliday sees language as a social phenomenon and as a resource rather than as a set of rules (ibid., 2011).

# 3.2. Language and context in SFL

The systemic-functional theory suggests that the analysis of language functions cannot take place without linguistic structure, and vice versa. This idea was first developed in Halliday's (1989) functional grammar of modern English. Halliday & Matthiessen (2004) point out that some functions of language are simultaneously expressed in instances of language use, giving rise to three strands of meaning. This way, language fulfills three

large "functions" in a social context, which are actually "metafunctions" because they subsume other more specific functions of the semantic system of a text:

- The **ideational macrofunction** is the expression of content, the use of language to represent things, ideas and relationships (Halliday, 1994). The content can be about the physical world that surrounds us or about the inner world of consciousness, dreams and fiction. Therefore, it can be said that it has two sub-categories: the experiential part, which represents our experience through different process types (material or action, mental and relational, etc.) (ibid., 1994); and the logical part, which expresses the abstract logical relations that derive from experience and explains how clauses are connected to each other (cause-effect, condition-consequence, purpose-medium, etc.) (Young, 2011).
- The **interpersonal macrofunction** is the use of language to interact with others, that is, to establish and maintain social relationships by expressing attitudes and stances in discourse (Halliday, 1994; Martin & White, 2005). It is related to the social, expressive and conative functions of language. Speakers or writers convey meanings through mood choices, such as statement, question or command, and through modality, which is realised by modal operators, such as 'might', 'could' or 'should' (Eggins, 2004). Meanings can also be expressed by adjuncts like 'probably' or 'usually' and sentence adjuncts referring to the whole sentence, such as 'frankly' and 'unfortunately' (Young, 2011).
- The **textual macrofunction** is the use of the resources that language has to ensure that an utterance is relevant in a given context (Halliday, 1994). Some resources to achieve so are cohesive features such as "ellipsis, reference, repetition, conjunction and thematic development" (Young, 2011, p. 629). The textual macrofunction also includes coherence. A text is coherent if it is consistent with itself and with the context of situation. To achieve coherent texts, speakers and writers must "hang' together through exophoric reference, reference outside the text to the immediate context or to the broader cultural one" (ibid., 2011).

Furthermore, SFL adopts a socio-semantic perspective of language (Eggins, 2004; Young, 2011). Under this perspective, Halliday (1974) believes that language is a "social semiotic", that is, a system organised as sets of choices that respond to the speakers' needs in different situations. The focus here is on "how people use language with each other in

accomplishing everyday social life" (Eggins, 2004, p. 3). This allows considering linguistic choices as appropriate or inappropriate according to their context of use.

In SFL, the social context is an abstraction of the semiotically relevant contextual aspects of communication. According to Malinowski (1946), language is a functional resource because its use always has a purpose and language only makes sense, that is, it only has a meaning when interpreted within its context. Eggins (2004) highlights the importance of context by stating that "it is often simply not possible to tell how people are using language if you do not take into account the context of use" (p. 8). Halliday defines context as "the environment in which meanings are being exchanged" (Halliday & Hasan, 1980, p. 12) and breaks it down into three dimensions which make a difference to how we use language: field, which is the kind of social activity or topic that is taking place and generating the text, and it includes the intentions or purposes of the speaker or writer; tenor, which is the relationship between the participants in the communicative act and its type of interaction and determines "[...] the position that speakers and writers adopt both in terms of information being conveyed as well as interactions shared with audiences" (Young, 2011, p. 631); and mode, which is the medium used as a communication channel, that is, the way in which the content is communicated (spoken or written, spontaneous or planned, etc.).

According to Halliday (1994), these three situational factors are text determinants, since they form out the semiotic structure of the situation in which language occurs, and configure what is called as *register variables*. As Eggins (2004) states, they explain that

we will not use language in the same way to write as to speak (mode variation), to talk to our boss as to talk to our lover (tenor variation) and to talk about linguistics as to talk about jogging (field variation)" (p. 9).

Halliday & Matthiessen (2004) state that register is a set of textual characteristics that vary systematically according to the contextual values of the type of situation. Therefore, a set of texts will share the same experiential, interpersonal and textual meanings as well as similar lexico-grammatical resources if they have the same context of situation, since they belong to the same register (Butt et al., 2000), Moreover, each type of meaning represented by the macrofunctions described above can be related in a predictable and systematic way to each of the register variables (Halliday, 1994) (see *Figure 1*). For this reason, the field of a text can be associated with the realization of ideational meanings; the mode, with that

of textual meanings; and the tenor, with that of interpersonal meanings, which means that "there is a correlation between the situational dimensions of context and these different types of lexico-grammatical patterns" (Eggins, 2004, p. 110). That is, the context is influenced by language choices "creating a bi-directional influence between language and contexts of situation" (Young, 2011, p. 631) since we can both deduce context from the text and predict language from context (Eggins, 2004; Halliday & Hasan, 1980). The present study has focused on the variables of field and tenor and, therefore, on the analysis of aspects related to the ideational macrofunction, specifically clause complexes and logical relations, and the interpersonal macrofunction, specifically Appraisal Theory. It also analyses speech functions, which are at an interactional level of language in SFL theory, and therefore a more detailed description of these features is offered in sections below.

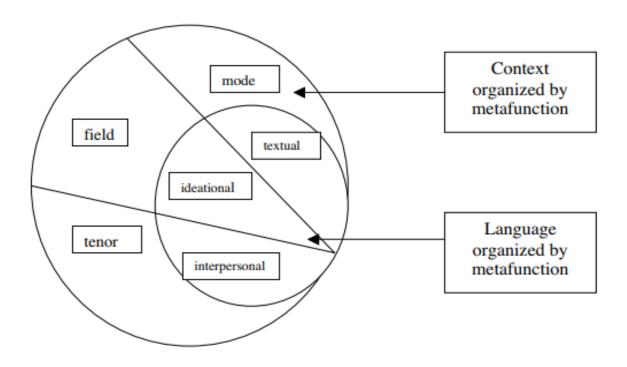


Figure 1. Context and language in the systemic functional model (Eggins and Martin in press in Eggins & Slade, 1997)

# 3.3. The ideational macrofunction: Clause complexes and logical relations

The logical structure of the clause complex is one of the components of the ideational macrofunction in language, which expresses meanings about the world. Eggins (2004) offers the following definition of clause complex:

Clause complex is the term systemicists use for the grammatical and semantic unit formed when two or more clauses are linked together in certain systematic and meaningful ways [...] the clause complex is a grammatical and semantic unit, and it is a unit that occurs in both spoken *and* written language. (p. 255)

According to Halliday & Matthiessen (2004), "semantically, the effect of combining clauses into a clause complex is one of tighter integration in meaning" (p. 365), since the grammatical sequences of clause complexes are sub-sequences within the total sequence of events taking place in the whole episode of a narrative. This sub-sequence of events is a typical feature of narratives in general (biographies, news reports, etc.) but, as Halliday (1994) argues, "the clause complex is of particular interest in spoken language, because it represents the dynamic potential of the system" (p. 224).

The relation between clauses is determined by two systems: the degree of interdependency or taxis and the logico-semantic relation (Halliday & Matthiessen, 2004). According to their degree of interdependency, logical relations of clause complexes can take two basic forms in natural language: parataxis, which is the relation between an initiating and a continuing element of equal status, and hypotaxis, which is the relation between a dominant element and a dependent element. In parataxis, both the initiating and the continuing element can function as a whole, which means that they are free, but in hypotaxis, only the dominant element is free. This corresponds to subordination and coordination relationships, respectively, in conventional grammars (Eggins, 2004). In both parataxis and hypotaxis, the secondary clause is marked by conjunctions (Halliday & Matthiessen, 2004).

Regarding the logico-semantic relation of clause complexes, there is a wide range of meaning or logical relations which may exist between the primary and secondary members of a clause nexus. They can be categorised into two types of relations: expansion, when "the secondary clause expands the primary clause, by elaborating it, extending it or

enhancing it", and projection, when "the secondary clause is projected through the primary clause, which instates it as a locution or an idea" (Halliday & Matthiessen, 2004, p. 377).

A clause can be expanded in three ways: elaborating it (relation of restatement or equivalence), extending it (relation of addition or variation) and enhancing it (relation of development) (Eggins, 2004). Elaboration consists in the elaboration of one clause on the meaning of the other by further specifying or describing it (e.g. i.e, for example, viz.). Elaboration can be either paratactic or hypotactic. There are three types of paratactic elaboration: exposition, when the meaning of the primary clause is restated by the secondary clause in order to present a different point of view or to reinforce the message (or (rather), in other words, that is to say, etc.); exemplification, when the meaning of the primary clause is developed by the secondary clause (for example, for instance, in particular, etc.); and clarification, when the meaning of the primary clause is clarified by the secondary clause by adding some kind of explanation or explanatory comment (in fact, actually, indeed, at least, what I mean is, etc.) (Eggins, 2004). In all these cases, the secondary clause only provides a further characterization of a meaning that already exists instead of adding a new element of meaning. On the other hand, hypotactic elaboration involves description (Halliday & Matthiessen, 2004) and is usually expressed through nondefining relative clause structures (also called 'non-restrictive', 'descriptive'), which can be either finite or non-finite (e.g. which, when, where, whose) to introduce background information, a characterization or an interpretation of some aspect of the dominant clause (Eggins, 2004).

Extension occurs when "one clause extends the meaning of another by adding something new to it" (Halliday & Matthiessen, 2004, p. 405). There are three main categories of paratactic extension. Firstly, addition takes place when one process is joined on to another and there is no causal or temporal relationship between them (Eggins, 2004). The relationship may be simply 'additive: positive' ('and'), 'additive: negative' ('nor') and 'adversative' ('but' – 'and conversely'). Secondly, variation takes place when one clause seems to be in total or partial replacement of another (Eggins, 2004). It can be 'replacive' ('instead') and 'subtractive' ('except'). Finally, alternation takes place when one of the clauses is presented as an alternative to another (either, or, etc.) (Halliday & Matthiessen, 2004). Hypotactic extension also embraces the meanings of addition and variation, being the extending clause dependent in these cases and finite or non-finite (e.g. besides, apart from, instead of, etc.).

Enhancement occurs when one clause enhances the meaning of another by qualifying it by reference to time, space, manner, cause or condition (including consequence) (Eggins, 2004). It can be paratactic, giving rise to a kind of coordination with the incorporation of a circumstantial feature; or hypotactic, giving rise to what is known in traditional grammar as 'adverbial clauses'. If hypotactic, it can be either finite or non-finite. Halliday & Matthiessen (2004) explain each type of enhancement in detail with extensive examples and discussion on them (see pp. 413-422). An outline of the main subtypes is provided by Eggins (2004) and can be found in *Appendix I* of this paper.

Regarding projection, one of the clauses indicates that someone or something said or thought something and the other clause or the rest of the clauses in the complex present what the person or phenomenon said or thought by quoting or reporting it (Eggins, 2004). According to Eggins (2004), "projection is thus a resource the grammar offers us for attributing words and ideas to their sources" (p. 271). It can involve the projection of locutions (when what is projected is speech, what someone said) or ideas (when what is projected is thoughts, what someone thought). Both can be paratactic or hypotactic: *They said 'You've got to have your blood tested* (paratactic locution), *They said that I had to have my blood tested against the donor's* (hypotactic locution), *I thought to myself 'This is so exciting'* (paratactic idea) and *I thought to myself that it was so exciting* (hypotactic idea) (Eggins, 2004, p. 272-73).

As it can be observed in these examples, whereas in hypotactic projection there is a verbal process clause followed by 'direct' (quoted) speech, which represents that which is said; in hypotactic projection, there is a process of thinking in a 'mental' clause followed by indirect speech of traditional grammar to express what someone thought or said. Ideas are typically projected through a mental process (Halliday & Matthiessen, 2004).

# 3.4. The interpersonal macrofunction: Appraisal Theory

Appraisal Theory is an extension of SFL's interpersonal metafunction developed by Martin & White (2005). It is defined by the authors as follows:

[It is] concerned with the construction by texts of communities of shared feelings and values, and with the linguistic mechanisms for the sharing of emotions, tastes and normative assessments [...] with how writers/ speakers construe for themselves particular authorial identities [...] (Martin & White, 2005, p. 1)

Appraisal Theory allows the analysis of the linguistic resources that speakers or writers use in order to establish subjectivity within a text or to adopt a stance towards the material they are talking about or the people they are talking with. Taking a stance through language use, that is, establishing one's orientation by making clear one's attitudes and positions, is fundamental to be recognised as a member of a specific community (Morton & Llinares, 2016). Sarangi (2003) points out that evaluation is always present because we frequently borrow others' words or words from different sources. This type of language becomes more necessary when tasks become more cognitively demanding at school and learning requires higher thinking skills and a more developed interpersonal ability, which is usually at secondary and tertiary levels (Llinares & Nikula, 2016).

According to Martin & White (2005), evaluative language is necessary both to adopt a stance towards subject-related information and to establish social relations. Appraisal Theory provides a framework for the description of evaluative language comprising three systems or interacting domains:

- Attitude, which is concerned with feelings, including emotional reactions (e.g. a <u>very</u> <u>sad</u> day), judgments of behaviour (e.g. a <u>skilful</u> person) and evaluation of things (e.g. a <u>very pretty</u> stroke).
- **Engagement**, which is concerned with sourcing attitudes and alternative viewpoints about opinions in discourse (see below).
- **Graduation**, which is concerned with grading phenomena whereby feelings are amplified (e.g. *This greatly <u>hindered us</u>*) and categories blurred (e.g. <u>kind of upset</u>).

(Martin & White, 2005)

Due to space limitations, this paper only focuses on the analysis of the category of engagement, which is particularly relevant for the purpose of the task analysed, and therefore a description of the systems of attitude and graduation cannot be included. As Martin & White (2005) state, engagement is concerned with

[...] the ways in which resources such as projection, modality, polarity, concession and various comment adverbials position the speaker/writer with respect to value position being advanced and with respect to potential responses to that value position – by quoting or reporting, acknowledging a possibility, denying, countering, affirming and so on. (p. 36)

In this study, the heteroglossia or dialogistic dimension is taken within the category of engagement. In this dimension, some propositions open up the dialogic space, with alternative positions and voices, what is called as *dialogic expansion*: when the proposition is explicitly presented as one out of a number of possible positions and thereby makes space for other dialogic possibilities (*entertain*) or when the proposition is disassociated from the text's authorial voice and is attributed to some external source (*attribute*) (Martin & White, 2005).

Whereas entertain refers to the internal value of the speaker/writer as the source (e.g.: I believe, in my view), attribution refers to some external voice (e.g. many Australians believe in Dawkin's view). On the one hand, entertain is expressed in assessments of likelihood through modal auxiliaries (may, might, could, must, etc.), modal adjuncts (perhaps, probably, definitely, etc.), modal attributes (it's possible that..., it's likely that..., etc.), circumstances (in my view) or mental verb/attribute projections (I suspect that..., I think, I believe, I'm convinced that, I doubt, etc.). It also includes evidence/appearance-based postulations (it seems, it appears, apparently, the research suggests...) and some rhetorical and expository questions (Martin & White, 2005). On the other hand, attribution is commonly achieved through reported speech and thought, and therefore is expressed by communicative process verbs (say) or mental processes (believe, suspect) as well as through nominalisations of these processes (assertion that, belief that) and several adverbial adjuncts (according to, in X's view) (ibid, 2005).

Within engagement, other propositions challenge or restrict the scope of another proposition, which is known as *dialogic contraction*, since "they close down the space for dialogic alternatives" (Martin & White, 2005, p. 103). This category sub-divides into the categories of *disclaim*, when the functions of negation-deny (e.g. *you don't need to give up potatoes to lose weight*) or concession-counter (conveyed via conjunctions and connectives, e.g. *although, however, yet* and *but*) are used to reject and to replace or supplant the current proposition, respectively; and *proclaim*, when a proposition presents itself as well-founded and "the textual voice sets itself against, suppresses or rules out alternative positions" (Martin & White, 2005, p. 98) through *concur*, which shows agreement through assertions (*naturally, of course, obviously*, etc.); *pronounce*, which reflects "authorial presence and emphasis" (Llinares & Dalton-Puffer, 2015, p. 73) (e.g. *I contend, the truth of the matter is that...*, etc.); or *endorsement*, when the speaker values external voices as correct or valid (e.g. *X has demonstrated that...; As X has shown...*,

etc.). In addition, White (2012) distinguishes a fourth category of *proclaim* to contract the possibilities for (dis)agreement with a proposition, that of *justify*, which "refers to non-factual propositions and expresses some kind of legitimation of the interpretation" (Llinares & Dalton-Puffer, 2015, p. 73).

# 3.5. Systemic-functional linguistic approach to interaction

In SFL, conversation is considered as a distinctive and organised level of language. Halliday (1989) supports the importance of using spoken language by stating that learning is not only achieved by reading and writing but also by speaking and listening. For the analysis of casual conversation, SFL has two main benefits: (1) Conversational patterns can be described and quantified at various levels and with different degrees of detail through a systemic model of language which involves simultaneous layers of meaning; and (2) conversation must be seen as a way of doing social life because language and its social dimension are inseparable, and therefore linguistic patterns both enact and construct social roles and interpersonal relations (Eggins & Slade, 1997). Although several strands of meaning are made simultaneously when using language, Eggins & Slade (1997) state that casual conversation is driven by interpersonal meanings to a higher extent than by ideational or textual ones. In contextual terms, this results in a focus on the register variable of tenor.

Halliday (1993) interprets dialogue as a form of interaction from a functional and semantic perspective in order to describe the dialogic structure and to express interpersonal relations. According to Eggins & Slade (1997), discourse structure patterns show how participants interact with each other by selecting different speech functions. Halliday (1993) believes that the discourse patterns of speech functions are expressed through moves. In order to describe the meanings of interactional moves, "[...] the speech function description needs to be extended in 'delicacy' (i.e. sub-classification needs to be made more detailed)" (Eggins & Slade, 1997, p. 191). This can be done through the lexicogrammatical analysis of linguistic resources and the analysis of the meanings conveyed in the specific context in which they occur.

In addition, any act of interaction involves two variables (Halliday, 1994): a commodity to be exchanged (information/goods and services); and a speech role (giving/demanding). These variables give rise to the speech functions that the speaker can use in order to initiate a dialogue: *statement*, *question*, *offer* and *command* (Pastrana,

2017). Eggins & Slade (1997) differentiate between supporting response (expressing agreement) and confronting responses (showing disagreement), since the responses produced may not always be as expected. Moreover, speech functions also allow the description of the social roles that each participant is playing in the interaction (Eggins & Slade, 1997). Depending on the role that each interlocutor plays, they may have access to certain speech functions or not.

The analysis of casual conversation starts by identifying the moves and the turn-taking organization of conversation. This study makes use of the simplified discourse layer created by Pastrana et al. (2017) for their research, which was adapted from Eggins & Slade's (1997) speech function classes. In this layer (see *Appendix 4*), the basic moves are *initiating moves*, when students initiate an interaction by *demanding information* or *giving information*; and the *response move*, when students produce a response to the initiation. *Response moves* are further divided into other types of moves. On the one hand, *support responses* include *develop* (completing or extending previously given information), *agree* (showing agreement with a previous idea), *conclude* (a form of *develop* that ends up concluding the interaction and leads to a new initiation) and *give information* (responding to an initiation which demands information). On the other hand, *confront moves* include *challenge* (questioning a given statement by giving reasons for such opposition) and *disagree* (expressing non-conformity with an aforementioned idea) (Pastrana et al., 2017).

## 4. METHODOLOGY

# 4.1. Participants

The participants of this study are two groups of students from the secondary education level of a state-founded school located in Madrid, where English is taught as a second language. Both groups of participants belong to the same level, that is, they are 4°ESO students who therefore belong to the second cycle of secondary education. All of the students are of similar age at the time of conducting the study, ranging from 15 to 16 years. One of the classes is the research or experimental group, 26 students with which a didactic unit designed with CL structures was implemented by the researcher; and the other is the control group, 16 students with which the same instructional content was implemented by their usual teacher using a traditional methodology. The intervention and research period lasted three weeks comprising a total of 10 lessons of 55 minutes each. Therefore, the total database comprises 9.16 hours of classroom interaction.

