

Cooperative Learning through ICT in an EFL Environment: A Case Study

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ABSTRACT

Cooperative learning has been widely regarded as being beneficial for pupils, turning the learning process into a much more meaningful, dynamic and engaging experience. However, several factors must be considered for a successful implementation of the mentioned learner-centered method. In this context, this paper aims to acknowledge the students' attitudes towards working in cooperation while using technology as well as examining the role of teachers as facilitators and their beliefs about these learning strategies. Furthermore, there is a wish to evaluate the learning implications of using such approaches in an EFL mixed-ability upper-secondary classroom environment, including the pupils' language choice in a cooperative activity setting. To gather evidence, a case study was carried out using a mixed methodology. Qualitative data was gathered from a participant observation and an open answer questionnaire administered to teachers. Quantitative data was obtained from the students' self-assessment of a task designed to work on the written and the oral dimensions following a cooperative structure with the support of Information & Communications Technology. The results seem to confirm that cooperative learning used in close relation to ICT actually enhances the learning process of pupils in mixed-ability EFL groups, regardless of the fact that the participants may not be used to working cooperatively on a daily basis but rather sporadically.

Keywords: Cooperative learning, ICT, learner-centered, EFL, upper-secondary, mixed-ability

RESUM

L'aprenentatge cooperatiu és àmpliament considerat beneficiós per als alumnes, convertint el procés d'aprenentatge en una experiència molt més significativa, dinàmica i atractiva. Tanmateix, cal tenir en compte diversos factors per a implementar amb èxit el mètode esmentat. En aquesta línia, el present treball vol conèixer les actituds dels estudiants envers treballar cooperativament amb el suport de la tecnologia i examinar el paper i les creences dels professors sobre aquesta metodologia d'aprenentatge. D'altra banda, es pretén avaluar les implicacions en l'aprenentatge d'estudiants EFL de batxillerat en un entorn divers, amb menció a la tria d'idioma que fan els alumnes. Per recollir evidències s'ha dut a terme un estudi de cas utilitzant una metodologia mixta. S'han recollit dades qualitatives mitjançant una observació participant i un qüestionari de resposta oberta administrat als professors. Pel que fa a les dades quantitatives, aquestes provenen de l'autoavaluació dels alumnes vers la tasca dissenyada per treballar les dimensions escrita i oral tot seguint una estructura de treball cooperativa amb el suport de les tecnologies de la informació i la comunicació. Els resultats ens indiquen que l'aprenentatge cooperatiu en relació estreta amb les TIC potencien el procés d'aprenentatge d'alumnes EFL en grups d'habilitats mixtes, encara que els participants només treballin de manera cooperativa esporàdicament.

Paraules clau: Aprenentatge cooperatiu, TIC, EFL, batxillerat, habilitats mixtes

1.Introduction

There is no denying that we live in a world of constant fluctuation and transformation. Education, as one of the main pillars of society, evolves and adapts to the needs of its everchanging surroundings. In the past, teaching was teacher-centered, that is based on a purely hierarchical relationship between teacher and student and learning came through repetition and imitation.. As times evolved, newer pedagogical approaches came into the picture changing the relationship between the actors in a classroom. Nowadays, in an attempt to take diversity into account (understanding that every student is different in essence, with different needs), institutions work towards providing a fair education for everybody. In this context of inclusion, teachers are considered to be facilitators of knowledge, a lighthouse for students to advance in their learning process. To ensure the latter, educators seek to place the student at the center of the learning process and to establish a positive atmosphere of cooperation and coexistence with students, making them realize they shall learn together.

By the turning of the new century, technology steadily started shaping the way we live. Bearing in mind that cooperative learning approaches have been widely regarded as being beneficial for the overall teaching environment, and ever since the eruption of Information and Communication Technology (ICT), most academic institutions have decided to combine both strategies in an attempt to make the learning process more engaging and meaningful for students. Nevertheless, instances where teacher-oriented lessons prevail and there is a reluctance to use ICT can still be found.

This paper aims to inquire into students' attitudes towards working in cooperation while using technology and to examine the role of teachers as facilitators and their beliefs about these learning strategies. Furthermore, there is a wish to evaluate the learning implications of using such approaches in an EFL mixed-ability classroom environment. In this vein, the following research questions are raised: To what extent do classroom activities that blend cooperation and ICT bring about an improvement in the EFL students' learning process? Which factors must be considered to ensure success when implementing cooperative learning strategies? What kind of spoken language do students use when they cooperate with other classmates in order to create and present content?

The first part of the paper takes a look at the relevant literature available regarding the topic at hand. First, we will focus on what cooperative learning implies, contrasting it to collaborative learning (as both terms are often confused), and going through the key factors that must be kept in mind to implement a cooperative learning structure. Then, we will look at the use of ICT in the classroom, paying special attention to its potential aid in cooperative learning settings. After dealing with ICT, the language choice of students in EFL settings will also be analyzed. Following the theoretical framework, we find another section that deals with the methodology and the teaching implementation in a local Catalan High School. In this part of the paper we will describe the data collection process and both the qualitative and quantitative measurement instruments used. Next, all the results will be thoroughly analyzed and discussed. As a final section there is an overall conclusion of the work, in which I will elaborate on the significance of the findings, as well as a mention of the limitations found in the process of elaboration of this paper and a proposal for further research.

2.Theoretical framework

Taking a retrospective look, the asymmetrical relationships between teachers and students, as well as the individual effort of the latter, have historically been more frequent in education. Students are expected to learn what the teacher explains and sort out doubts interacting with their educator. Hence, the individualistic methodology resorts to the effort and individual work that should lead students to achieve their goals irrespectively of what the rest of the classmates do. This perspective is still widespread in many educational institutions that have taken innovative measures for inclusion and attention to diversity but lack a change in the backbone of the activity structure (Pujolàs *et al.*, 2011).

The competitiveness attached to our society has also transferred to the way educators may structure their lessons. In a competitive classroom setting, students try to best their peers and success can only be achieved if they are faster, better and more accurate than the other classmates. There is a negative interdependence of goal achievements, that is, success can only be attainable if the others do not meet the expectations. (Johnson & Johnson, 2017; Pujolàs *et al.*, 2011). Within this competitive society, most job places also value and require their employees to have good social skills and the ability to work and perform well with others, in groups or teams. As the Johnson brothers discuss (2015) “during the twentieth century, there have been a series of forces that have

highlighted the importance of cooperation and competition and often created a creative tension between them” (p.856). If we understand that working hand-in-hand with others, being respectful, supportive and helpful are values required for everybody to function properly in society, these shall be taught and reminded directly and indirectly through all stages of education. In the last few decades a widespread recognition has been given to the fact that having symmetrical interaction between equals is as important as the instances where teacher-student interaction predominates (Pujolàs *et al.*, 2011). Taking this into account, lessons should be structured in a way that a symmetrical interaction between equals is ensured, to favor learning in general and to drive away from Slavin’s (1985) perceptions that “students have long experienced cooperative activity in laboratory groups, and project groups, but these activities occupy a small portion of a student’s schooling. Most of the time, students work independently, and they are continually in competition with one another” (p.5).

2.1. Cooperative learning

Implementing cooperative learning appropriately turns the learning process into a much more meaningful, dynamic and engaging experience for students. Working with such a student-centered instruction brings about many benefits for pupils, who find themselves actively involved in the learning process while their critical thinking and autonomy are enhanced. As Kagan (1985) advocates,

The case for cooperative learning has been made on many grounds; it usually (1) enhances student achievement, especially the achievement of minority and low-achieving students; (2) improves cross-ethnic relations; (3) aids in the successful mainstreaming of handicapped students; (4) facilitates the maintenance of minority cultural values; (5) promotes positive social relations and prosocial development; and (6) increases the liking among students for class, school, learning, and self (p.67).

Following Kagan’s words, we understand that besides the abovementioned benefits attributed to the method, it also turns out to be ideal to promote inclusion within a group-class. Cooperative learning is defined as the didactic use of reduced teams in activities structured so as to ensure equal participation and simultaneous interaction between team members (Pujolàs *et al.*, 2011). These two concepts are included in the four basic principles (under the acronym PIES¹) that, according to Spencer Kagan

¹ The acronym PIES stands for Dr. Spencer Kagan’s four basic principles of cooperative learning: positive interdependence, individual accountability, equal participation and simultaneous interaction.