## 4.2. Data collection instruments

This study used two oral tests in order to compile the variety of data necessary to assess and analyse students' language and to answer the research questions: a pre-test, done before the research period started; and a post-test, done when the research period ended after students in the experimental group were exposed to CL tasks and students in the control group were exposed to a traditional teacher-centred methodology. The tests were done with both groups of participants to measure students' progress in their communicative skills and linguistic resources and to see the effectiveness of CL in contrast to a teacher-centred approach. Therefore, the database consists of the experimental corpora with a total of 10185 words (3733 words in the pre-test corpus and 6452 words in the post-test corpus) and the control corpora with a total of 3834 words (1932 words in the pre-test corpus and 1902 words in the post-test corpus).

Students took the oral exams in pairs and both tests contained the same three types of tasks: (1) describing a picture, (2) expressing one's opinion about a particular topic and (3) interacting with a partner (see *Appendix 2*). As Jacobs & Ward (2000) point out, any text (spoken or written) will include the three metafunctions of SFL but can be still considered to overall fit within one of the three metafunctions. For this reason, in this study, the ideational macrofunction of language, which deals with meanings about the world and the representation of reality and is associated to the register variable of *field*, has

been analysed in Task (1). More specifically, in this activity the focus has been on clause complexes and logical relations. In Task (2), which deals with meanings about roles and relationships, the focus of the analysis has been the interpersonal macrofunction, associated to the register variable of *tenor*. More specifically, this activity has been analysed according to Appraisal Theory, which studies evaluative language when participants in a communicative exchange take a stance. Task (3) has been analysed according to the SFL model of speech functions in discourse, since it happens at an interactional level.

# 4.3. Research design

This paper has a quantitative design since it compares students' ability to communicate according to fluency, accuracy and grammatical complexity as well as appropriate linguistic resources after having been instructed under a CL methodology (experimental group) and after having been exposed to a traditional teacher-centred method (control group) for three weeks.

During the research period, the same academic material was implemented with both groups of students, but following different methodologies: whereas the experimental group received instruction based on CL tasks by the researcher, the control group was exposed to their usual teacher's traditional way of teaching. The comparison between the scores of both groups in the pre- and post-oral tests allows checking students' progress in their ability to use language and to communicate in different communicative situations or contexts, and therefore it allows confirming or denying the effectivity of CL in the English classroom.

Therefore, whereas students' development of linguistic resources in a second language was assumed as the dependent variable, the use of group work tasks based on a cooperative approach to both teaching and learning was considered as the independent variable. It is expected that the dependent variable is influenced by the manner the independent variable intervenes along the experimental period. In other words, students' development of linguistic resources is expected to vary depending on whether cooperative tasks are used or not in some given communicative context in the classroom.

Dependent variable	Independent variable	
-	Cooperative learning	
of linguistic resources		

Table 1. Dependent and independent variables

# 4.4. Pedagogical procedure

As Romero-Arcas (2017) explains, based on Johnson et al.'s (1994) work, some important decisions had to be made before the implementation of CL during the 3-week intervention period by taking the following criteria into account:

## (a) The selection of materials and didactic objectives

The tasks of the didactic unit as they were presented to the students can be found in *Appendix 3*. The materials used in each of the tasks as well as the aims of each of the sessions that were implemented are indicated in the lessons plans of the didactic unit. Every cooperative task in the unit has been based on Kagan's CL structures (e.g. Time-Pair-Share, Round Robin, Quiz Quiz Trade, etc.), as he describes them in his book (see Kagan, 1989), since these structures place the emphasis on increasing students' communication in the classroom about important and personal issues (Davoudi & Mahinpo, 2012; Lin, 2013).

## (b) Conformation of groups

For the present study, students were divided into five groups of four members, although two groups had to be composed only by three. Moreover, heterogeneous groups were formed by the teacher according to language proficiency, ethnicity and gender, as suggested by Jacobs (2006). Heterogeneous groups stimulate learning and cognitive development and promote deeper thinking and greater input on material analysis (Johnson et al., 1994), which is essential for language acquisition.

# (c) Classroom layout: group seating

For the arrangement of the classroom, as recommended by Johnson & Johnson (2003), the members of each group sit together and faced each other to communicate to a higher extent, and groups were far enough away not to interfere with each other.

## (d) Assignment of roles

Assignment of roles ensures that group members work in their team without difficulty and in a productive way, produces positive interdependence, guarantees the use of basic group techniques and reduces the possibility of someone taking a passive or dominant state (Johnson et al., 1994). In each of the sessions of the didactic unit, students had a different role for which they must be responsible in their groups while they were working together. The roles and their respective functions are described in Romero-Arcas (2017, p. 33)

# 4.5. Research procedure

In order to collect the required data, students' individual oral production and interactive communication was audio-recorded and subsequently transcribed by Romero-Arcas (2017), and errors were marked by underlining them. For the analysis, only grammatical (e.g. word order, verb form, position, etc.) and vocabulary errors (invented words, incorrect words, wrong prepositions, etc.) were taken into account, excluding therefore pronunciation errors. Moreover, those cases in which students corrected themselves and continued the conversation have not been considered as an error.

The tests were analysed in this paper, first, by following a general linguistic characterisation of compositions (Wolfe-Quintero et al., 1998); and, second, by following a SFL lexico-grammatical model (Halliday, 1994). Firstly, fluency, complexity and accuracy were analysed in order to see the general effect of both methodologies on language use in all tasks. According to Skehan (1998) and Ellis (2003), complexity, accuracy and fluency (CAF) are major research variables in applied linguistics research and have been used to assess students' oral and written performance, students' proficiency and students' progress in language learning. This part of the analysis was done manually by the researcher of this paper without the help of any software due to the great amount of time it would take to create a corpus for each of the tasks and per student. This general analysis was based on Wolfe-Quintero et al.'s (1998) best measures to determine second language development in writing. The reason why the analysis of this paper is based on Wolfe-Quintero's measures in order to analyse speech is that they have been already used by other scholars to measure students' oral production in the English classroom (e.g. Larsen-Freeman, 2006). Therefore, fluency was calculated by measuring the number of words per turn and the number of clauses per turn; complexity was measured by counting the number of words per clause and the number of clauses per t-unit; and accuracy was measured by counting the number of free-error clauses per clause.

Secondly, from a SFL perspective, each task was analysed according to one aspect of the model: Task (1) was analysed according to clause complexes and logical relations to see how students describe the reality that surrounds us, Task (2) was analysed according to Appraisal Theory to see how students use language to take a position or a stance towards a topic, and Task (3) was analysed according to speech functions to see how students use functions in discourse when interacting with somebody. In this case, the data were coded with the help of the UAM-Corpus tool (see O'Donnell, 2008), a program specially designed to analyse language from a SFL perspective and to annotate text corpora as well as retrieve instances from them. The process was done by using three layers that can be found in *Appendix 4* attached to this paper and designed by the researcher of the present study: the ideational and interactional layers, based on Halliday's (1975) metafunctions, to analyse clause complexes and apply Appraisal Theory, respectively; and the discourse layer, based on Eggins & Slade's (1997) model of speech functions to analyse students' interaction.

## **5. ANALYSIS OF RESULTS**

In this section, quantitative results are presented based on the questions under study. In order to answer these questions, the pre- and post-oral tests students in experimental and control groups did were analysed according to the following criteria: on the one hand, fluency, accuracy and grammatical complexity; and, on the other hand, clause complexes, appraisal resources and speech functions. Due to space limitations, the tables comparing the performance of the experimental group in their pre- and post-tests had to be placed in *Appendices 5-8*.

For Research Question 1, the data obtained from the pre- and post- oral tests were analysed and interpreted using the statistical package of Microsoft Excel. Results obtained by both groups of students were compared by using t-tests with p-value=0.05 as the predetermined significance level. For Research Questions 2-4, results are presented locally, that is, each category is considered as a whole, representing a total of 100% as opposed to globally, where the 100% would be distributed through each category. The comparison of experimental and control databases was done using the UAM Corpus Tool. All comparisons include the calculation of Chi-square and, therefore, provide information about the statistical significance of the difference between the datasets.

# 5.1. Analysis of students' fluency, accuracy and complexity

**Research Question 1:** Is CL more effective than a traditional methodology at a fluency, accuracy and grammatical complexity level in all the activities under analysis?

In order to answer this research question, the differences between the performances of both experimental and control groups in the tasks of pre- and post-tests were measured according to their level of fluency, accuracy and grammatical complexity and are illustrated in Figures 2-6. Furthermore, t-tests were run, first, to compare the means of the experimental group in pre- and post-tests and, second, to compare the means of both groups in each of the tasks of the pre- and post-tests in order to determine if there is any significant statistical difference in their levels of fluency, accuracy or grammatical complexity.

Firstly, Figures 2 and 3 show students' fluency level in both pre- and post-tests regarding the number of words and clauses they used per turn, respectively.

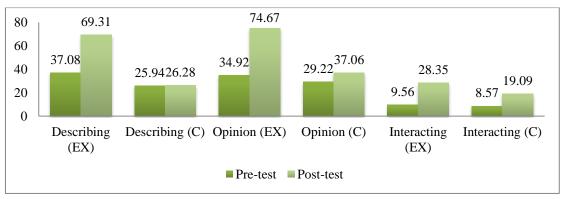


Figure 2. Fluency measure using words per turn in pre- and post-tests by experimental (EX) and control (C) groups.

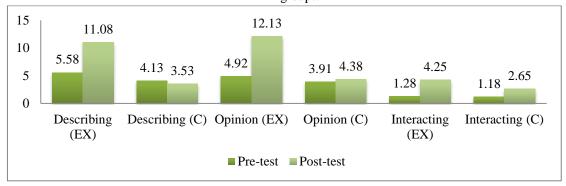


Figure 3. Fluency measure using clauses per turn in pre- and post-tests by experimental (EX) and control (C) groups.

In both cases, the experimental group performed similarly in the pre-test in the task 'describing a picture' ( $\bar{x}$ =37.08 in words/turns;  $\bar{x}$ =5.58 in clauses/turns) and 'giving an opinion' ( $\bar{x}$ = 34.92 in words/turns;  $\bar{x}$ =4.92 in clauses/turns), but their fluency level when interacting with a partner was very low ( $\bar{x}$ = 9.56 in words/turns;  $\bar{x}$ =1.18 in clause/turns). The control group performed worse in all the tasks when using words and clauses per turn.

In the post-test, students in the experimental group considerably progressed regarding fluency both when using words and clauses per turn. The highest frequency of words per turn was, firstly, when giving their opinion ( $\bar{x}$ =74.67); and, secondly, when describing a picture ( $\bar{x}$ =69.31). Regarding clauses per turns, as Figure 3 illustrates, students progressed more or less to the same extent when describing a picture ( $\bar{x}$ =5.58 in the pretest vs. 11.08 in the post-test) and when giving their opinion ( $\bar{x}$ =4.92 in the pre-test vs. 12.13 in the post-test). Moreover, in the task in which they had to interact with a partner, students improved in their use of words per turn ( $\bar{x}$ =9.56 in the pre-test vs.  $\bar{x}$ =28.35 in the post-test) and also in their use of clauses per turn ( $\bar{x}$ =1.28 in the pre-test vs.  $\bar{x}$ =4.25 in the post-test), although to a lesser extent. However, as shown in *Appendix 5*, all these results are statistically significant.

Regarding students in the control group, they did not progress so much as the experimental group when giving an opinion in terms of words per turn ( $\bar{x}$ = 29.22 in the pre-test vs.  $\bar{x}$ =37.06 in the post-test) or clauses per turn ( $\bar{x}$ = 4.92 in the pre-test;  $\bar{x}$ = 12.13 in the post-test); and they did not do it either when interacting with a partner in words per turn ( $\bar{x}$ = 8.57 in the pre-test vs.  $\bar{x}$ = 19.09 in the post-test) or clauses per turn ( $\bar{x}$ = 1.18 in the pre-test vs.  $\bar{x}$ = 2.65 in the post-test). They even performed very similarly when describing a picture in both pre- and post-tests ( $\bar{x}$ = 25.94 vs.  $\bar{x}$ = 26.28 in words/turn;  $\bar{x}$ =4.13 vs. 3.53 in clauses/turn).

As Table 2 below shows, there is already a significant statistical difference between students in the control and the experimental groups before the research period started regarding their use of words per turn in this task in favour of the experimental group (p-value= 0.029 < 0.05). However, while the experimental group shows development in the post-test ( $\bar{x}$ =37.08 vs.  $\bar{x}$ =69.31), the control group shows barely the same mean in pre- and post-tests ( $\bar{x}$ =25.94 vs.  $\bar{x}$ =26.28).

Test	Fluency type	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2- tailed)	Interpretation	
	Words/turns	Experimental	26	37.08	15.47	2.272	40	0.029	Significance	
Pre-		Control	16	25.94	15.35					
test	Clause/turns	Experimental	26	5.58	2.23	1.532	23	0.139	No significance	
	Clause/turns	Control	16	4.13	3.36			0.120	Ü	
	Words/turns	Experimental	26	69.31	33.91	5.496	38	0.000	Significance	
Post-		Control	16	26.28	16.53					
test		Experimental	26	11.08	5.25	6.157	39	0.000	Significance	
Clause/tull		Control	16	3.53	2.65					

Table 2. Paired samples t-tests of the experimental and the control groups in the pre- and post-tests of the task 'describing a picture' according to fluency as the unit of measurement.

For this reason, there is a statistically significant difference between the experimental and the control groups in favour of the experimental group in Task 1 (describing a picture) of the post-test in the case of words per turns (p-value= 0.000 < 0.05). The same occurs in relation to Task 2 (giving an opinion) (see Table 3 below).

However, as shown in Table 4, this result was not statistically significant in Task 3 (interacting) (p-value= 0.073 > 0.05).

Test	Fluency type	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation	
	Words/turns	Experimental	26	34.92	20.57	0.874	40	0.387	No significance	
Pre-		Control	16	29.22	20.50					
test		Experimental	26	4.92	3.01	1.076	40	0.288	No significance	
	Clause, turns	Control	16	3.91	2.92					
	Words/turns	Experimental	26	74.67	33.78	4.648	40	0.000	Significance	
Post-	vv oras/tariis	Control	16	27.06	29.48					
test		Experimental	26	12.13	5.23	4.785	40	0.000	Significance	
	_	Control	16	4.38	4.88					

Table 3. Paired samples t-tests of the experimental and the control groups in the pre- and post-tests of the task 'giving an opinion' according to fluency as the unit of measurement.

Test	Fluency type	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation	
	Words/turns	Experimental	26	9.56	5.77	0.610	37	0.545	No significance	
Pre-		Control	16	8.57	4.62					
test	Clause/turns	Experimental	26	1.28	0.76	0.392	40	0.697	No significance	
		Control	16	1.18	0.89					
	Words/turns	Experimental	26	28.35	14.71	1.838	40	0.073	No significance	
Post-		Control	16	19.09	17.62					
test	Clause/turns	Experimental	26	4.25	1.96	2.302	40	0.027	Significance	
		Control	16	2.65	2.51					

Table 4. Paired samples t-tests of the experimental and the control groups in the pre- and post-tests of the task 'interacting' according to fluency as the unit of measurement.

In the case of clauses per turns, there is a statistically significant difference in favour of the experimental group in the three tasks of the post-test with p-value = 0.000 (Task 1), 0.000 (Task 2) and 0.027 (Task 3) being smaller than the alpha level of 0.05.

Whereas the experimental group showed a great improvement in fluency after being exposed to cooperative tasks, the performance of the control group, which was exposed to a traditional method during the intervention period, showed no improvement or almost no improvement at the end of the research period.

Secondly, Figure 4 shows students' accuracy level in both pre- and post-tests regarding the number of number of error free clauses they managed to utter. It can be observed the experimental group performed equally when describing a picture and when giving an opinion in the pre-test ( $\bar{x}$ = 0.63). Students even obtained a similar result in both tasks in the post-test ( $\bar{x}$ = 0.84 and  $\bar{x}$ = 0.83, respectively).

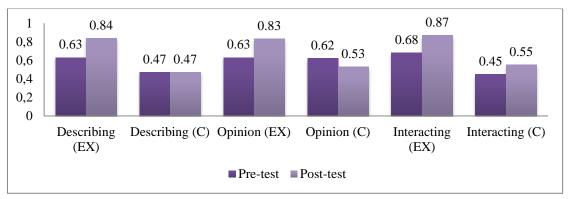


Figure 4. Accuracy measure in pre- and post-tests by experimental (EX) and control (C) groups.

In the case of the control group, students made the same number of errors within clauses when describing a picture in pre- and post-tests ( $\bar{x}$ =0.47) and they made a fewer number of errors in the pre-test ( $\bar{x}$ =0.62) than in the post-test ( $\bar{x}$ =0.53) when giving their opinion. They progressed in the task in which they had to interact with a partner ( $\bar{x}$ =0.45 in the pre-test;  $\bar{x}$ =0.55 in the post-test), although to a lesser extent than the experimental group ( $\bar{x}$ =0.68 in the pre-test;  $\bar{x}$ =0.87 in the post-test).

Results in Tables 5-7 show there is a statistically significant difference between the experimental and the control groups in favour of the experimental group in the three tasks of the post-test regarding accuracy with p-value = 0.000 (Task 1), 0.012 (Task 2) and 0.007 (Task 3) being smaller than the alpha level of 0.05. As it can be observed in Table 7, students in the experimental group already performed significantly better than students in the control group in Task 3 (interacting) before the research period started (p-value=0.048 < 0.05), but, again, the experimental group shows greater development in the post-test ( $\bar{x}$ =0.68 vs.  $\bar{x}$ =0.87) than the control group ( $\bar{x}$ =0.45 vs.  $\bar{x}$ =0.55), which is statistically significant (p=0.007 < 0.05).

Test	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation	
Pre-	Experimental	26	0.63	0.32	1.555	40	0.128	No significance	
test	Control	16	0.47	0.33					
Post-	Experimental	26	0.84	0.17	4.105	20	0.000	ac.	
test	Control	16	0.47	0.37	4.185	20	0.000	Significance	

Table 5. Paired samples t-test of the experimental and the control groups in the pre- and post-tests of the task 'describing a picture' according to accuracy as the unit of measurement.

Test	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation
Pre-	Experimental	26	0.63	0.32	0.147	10	0.004	NI: - : : : : : : : : : : : : : : : :
tost	Control	16	0.62	0.32	0.147	40	0.884	No significance
Post-	Experimental	26	0.83	0.21				
tost	Control	16	0.53	0.41	2.775	20	0.012	Significance

Table 6. Paired samples t-test of the experimental and the control groups in the pre- and post-tests of the task 'giving an opinion' according to accuracy as the unit of measurement.

Test	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation	
Pre-	Experimental	26	0.68	0.34	2.038	40	0.048	Significance	
tost	Control	16	0.45	0.37	2.036	40	0.046	Significance	
Post-	Experimental 26 0.87 0.20		3.023	20	0.007	Cianificanas			
test	Control	16	0.55	0.38	3.023	20	0.007	Significance	

Table 7. Paired samples t-test of the experimental and the control groups in the pre- and post-tests of the task 'interacting' according to accuracy as the unit of measurement.

As for grammatical complexity, Figures 5 and 6 show students' use of words per clause and clauses per t-unit in both pre- and post-tests. As illustrated in Figure 5, the experimental group used more words per clauses in the pre-test than in the post-test in all the tasks: when describing a picture ( $\bar{x}$ = 6.98 vs.  $\bar{x}$ =6.4), when giving their opinion ( $\bar{x}$ = 7.66 vs.  $\bar{x}$ = 5.9), and when interacting ( $\bar{x}$ = 8.74 vs.  $\bar{x}$ = 6.54), which means that they did not

progress after the intervention period. This latter result is statistically significant (p=0.026 < 0.05) (see *Appendix 5*). Regarding their use of clauses per t-unit, their performance is similar in both pre- and post-tests when describing a picture ( $\bar{x}$ = 1.28 vs.  $\bar{x}$ = 1.26, respectively), but they progressed when giving an opinion ( $\bar{x}$ = 1.49 vs.  $\bar{x}$ = 1.76, respectively) and when interacting ( $\bar{x}$ = 1.16 vs.  $\bar{x}$ = 1.57, respectively). As seen in *Appendix 5*, students did only perform significantly better in the post-test in Task 3 (interacting) (p=0.000 < 0.05).