(2001), all cooperative learning teams should incorporate to be successful, in addition to positive interdependence and individual accountability.

Positive interdependence is achieved when students work together towards a common outcome and understand that success can only be achieved if everyone succeeds. In other words, students share a common fate and believe they all “sink or swim together” (Johnson & Johnson, 1999). Each team member is responsible for their own learning and contributing to the learning of the rest of their teammates. The second aspect, individual accountability, refers to whether or not each group member achieves the groups’ goal (Johnson, Johnson & Holubec, 1998). In addition, equal participation is ensured by providing students with a structure to follow (Kagan, 2001), unlike the spontaneous participation defended by the Johnson brothers. The last aspect forming the PIES principle refers to simultaneous interaction, which is defined as the interaction that takes place anytime between team members who are engaged in their learning process. Similarly, Johnson & Johnson (2017) divide the basic principles of cooperative learning into five elements. In addition to the positive interdependence and the individual accountability already mentioned, social skills, face-to-face promotive interaction and group processing are also brought into the picture. Considering these elements as the cornerstone of cooperative groups, we must also understand team formation and their inner characteristics.

2.1.1. Team structures

Cooperative learning can be applied anytime and in any subject, lasting from a few moments or an entire session to a more consistent usage during several weeks or a whole academic year. Ideally, this method should be used on a regular and stable basis rather than just occasionally as it is useful to better learn the academic contents and also represents a specific part of the curriculum content students must assimilate. Furthermore, a healthy group cohesion is needed for the method to work in a positive classroom environment. Group cohesion must be kept in mind on a daily basis, during any subject and in group tutorials, as any activity that is implemented can contribute to improving this aspect depending on how the content is presented to students (Pujolàs *et al.*, 2011).

When it comes to grouping students to work in cooperation, Felder & Brent (2007) state:

Instructors should form teams rather than permitting students to choose their own teammates. When students self-select into teams, the best students tend to cluster, leaving the weak ones to shift for themselves, and friends cluster, leaving some students out of groups and excluding other from cliques within groups. Moreover, when graduates go to work in industry or business, they will be required to work in teams and will have no voice in the team formation, and their job performance evaluation will depend as much on their ability to work with their teammates as on their technical skills. Since that's what they'll doing then, the job of their instructors is to prepare them for it now (p.43).

The compelling words of Felder & Brent reassure the need to teach students cooperative skills for their upcoming careers. In addition, it is clearly stated that if the teachers allow students to work with whoever they want, they will probably seek to do so with the classmates they feel more comfortable working with, thus potentially creating differences within the group-class that may question the preservation of the principles attributed to Kagan's (2001) "cooperative structures". Nonetheless, this issue can be avoided by creating premade heterogeneous teams in terms of ethnicity, gender, achievement level, ability and language aptitude, motivation, etc.

In general terms, every small team must be formed by four or maximum five pupils that represent the reality of the class to the maximum of its possibilities. Having four students per group seems to ensure a higher level of simultaneous interaction as compared to teams formed by an uneven number of three or five participants. In teams of three or five there is a chance that at least one of the pupils stops interacting with their teammates and switches off the activity (Pujolàs *et al.*, 2011). Pujolàs, Lago and their collaborators continue stating that in a context of regular cooperative learning implementation, heterogeneous *base teams* should be formed – which provide stability in the long term. *Base teams* are used to present new content, that is, when pupils must learn something new, and are composed by one of the most capable students in the class—not necessarily in terms of aptitude but more in terms of motivation to learn and the ability to engage others in the process of knowledge acquisition—, two more pupils of an average level and a final member with a weaker level. In a similar vein, Cornelius-White & Harbaugh (2010) also agree that heterogeneous teams should be formed bearing in mind more aspects rather than just differences in ability levels and add the fact that “heterogeneity provides an opportunity for students to learn how to interact and

accommodate across multiple learning styles, personalities, cultures [...] In classrooms where these differences are valued and shared, all students are learning from one another, socially and academically” (p.142).

Notwithstanding the fact that heterogeneous teams must be formed taking a wide range of aspects into account, we must remark that in mixed-ability classroom contexts students showing lower proficiency levels or any learning difficulties have a better chance to receive individualized assistance by the teacher in a class that follows a cooperative learning structure (see Kagan, 1985; Hooper & Hannafin, 1988) and, on top of that, they also have the help of their classmates.

Following this idea, Hooper & Hannafin describe the three learning phases proposed by Rummelhart and Norman (1978) to predict the effectiveness of cooperative learning models. These three modes of learning are accretion —addition of new knowledge to memory—, structuring—forming new schema—and tuning—adjusting knowledge and putting it into practice. First, students recognize examples but are unable to apply the new knowledge acquired. Then, learners transfer learning but cannot provide in-depth explanations. Finally, learners are able to solve problems, work under stress and provide thorough explanations. According to Hooper & Hannafin, these learning stages suggest that low ability students working together would have a negative outcome when introducing new knowledge, but in mixed-ability teams they are more likely to benefit from a cooperative learning structure due to the aforementioned higher chances for individualized assistance from their educator as well as the help of their teammates, without diminishing the learning process of higher ability students.

Here is where homogeneous teams come into context. Providing an opposing view regarding the benefits of heterogeneous grouping in cooperative classroom settings, So & Agbayewa (2011) conducted a study on the effect of homogeneous and heterogeneous on student’s interest, attitude and achievement and concluded that homogeneous grouping favors student achievement. Conversely to what we have seen until now, So & Agbayewa defend that “low achieving students feel more comfortable and participate more working with peers of similar ability and high achievers have their interest and incentive maintained” (p.53). If we rely on the views of Hooper & Hannafin, having homogeneous base groups would have undesired consequences on

low-ability students, provided their added difficulty facing complex learning situations. However, So & Agbayewa's assertions hold a partial similarity to Pujolàs *et al.*, (2011) views on the benefits of implementing homogeneous teams. Pujolàs, Lago and their collaborators defend that heterogeneous *base teams* ought to be complemented with occasional homogeneous teams. In this case, students would be randomly placed with other classmates that have a similar ability level to reinforce the content that has previously been covered in their respective base teams —lower ability students— or to incorporate extra content that expands on the materials seen in class —higher ability students—. Then, we can argue that specifically in these two temporary contexts the benefits of homogeneous grouping remarked by So & Agbayewa are undisputable, but heterogeneous *base teams* should be always maintained when incorporating new contents into the cooperative classroom setting. In a similar manner, Zamani (2016) compared homogeneous and heterogeneous grouping of EFL learners in a writing context and argued that students improved their writing performance in both homogeneous and heterogeneous groups, but heterogeneous grouping turned out to be more efficient and successful for lower proficiency pupils.

2.1.2. Engagement and motivation levels

Motivational factors have already been mentioned as one the main elements considered when implementing a cooperative learning method in a group-class. Focusing on the language classroom, Dörnyei's (1994, cited in Dörnyei, 2008) framework conceptualizes L2 motivation in three levels. The first one is the *Language Level*, which deals with the integrative and instrumental motivational subsystems. The former refers to the will to integrate the TL culture and the language itself while the latter defines the usefulness in learning the TL. Secondly, the *Learner Level* takes into account the individual need for achievement, self-confidence (including language use anxiety, perceived L2 competence, etc.). Thirdly, the *Learning Situation Level* refers to the motivation aspects embedded within a classroom (e.g. course, teacher and group specific motivational factors).

In order to create and maintain motivational conditions, Dörnyei (2008) poses a set of components that should be found in the language classroom. The basic conditions include appropriate teacher behaviors as well as the already mentioned pleasant and supportive atmosphere in the classroom granted by a cohesive group with appropriate

group norms. When it comes to teacher behavior, Dörnyei argues that teachers need to show enthusiasm towards the subject-matter, be committed to their students (have a good relationship with them and their parents) and set expectations for their learning. As far as setting a pleasant classroom atmosphere is concerned, some of the strategies mentioned relate to establishing a norm of tolerance, encouraging risk-taking and regard mistakes as part of the learning process and bring a bit of humor into the class. Lastly, group cohesion can be improved by using ice-breakers at the beginning of a course, organizing outings and by promoting interaction among learners using cooperation, the method that enlightened the present paper.