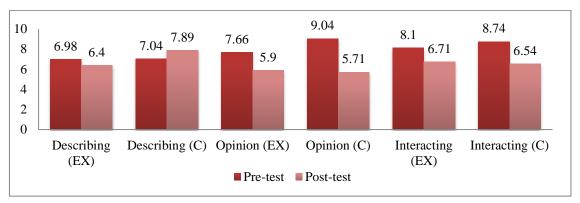


Figure 5. Grammatical complexity measure using words per clause in pre- and post-tests by experimental (EX) and control (C) groups.

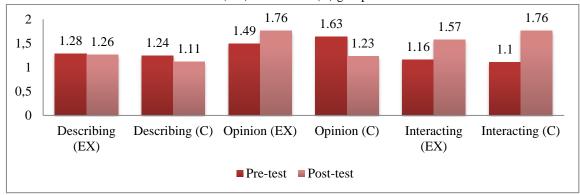


Figure 6. Grammatical complexity measure using clauses per t-unit in pre- and post-tests by experimental (EX) and control (C) groups.

In the control group, there is almost no difference between the number of words per clauses or the number of clauses per t-units used in the pre- and post-tests when describing a picture ( $\bar{x}=7.04$  vs.  $\bar{x}=7.89$ ;  $\bar{x}=1.24$  vs.  $\bar{x}=1.1$ , respectively). When giving their opinion, students used more words per clause ( $\bar{x}=8.1$  vs.  $\bar{x}=6.71$ ) and more clauses per t-units ( $\bar{x}=1.63$  vs.  $\bar{x}=1.23$ ) in the pre-test. In the case of number of words per clauses, the control group also showed a more developed level of grammatical complexity when interacting in the pre-test ( $\bar{x}=8.74$  vs.  $\bar{x}=6.54$ ). In contrast, in the case of clauses per t-units, they progressed in this task to a considerably extent ( $\bar{x}=1.1$  vs.  $\bar{x}=1.76$ ). As Tables 8, 9 and 10 show, these results do not present a statistically significant difference between the

performance of the experimental and the control group except in Task 2 (giving an opinion) in the number of clauses per t-unit students used in the post-test, where the experimental group significantly outperformed the control group (p-value= 0.019 < 0.05).

Test	Grammatical complexity	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation	
	Words/clauses	Experimental	26	6.98	2.09	-0.052	21	0.959	No significance	
Pre-		Control	16	7.04	3.58					
test		Experimental	26	1.28	0.26	0.308	.308 20. 0.761		No significance	
		Control	16	1.24	0.49					
	Words/clauses	Experimental	26	6.40	1.19	-1.869	40	0.069	No significance	
Post-		Control	16	7.89	3.80					
test	Clause/t-units	Experimental	26	1.26	0.21	1.413	20	0.173	No significance	
		Control	16	1.11	0.41					

Table 8. Paired samples t-tests of the experimental and the control groups in the pre- and post-tests of the task 'describing a picture' according to grammatical complexity as the unit of measurement.

Test	Grammatical complexity	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation
	Words/clauses	Experimental	26	7.66	3.75	-0.877	24	0.389	No significance
Pre-		Control	16	9.04	5.53				
test	Clause/t-units	Experimental	26	1.49	0.61	-0.506	22	0.618	No significance
		Control	16	1.63	1.00				
	Words/clauses	Experimental	26	5.90	1.14	0.296	40	0.769	No significance
Post-		Control	16	5.71	3.10				
test		Experimental	26	1.76	0.43	2.544	21	0.019	Significance
	Clause/t units	Control	16	1.23	0.76				

Table 9. Paired samples t-tests of the experimental and the control groups in the pre- and post-tests of the task 'giving an opinion' according to grammatical complexity as the unit of measurement.

Test	Grammatical complexity	Group	No.	Mean	Std. Deviation	T-value	df	Sig. (2-tailed)	Interpretation	
	Words/clauses	Experimental	26	8.10	2.73	-0.418	19	0.681	No significance	
Pre-		Control	16	8.74	5.79					
test	Clause/t-units	Experimental	26	1.16	0.28	0.512	22	0.614	No significance	
		Control	16	1.10	0.46					
	Words/clauses	Experimental	26	6.71	1.37	0.221	19	0.827	No significance	
Post-		Control	16	6.54	2.96					
test		Experimental	26	1.57	0.38	-0.843	40	0.404	No significance	
		Control	16	1.76	1.03					

Table 10. Paired samples t-tests of the experimental and the control groups in the pre- and post-tests of the task 'interacting' according to grammatical complexity as the unit of measurement.

# 5.2. SFL analysis of clause complexes, appraisal resources and speech functions

# **5.2.1.** Clause complexes

**Research Question 2:** Is CL more effective than a traditional methodology in terms of the variety of logical relations used when describing a picture?

In order to answer this question, the analysis of clause complexes based on Halliday & Matthiessen's (2004) description is presented here. The amount and types of clause complexes used by experimental and control groups in pre- and post-tests will be compared, as Tables 11 and 12 respectively show.

In the pre-test, the experimental group (N=84) already used more clause complexes than the control group (N=32). In the post-test, the number of clause complexes used by the experimental group (N=170) was also higher than that used by the control group (N=25). This reveals that while the control group maintained approximately the same use of clause complexes in the post-test, the experimental group increased the use of clause complexes to a large extent.

In both experimental and control groups, the most frequent type of clause complex was *expansion* in pre- (11.9% and 9.4%, respectively) and post-tests (14.7% and 8%,

respectively). The distribution of clause complexes of *projection* and *expansion* is individually done in a similar way by both experimental and control groups: in both preand post-tests, the experimental group used *projection* (11.9% and 14.7%, respectively) and *expansion* resources (88.1% and 85.3%, respectively) in similar proportions as well as the control group, which used *projection* (9.4% and 8%, respectively) and *expansion* resources (90.6% and 92%, respectively) also similarly in both tests.

Within *expansion*, in both pre- and post-tests, both groups mostly used *extension* resources, followed by *enhancement* resources and finally by *elaboration* resources. Proportionally, the control group used more *expansion-extension* resources than the experimental group in pre- (93.1% vs. 79.7%) and post-tests (73.9% vs. 62.8%), whereas the experimental group used more *expansion-enhancement* resources also in pre- (20.3% vs. 6.9%) and post-tests (33.1% vs. 17.4%). However, this is due to the fact whereas the experimental group made use of both *extension* (79.7% in the pre-test and 62.8% in the post-test) and *enhancement* resources (20.3% in the pre-test and 33.1% in the post-test), the control group made little use of *enhancement* resources (6.9% in the pre-test and 17.4% in the post-test) and concentrated on using only *extension* resources (93.1% in the pre-test and 73.9% in the post-test). No *elaboration* resources were used by any of the groups in the pre-test, but both experimental and control groups used them to some extent in the post-test (4.1% and 8.7%, respectively).

Tables 11 and 12 show any of these results present statistically significant differences between the performances of both groups. However, as shown in *Appendix 6*, there are some statistically significant changes regarding the performance of the experimental group before and after the intervention period. It can be observed that the use of *extension* resources by students in the post-test is very statistically significantly higher in comparison to that done in the pre-test (79.7% vs. 62.8% with Chi-value=6.54), the use of *enhancement* resources is statistically significantly higher (20.3% vs. 33.1% with Chi-value=3.94) and the use of *elaboration* resources was also slightly significantly higher (4.1% vs. 0% with Chi-value=3.15).

PRE-TEST	Experin	nental group	Control	group		
Feature	N	Percent	N	Percent	Chisqu	Signif.
CLAUSE	N=84		N=32			
COMPLEXES						
Projection	10	11.9%	3	9.4%	0.15	
Expansion	74	88.1%	29	90.6%	0.15	
PROJECTION	N=10		N=3			
Idea	10	100%	3	100%	0.00	
Locution	0	0%	0	0.0%	0.00	
IDEA-TYPE	N=10		N=3			
Paratactic	0	0%	0	0%	0.00	
Hypotactic	10	100%	3	100%	0.00	
LOCUTION-TYPE	N=0		N=0			
Paratactic	0	0%	0	0%	0.00	
Hypotactic	0	0%	0	0%	0.00	
EXPANSION	N=74		N=29			
Elaboration	0	0%	0	0%	0.00	
Extension	59	79.7%	27	93.1%	2.70	
Enhancement	15	20.3%	2	6.9%	2.70	
<b>ELABORATION-</b>	N=0		N=0			
TYPE						
Exposition	0	0%	0	0%	0.00	
Exemplification	0	0%	0	0%	0.00	
Clarification	0	0%	0	0%	0.00	
<b>EXTENSION-</b>	N=59		N=27			
TYPE						
Addition	54	91.5%	25	92.6%	0.03	
Variation	1	1.7%	0	0%	0.46	
Alternation	4	6.8%	2	7.4%	0.01	
ADDITION-TYPE	N=54		N=25			
Positive	52	96.3%	25	100%	0.95	
Negative	0	0%	0	0%	0.00	
Adversative	2	3.7%	0	0%	0.95	
ENHANCEMENT-	N=15		N=2			
TYPE						
Time	0	0%	0	0%	0.00	
Space	0	0%	0	0%	0.00	
Manner	2	13.3%	0	0%	0.30	
Cause	12	80%	1	50%	0.88	+
Condition and	1	6.7%	1	50%	3.19	+
concession						
CAUSE-TYPE	N= 12		N=1			
Purpose	6	50%	0	0%	0.93	

Consequence	2	16.7%	0	0%	0.20	
Reason	4	33.3%	1	100%	1.73	
<b>Notes:</b> + slightly signi	ficant; ++	significant; ++	+ very sig	nificant.		

Table 11. Distribution of appraisal resources in the task 'describing a picture' of the pre-test in the experimental and control groups.

POST-TEST	Experin	nental group	Control	group		
Feature	N	Percent	N	Percent	Chisqu	Signif.
CLAUSE COMPLEXES	N=170		N=25			
Projection	25	14.7%	2	8%	0.82	
Expansion	145	85.3%	23	92.0%	0.82	
PROJECTION	N=25		N=2			
Idea	25	100%	2	100%	0.00	
Locution	0	0%	0	0%	0.00	
IDEA-TYPE	N=25		N=2			
Paratactic	0	0%	0	0%	0.00	
Hypotactic	25	100%	2	100%	0.00	
LOCUTION-TYPE	N=0		N=0			
Paratactic	0	0%	0	0%	0.00	
Hypotactic	0	0%	0	0%	0.00	
EXPANSION	N=145		N=23			
Elaboration	6	4.1%	2	8.7%	0.91	
Extension	91	62.8%	17	73.9%	1.08	
Enhancement	48	33.1%	4	17.4%	2.29	
ELABORATION- TYPE	N=3		N=2			
Exposition	1	25%	1	50%	0.89	
Exemplification	2	75%	1	50%	0.18	
Clarification	0	0%	0	0.0%	0.00	
EXTENSION- TYPE	N=91		N=17			
Addition	89	97.8%	17	100%	0.38	
Variation	0	0%	0	0%	0.00	
Alternation	2	2.2%	0	0%	0.38	
ADDITION-TYPE	N=89		N=17			
Positive	84	94.4%	16	94.1%	0.00	
Negative	0	0%	0	0%	0.00	
Adversative	5	5.6%	1	5.9%	0.00	
ENHANCEMENT- TYPE	N=48		N=4			
Time	5	10.4%	0	0%	0.46	
Space	0	0%	0	0%	0.00	

Manner	5	10.4%	3	75%	11.83	+++
Cause	35	72.9%	1	25%	3.98	++
Condition and concession	3	6.3%	0	0%	0.27	
CAUSE-TYPE	N=34		N=1			
Purpose	7	20.6%	0	0%	0.26	
Consequence	9	26.5%	0	0%	0.36	
Reason	18	52.9%	1	100%	0.87	
Notes: + slightly significant; ++ significant; +++ very significant.						

Table 12. Distribution of appraisal resources in the task 'describing a picture' of the post-test in the experimental and control groups.

Moving down into lower levels of delicacy in the clause complex analysis, regarding *enhancement*, in the pre-test the control group only used *cause* (50%) and *condition and concession* resources (50%) once, while the experimental group used a wider variety: *cause* (80%), *manner* (13.3%) and *condition and concession* (6.7%) resources. For these reasons, the use of *condition and concession* clause complexes was slightly significant in favour of the control group (50% vs 6.7% with Chi-value=3.19), whereas the use of *cause* clause complexes was slightly significant in favour of the experimental group (80% vs. 50% with Chi-value=0.88).

Moreover, in the post-test, the experimental group used four different types of *enhancement*, being *time* (10.4%) resources added to *manner* (10.4%), *cause* (72.9%) and *condition and concession* resources (6.3%), whereas the control group continued using only two different types of *enhancement*, being in this case *manner* (75%) and *cause* (25%). The use of *manner* resources is statistically very significant in favour of the control group (75% vs. 10.4% with Chi-value=11.83) whereas the use of *cause* resources is again statistically significant in favour of the experimental group (72.9% vs. 25% with Chi-value=3.98), although this time to a higher extent than in the pre-test (Chi-value=0.88).

# **5.2.2.** Appraisal resources

**Research Question 3:** Is CL more effective than a traditional methodology in terms of the variety of interpersonal language used when giving opinions about a specific topic?

This part presents the main results of the analysis of students' evaluative resources based on *engagement*, which is one of the three systems comprising the framework of Appraisal Theory provided by Martin & White's (2005). For reasons of space, this paper only

focuses on the category of *engagement*, concerned with sourcing attitudes and opinions, as it is particularly relevant for the purpose of Task 2.

Tables 13 and 14 show the amount and types of engagement resources used by the participants of this study in the pre- and post-tests, respectively. A higher use of appraisal resources is observed in the experimental group in both the pre-test (N=109 vs. N=51) and the post-test (N=223 vs. N=51), and whereas the experimental group showed great development in the post-test, the control group did not progress at all. The distribution of use of *contract* and *expand* resources, however, is done very similarly by both groups in pre- and post-tests. Regarding *contract* resources, in the pre-test, the experimental group used 43.1% and the control group 45.1%; and, in the post-test, the experimental group used 56.2% and the control group 49%. Regarding *expand* resources, in the pre-test, the experimental group used 56.9% and the control group 54.9% and, in the post-test, the experimental group used 43.8% and the control group used 51%.

PRE-TEST	Experimental group		Control group			
Feature	N	Percent	N	Percent	Chisqu	Signif.
APPRAISAL						
ENGAGEMENT	N=109		N=51			
Contract	47	43.1%	23	45.1%	0.06	
Expand	62	56.9%	28	54.9%	0.06	
CONTRACT- TYPE	N=47		N=23			
Disclaim	33	70.2%	19	82.6%	1.24	
Proclaim	14	29.8%	4	17.4%	1.24	
DISCLAIM-TYPE	N=33		N=19			
Deny	26	78.8%	13	68.4%	0.69	
Counter	7	21.2%	6	31.6%	0.69	
PROCLAIM-TYPE	N=14		N=4			
Concur	1	7.1%	0	0%	0.30	
Pronounce	0	0%	0	0%	0.00	
Endorse	0	0%	0	0%	0.00	
Justify	13	92.9%	4	100%	0.30	
EXPAND-TYPE	N=62		N=28			
Entertain	62	100%	28	100%	0.00	
Attribute	0	0%	0	0%	0.00	
ENTERTAIN- TYPE	N=61		N=28			
Modal-auxiliary	33	54.1%	16	57.1%	0.07	
Modal-adjunct	5	8.2%	2	7.1%	0.03	

Modal-attribute	23	37.7%	10	35.7%	0.03			
<b>Notes:</b> + slightly significant; ++ significant; +++ very significant.								

Table 13. Distribution of appraisal resources in the task 'giving an opinion' of the pre-test in the experimental and control groups.

POST-TEST	Experimental group		Control group				
Feature	N	Percent	N	Percent	Chisqu	Signif.	
APPRAISAL							
ENGAGEMENT	N=226		N=51				
Contract	127	56.2%	25	49%	0.87		
Expand	99	43.8%	26	51%	0.87		
CONTRACT- TYPE	N=127		N=25				
Disclaim	74	58.3%	13	52%	0.34		
Proclaim	53	41.7%	12	48%	0.34		
<b>DISCLAIM-TYPE</b>	N=74		N=13				
Deny	59	79.7%	11	84.6%	0.17		
Counter	15	20.3%	2	15.4%	0.17		
PROCLAIM-TYPE	N=56		N=17				
Concur	2	3.8%	0	0%	0.47		
Pronounce	2	3.8%	0	0%	0.47		
Endorse	0	0%	0	0%	0.00		
Justify	49	92.5%	12	100%	0.97		
EXPAND-TYPE	N=94		N=26				
Entertain	94	94.9%	21	80.8%	5.63	+++	
Attribute	5	5.1%	5	19.2%	5.63	+++	
ENTERTAIN- TYPE	N=94		N=21				
Modal-auxiliary	52	55.3%	10	47.6%	0.41		
Modal-adjunct	8	8.5%	1	4.8%	0.33		
Modal-attribute	34	36.2%	10	47.6%	0.95		
<b>Notes:</b> + slightly significant; ++ significant; +++ very significant.							

Table 14. Distribution of appraisal resources in the task 'giving an opinion' of the post-test in the experimental and control groups.

Both experimental and control groups mostly used *expand* resources in the pre-test (56.9% and 54.9%, respectively). Nevertheless, in the post-test, whereas the control group mostly used *expand* resources (51%), the experimental group mostly used *contract* resources (56.2%). When comparing the results of the experimental group in their pre- and post-tests (see *Appendix 7*), it can be observed that the use of *contract* resources by the experimental group in the post-test (56.2%) is statistically significantly higher to that in

their pre-test (43.1%), as well as the use of *expand* resources in the pre-test (56.9%) in comparison to their use in the post-test (43.8%), both with Chi-value=5.04.

Moving into lower levels of delicacy, regarding *contract* resources, in the pre-test, the experimental group uses more *proclaim-type* resources (29.8%) than the control group (17.4%), whereas the control group uses more *disclaim-type* resources (82.6%) than the experimental group (70.2%), but these results are not statistically significant. In the post-test, both experimental and control groups use *disclaim* (58.3% and 52%, respectively) and *proclaim* (41.7% and 48%, respectively) resources in similar proportions. However, the experimental group uses more *disclaim* than *proclaim* resources due to the high number of times they used *deny* (79.7%) or *counter* (20.3%) resources, and the control group uses both *proclaim* (48%) and *disclaim* (52%) resources similarly.

Within *proclaim*, the control group only used *justify* resources in both pre- and post-tests, whereas the experimental group used two different types of *proclaim* resources in the pre-test (*justify* (92.9%) and *concur* (7.1%)) and achieved to use three types in the post-test (*justify* (92.5%), *pronounce* (8%) and *concur* (3.8%)). The most popular *proclaim-type* in both groups was *justify*. The number of times students in the experimental group used this resource noticeably increased once the intervention period had ended (N=13 in the pre-test; N=49 in the post-test).

As for *expand* resources, whereas in the pre-test there are no statistically significant differences between the performance of both groups, in the post-test significant results can be found. The use of *entertain* resources by the experimental group is statistically very significant (94.9% vs. 80.8% with Chi-value=5.63) whereas the use of *attribute* is statistically very significant in favour of the control group (19.2% vs. 5.1% with Chi-value=5.63). As shown in *Appendix 7*, the use of *attribute* resources by the experimental group is slightly statistically significant with Chi-value=3.23 in the post-test. Whereas in the pre-test they only used *expand-entertain* resources (100%), in the post-test they used both *expand-entertain* (94.9%) and *expand-attribute* (5.1%) resources.

# **5.2.3. Speech functions**

**Research Question 4:** Is CL more effective than a traditional methodology in the types of speech functions used when students interact with each other?

In order to answer this research question, the results concerning the interactional analysis will be shown. For this purpose, Eggins & Slade's (1997) model of speech functions in

casual conversation was adapted to the purposes and the research context of this study and applied to the collected data corpus.

Tables 15 and 16 present the type of speech function moves used by students in the experimental and control groups in the pre-test and post-test, respectively, including number of moves (*N*) and percentages. As in the case of appraisal resources and clause complexes, students in the experimental group used more speech functions than students in the control group in both pre- (N=186 vs. N=99) and post-tests (N=196 vs. N=74). The distribution of use of resources with regard to the two main features is also done very similarly by the two groups of participants in both tests. Most moves used by the experimental group are *response* moves (65.1% in the pre-test and 67.3% in the post-test), followed by *initiating* moves (34.9% in the pre-test and 32.7% in the post-test). Similarly, in the control group, most moves are also *response* moves (61.6% in the pre-test and 58.1% in the post-test) and the rest are *initiating* moves (38.4% in the pre-test and 41.9% in the post-test).

PRE-TEST	Experimental group		Control group				
Feature	N	Percent	N	Percent	Chisqu	Signif.	
SPEECH	N=186		N=99				
FUNCTIONS							
Initiation	65	34.9%	38	38.4%	0.33		
Response	121	65.1%	61	61.6%	0.33		
INITIATION-	N=65		N=38				
TYPE							
Give-info	14	21.5%	17	44.7%	6.13	+++	
Demand-info	51	78.5%	21	55.3%	6.13	+++	
<b>RESPONSE-TYPE</b>	N=121		N=61				
Support	98	81%	56	91.8%	3.64	+	
Confront	23	19%	5	8.2%	3.64	+	
SUPPORT-TYPE	N=98		N=56				
Develop	8	8.2%	7	12.5%	0.76		
Agree	15	15.3%	8	14.3%	0.03		
Conclude	7	7.1%	7	12.5%	1.24		
Give-info	68	69.4%	34	60.7%	1.20		
CONFRONT-	N=23		N=5				
TYPE							
Challenge	15	65.2%	2	40%	1.10		
Disagree	8	34.8%	3	60%	1.10		
Notes: + slightly significant; ++ significant; +++ very significant.							

Table 15. Distribution of speech functions in the task 'interacting' of the pre-test in the experimental and control groups.

POST-TEST	Experimental group		Control group				
Feature	N	Percent	N	Percent	Chisqu	Signif.	
SPEECH FUNCTIONS	N=196		N=74				
Initiation	64	32.7%	31	41.9%	2.01		
Response	132	67.3%	43	58.1%	2.01		
INITIATION- TYPE	N=64		N=30				
Give-info	45	70.3%	18	60%	0.98		
Demand-info	19	29.7%	12	40%	0.98		
RESPONSE-TYPE	N=132		N=43				
Support	112	84.8%	42	97.7%	5.05	++	
Confront	20	15.2%	1	2.3%	5.05	++	
SUPPORT-TYPE	N=112		N=42				
Develop	43	38.4%	11	26.2%	2.00		
Agree	25	22.3%	6	14.3%	1.23		
Conclude	2	1.8%	4	9.5%	4.88	++	
Give-info	42	37.5%	21	50%	1.97		
CONFRONT- TYPE	N=20		N=1				
Challenge	13	65%	1	100%	0.53		
Disagree	7	35%	0	0%	0.53		
Notes: + slightly significant; ++ significant; +++ very significant.							

Table 16. Distribution of speech functions in the task 'interacting' of the post-test in the experimental and control groups.

On the one hand, in the pre-test, some significant differences can be found across the experimental and control groups regarding the distribution of *initiation-type* moves and *response-type* moves. Thus, in the case of *initiation*, students in the control group tend to use significantly more *give-info* moves (44.7%) than students in the experimental group (21.5%), who, on the contrary, use a higher percentage of *demand-info* moves (78.5% in the experimental group vs. 55.3% in the control group) in a significant way (both with Chivalue=6.13). Within *responses*, *support* responses are more frequent than *confront* responses in both cases but the difference is slightly significant in the control group for *support* responses (91.8% vs. 81%) and in the experimental group for *confront* responses (91.8% vs. 81%) both with Chi-value=3.64.

Moving down into a lower level of analysis, *response-support-give-info* is the most frequent type of *support* response in both experimental (69.4%) and control groups (60.7%), although the percentage of use in the control group is lower than in the experimental data. Regarding *confront* moves, whereas *challenge* is the most frequent type

used by the experimental group (65.2%), *disagree* is the most frequent one in the case of the control group (60%). However, as illustrated in Table 15, these differences are not statistically significant.

On the other hand, in the post-test, regarding *initiation-type* moves, the experimental group used proportionally more *give-info* moves (70.3%) than the control group (60%), which used a greater percentage of *demand-info* moves (40%) than the experimental group (29.7%). However, these results are not statistically significant. Regarding *response-type* moves, the control group made a statistically significant use of *support* moves in comparison to the experimental group (97.7% vs. 84.8% with Chivalue=5.05) because they only used this type of *response* moves. In contrast, the experimental group used both *support* (84.8%) and *confront* moves (15.2%), and their performance was statistically significant in the case of *confront* moves with Chivalue=5.05, of which the control group only used 2.3%.

Within *support-type* moves, the experimental group mostly used *develop* (38.4%) and *give-info* (37.5%) moves, followed by *agree* (22.3%) and finally by *conclude* (1.8%). Similarly, the control group mostly used *give-info* (50%) and *develop* moves (26.2%), followed by *agree* (14.3%) and finally by *conclude* (9.5%). Thus, whereas the experimental group used a greater percentage of *develop* moves and even *agree* moves in comparison to the control group, the control group used a greater percentage of *give-info* moves. As shown in *Appendix* 8, when comparing the performance of the experimental group in pre- and post-tests, students mostly used *give-info* moves in the pre-test (69.4%), but in the post-test they used both *develop* (38.4%) and *give-info* moves (37.5%). The use of *give-info* moves in their pre-test is statistically significant with Chi-value=21.31, and the use of *develop* moves in their post-test is statistically significant with Chi-value=25.98.

Furthermore, the higher presence of *conclude* moves in the control group (9.5%) is statistically significant when compared to its use in the experimental group (1.8%) with Chi-value=4.88. Regarding *confront* moves, whereas the experimental group uses both *challenge* (65%) and *disagree* moves (35%), the control group only uses one *challenge* move in its performance in the post-test.

#### 6. DISCUSSION

In this section, the results presented in the quantitative analysis will be discussed in relation to the research questions. Therefore, the results obtained in the general analysis of compositions based on fluency, accuracy and grammatical complexity will be interpreted, followed by the results obtained in the SFL analysis according to clause complexes and logical relations, appraisal resources and speech functions.

# 6.1. Students' fluency, accuracy and complexity

The first research question seeks to answer whether cooperative learning is more effective than a traditional methodology to enhance students' fluency, accuracy and grammatical complexity level. Regarding fluency, the experimental group progressed in all the tasks, which means that they were able to develop their fluency level when describing, evaluating and interacting after having been working in cooperation. Whereas all results are statistically significant in relation to clauses per turn, students did not improve significantly in the number of words per turn when interacting with a partner in Task 3. This may be due to the fact that interaction does not necessarily involve long turns and students often convey their message in more than one turn. However, although students did not use significantly more words per turn when interacting, they used a higher number of clauses per turn, meaning that their production was still more fluent in the post-test regarding this task.

The control group did not progress so much as the experimental group or did not even progress at all as for example in the number of clauses per turn when describing a picture. It can be argued that the meaning-oriented focus of most of the cooperative tasks that were implemented during the intervention period gave rise to the significant results of the experimental group in all the tasks of the post-test regarding fluency. That is, students seemed to talk more after making an authentic use of language for meaningful purposes in cooperative tasks (Jacobs et al., 2006; Skehan, 2008). In line with Housen & Kuiken (2009), this was appreciated not only in the amount of speech but also in the ease and speed with which they accessed second language information to communicate meanings.

Secondly, regarding accuracy, on the one hand, the progress of the experimental group was very similar in Task 1 (giving an opinion) and Task 2 (describing a picture), whereas they progressed to a lesser extent in Task 3 (interacting). However, they significantly developed their accuracy level in all the tasks of the post-test when compared

to the control group, meaning that they were more able to produce free-error speech (Wolfe-Quintero et al., 1998). The control group performed equally when describing a picture in pre- and post-tests, performed better when giving an opinion in the pre-test and progressed in interaction but to a lesser extent than the experimental group did.

As Basterrechea & García Mayo (2013) claim, in cooperative tasks students do not only focus on meaning but also on form because they reflect on the language they are producing and question whether their language use is correct or not by creating language-related episodes (LRE). Thus, it can be assumed that students in the experimental group also achieved significant results in all the tasks regarding accuracy because they consciously attended to the input and made efforts to monitor output when interacting with their group members in class. Overall, these findings support that the negotiation of meaning that takes place when students try to solve cooperative tasks in their groups leads to accuracy and fluency improvement because it provides students with opportunities to receive comprehensible input and feedback from their peers and to produce modified output (García Mayo & Pica, 2000; Keck et al., 2006; Mackey & Goo, 2007; Mackey et al., 2003).

Finally, unexpected results have been found regarding grammatical complexity. While students in the experimental group performed better than the control group in all the tasks of the post-test regarding fluency and accuracy, they performed worse in all the tasks of the post-tests in the number of words per clauses (but without significant differences). In relation to clauses per t-units, the performance of the experimental group when interacting in the post-test was statistically significantly higher in comparison to their performance in the pre-test. That is, they achieved to form more complex sentences by including more clauses in their utterances, but not necessarily long clauses. In comparison to the control group, they also performed statistically significantly better in Task 2 of the post-test, meaning that when evaluating, students achieved to expand and justify their ideas through complex sentences.

In contrast, when describing a picture or when interacting with a partner, their result is not statistically significantly better when compared to the control group. This finding, however, does not necessarily mean that students have not improved significantly but it may be due to the fact that the task itself did not require them to use more complexity in terms of clauses per t-units. Another reason why students did not progress in Task 1 (describing a picture) either when using words per clauses or clauses per t-units could be

that only one of the cooperative tasks in the implemented didactic unit allowed students to practice this kind of task (Task 4 in Session 4, see *Appendix 3*).

As for the control group, regarding words per clauses, students only progressed when describing a picture. Regarding clauses per t-unit, there is no difference in the pretest and post-test performance when describing a picture, they performed better in the pretest than in the post-test when giving an opinion, but they progressed when interacting with a partner. This result is surprising because these students did not have opportunities to interact among each other in the classroom. In any case, the result is not statistically significant when compared to the performance of the experimental group in this task.

To achieve a simultaneous development of accuracy and grammatical complexity, Robinson (2001) proposes that task complexity must be increased by making tasks more cognitively demanding in order to promote more complex and grammaticised second language speech production. This way, students could probably have progressed to a higher extent in grammatical complexity in this study. Moreover, Larsen-Freeman (2006) states that the findings obtained by fluency, accuracy and complexity measures depend on the context in which the data have been collected. Therefore, it could be the case in the present study that students were more concerned about producing fluent and accurate language than about producing elaborate and varied language when performing the task because they were doing an oral exam and they knew they must speak as much as they could in an accurate way (not necessarily in a complex way).

# 6.2. Clause complexes, appraisal resources and speech functions

The rest of the research questions concern the SFL analysis. The second research question aims at examining whether cooperative learning is more effective than a traditional methodology to develop students' ability to use a variety of logical relations when describing a picture (Task 1). After carrying out the analysis, it can be appreciated that a comparison of distribution of types of clause complexes shows similarity across the two contexts because *expansion* and *projection* resources are proportionally similarly used by experimental and control groups in both pre- and post-tests. Within *expansion*, students mostly used *extension* resources, followed by *enhancement* resources and finally by *elaboration* resources. However, whereas the control group preferred using *extension* resources, the experimental group used *enhancement* resources to a higher extent, especially after having been working in cooperation, since the use of these resources by the

experimental group was statistically significantly higher in their post-test in comparison to their pre-test. Already in the pre-test, they did not only use additive (and, but) or alternative (or) resources characteristic of expansion, but they also used cause, manner and condition and concession resources. In the post-test, they even added logical relations of time. The use of enhancement by the experimental group in the post-test can be exemplified with the following extracts:

- (1) [...] Ehm, it looks <u>like</u> (*manner*) it's also a sunny day, <u>since</u> (*cause-reason*) you can't see well outside the window <u>due to</u> (*cause-reason*) the light.
- (2) [...] They are dancing while (time) holding some weight on. And they look happy and they look like (manner) they are enjoying it. In the background you can see that, there are some curtains and some speakers, and a mirror to (cause-purpose) see themselves.
- (3) [...] I think they are having a good time. I have never practiced this. I don't know <u>if</u> (condition) I would do it, <u>but</u> (concession) they look fun.

The control group used cause and condition and concession resources in the pre-test and they only continued using *cause* resources in the post-test together with *manner* resources. The use of the latter was statistically significant in the post-test, but, overall, they used a more reduced variety of logical relations or clause complexes than the experimental group. These findings suggest that students in the experimental group produced richer and more varied descriptions than students in the control group, which in turn reveals the effectiveness of cooperative learning as an educational methodology to improve second language students' communicative ability as well as social and cognitive competences. This may be explained by the fact that, as Krashen (1982) claims, learning, the conscious representation of grammatical knowledge that has resulted from instruction, cannot lead to acquisition, and since the experimental group could use language in real communicative contexts, they developed their language system in a more unconscious way, that is, they acquired language. Students did not produce words as an end themselves but as a means towards accomplishing the goal, and therefore their variety of language functions increased. On the contrary, under a traditional teaching method, the amount of teacher talk was much higher than that of student talk and fewer opportunities were given for students to communicate among each other in the control group and therefore to produce output (Kagan, 1995). Both groups avoided using *elaboration* resources, which means that they did not use non-defining relative clauses, which would form hypotactic elaboration, or they did not feel the need to clarify, exemplify or expose something with other words, which would form paratactic elaboration.

The third research question seeks at answering whether cooperative learning is more effective than a traditional methodology to enhance students' ability to use evaluative or interpersonal resources when expressing their opinion about a topic. While both experimental and control groups used more *expand* resources in the pre-test because of the high use of *entertain* resources, they used *contract* resources more frequently in the post-test. Both *disclaim-type* and *proclaim-type* were also used in similar proportions within control and experimental groups.

However, across the two contexts, the comparison of the distribution of types of engagement does not show similarity in the post-test. The experimental group used the contract-subcategory disclaim to a higher extent due to the number of times they used negations, and because they also countered what they were saying with alternatives. Moreover, they improved their ability to communicate to a higher extent by using a greater number of types of proclaim in the post-test (concur, pronounce and justify), although the most popular one was still justify as in the pre-test. The preference of justify over concur may be due to the fact students are not taking part in an interaction in Task 2, where they must give their own opinion about a topic and reasons for it, and therefore they do not have opportunities to show agreement through assertions.

Within *expand-type*, on the one hand, the use of *entertain* resources in the post-test is statistically significant in favour of the experimental group because they used numerous modal-auxiliaries (especially *have to, can* and *don't need to*) and modal attributes (mostly *I think*) to present their position and to make space for other dialogic possibilities. This is illustrated with the following excerpt:

(4) Ehm, indoors. Because indoors <u>I think</u> (*modal-attribute*) it's more... <u>you don't have to</u> (*auxiliary*) worry about the weather. And it's good. It's better <u>I think</u> (*modal-attribute*). Because indoors <u>you can do</u> (*modal-auxiliary*) sport alone or with your friends, and <u>no one can</u> (*modal-auxiliary*) disturb you <u>I think</u> (*modal-attribute*) [...].

This high use of *entertain* expresses students' need to tell their opinion and to justify what they were saying in the task. These findings suggest that the experimental group achieved to handle higher order skills and attained oral argumentation skills after negotiating meaning and communicating in cooperative tasks with the members of their group, which encourages reasoning and reflective thinking to a higher extent than whole-class conversations and therefore involves the use of *engagement* in fundamental ways.

Surprisingly, the use of *attribute* is statistically significant in favour of the control group in the post-test, meaning that they preferred to make reference to some external voice to a higher extent than the experimental group. This finding is surprising because in teacher-fronted lessons students had few or no opportunities to produce oral language in whole-class conversations led by the teacher, who had control over the topics introduced and pursued. However, this result is countered by experimental students' slightly higher significant use of *attribute* resources in their post-test when compared to their pre-test. For this reason, overall, it seems that students in the experimental group were more able to display an evaluative orientation to content learning when the research period ended.

Finally, the fourth research question aims at examining whether cooperative learning is more effective than a traditional methodology to encourage students to use a greater variety of speech functions when interacting with someone else. At this interactional level, the comparison between experimental and control groups shows both similarities and differences. Both experimental and control students usually initiate exchanges to give information in the post-test. As for the types of responses, *support* responses are more frequent than *confront* responses. Regarding differences, results show that the experimental group used *support-develop* and *confront-challenge* responses more frequently in the post-test, which indicates that students are seeking to answer the prompt questions in cooperation and they were willing to discuss and offer reasons and arguments to support their opinions when disagreement appeared.

Moreover, there is a more frequent use of *disagree* moves by the experimental group in the post-test, and its lower use in comparison to other *support* moves could be due to the fact students tried to negotiate a common position or solution. However, the use of *response-confront* moves by the experimental group in the post-test is statistically significantly higher, as exemplified in the following communicative exchange:

- (5) Eh, I, I disagree because you can start one hour later, but eh, finish you can't finish one hour later (disagree) because, eh, you will finish at 3pm and it's not good for you to eat more late (disagree). Because, eh, you won't eat at 2pm (disagree) [...]
  - I agree (*agree*), but you can have a time to eat, eh, from the 2 to 3pm (*challenge*). You can have a receipt for, for your lunch, eh, and then longer the time when you finish school. So you can eat and don't worry about that.
  - I don't agree (*disagree*), because you can get up one hour before (*challenge*). It's no problem [...]

The diversity of speech functions used in this context may be due to the fact students in cooperative learning have the opportunity to share knowledge and to defend their viewpoints in front of their peers, which requires a higher engagement in meaning. Therefore, reasoning and reflective thinking are encouraged more in cooperative learning lessons, which contrasts with the focus on form of the teacher-fronted class. This finding seems to support studies claiming that cooperative learning leads to a higher level of productivity and achievement by providing students opportunities to communicate in a stress-reduced atmosphere (Johnson & Johnson, 1991; Johnson & Johnson, 1994; Gillies, 2007; Kagan, 1999; Slavin, 1995).

In the control group, the most frequent moves were *response-support-give-info*, which is the reason why the use of *response-support* moves in the control group was statistically significantly higher in the post-test. That is, students in the control group did not develop their own arguments or their partner's arguments to the same extent as students in the experimental group but just limited themselves to answer their partner's questions or to add new information.

#### 7. CONCLUSION

All in all, whereas traditional methods of second language learning marginalise oral production in the classroom and focus on the learning of grammar and vocabulary, cooperative learning encourages the use of oral language in real communicative situations, and therefore it can be considered an appropriate method for enhancing students' language performance and communicative ability for using more linguistic resources. In cooperative tasks, students have the opportunity to receive comprehensible input and to produce output while negotiating meaning, sharing knowledge and questioning the appropriateness of language forms with their peers as well as giving feedback to each other, which leads to second language acquisition (García Mayo & Pica, 2000; Kagan, 1995; Keck et al., 2006; Mackey & Goo, 2007).