Let us now turn to the aspects that, according to Dörnyei himself, drive initial motivation and its maintenance. Motivation is brought into the classroom by enhancing the learners' language-related values and attitudes, increasing the expectancy of success, teaching material relevant for the learners and creating realistic learners beliefs. When trying to understand the learner's language related values and attitudes, the aspects described in the *Language Level* above, plus the intrinsic value or interest in learning the language must be taken into account. Moreover, in order to increase the pupils expectancy of success, besides letting team members help each other, teachers, who "need savvy interpersonal skills to model and clarify ways of interacting to help students cooperatively navigate social and academic situations in the classroom and beyond" (Cornelius-White & Harbaugh, 2009, p.140-141) must provide enough preparation, assistance and scaffolding, make the criteria clear, model success and remove obstacles that might get in the way of the learning process. Turning to the use of relevant materials for the learners, Gary Chambers (1999, as cited in Dörnyei, 2008) asserts,

"If the teacher is to motivate pupils to learn, then relevance has to be the red thread permeating activities. If pupils fail to see the relationship between the activity and the world in which they live, then the point of the activity is likely to be lost on them... If pupils do not see the relevance of a subject, the teacher has from the outset a major challenge" (p.37-38).

Therefore, the teacher must select activities that are both plausible and close to the reality context of students if there is a wish to maintain pupils' attention and motivation. What is more, the teacher must also transmit reachable learning expectations to those students that think learning a foreign language should not take too much time and they

get disappointed and discouraged after realizing they cannot keep up the pace they had initially imagined.

Cooperative learning can be advantageous when it comes to maintaining motivation in the language classroom. In this case, Dörnyei argues that teachers may increase students' involvement by presenting tasks that are challenging —with a tangible outcome— in a motivating way, using interesting content, introducing something new or unexpected, intriguing or even relating the content to the students' own personal lives. By working in cooperative teams, among a long list of benefits, students tend to have a higher expectancy of success, anxiety to use the target language is reduced when working with fellow peers, there is a sense of obligation and responsibility, that is, team members become aware they are working towards a common goal that cannot be achieved without everybody's contribution and commitment and there is a feeling of mutual satisfaction after achieving the objectives. Ning & Hornby (2013) conducted a study on the impact of cooperative learning on tertiary EFL learners' motivation and found out that intrinsic motivation to learn was improved by following a learning method based on cooperation, so that the “link between CL and intrinsic motivation may be primarily attributed to the ability of CL to facilitate a supportive and non-threatening learning atmosphere, where students find it fun and enjoyable to learn and are intrinsically motivated to achieve goals” (p.12). Assigning roles to every team member is also a factor designed to try to ensure the equal participation of the learners and enhance the sense of obligation and responsibility, making students subject to their own learning, that is, increasing the learners' autonomy.

When teams reach their objectives, the teacher must provide motivational feedback, bearing in mind the team product and not only the individual contributions. Effective and timely feedback should be provided to students on a regular basis, reacting to any positive contributions and letting them know the parts of the language they should pay special attention to. Turning to grades and rewards, Dörnyei suggests that these should be presented in a motivating manner. The potential demotivating impact of grades should be reduced by reflecting effort and improvement, encouraging self-assessment and making the assessment system completely transparent. As far as rewards are concerned, these should reward the completion of complex activities in a meaningful way and should also have a lasting visual representation. Nonetheless, the reward factor

should not be taken too seriously nor be overused in order to avoid pupils focusing more on the reward than on the task itself, that is, the incentive should be intrinsic to the tasks themselves thanks to the factors aforementioned rather than having to resort to an extrinsic reward system so as to keep all pupils engaged. In this vein, Pujolàs *et al.* (2011) argue that their program “CA/AC para enseñar a aprender en equipo” was not based on a structure of rewards because they wished to make their students aware of the intrinsic benefits linked to working in teams, to achieve better results both academically and socially.

2.1.3. Cooperative vs. collaborative learning

Many educators wonder whether the terms *cooperative* and *collaborative* under the umbrella of group learning share the same meaning or not, all too often leading to confusion. Oxford (1997) links collaborative learning in an L2 classroom to social constructivism and argues that, as compared to cooperative learning, “collaborative learning is more philosophically oriented, with the goal of acculturating students into the immediate community of learners and the wider world of the target language and culture” (p.452).