In the general analysis based on *fluency, accuracy* and *grammatical complexity* measures, the study has shown that in the post-test, students in the experimental group achieved significantly better results than students in the control group in all the tasks regarding fluency and accuracy, probably due to the meaning-oriented focus and to the production of learning-related episodes (LRE) focused on form to carry out the task. However, students did not progress significantly regarding *grammatical complexity* in all the tasks, probably because cooperative tasks were not increasingly complex in the different sessions of the intervention period but of the same level, and also because in an exam context students may be more concerned about producing fluent and accurate language than about developing ideas using complex linguistic structures. The students in the experimental group only used significantly more complex grammatical structures than the control group when giving their opinion.

In the SFL analysis, in comparison to the control group, the experimental group used a greater variety of clause complexes of *enhancement* when describing a picture, significantly more *entertain* evaluative linguistic resources when giving an opinion and a combination of *give-info* and *develop* responses as well as significantly more *confront* responses when interacting with a partner. The development of these features means students were more able to construct more elaborated sentences and to think critically after the research period. These systemic-functional differences between experimental and control groups in each of the tasks, together with a more fluent and accurate second language performance in all the tasks, make this paper a piece of evidence for teachers to know the effectiveness of cooperative learning to enhance students' second language

performance and linguistic resources over a traditional methodology at a secondary level in Spain.

Therefore, the main pedagogical implication of these results is that teachers should not overemphasise a teacher-centred instruction where communicative tasks are ignored but they should provide students with opportunities to work together in groups to allow them to improve their communicative ability in the second language. They should consider students' communicative skills in class because language acquisition is only achieved by offering students the opportunity to produce oral language (Kagan, 1995).

The present study has some limitations that should be taken into account regarding time. On the one hand, the short duration of the study, which lasted only three weeks, could have prevented the results from being even more significant, especially in terms of grammatical complexity. On the other hand, the teacher had to spend much time explaining cooperative structures used in the tasks so that students could understand them, since they were not used to this type of learning; and some time was also lost at the beginning of each lesson when students had to put their tables in groups, since the researcher was not allowed to preserve the tables in groups for the research period. Besides time, other limitations to carry out the work were low-proficiency level students' tendency to use the L1 during the first lessons, since they lacked the appropriate input to express themselves correctly in the second language; and teacher's selection of materials for the tasks, which requires much dedication to maintain all students' motivation.

The exploratory nature of the study calls for further research in this area by replicating the present study with a broader analysis which applies each of the systemic-functional models used in this paper to all the tasks instead of just on one of them. Moreover, the same study could be replicated by implementing increasingly more complex tasks to examine whether this would improve students' grammatical complexity to a higher extent. In order to overcome the limitations mentioned in the present research, future researchers should take a longer intervention period to cross validate the results of the current study in secondary education.

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# APPENDIX

### **APPENDIX 1: ENHANCEMENT SUBTYPES BY EGGINS (2004)**

**Temporal:** when? at what time?

i) same time

Just when I feared we would have to turn back, I saw a light that looked like a fire.

ii) different time

At first I was proud to do it, then nervous and now I'm terrified.

Spatial: where? whereabouts?

Donovan was hunting her, wherever she might go.

Manner: how? in what way? by what means? like what?

It was Brently Mallard who entered, a little travel-stained, composedly carrying his grip-sack and umbrella.

#### Casual:

i) cause: reason

I ducked, sending him over my back and into the fire.

ii) cause: purpose

Knowing that Mrs. Mallard was afflicted with a heart trouble, great care was taken...

#### **Conditional and Concessive**

Conditional: If you don't wait until November, you could find yourself in trouble.

Concessive: Nobody paid any attention to her, despite her being in charge of the whole thing.

(Eggins, 2004, p. 283-84)

## **APPENDIX 2: PRE- AND POST-ORAL TESTS**

## **Pre-oral exam: Fact or Fiction?**

## **Activity 1: Describing a picture**

The pictures below show people using technology. Describe the picture you are assigned and be imaginative. You can also tell how people are feeling, what they are doing, and what they will do later.



(Addison, C. & Norcott, R, 2011)

## Activity 2: Expressing one's opinion about a particular topic

- How would your life change if you had a robot?
- How do you imagine schools in the future?

## Activity 3: Talking with a partner about reaching an agreement

Discuss a plan for the weekend and reach an agreement. One of you has to suggest his/her classmate do something this weekend and the other has to disagree and, finally, to agree with the plan offered.

# **Post-oral exam: Health matters**

## **Activity 1: Describing a picture**

The pictures below show people doing exercise. Describe the picture you are assigned and be imaginative. You can also tell how people are feeling, what they are doing, and what they will do later.

### Picture A



### Picture B



## Activity 2: Expressing one's opinion about a particular topic

- 1. What do you prefer? Indoors or outdoors exercise?
- 2. What do you think about looking for medical advice on the Internet?

# Activity 3: Talking with a partner about reaching an agreement

Look at the posters for the student elections. Choose one and discuss with your partner. You have to show agreement or disagreement with your partner after listening to his or her opinion. Finally, you have to reach an agreement to vote for one candidate.



(Addison, C. & Norcott, R, 2011)

## **APPENDIX 3: DIDACTIC UNIT "HEALTH MATTERS"**

## **SESSION 1- VOCABULARY: ILLNESSES**

- 1. To allow students to interact among each other talking about health issues, such as the importance of health and the diversity of illnesses.
- 2. To make learning visual to encourage students to guess the meaning of vocabulary related to health through some images.
- 3. To familiarize students with expressions to deal with a real life situation such as going to a doctor.

Step (Time)	Activities	Justification	Skills	Grouping	Materials
Activity 1: "Are you healthy enough?" (4min)	In this activity students have to interview a partner using a quiz. They have to write down their partner's answers to calculate his/her result at the end.	This activity aims at presenting students the unit through a motivating approach, since they have to use their personal experiences in order to do it.	Speaking	S-S	Quiz
Activity 2: Warm-up (Round Robin + brainstorming) (5min)	In this activity the teacher provides the students with some questions related to what will be seen in class. Then, students must reflect on them in their groups. In Round Robin, students take turns responding orally so that everybody has the opportunity to express their ideas. Each student participates by sharing something and the rest of team members have to actively listen to what their classmate says because they are not allowed to repeat what he/she says.	students' prior knowledge on the topic and encourages their speaking. Moreover, it	Speaking	SS-SS T-SS	Blackboard
Activity 3: Showdown strategy	The teacher provides students with some cards stacked face down in the	This activity focuses on oral communication among students in their	Speaking + reading	SS-SS	Cards with famous people's

(8min)	centre of the table. One student in the group will be the Showdown Captain, who takes one card, reads it aloud and provides think time for the rest of the members. Students will have to tell what each quote means for them and whether they agree or disagree with it and why. They preferably take notes of their opinion. When team members are ready to tell their opinion, the Showdown Captain calls "Showdown!" and teammates discuss their answers. Then, the Showdown Captain checks their answers and another person in the group becomes the Showdown Captain for the next round.	group. It allows students to know different perspectives about the same issue, and develops their social and thinking skills.			quotes from the textbook
Activity 4: Matching activity through 1,2,4 strategy (5min)	First of all, students do the activity individually. Students have to match some vocabulary words and expressions referring to illnesses with the picture that represents it. Then, in pairs, they exchange their answers, reaching common conclusions. Finally, all team members compare their responses and ask others if they have any doubt.	,	Speaking + writing	S S-S SS-SS	Pictures
Activity 5: Fill- in the gaps through Fan- N-Pick strategy (6min)	The teacher provides students with cards, each one with a sentence students have to complete with the right word of the box they have in their lesson sheet. One member of the group holds the cards in a fan, another student picks the	The activity is useful to allow students show understanding of vocabulary words from context and to increase students' attention to the task and their responsibility for having different roles to those	Speaking + reading	SS-SS	Cards

	card and reads it aloud. Then, all the members of the group have time to think about the answer. Finally, the third member of the group card gives an answer. The fourth member has to be attentive to correct him/her in case the answer is wrong, and he/she explains the vocabulary word or expression using his/her own words. The roles rotate clockwise and the process is repeated until all members of the group have picked a card or cards finish.	they usually have in their groups.			
Activity 6: Role play (15min)	The teacher provides each student with a card which has information about a situation and a role they have to assume. In pairs, students have to adopt and act out the roles they have been assigned, either doctor or patient. They have to create and to write down a dialogue reflecting the real-life situation of going to a doctor. After acting it out once, they exchange roles.	oral communication between students and encourages them to enhance creativity in order to solve problems. It also allows students to build self- confidence and confidence in their partner, who can help	Speaking + listening + writing	S-S T-SS	Cards and textbook
Activity 7: Find someone who (10min)	Students circulate through the classroom looking for someone who has ever had some of the illnesses of the chart and who is able to explain the causes why he/she had it and the consequences it had for him/her. They must ask as many people as possible to have at least one case of each illness.	the end so that students reflect on personal	Speaking + listening	SS-SS (the whole class)	Chart

### **SESSION 2- READING: AN ALLERGY FORUM**

- 1. To allow students to reflect and to later discuss on the causes and symptoms of allergies basing on a real life documentary.
- 2. To help students creating their own learning through the "jigsaw" technique, in which each member of the home group will provide the others with relevant information about a part of the text.
- 3. To encourage students to give their personal opinions through the use of expressions related to main function of the unit, "agreement & disagreement".

Step (Time)	Activities	Justification	Skills	Grouping	Materials
Activity 1: Warm-up (Pair-Share- Repeat + Rally Robin) (5min)	In this activity the teacher provides the students with some questions related to what will be seen in class. The Pair-Share-Repeat strategy is used to answer the first question, which is an alternative to the traditional Think-Pair-Share strategy. Therefore, students have to share their ideas with a partner, and after that, they have to switch the partner and to share both his/her own ideas and the old partner's ideas with the new one. This way, students are able to hear different perspectives on an issue. The other two questions are done using the Rally Robin strategy, in which in pairs students have to tell as many answers as they can. After one of them shares something, the other shares another thing, and this process is constantly repeated.	students' prior knowledge on the topic and encourages their speaking. Moreover, it helps students build	Speaking + writing	S-S SS-SS	Mind map
Activity 2: Which one is an allergen? (3min)	The teacher puts a Power Point presentation and the students have to guess which objects are allergens and	This activity will make students lose their inhibitions to participate and it will reinforce the content of the previous	Speaking	SS-SS (the whole class)	Power Point presentatio n +

	which are not.	activity.			pictures
Activity 3: Guessing the topic (2min)	Students watch the first minute of the video without subtitles and have to guess the type of allergy it is about.	This activity increases students' motivation and attention to see the video.	Listening + speaking	SS-SS (the whole class)	Video
Activity 4: Listening activity through Pencils in the centre strategy (10min)	Students are left some time to read the questions they will have to answer. Then, they watch a short documentary about allergies with subtitles and they take notes for each question.  They watch the video again, and, afterwards, in their group they put their ideas in common to answer the questions together. While group members are discussing the answer to a question, the pencils are in the centre of the table to indicate that at that time they can only listen and talk. When everyone has a clear answer, each one picks up his/her pencil and writes the answer. The process is repeated with each question.	This activity enhances students' listening comprehension and focuses on oral communication among students in their groups.	Listening + reading + speaking	S SS-SS	Video and questions
Activity 5: Predicting from the title (2min)	Students read the title of the text and they have to predict what it is about and to tell why they think so.	This activity increases students' motivation and attention to read the text.	Reading + speaking	T-SS	Title of the text
Activity 6: Jigsaw activity + Numbered Heads Together (10min)	The teacher numbers the members of each group from number 1 to number 4. He/she tells them that their number corresponds to the number of the text they have to read. Individually, the students read their text and	This activity enhances students' reading comprehension of a text and focuses on oral communication among students in groups, since they have to share their ideas	Reading + speaking + writing	S SS-SS	Text, table and quiz

	fill in the blank space of the table with information about their allergy. Then, all students who have the same text meet together and check that their answers in the table coincide. Together, they answer the questions about their text. As they discuss the answers, the group members literally put their heads together and become experts about a type of allergy.	about the text to be able to answer the questions correctly.			
Activity 7: Jigsaw activity (continuation) (7min)	Students come back to their home group and talk to the rest of the members about the type of allergy they know so that the rest can finish filling in the table. Together, the members of the group also have to find out which is the meaning of the highlighted words of the text.	communication, since	Speaking + listening + reading	SS-SS	Text and table
Activity 8: Group race (EXTRA) (7min)	This activity will be done only if the teacher considers there will be enough time to do the debate. In groups, students try to complete some sentences with information from the whole text of the Allergy Forum as soon as possible. The team that finishes first and has all the sentences grammatically corrected wins. The group which finishes first will read the sentences aloud and the teacher will check them in terms of content, grammar and spelling.	This activity checks students' reading comprehension. The fact that the activity is a competition will encourage them to participate in their groups.	Speaking + reading	SS-SS	Textbook
Activity 9: Debate (10min)	The teacher exposes a controversial statement and students have to decide	This activity focuses on oral communication and allows students to	Speaking	SS-SS	None

,	whether they	agree or	freely	express	their	T-SS	
	disagree with it.	•	,	•			
	agree must go to		-				
	of the class and	those who					
	disagree must go	to the right.					
	Therefore, two gr	oups will be					
	formed and stude	nts will have					
1	to discuss some	arguments					
	to support their	•					
	the people in thei	group.					

## **ESSION 3- GRAMMAR: MODAL VERBS**

- 1. To familiarize students with the uses and the purposes of the different categories of modal verbs.
- 2. To enhance students' critical thinking through group discussion on controversial issues using modal verbs.
- 3. To increase students' motivation and imagination and to encourage them to put their ideas in common and to negotiate meaning in order to design their own health club.

Step (Time)	Activities	Language (gram, vocab, pron)	Skills	Grouping	Materials
Activity 1: Warm up (5 mins)	In this activity, students have to predict the topic of the lesson from an image and to orally answer some questions the teacher asks them related to the topic.	The main aim of this activity is to introduce the topic to the class and to encourage their speaking. As they can freely express their opinions, students are more motivated to participate. Students also learn some specific vocabulary about the topic.	Speaking	T-SS	Picture
Activity 2: Discussion through the Talking chips strategy (8min)	First of all, in this activity students watch a video and they have to predict what happens to a man who represents a real-life case of bigorexia. This part of the activity is done with the whole class together.  Secondly, students have to discuss in their groups on the reasons why they think people, mostly men, might end up suffering from that mental disorder. For the discussion, the strategy called Talking Chips will be used. Then, each student will start the discussion with a chip and they will place it in the centre of the table when they finish participating in the		Listening + speaking	T-SS SS-SS	Video and talking chips

	group discussion. When all chips are used, team members collect their chips and the discussion continues by repeating the same process.				
Activity 3: Text about bigorexia (6min)	The day before, the teacher tells students to revise the purposes of modal verbs from their text book for this lesson. Students firstly do this activity individually. They have to choose the right modal verb according to its purpose. Then, in pairs, they exchange their answers, reaching common conclusions.	problem at the same	Reading + speaking	S-S	Text adapted from some webpages (realia)
Activity 4: Reflecting on modal verbs (7min)	In this activity, students work in their groups to infer from context the purposes of each modal verb used in the previous activity. Once they have done this, they have to fill in the table with the correct purpose and with an expression that represents each modal verb.	groups so that students can discuss their answers and ask each other any doubt they can have about	Speaking + reading	SS-SS	Table template
Activity 5 (EXTRA): Mixed-up sentences through the Silent Card Shuffle strategy	This activity will be done at the end of the lesson only if there is enough time.  In this activity cards are created representing verbs, nouns, adjectives, adverbs, articles, prepositions and pronouns. The activity begins when the pieces of paper have been given to the groups.  First of all, in their groups, students have to classify the	Scritchec unough <b>ora</b>	Speaking	SS-SS	Cards

	words into the different categories. Then, they try to put the words in order to create sentences. All the members of the group must discuss on it. Afterwards, each group visits other groups to know the efforts of their peers and to see if their sentences coincide with those they have formed. Later, they return to their tables, and basing on their observations and discussions, they decide if they want to make further changes.				
Activity 6: Gym rules (8min)	In this activity, students have to rewrite the gym rules using modal verbs in such a way the rules have the same meaning. They will have to take into account both the purposes and the expressions that characterize each modal verb in order to do this activity.	grammar in groups, students do this activity individually to assert everyone has	Writing	S	Textbook
Activity 7: Team project (10min)	Taking the previous activity as an example, students have to design their own health club in their groups and to make up five creative rules. In order to do that, they must follow a template provided by the teacher.	The main purpose of this activity is to develop students' creativity while reinforcing the writing skill and oral communication through negotiation of meaning.	Speaking + writing	SS-SS	Writing template
Activity 8: Four Corners (11min)	One poster will be placed in each corner of the classroom. Each one will have a different expression on it: I totally agree, I totally disagree, I don't mind and I agree, but The teacher says a statement	opportunity to express their own ideas and to learn different perspectives about the	Speaking	T-SS SS-SS	Posters

	and students move to a corner of the class according to their ideas. This way, four groups are supposed to be formed and students will have to prepare some arguments with the members of the group to support their opinion.				
Activity 9: Opinion essay (Homework)	At home, students have to write an opinion essay of around 150 words about the previous activity. The teacher collects them the next day of class, corrects them and gives them back to students so that they can see and reflect on the mistakes they made.	encourages students to reflect alone on an issue discussed in class and allows them to summarize in their essay to summarize the discussion or to point	Writing	S	Box with agreement/ disagreem ent expression s

### **SESSION 4- VOCABULARY: KEEPING FIT**

- 1. To activate prior knowledge about the grammatical point studied the day before through interaction with a partner.
- 2. To get to know new vocabulary about keeping fit with classmates' explanations and through movement, and to reinforce vocabulary learning in an individual way by making sentences with one's own ideas.
- 3. To enable students to describe and identify a variety of pictures and to expose them to the different points of view of their classmates by talking to all of them.

Step (Time)	Activities	Language (gram, vocab, pron)	Skills	Grouping	Materials
Activity 1: Warm-up (Paper Airplane Facts) (10min)	Students write in a piece of paper three or more facts about themselves that they consider to be not healthy enough and that they would like to change. They fold the piece of paper into a paper airplane and then fly the plane across the room. After that, they pick up the airplane that they have nearest, and they have to guess who wrote the facts and to give him/her advice.	activity is to activate students' prior knowledge of the grammar point students they had studied in the previous class through a motivating approach	Writing + speaking	ss-ss (the whole class)	Paper airplanes
Activity 2: Introducing vocabulary through the Quizz, Quizz, Trade strategy (10min)	In this activity, students are provided with some cards with a sentence to complete on one side and the answer on the other. Students have to ask a partner to complete the sentence by choosing the correct word so that it makes sense. Once students guess the answer of each other's card, they will exchange the cards and ask another person.	Through oral interaction, students learn vocabulary useful for them to later describe the pictures of activity 4.	Speaking	SS-SS (the whole class)	Cards
Activity 3: Consolidating vocabulary through the	Students have to complete in their groups a crossword about the vocabulary studied in the previous activity. When they	The main aim of this activity is to consolidate the vocabulary seen in	Reading+ speaking + writing	SS-SS	Crossword

Round Robin strategy (7min)	finish, they choose a word or expression and take turns to form a sentence aloud with the word chosen.	the previous activity by being able to identify the words or expressions with their definitions and by constructing free sentences.			
Activity 4: Picture description (15min)	Each group is given a different picture they have to describe. In order to do that, they must follow some steps and expressions provided in advance by the teacher. At the end, each group present their picture to the rest of the class.	encourages students	Speaking + writing + listening	SS-SS	Pictures
Activity 5: Discussion using the Inside-outside Circle strategy (13min)	Students form two large circles in the class: inside circle facing outward and outside circle facing inward. The teacher shows a poster in a Power Point presentation and inside-circle-students start expressing their opinion on it using agreement, partly agreement and disagreement expressions. When the teacher indicates, students switch roles and outside-circle-students give their opinion whereas inside-circle-students listen to them.	The main purpose of this activity is <b>oral communication</b> between students to encourage them to freely share their opinions about some school posters.	Speaking	SS-SS (the whole class)	Posters from the textbook
Activity 6 (EXTRA): Board game about modal verbs	In this activity, students have to play a board game in their home groups. They throw the dice and answer the question of the square that corresponds using their own ideas and the appropriate modal verb.	This activity is useful to consolidate the grammar point of the unit through a motivating approach and through speaking.	Speaking	SS-SS	Board game and dice

Activity 7: Grammar reinforcing activity (Homework)	In this activity students have to rewrite the sentences using modal verbs in such a way the sentences have the same meaning. The next day of class the teacher collects the activity. The teacher corrects them at	to go over the previous lesson to consolidate learning, since students revise the grammar point of	Writing	S	Blackboard to copy sentences created by the teacher

### **SESSION 5- WRITING: AN INFORMATIVE ESSAY**

- 1. To encourage students to discuss on their prior knowledge of some major medical discoveries and of their importance in society nowadays.
- 2. To show students the main features and the structure of an informative essay, to enhance students' imagination and speaking by writing their own informative essay of a futurist medical discovery created by themselves, and to raise awareness of the importance of right punctuation and spelling in writing.
- 3. To allow students in a group to collaborate by assessing other group's work and to learn from each other's mistakes by correcting another group's writing.

Step (Time)	Activities	Justification	Skills	Grouping	Materials
Activity 1: Warm-up (5min)	In this activity students have to match the name of some major discoveries with the picture that represents them. They also have to try to guess when the discoveries took place in Europe and to place them in a timetable provided by the teacher. Finally, they share what they already know of the discoveries with their group through the Round Robin strategy, in which students must take individual turns and all of them must participate and respect others' opinions.	activating students' prior knowledge about medicine major discoveries and their importance for society. Listening to their teammates' ideas, students will be able to get different perspectives about the topic. Therefore, the	Speaking	SS-SS + T-SS	Pictures + timeline
Activity 2: Model text through the 1, 2, 4 strategy (5min)	Students have to read a model text and to correct it in terms of punctuation and spelling. They also have to reflect on the structure of the text and the content of each paragraph and to finally answer some questions related to the whole text. Firstly, students do the activity individually, later they share their answers with a partner in their group and after that they share them with the rest of the members	familiarising students with the common structure of an informative essay so that they can have it into account to write their own essay later	Reading + speaking + writing	SS-SS	Text from the textbook

	of the group.				
Activity 3: Connectors (5min)	Some connectors are presented to students, who have to identify their purpose and to look for as many as they can in the model text. Afterwards, they choose three connectors and write down their own sentences. At the end of the activity, the teacher will ask some of them to orally share their sentences with the rest of the class and will correct them if necessary in terms of grammar, content or pronunciation.	This activity aims at familiarising students with <b>connectors</b> that can be used in an informative essay to enrich their writing. It is done individually to make sure each student is able to use them.	Reading + writing	S	Table
Activity 4: Team project (8min)	In their groups, students have to imagine they are future inventors and to create something they think might be useful for society in the future. They have to fill in a graphic organiser with some notes answering the same questions they previously answered about the model text. In order to do that, all the members of the group have to share their ideas and to reach to common conclusions.	organize content and ideas before writing with a graphic organiser. A graphic organiser presents material through a visual modality and helps students	Speaking + writing	SS-SS	Graphic organiser
Activity 5: Team project: writing (10min)	Students have to write an informative essay about the futuristic invention they have created. They also have to include in their essay the	This activity aims at increasing students' imagination and negotiation of meaning through the	Writing + speaking	SS-SS	Writing template

	information asked in a writing template provided by the teacher. Only the group member who has the role of the recorder that day writes down the essay, but the rest of the members have to pay attention especially to grammar, spelling and punctuation mistakes.	invention in groups. Apart from oral communication, it also focuses on the writing			
Activity 6: Group assessment (7min)	After each group finish writing their essay, they give it to another group, which will have to correct it following a checklist previously explained by the teacher. They will also have to give the group some feedback at the end. After the correction, students have some time to make any change they consider necessary.	This activity develops students' judgement skills and encourages their responsibility and involvement. They can also learn from others' successes and from others' mistakes.	Speaking + reading + writing	ss-ss	None
Activity 7: Oral presentations (15min)	The teacher asks for a volunteer in each group to display their finished work in front of the class in a 2 minutes presentation. Each group is provided with some stars score to evaluate the work of the rest of the groups. At the end, the group who get more stars will be praised by the teacher and will win a prize (e.g. lollipops).	display what they have created in front of the class while developing communicative skills. It also allows each group of students to	Speaking + listening	SS-SS (the whole class and in groups)	Stars

## Student's pack

### **SESSION 1**

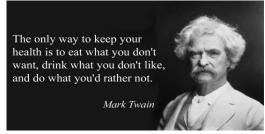
**Activity 1 (4min).** Use the following quiz to interview a partner. Calculate his/her result and tell him/her how healthy he/she is! (see Appendix 2)

Activity 2 (5min). Read and answer the following questions:

- 1- Why do you think health is important in our lives?
- 2- Do you follow healthy habits, such as having a healthy diet, practising sport or going to sleep early?
- 3- Have you ever heard the popular statement "your health comes first"? What do you think about it?

**Activity 3 (10min).** Now discuss the meaning of the quotes about health. Which one do you like most? Justify your answer.







Every human being is the author of his own health or disease.

— Gautama Buddha —



Early to bed and early to rise makes a man healthy, wealthy and wise.

~ Benjamin Franklin

Activity 4 (5min). Write the words or phrases bellow the correct picture.

stomach a	ache	runny nose	broken foot	cough
rash	sore throat	temperati	ure headache	itchy skin







a)

b)

c)



Activity 5 (Fan-N-Pick, 6min). Complete the sentences with the right words or phrases.

nje	ections	pills		broken for	ot		bed re	st		
em	ergency	room	flu	allergio	reaction	n	seve	re pain		
				an accident,					to	the
				y given to pe ake two				hours to	reco	over
		e					,			
4-	She ha	s a stomac	h ache	and she feels	s a			_ in her s	toma	ach.
5-	He mis	sed all the	matche	es with his fo	otball	team	because	he		his
	-									
		do not feel	well, it	is better that	you _		in	be	fore	you
	get ill.					_				
<b>/-</b>	An		m	nade her to co	onstant	ly sne	eze.			

**Activity 6 (Role Play, 15min).** Look at the doctor's reports and identify the diagnoses. Then, in pairs, imagine one of you is the doctor and one of you is the patient. Maintain a conversation using the information in the report and in your card. When you finish, exchange roles with your patient of the other pair in your group (if you have been a doctor) or with the doctor (if you have been a patient).

**Diagnoses**: flu allergic reaction

## **Doctor's Report**

Patient: Sue Brown

Symptoms: rash, itchy skin, runny nose, can't

breathe easily

Treatment: monthly injections, antihistamine pills

Diagnosis:

## **Doctor's Report**

Patient: Mike Mills

Symptoms: temperature, sore throat, cough,

stomach ache, headache **Treatment**: bed rest, aspirin

Diagnosis:

#### **PATIENT**

Sue Brown

You go to the doctor because you do not know what happens to you. You must tell the doctor your symptoms so that he/she can detect it. Both of you have to set up a date to come to see the doctor again to check the progress.

#### **PATIENT**

Mike Mills

You go to the doctor because you do not know what happens to you. You must tell the doctor your symptoms so that he/she can detect it. Both of you have to set up a date to check the progress.

## DOCTOR

Mr/Ms Rodríguez

You must calm the patient down and listen to his/her symptoms. You must detect what happens to him/her and to explain the treatment that must be followed to recover. Both of you have to set up a date to check the progress.

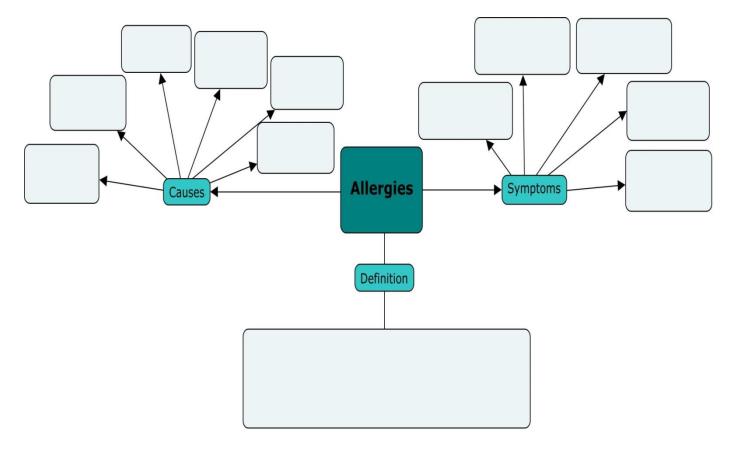
Activity 7 (Find someone who..., 10min). You have to find someone who has had the symptoms that can be seen in the table. You also have to ask for their causes and their consequences and to briefly write them down. When time is up, come back to your group. The group who has been able to find more people who have suffered these symptoms wins. Good luck!

Find someone who has ever had	<u>Name</u>	<u>Causes</u>	Consequences
the flu			
an allergic reaction			
a broken bone			
an injection			
a sore throat			
a tooth ache			

## **SESSION 2**

Activity 1 (5min). Answer the first question in groups and complete the mind map:

- 1- What are allergies? Explain it using your own words.
- 2- What things can cause an allergic reaction?
- 3- Can you think about some symptoms of allergies?

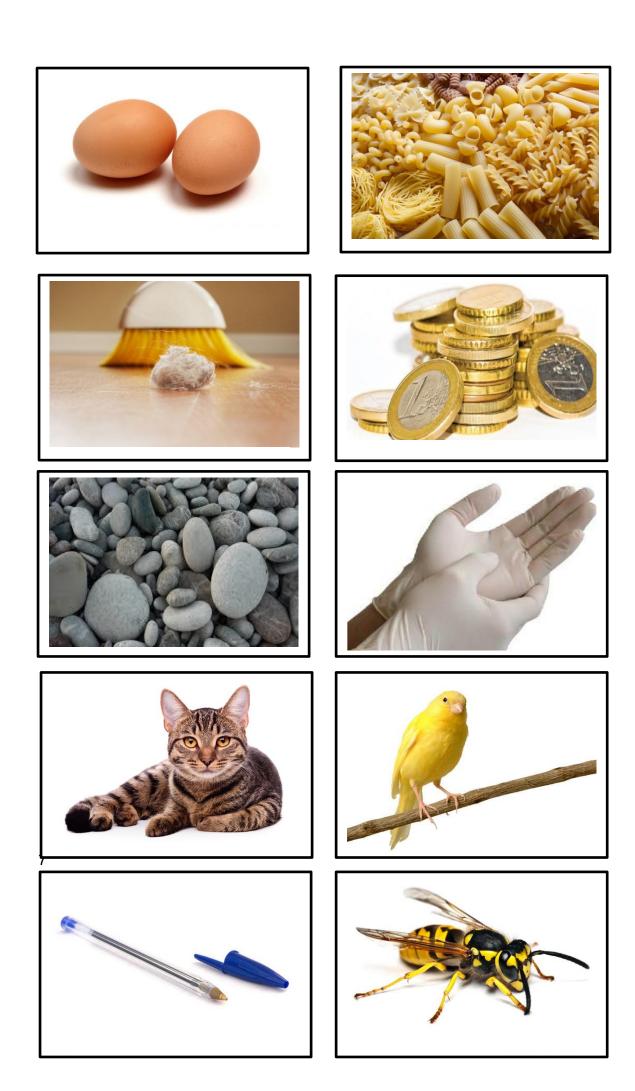


**Activity 2 (3min).** Pay attention to this Power Point presentation and decide which things are allergens of the most common allergies.

Allergen: substance that causes an allergic reaction







**Activity 3 (2min).** Listen to the first minute of this video about allergies (<a href="https://www.youtube.com/watch?v=AKVjKC3u9hk">https://www.youtube.com/watch?v=AKVjKC3u9hk</a>). Which type of allergy is it about?

**Activity 4 (10min).** Watch the video again (now with subtitles). Then, decide whether sentences 1-5 are true or false and justify your answers. After that, complete questions 5-10.

- 1- People who have asthma are more susceptible to allergic reactions.
- 2- A food allergy has no cure.
- 3- People with food allergic reactions never have problems to breath.
- 4- Swollen foot and hives are symptoms of food allergic reactions. Swollen lips
- 5- An allergic reaction occurs sixty minutes after taking an allergen.
- 6- What system is responsible for an allergic reaction?
- 7- What type of food can most commonly trigger an allergic reaction?
- 8- What happens inside your body when you take an allergen?
- 9- What is anaphylaxis? What can it cause?
- 10- What advice is given to people with food allergy?

Activity 5 (2min). Look at the title of the text. What do you think it will be about?

Activity 6 (Jigsaw activity, 10min).

MedWeb Allergy Forum -

Get answers from health experts!

Dr. David Mellman, Allergist (Liverpool Allergy Clinic)

#### Text 1

#### MedWeb Member's Question, lea22, 27/01, 06:33pm

I love jogging, but for the past month, every time I go jogging I get an itchy rash. Then, my face and eyes become swollen and it's difficult to breathe.

## Doctor's Answer -> lea22

You are probably allergic to exercise. Be careful: the swelling might affect your throat so that you can't breathe. This can be fatal, so it's very important to see your doctor! Believe it or not, any kind of exercise can cause allergies- jogging, tennis, dancing or even walking. However, you'll be glad to know that with a little detective work, you may be able to carry on jogging. That's because this reaction is often really caused by something you've eaten before exercising. You have to identify the flood, which might not be easy. In most cases, it won't cause an allergic reaction unless you exercise. When you find out what it is, remember you mustn't eat it for 24 hours before you jog. To be safe, you should always have allergy medicine with you, and you must always jog with a partner. Good luck.

#### Text 2

### MedWeb Member's Question, sunshine3, 29/01, 10:40am

Help! I get a terrible, painful itchy feeling all over my body every time I touch water. I can't have a shower or bath, and swimming is impossible. I'm even afraid to go out in the rain! The worst thing is that because there's no rash, my doctor thinks I'm imagining it. What's happening to me?

#### Doctor's Answer -> sunshine3

Don't worry – you're not going mad. It sounds like you are allergic to water. You may be surprised to know that you're not alone – a lot of people suffer from this. It's very difficult to treat a water allergy, so you ought to find a doctor who knows that treatments to try. Take very quick showers and make sure the water isn't too hot or too cold. By the way, water allergies sometimes vanish after a few days, so there's hope!

#### Text 3

## MedWeb Member's Question, tucker, 30/01, 11:28pm

I'm 16 years old, and I often get a rash on my check and ear. I went to the doctor. In his opinion, I might be allergic to my mobile phone. Do I have to stop using it?

#### Doctor's Answer -> tucker

This problem is caused by a metal called nickel, which a lot of people are allergic to. Many of today's mobile phones contain nickel, especially the more fashionable ones. It's also in a lot of other everyday objects, such as jewellery, coins and watches. You needn't stop using a mobile phone. All you have to do is get another phone, although it may not be as trendy as the one you've got now. Just make sure that your new phone hasn't got nickel in it. Good luck.

## Adapted from the coursebook to four groups participants

#### Text 4

#### MedWeb Member's Question, anthony7, 2/02, 5:34pm

Hello. I'm 15 years old. Yesterday, I was spending the day in the countryside in a school excursion when, suddenly, I started to have a runny nose and my eyes and throat became very itchy. It was really uncomfortable. Although I drank a lot of water, that feeling did not go! And my nose did not get better either. My teacher told me I had probably got a cold because, you know, in the countryside it is always a little bit colder than in the town. But I think that cannot be the reason, since today I do not have any of those symptoms! I think I could be allergic to a type of plant. What do you think about that? Can you imagine any type of plant?

#### Doctor's Answer -> anthony7

Hello, Anthony. I see your problem very clear: you're allergic to pollen! It is yellowish grains produced in flowering plants, and therefore it is mainly present in the spring season. Sometimes it can be even found in other plants because it may be transported by birds, by the wind, by insects or by other animals. It causes one of the most common allergic reactions and its symptoms include those you have mentioned in your post: runny nose, watery eyes, sneezing, nasal congestion and itchy throat and eyes. I recommend you observe yourself the next time you go to the countryside. If you continue having those symptoms, hurry up and go to the doctor as soon as possible. The doctor will prescribe some allergy shot or tablets and you will be able to go to the countryside without any problem. Don't worry.

a) Before moving to your group of experts, fill in the chart with the features of the allergy you have been assigned.

Allergy	Symptoms	Treatments
(1)		
(2)		
(3)		
(4)		

b) Go to your group of experts. Check that the information in your chart coincides. Discuss the type of allergy you have been assigned and answer the following questions about your text:

#### Text 1

- 1. Lea22 found it very difficult to breathe because...
  - a) she was tired from jogging.
  - b) she got an itchy rash.
  - c) her face became swollen.
- 2. In most cases, lea22's allergic reaction...
  - a) is only caused by exercise.
  - b) is only caused by food.
  - c) is caused by both food and exercise.
- 3. Will be *lea22* able to continue jogging?
- 4. How much time must *lea22* spend without eating the food that causes her allergic reaction in order to be able to jog?

#### Text 2

- 1. Sunshine3 says she cannot...
  - a) drink water
  - b) take a shower

- c) be under the rain
- 2. Water allergies...
  - a) are lifelong
  - b) are very common
  - c) require specialized doctors
- 3. What must sunshine3 do to take a shower?
- 4. Why did the doctor not believe sunshine3?

#### Text 3

- 1. Tucker's allergy was caused by...
  - a) A watch
  - b) Coins
  - c) Neither a) nor b)
- 2. When tucker got a rash,...
  - a) he wrote in the allergy forum
  - b) he stopped using his mobile phone
  - c) he went to the doctor
- 3. What did tucker's doctor tell him?
  - 4. What does Dr. David Mellman recommend tucker?

#### Text 4

- 1. *Anthony7...* 
  - a) will not be able to go to the countryside again.
  - b) must go to the doctor if symptoms reappear.
  - c) did not have his eyes and throat itchy after drinking water.
- 2. The doctor knew anthony7 was allergic to pollen...
  - a) because the countryside is full of plants.
  - b) because in spring pollen is abundant.
  - c) because he had watery eyes.
- 3. Why did Anthony know that he had not just a cold?
- 4. Where can be pollen found?

Activity 7 (7min). Come back to your home group and do the following:

- a) Explain the symptoms and the treatment of the case of allergy about which you are an expert to the rest of members of the group, who have to complete the table of activity 5a.
- b) Look at the highlighted words of the text and write them next to their meaning:
  - 1. to be free of doubt
  - 2. to disappear or to come to an end
  - 3. to continue
  - 4. delighted or pleased
  - 5. irritating
  - 6. ordinary days
  - 7. characterized by speed
  - 8. for a particular purpose

**Activity 8 (Group race, 7min)**: Complete these sentences with information from the Allergy Forum. The group which finishes first wins the race. Be careful! In order to win, it is important all answers are correct (regarding content, grammar and spelling).

- 1. Exercise allergies can occur during various...
- 2. Lea22 should never go jogging...
- 3. Sunshine3 is not the only person who...
- 4. It's possible that sunshine3's allergy...
- 5. Tucker might have to get a less...
- 6. Anthony's teacher told...

(Addison & Norcott, 2011)

**Activity 9 (Debate, 10min).** Think about this question: "If you needed, would you ask for advice about your medical or personal problems on the Internet? Why or why not?". If your answer is 'yes', please go to the left part of the class. On the contrary, if your answer is 'no', go to the right. Discuss with the people in your group on some arguments to support your opinion.

## **SESSION 3**

## Activity 1 (Warm-up, 5min). Answer these questions:

a) Look at the picture. What do you think we are going to be talking about today?



- b) Why do/don't you go to the \_\_\_\_\_?
- c) Can you think of a synonym of the word missing in b)?
- d) In case you go, how often do you go there? In case you don't, how often do you think people should go there?
- e) What do you usually do there? Which other activities can be done?
- f) What are the advantages and disadvantages of going there?

## Activity 2 (Text about Bigorexia, 6min). Read the text.

 a) Listen to what this English man says. What happens to him? <a href="http://www.mirror.co.uk/news/real-life-stories/bodybuilder-battling-bigorexia-perfect-body-6516487">http://www.mirror.co.uk/news/real-life-stories/bodybuilder-battling-bigorexia-perfect-body-6516487</a>

(Myall, 2015)

#### b) Select the correct modal verb.

#### Gym-obssessed men are suffering from a disorder

Everybody knows that doing exercise is quite healthy but many do not know it can / have to also be the other way round. If vital aspects of life, such as family, friends, having fun and work, take a back seat to your workouts, you have to/ may be a bit obsessed with fitness. There are many reasons why people might / must have this problem. Among the most important ones could / ought to be that publicity and models' body made them feel they have to / might have strong muscles in order to fit in society.

There are many people who are able to / needn't spend more hours doing exercise than they should / can at health clubs, do really strict diets and take extra proteins and vitamins just because they perceive themselves as skinny or to small and they are trying to supersize their physique, although they needn't / mustn't do that. This problem is caused by a mental illness or disorder called bigorexia, in which people who suffers from it are obsessed with the idea that they should / could be more muscular. It might / ought to also be described as the reverse of anorexia, a condition in which someone stops eating because of the false idea that they are overweight. Since anorexia sufferers are usually female, bigorexia mustn't / can be considered as the male equivalent of the condition.

It usually happens because men **should / can** be vulnerable to the increasing pressure to adhere to a muscular ideal body. Nowadays, it affects adolescents to a higher extent, who work out excessively because they think they **must / might** have a 'beach body ready'. They **may / have to** say they do that just because they like sport very much or because they are really healthy people, but that is not true. Unfortunately, they do not realize they are fit enough and they **could / ought not to** follow those strict habits because they would not be healthy neither for their body nor for their mind. A possible solution for this disorder would be that a close person convinced these people they **don't have to / cannot** act that way in order to be beautiful.

(Devon, 2015)

**Activity 3 (5min).** Look at the modal verbs in the text about bigorexia. What is each modal verb used for? Use the following functions and expressions and classify them.

#### **Functions:**

- To express ability
- To show possibility
- To ask permission
- To give permission
- To give advice
- To express prohibition

- To make requests
- To express obligation
- To express lack of obligation
- To express certainty
- To express impossibility

## **Expressions:**

- I think it is a good thing to do this
- Do this because it is a rule or the law
- Don't do this because it isn't allowed/permitted
- It is not necessary to do this
- Do this because you have evidence that proves it

- Do this because you have the opportunity or time
- Do this because you have the opportunity or time in a specific moment
- It is likely that...
- It is likely that... (but less than 'may')
- There is only a possibility that...

Modal verb	Function	Expression

**Activity 4 (Discussion, 6min):** After reading the text, discuss in groups the following question and write down two reasons for your answers.

Why do you think people might end up suffering from bigorexia?

Activity 5 (Mixed up sentences, The Silent Card Shuffle, 8min): Here you have 5 mixed up sentences which have been cut up into pieces of paper. Try to put the sentences in the right order taking into account the syntactical *structure of subject* + *verb* + *(objects)* + *complements*. When the teacher indicates, move around the other groups to see how they have formed the sentences. Come to your home group later and make any change if necessary.

- 1- You should | go to | the doctor | if you | have | problems breathing.
- 2- You must | avoid | eating | too much | fat or sugar.
- 3- I wasn't able to | go to | school | last week | because | I was | ill.
- 4- Your allergy | might | improve | with | this treatment.
- 5- May I | call you | later | to talk about | your brother?
- 6- You mustn't | drive | and | talk | on your mobile phone | at the same time.

**Activity 6 (Gym rules, 7min):** Write one sentence for each rule below, using a modal. There may be more than one correct answer.

#### **GYM RULES**

- 1) No sandals or flip-flops are allowed in the gym.
- 2) Always use a towel when you exercise.
- 3) It is important to drink lots of water.
- 4) Feel free to ask your trainers for help.
- 5) No children or pets are allowed in the gym.
- 6) It's not a good idea to leave expensive things in your bag.
- 7) It will not be possible for you to begin without a doctor's note.
- 8) We provide bottled water. It's not necessary to bring your own.

(Addison & Norcott, 2011)

Activity 7 (Invention, 10min): Design your own health club including the following information:

	Logo
Name of the health club:	

Brief description of the activities that can be developed:					
ve rules (you can take only one from the activity above):					

Activity 8 (Four Corners, 10min): Listen to the statement and go to a corner depending on whether you *totally agree*, *totally disagree*, *don't mind* or you *agree*, *but...* Afterwards, prepare arguments with the members of the corner where you are in order to convince the rest of your classmates to change their mind and think like you.

"Working out indoors is better than outdoors"

**Activity 9 (Homework):** Write an opinion essay at home about the statement that has been discussed in the previous activity.

# **SESSION 4**

**Activity 1 (Paper Airplane Facts, 10min):** Write three facts you would like to change about your habits because you consider they are not healthy or really very appropriate for your health. Afterwards, follow these instructions:



#### Instructions

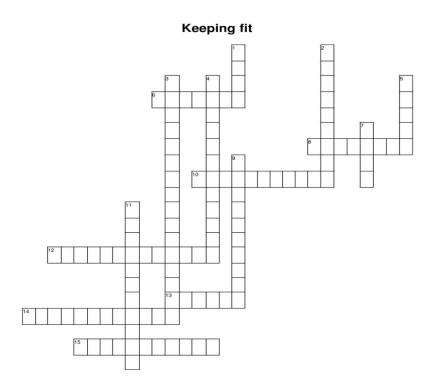
- 1- Fold the piece of paper to form an airplane.
- 2- Take the airplane that lands nearest you.
- 3- Read the facts.
- 4- Give advice to the person who has written them.
- 5- You can also prohibit him/her from doing something if you consider it necessary.

**IMPORTANT!:** Use modal verbs to do points 4 and 5.

Activity 2 (Quizz, Quizz, Trade, 8min): With the card you have been assigned, stand up and look for someone who will try to select the correct answer of the sentence in your card. That person will ask you to select the correct answer of his/her card, and when you finish, you will exchange the cards and will have to look for another person to ask.

- 1. I usually work out at **the office / the gym** at 9 o'clock in the morning.
- 2. My personal trainer is very kind. He always explains to me how to do my homework / how to use the weight machines.
- 3. I'm sure you will **feel better / stop feeling better** when you achieve your goals. Don't worry.
- 4. If you eat junk food / healthy food, you will put on weight.
- 5. Eva **is very stressed / does not worry** because she has a lot of work. She should relax more.
- 6. I will do the course / the race if I get in shape in time.
- 7. You will not be able to **lose weight / put on weight** unless you start a balanced diet.
- 8. It is **convenient / inconvenient** for your muscles to do stretching exercises after doing exercise.
- 9. In most cases of people with an unhealthy lifestyle, they do not practice any exercise / practice exercise very often.
- 10. I like doing sport in my fitness club, but I also like jogging indoors / outdoors.

**Activity 3 (7min).** In your home groups, complete the following crossword about previous vocabulary:



#### **Across**

- 6. to exercise to stay in shape
- 8. to exercise or train.
- **10.** to get in good physical condition
- **12.** consisting of the proper quantities of foods to maintain health.
- **13.** to enjoy or bring relief from the effects of tension, anxiety, etc.
- 14. to gain weight.
- **15.** the activity of straightening the arms and legs and tightening the muscles.

- 1. a health club.
- **2.** food that is high in calories but low in nutritional content.
- **3.** a person who works with an individual client to plan or carry out an exercise or fitness program.
- **4.** to exercise by lifting heavy objects.
- **5.** to have a long walk or march for pleasure or to exercise.
- **7.** to run at a slow, steady pace.
- **9.** the habits, attitudes, tastes, moral standards, economic level, etc. that together constitute the mode of living of an individual or a group.
- **11.** to get rid of weight.

#### Down

#### Extracted from Wordreference.com & CrosswordLabs.com

# 3B. Choose a word and create a sentence with your own ideas.

**Activity 4 (Picture description, 15min):** The pictures below show some people doing exercise. Describe the picture your group has been assigned by using as many vocabulary words we have already studied in this unit as you can. You can follow these points to help you:

1) Focus on the main part of the picture at the beginning. Look at the picture. What can you see?

Useful language:

- This picture shows...
- There is / there are...
- I can see
- 2) Describe as much as you can.

Useful language:

- In the foreground / in the background
- On the right / on the left
- 3) Try to use your imagination to make assumptions

Useful language:

- I think... Maybe/Perhaps...
- Modal verbs of deduction: she must / can't / might be...
- She looks... (happy) / She looks like... (someone)
- 4) You can also use personal stories

Use your stories and examples from your life to speak more. People are much more comfortable talking about their experiences, so talk about yourself.

It is best to think about the WHO, WHAT, WHERE, WHEN, WHY and HOW of each picture.

Think about the subject, the environment, time of day, weather, location, culture... this will give your ideas to keep you talking.

(BlogDeCristina, 2015)

Group 1



Group 2



Group 3



Group 4



Group 5



Group 6



Group 7



**Activity 5 (Double circle, 10min).** Look at the posters for the student elections. Choose one and discuss with your partner. You have to show agreement or disagreement with your partner after listening to his or her opinion. Finally, you have to reach an agreement to vote for one candidate. Use the expressions below to help you.

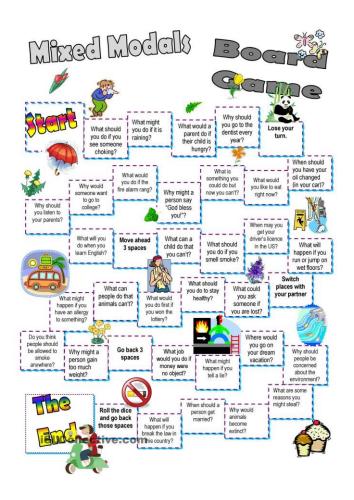


(Addison & Norcott, 2011)

Agreeing	Disagreeing	Partly agreeing
<ul> <li>That's right!</li> <li>Absolutely!</li> <li>Exactly!</li> <li>Me too!</li> <li>Yes, I agree with you!</li> <li>I totally agree!</li> <li>I couldn't agree more!</li> <li>I see exactly what you mean!</li> <li>You're right. That's a good point.</li> </ul>	<ul> <li>I don't agree!</li> <li>I'm sorry, but I (totally) disagree.</li> <li>Absolutely not!</li> <li>That's not right!</li> <li>You're wrong.</li> <li>That's not how I see it.</li> </ul>	<ul> <li>I agree up to a point, but</li> <li>I see your point, but</li> <li>That's (partly) true, but</li> <li>I'm not sure about that.</li> </ul>
IMPORTANT! It is always	a good idea to justify your	oninione Don't just say 'I

**IMPORTANT!:** It is always a good idea to justify your opinions. Don't just say 'agree', but say 'I agree because I think that... (explain your reason)'.

**Activity 6 (EXTRA: Board Game).** Time to play! Through the dice and answer the question with your own ideas. Your teammates have to judge if your answer is valid or not. Good luck!



(ISLCollective, 2014)

**Activity 7 (Homework: Grammar reinforcing activity):** Rewrite the sentences with a modal verb so that they have the same meaning:

- 1. It is not allowed to drink water here. It is not safe.
- 2. It is necessary to wear a uniform at my school.
- 3. You don't need to shout because Juan is next to you.
- 4. It's my mum's birthday, so I will call her tonight.
- 5. I think it is a good idea to visit Juan because he broke his arm yesterday.
- 6. It is not a good idea to go swimming after a big meal.

# **SESSION 5**

An **informative essay** gives objective information about a topic. It must include names, dates and other factual information.

Be careful! Informative essays do not include opinions or personal stories.

**Activity 1 (4min):** Match the name of these major medicine discoveries with the right image that represents them and write down their name in the timeline next to the date in which they were discovered in Europe.

Insulin	X-Rays	Vitamins	DNA	Vaccination
Anesthetic		Pen	ecillin	





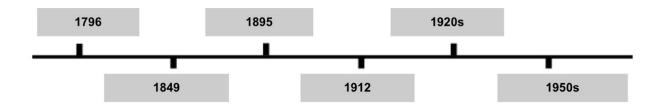












**Tip!**: Penicillin and insulin were discovered in the same decade, that is, in the 1920s or in the 1950s.

**1B** (4min). In your group, discuss what you already know about the medical discoveries and about their importance for society nowadays.

#### The structure of a model text

**Activity 2 (4min):** Read the model text and correct it in terms of punctuation (commas and periods) and spelling mistakes (including capital letters).

# X-Rays

Doctors use X-rays to see inside the human body thanks to X-rays, doctors are able to diagnose many medical problems such as broken boens and tumours.

X-rays were discovered by accident in 1895 by Wihelm roentgen, a german phisicyst. While Roentgen was doing experiments with electron rays he put his hand in front of the rais and could see his onw bones.

X-rays are a type of radiation that is absorbed differently by different materials. For example bones look white in a X-ray because they absorb most of the radiation, but fat and muscles look grey. X-rays are a fast painless and inexpensive tool. Hoewver doctors must be careful not to use them too much, because radiation can cause cancer.

2B. Then, decide which paragraph(s)...

- Give(s) facts and information about the discovery.
- Repeat(s) the main ideas.
- Write(s) what the medical discovery is and why it is important.

# **2C.** Answer these questions with information from the text:

- 1. What is the name of the discovery?
- 2. Why is the discovery important?
- 3. Who discovered it?
- 4. How and when was it discovered?
- 5. What are the advantages and disadvantages of using it?

**Activity 3 (4min):** Which of these connectors can you find in the text? Circle them and decide what is the purpose of each group.

<ul><li>Firstly</li><li>First of all</li><li>To start with</li><li>To begin with</li></ul>	<ul> <li>Secondly</li> <li>Thirdly</li> <li>Moreover</li> <li>Furthermore</li> <li>In addition</li> <li>What is more</li> <li>Apart from that</li> <li>Also</li> </ul>	<ul><li>Finally</li><li>At the end</li><li>Lastly</li></ul>	<ul><li>For this reason</li><li>Therefore</li><li>Because</li><li>As a result</li></ul>

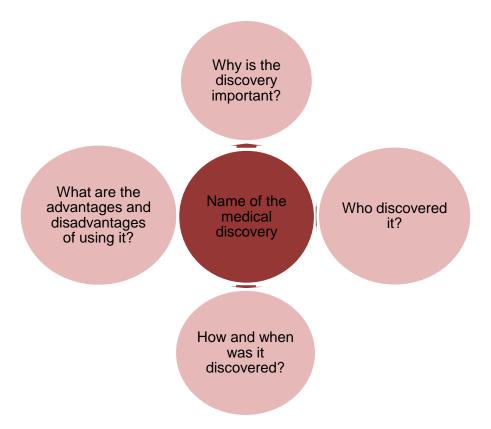
<ul> <li>However</li> <li>But</li> <li>Although</li> <li>Though</li> <li>In spite of</li> <li>Despite</li> <li>Nevertheless</li> </ul>	<ul><li>For example</li><li>For instance</li><li>Such as</li><li>Like</li></ul>	<ul><li>To conclude</li><li>In conclusion</li><li>To sum up</li><li>In summary</li></ul>

# **Purposes:**

- Giving examples
- Expressing contrast
- Introducing a further point in a list of points
- Introducing a conclusion
- Introducing the first point in a list of points
- Introducing a final point in a list of points
- Expressing results

**3B.** Choose three connectors, each one from a different group, and write three sentences with your own ideas.

**Activity 4 (8min):** Imagine you are a future inventor. In groups, you have to create something you think will be necessary in the field of medicine for society in the future. In your group notebook, draw your own graphic organiser and take notes answering the questions of the template you can find below with information about your invention.



Activity 5 (10min): Write a 100-150 words informative essay about your invention using the information of your graphic organiser. You must also fill in this card, which will

be sent do the WHO (World Health Organization) to consider whether your invention is valid or not.

Name of the invention:	Date:
Inventors' names:	
Description of your future invention:	
Reasons why it was invented (how might it help peop	ole?):
Instructions of use:	

Activity 6 (Group correction, 6min). Exchange your writing with another group and correct the written you are given according to the following checklist:

# Checklist:

- ✓ My text gives relevant information about the discovery
- ✓ My text does not include opinions or personal experiences
- ✓ My text uses good spelling and punctuation
- ✓ My text uses connectors to organise the ideas

**Activity 7 (16min).** Listen to the rest of the groups' inventions and give each one an objective rating. Colour as many stars as you think the group deserves. Your opinion is very important!

ጵቱቱቱ Excellent; ቱቱቱ = better than most; ቱቱ = average; ቱ= below average; no stars=poor



# Teacher's pack

#### SESSION 1

#### **Activity 1**

Free answers

# **Activity 2**

Suggested answers:

"It is health that is real wealth and not pieces of gold and silver" Mahatma Gandhi

Meaning: Health is more important than money and more important than all the wealth a person can possess.

"The only way to keep your health is to eat what you don't want, drink what you don't like, and do what you'd rather not" *Mark Twain* 

Meaning: Most of the times, people feel like eating, drinking or doing what is not healthy for them. For that reason, you should do what you do not want, eat what you don't want and drink what you don't want because that will be healthy.

"Early to bed, early to rise, makes a man healthy, wealthy and wise" Benjamin Franklin

Meaning: If you go to bed early, you will have more energy to do things the next day. Moreover, you will be able to get up earlier and you will have more time to work, to study and to form as a person.

"Every human being is the author of his own health or disease" Budha

Meaning: Everybody is responsible for having or not healthy habits, and therefore in many cases also responsible for having a disease because most of them are caused by habits that negatively affect our health.

# **Activity 3**

#### Answers:

- a) Cough
- b) Runny nose
- c) Broken foot
- d) Rash
- e) Temperature

- f) Headache
- g) Stomach ache
- h) Sore throat
- i) Itchy skin

#### **Activity 4**

- 1- Emergency room
- 2- Injections
- 3- Pills / flu
- 4- Severe pain

- 5- Broke his foot
- 6- Rest in bed
- 7- Allergic reaction

Free answers (students' creation)

# **Activity 6**

Answers may vary to whom students talk.

### **SESSION 2**

# **Activity 1**

Free answers

# **Activity 2**

Fish, eggs, dust, nickel, latex, cats, birds, insect strings.

# **Activity 3**

Food allergies.

# **Activity 4**

- 1- T
- 2- T
- 3- F. They do. They have a shortness of breath.
- 4- F. Swollen lips
- 5- F. It occurs thirty minutes after taking an allergen.
- 6- The immune system.
- 7- Milk, eggs and peanuts
- 8- The food allergen attaches to the antibodies, and then the immune cells release some chemicals that cause allergy symptoms such as swelling of the lips, hives and shortness of breath.
- 9- The most severe kind of reaction. It can cause a sudden drop in blood pressure, trouble breathing, dizziness and possibly death.
- 10- To avoid allergenic food, read food labels carefully, wash hands and household surfaces, and always carry an epinephrine autoinjector.

# **Activity 5**

A website where people asks a doctor online for some of their problems with allergies.

a)

Allergy	Symptoms	Treatments
(1) exercise	Itchy rash, swollen face and eyes, difficulty to breathe	Identify the food and don't eat it for 24 hours before exercising, allergy medicine
(2) water	Painful, itchy feeling all over body	Take short showers with water that isn't too hot or too cold.
(3) Nickel	Rash on cheek and ear.	Get a phone without nickel in it.
(4) Pollen	Runny nose and itchy eyes and throat	Observe you the next time you go to the countryside and if you continue having the same symptoms, go to the doctor.

b)

# Text 1

- 1. Lea22 found it very difficult to breathe because...
  - a) she was tired from jogging.
  - b) she got an itchy rash.
  - c) her face became swollen.
- 2. In most cases, lea22's allergic reaction...
  - a) is only caused by exercise.
  - b) is only caused by food.
  - c) is caused by both food and exercise.
- 3. Will be *lea22* able to continue jogging? Yes, but only if she finds out what kind of food is causing her allergic reaction
- 4. How much time must *lea22* spend without eating the food that causes her allergic reaction in order to be able to jog? She must spend 24 hours/one day without eating the food

#### Text 2

- 1. Sunshine3 says she cannot...
  - d) drink water
  - e) take a shower

- f) be under the rain
- 2. Water allergies...
  - d) are lifelong
  - e) are very common
  - f) require specialized doctors
- 3. What must *sunshine3* do to take a shower? She must take it very quickly and to make sure the water is not too hot or too cold
- 4. Why did the doctor not believe sunshine3? Because he had no rash on her skin

#### Text 3

- 1. Tucker's allergy was caused by...
  - d) A watch
  - e) Coins
  - f) Neither a) nor b)
- 2. When tucker got a rash,...
  - d) he wrote in the allergy forum
  - e) he stopped using his mobile phone
  - f) he went to the doctor
- 3. What did *tucker*'s doctor tell him? The doctor told him that he might be allergic to his mobile phone
- 4. What does Dr. David Mellman recommend tucker? He recommends getting another phone which is not as trendy as the one he has now and which have not got nickel

#### Text 4

- 1. *Anthony7...* 
  - d) will not be able to go to the countryside again.
  - e) must go to the doctor if symptoms reappear.
  - f) did not have his eyes and throat itchy after drinking water.
- 2. The doctor knew anthony7 was allergic to pollen...
  - d) because the countryside is full of plants.
  - e) because in spring pollen is abundant.
  - f) because he had watery eyes.
- Why did Anthony know that he had not just a cold? Because the day after being in the countryside he had none of the symptoms he had had, such as runny nose or itchy throat and eyes
- 4. Where can be pollen found? (Pollen can be mainly found in flowering plants, but it can also be found in other plants because it may be transported by birds, by the wind, by insects or by other animals.

- a) See activity 6a
- b)
- 1. to be free of doubt (to make sure)
- 2. to disappear or to come to an end (vanish)
- 3. to continue (carry on)
- 4. delighted or pleased (glad)
- 5. irritating (uncomfortable)
- 6. ordinary days (everyday)
- 7. characterized by speed (hurry up)
- 8. for a particular purpose (especially)

# **Activity 8**

- 1. ... kinds of exercise
- 2. ...alone/without allergy medicine/ after she eats the food she is allergic to
- 3. ...suffers from water allergy
- 4. ...will vanish
- 5. ...trendy mobile phone

# **Activity 9**

# Suggested answers:

# Positive points:

- Many people can access the Internet, and therefore there may be people in the same situation that solves out your question.
- It is less time consuming that going to the doctor. Therefore, it is more practical

# Negative points:

- It is not reliable information.
- You cannot have medicine prescribed.

#### **SESSION 3**

# **Activity 1**

- a) About a gym
- b) Gym
- c) Health club / fitness club.
- To lift weights
- To use weight machines
- Jogging
- Kickboxing
- Cycling

- d) Free answer
- e) Free answer
- f) Suggested answers:
- Zumba
- Body pump
- To use the sauna
- Swimming

a) This man thinks he is too small and he does not like him when he looks at him in the mirror. He wonders "how can you like this when you look at it?".

b) 1- can 8-should
2- may 9-might
3-might 10-can
4-could 11-can
5-have to 12-must
6-are able to 13-may
7-should 14-don't have

# **Activity 3**

Modal verb	Function	Expression
Should	To give advice	I think it is a good thing to do this
Ought to	To give advice	I think it is a good thing to do this
Can	To express ability (Important! The teacher must also say 'can' can be used to make request, to ask and to give permission in other contexts)	Do this because you have the opportunity or time
Have to	To express obligation	Do this because it is a rule or the law
Must	To express obligation	Do this because you have evidence that proves it
Mustn't	To express prohibition	Don't do this because it isn't allowed/permitted
Be able to	To express ability	Do this because you have the opportunity or time in a specific moment
May	To ask for permission/ To show possibility	It is likely that
Could	To show possibility	It is likely that (but less than 'may')
Might	To show possibility	There is only a possibility that

# **Activity 4**

Free answers

# Completed sentences

# **Activity 6**

#### Possible answers:

- 1. You mustn't wear sandals or flip-flops in the gym.
- 2. You must / have to always use a towel when you exercise.
- 3. You should / ought to drink lots of water.
- 4. You may / can ask our trainers for help.
- 5. You mustn't bring children or pets.
- 6. You shouldn't leave expensive things in your bag.
- 7. You will not be able to begin without a doctor's note.
- 8. You don't have to / needn't bring your own water.

# **Activity 7**

Free answers

# **Activity 8**

Free answers

# **SESSION 4**

# **Activity 1**

Free answers

# **Activity 2**

#### Answers:

- 1. The gym
- 2. How to use the weight machines
- 3. Feel better
- 4. Junk food
- 5. Is very stressed

- 6. The race
- 7. Lose weight
- 8. Convenient
- 9. Do not practice any
- 10. Outdoors

# **Activity 3**

# Answers:

- **Lifestyle**: the habits, attitudes, tastes, moral standards, economic level, etc. that together constitute the mode of living of an individual or a group.
- **Get in shape**: to get in good physical condition
- Work out: to exercise or train.

- **Personal trainer**: a person who works with an individual client to plan or carry out an exercise or fitness program.
- **Gym**: a health club.
- Get fit: to exercise to stay in shape
- **Stretching:** the activity of straightening the arms and legs and tightening the muscles.
- Put on weight: to gain weight.
- Lose weight: to get rid of weight.
- Lift a weight: to exercise by lifting heavy objects.
- **Junk food**: food that is high in calories but low in nutritional content.
- **Balanced diet:** consisting of the proper quantities of foods to maintain health.
- **Relax**: to enjoy or bring relief from the effects of tension, anxiety, etc.
- To jog: to run at a slow, steady pace.
- To hike: to have a long walk or march for pleasure or to exercise.

Free descriptions. The teacher checks there is coherent between students' descriptions and the pictures.

# Activity 5

Free discussion

# **Activity 6**

Free answers

# **Activity 7 (Homework)**

- 1. It is not allowed to drink water here. It is not safe. You must not drink water here. It is not safe.
- 2. It is necessary to wear a uniform at my school. You have to wear a uniform at my school.
- 3. You don't need to shout because Juan is next to you. You don't have to shout because Juan is next to you.
- It's my mum's birthday, so I will call her tonight.
   I must call my mum tonight because it is her birthday.
- 5. I think it is a good idea to visit Juan because he broke his arm yesterday. You should visit Juan because he broke his arm yesterday.
- 6. It is not a good idea to go swimming after a big meal. You shouldn't go swimming after a big meal.

# SESSION 5

# **Activity 1**

♣ Vaccination (1796)



♣ Anaesthetic (1849)



**↓** X-Rays (1895)



♣ Vitamins (1912)

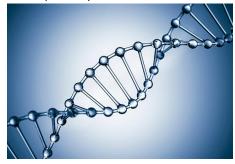


# ♣ Insulin/Penicillin (1920s)





# **4** DNA (1950s)



**1B:** Free answers and teacher's intervention.

# **Activity 2**

# **Punctuation mistakes:**

.Thanks to X-rays

, such as

While... with electron rays,

For example,

A fast, painless and inexpensive tool

However,

# Spelling mistakes:

Broken boens = broken bones

Wihelm roentgen = Wihelm Roentgen

A german phisicyst = A German physicist

Rais = Rays

Onw = own

Hoewver = However

#### 2B.

- Give(s) facts and information about the discovery: paragraphs 2 and 3.
- Repeat(s) the main ideas: paragraph 4.
- Write(s) what the medical discovery is and why it is important: paragraph 1.

#### 2C.

- 1. X-rays
- 2. X-rays help doctors diagnose many medical problems / X-rays are used to find broken bones and tumours
- 3. Wilhelm Roentgen
- 4. In 1895, while Roentgen was doing experiments with electron rays, he put his hand in front of the rays and saw his own bones.
- 5. Advantage: X-rays are a fast, painless and inexpensive tool. Disadvantage: Too much X-ray radiation can cause cancer.

# **Activity 3**

- 1. Introducing the first point of a list of points
- 2. Introducing a further point in a list of points
- 3. Introducing a final point in a list of points
- 4. Expressing results
- 5. Expressing contrast
- 6. Giving examples
- 7. Introducing a conclusion

#### 3B. Free answers

#### **Activity 4**

Free answers

#### **Activity 5**

Free answers. The teacher collects the writings to correct them at home and give them back to students the next day of class.

#### **Activity 6**

Answers according to the checklist.

#### **Activity 7**

Students' oral performance. The teacher corrects students if they make pronunciation or grammatical mistakes.

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# APPENDIX 4: LAYERS USED FOR THE SYSTEMIC-FUNCTIONAL ANALYSIS

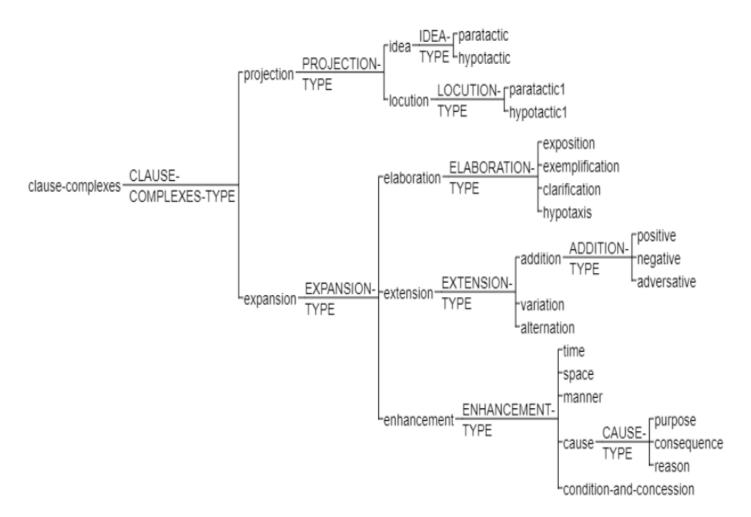


Figure 1. Clause complexes system used in the study (adapted from Halliday & Matthiessen, 2004)

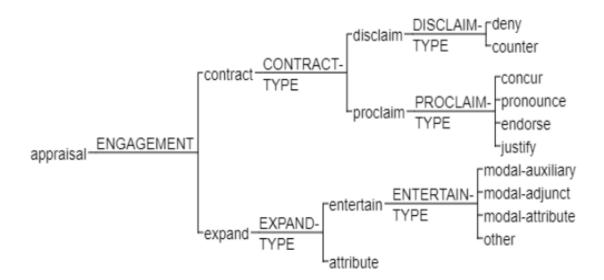


Figure 2. Appraisal system used in the study (adapted from Martin & White, 2005)

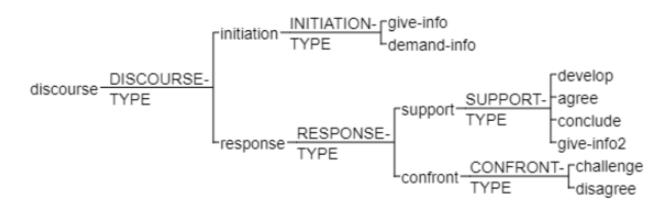


Figure 3. Discourse layer used in the study (adapted from Eggins & Slade, 1997)

# APPENDIX 5: PERFORMANCE OF THE EXPERIMENTAL GROUP REGARDING ACCURACY, FLUENCY AND GRAMMATICAL COMPLEXITY

ACCURAC	CY	Test	Mean	Std. Deviation	T- value	df	Sg. (2-tailed)	Interpretation
TASK 1: DESCR	IBING A	Pre- test	0.63	0.32	2.007	20	0.007	a: :c
PICTURE		Post- test	0.84	0.17	-2.987	38	0.005	Significance
TASK 2: GIVIN	NG AN	Pre- test	0.63	0.32	-2.695	44	0.010	Significance
OPINION	1	Post- test	0.83	0.21	-2.093	44	0.010	Significance
TASK 3:		Pre- test	0.68	0.34	-2.418	40	0.020	Significance
INTERACT	ING	Post- test	0.87	0.20	-2.410	40	0.020	Significance
FLUENC	Y	Test	Mean	Std. Deviation	T- value	df	Sg. (2-tailed)	Interpretation
	Words/	Pre- test	37.08	15.47	-4,410 3:	25	0.000	Significance
TASK 1:	clauses	Post- test	69.31	33.91		33		
DESCRIBING A PICTURE	Clauses/	Pre- test	5.58	2.23	-4,916	34	0.000	Significance
	t-units	Post- test	11,08	5.25		34		
	Words/ clauses	Pre- test	34.92	20.57	-5.125	41	0.000	Significance
TASK 2:		Post- test	74.67	33.78	3.123	11	0.000	
GIVING AN OPINION	Clauses/	Pre- test	4.92	3.01	-6.093	40	0.000	Significance
	t-units	Post- test	12.13	5.23				2.8
	Words/	Pre- test	9.56	5.77	-6.064	33	0.000	Significance
TASK 3: INTERACTING	clauses	Post- test	28.35	14.71	0.001		0.000	
		Pre- test	1.28	0.76				
	Clauses/ t-units	Post- test	4.25	1.96	-7.207 32	32	32 0.000	Significance

GRAMMATI COMPLEXI		Test	Mean	Std. Deviation	T- value	df	Sg. (2-tailed)	Interpretation
	Words/	Pre- test	6.98	2.09	1.248	40	0.219	N
TASK 1: DESCRIBING A	clauses	Post- test	6.40	0.26	1.240	40	0.219	No significance
PICTURE	Clauses/	Pre- test	1.28	1.19	0.238	50	0.813	No significance
	t-units	Post- test	1.26	0.21	0.236	30	0.813	No significance
	Words/ clauses	Pre- test	7.66	3.75	2.289	30	0.029	No significance
TASK 2:		Post- test	5.90	0.61		30		
GIVING AN OPINION	Clauses/ t-units	Pre- test	1.49	1.14	-1.806	15	0.078	No significance
		Post- test	1.76	0.43		45		
	Words/	Pre- test	8.10	2.73	2 211	37	0.026	Cionificanos
TASK 3: INTERACTING	clauses	Post- test	6.71	1.37	2.311	31	0.026	Significance
	Clauses/	Pre- test	1.16	0.28	-4.373	50	0.000	Significance
	t-units	Post- test	1.57	0.38				

Table 1. T-tests of the experimental group in the tasks of the pre- and post-tests according to the different units of measurement.

# APPENDIX 6: PERFORMANCE OF THE EXPERIMENTAL GROUP REGARDING CLAUSE COMPLEXES

Experimental group	PRE-TI	EST	POST-T	EST		
Feature	N	Percent	N	Percent	Chisqu	Signif.
CLAUSE COMPLEXES	N=84		N=170			
Projection	10	11.9%	25	14.7%	0.37	
Expansion	74	88.1%	145	85.3%	0.37	
PROJECTION	N=10		N=25			
Idea	10	100%	25	100%	0.00	
Locution	0	0%	0	0%	0.00	
IDEA-TYPE	N=10		N=25			
Paratactic	0	0%	0	0%	0.00	
Hypotactic	10	100%	25	100%	0.00	
LOCUTION-TYPE	N=0		N=0			
Paratactic	0	0%	0	0%	0.00	
Hypotactic	0	0%	0	0%	0.00	
EXPANSION	N=74		N=145			
Elaboration	0	0%	6	4.1%	3.15	+
Extension	59	79.7%	91	62.8%	6.54	+++
Enhancement	15	20.3%	48	33.1%	3.94	++
ELABORATION- TYPE	N=0		N=6			
Exposition	0	0%	1	25%	0.00	
Exemplification	0	0%	2	75%	0.00	
Clarification	0	0%	0	0	0.00	
EXTENSION- TYPE	N=59		N=91			
Addition	54	91.5%	89	97.8%	3.17	+
Variation	1	1.7%	0	0%	1.55	
Alternation	4	6.8%	2	2.2%	1.96	
ADDITION-TYPE	N=54		N=89			
Positive	52	96.3%	84	94.4%	0.26	
Negative	0	0%	0	0%	0.00	
Adversative	2	3.7%	5	5.6%	0.26	
ENHANCEMENT- TYPE	N=15		N=48			
Time	0	0%	5	10.4%	1.70	
Space	0	0%	0	0%	0.00	Ì
Manner	2	13.3%	5	10.4%	0.10	ĺ

Cause	12	80%	35	72.9%	0.30			
Condition and concession	1	6.7%	3	6.3%	0.00			
CAUSE-TYPE	N= 12		N=34					
Purpose	6	50%	7	20.6%	3.78	+		
Consequence	2	16.7%	9	26.5%	0.47			
Reason	4	33.3%	18	52.9%	1.37			
<b>Notes:</b> + slightly signi	<b>Notes:</b> + slightly significant; ++ significant; +++ very significant.							

Table 2. Clause complexes used by the experimental group before and after the intervention.

# APPENDIX 7: PERFORMANCE OF THE EXPERIMENTAL GROUP REGARDING APPRAISAL RESOURCES

Experimental group	PRE-TE	EST	POST-T	EST		
Feature	N	Percent	N	Percent	Chisqu	Signif.
APPRAISAL						
ENGAGEMENT	N=109		N=226			
Contract	47	43.1%	127	56.2%	5.04	++
Expand	62	56.9%	99	43.8%	5.04	++
CONTRACT- TYPE	N=47		N=129			
Disclaim	33	70.2%	74	58.3%	2.07	
Proclaim	14	29.8%	53	41.7%	2.07	
DISCLAIM-TYPE	N=33		N=73			
Deny	26	78.8%	59	79.7%	0.01	
Counter	7	21.2%	15	20.3%	0.01	
PROCLAIM-TYPE	N=14		N=56			
Concur	1	7.1%	2	3.8%	0.29	
Pronounce	0	0%	2	3.8%	0.54	
Endorse	0	0%	0	0%	0.00	
Justify	13	92.9%	49	92.5%	0.00	
EXPAND-TYPE	N=62		N=94			
Entertain	62	100%	94	94.9%	3.23	+
Attribute	0	0%	5	5.1%	3.23	+
ENTERTAIN- TYPE	N=61		N=94			
Modal-auxiliary	33	54.1%	52	55.3%	0.02	
Modal-adjunct	5	8.2%	8	8.5%	0.00	
Modal-attribute	23	37.7%	34	36.2%	0.04	
Notes: + slightly signi	ficant; ++	significant; ++	+ very sig		2	

Table 3. Appraisal resources used by the experimental group before and after the intervention.

# APPENDIX 8: PERFORMANCE OF THE EXPERIMENTAL GROUP REGARDING SPEECH FUNCTIONS

Experimental group	PRE-TEST		POST-TEST			
Feature	N	Percent	N	Percent	Chisqu	Signif.
SPEECH FUNCTIONS	N=186		N=196			
Initiation	65	34.9%	64	32.7%	0.22	
Response	121	65.1%	132	67.3%	0.22	
INITIATION- TYPE	N=65		N=64			
Give-info	14	21.5%	45	70.3%	30.91	+++
Demand-info	51	78.5%	19	29.7%	30.91	+++
RESPONSE-TYPE	N=121		N=132			
Support	98	81%	112	84.8%	0.67	
Confront	23	19%	20	15.2%	0.67	
SUPPORT-TYPE	N=98		N=112			
Develop	8	8.2%	43	38.4%	25.98	+++
Agree	15	15.3%	25	22.3%	1.67	
Conclude	7	7.1%	2	1.8%	3.66	+
Give-info	68	69.4%	42	37.5%	21.31	+++
CONFRONT- TYPE	N=23		N=20			
Challenge	15	65.2%	13	65%	0.00	
Disagree	8	34.8%	7	35%	0.00	
<b>Notes:</b> + slightly significant; ++ significant; +++ very significant.						

Table 4. Speech functions used by the experimental group before and after the intervention.