In L2 learning, when the main input pupils receive of the TL comes in the shape of formal classroom settings—thus relating the learning community of L2 to the classroom environment—, the teacher is often regarded as the main representative of both the foreign language and its culture. By using collaborative learning, Oxford discusses that “in a community of L2 learners, cultural and linguistic ideas are best shaped through reflective inquiry with other people (teachers, peers, native speakers, etc.), who help the learner negotiate his or her degree of potential under the best conditions” (p.448). Hence, the author summarizes both approaches differencing their purposes, that is, collaborative learning being focused in acculturating learners into knowledge communities whereas cooperative techniques enhance both cognitive and social skills.

Jacobs (2015) compares both terms and regards them as synonymous in the sense they are both student-centered approaches to learning and whichever educators use, the key is to be flexible in using both approaches to maximize the options for effective interaction in the classroom. Other authors, though, state the differences in the definition of terms (Davidson & Major, 2014; Pujolàs *et al.*, 2011). For instance,

Davidson & Major (2014) clarifies that “collaborative means to labor with each other towards the same end, but not necessarily cooperatively on the same tasks” (p.20). Collaborative learning can be differentiated in terms of *efficiency* and *affective* factors. In this vein, Pujolàs *et al.*, (2011) argue that cooperative communities are not just about collaborating to be more efficient. Instead, they are deeper in the affective level because there is a sense of mutual help, support and solidarity thanks to the careful planning of the interaction between team members. In collaborative approaches, Forrestal (as cited in Davidson & Major, 2014) divides the learning processes in five steps: engagement with the information, exploration, transformation, presentation of the findings and reflection on one’s own learning, but the affective factor towards the fellow collaborators is not present.

2.2. Support of ICT in a cooperative classroom setting

It is widely recognized that having the support of Information and Communication Technology tools in the classroom can add to the progress in the pupils’ learning process. When it comes to mixing ICT and a cooperative pedagogical approach, Manlunas (2006) conducted a two-month experimental study and concluded that the “combination of ICT and cooperative learning proved to be more successful in terms of student achievement” (p.14). In addition, Benson (as cited in Dörnyei, 2008) highlights that technology-based approaches are a type of practice that foster learner’s autonomy. In order to maximize the benefits mentioned, research reveals that several aspects must be taken into account for a successful implementation of cooperative learning strategies using ICT. As Azmi (2017) suggests,

The use of appropriate pedagogies and methodologies can then make a difference, bring positive changes in the EFL classroom and turn classrooms into open digital environments of learning. However, using ICT without careful planning and well-defined objectives will more likely be a waste of time and effort. (p.117)

Hence, carrying out an activity without having thoroughly thought about it beforehand, or without considering all the different aspects we have seen, will probably turn out to be ineffective. First of all, teachers must be capable of *actually* using ICT. For instance, if a teacher has not fully adapted to new methodologies or completely acquired new pedagogical skills but is somehow forced to use them so as to meet curriculum demands, the outcomes could not go as desired. Hjalmarsson (2015) states that

“Successful integration, although not defined, is connected to the proficiency level, in using ICT, of both teachers and learners which in turn connects to the teachers’ level of creativity as well as their aptitude as *researchers* when it comes to adopting new pedagogical tools” (p.15) . Following this trend, Smeets and Mooij (2001) studied the role of the teacher in 25 different ICT learning environments, both in primary and secondary education across five different European countries and reached the conclusion that “in the majority of lessons ICT is utilized as an “add-on” to traditional learning arrangements [...]” (p.415). Conversely, in the minority of lessons where ICT was joint with cooperative learning methods, students were trained and knew what they had to do, thus contributing to fostering high-order skills such as information handling or problem solving.

2.3 Language choice of EFL students

The language choice of students has always been a matter of much debate. Some of the queries that regularly appear regard the extent to which the L1 should be used in a foreign language class or the strategies that can be implemented so as to boost the use of the TL in the classroom. Dörnyei, Csizer & Nemeth (2006) provide perspective to motivation and language attitudes in a globalized world and underline that,

“although the popularity and international dominance of English is as strong as ever, the link between motivation and the choice of Global English for language learning has been losing its significance because people tend to take up the study of English increasingly as a self-evident part of education rather than driven by a motivated decision” (p.144).

Spaniards are, in general terms, considered to have a lower proficiency level as compared to many other countries with EFL settings when it comes to maintaining a conversation in English (Martín, 2015). In this regard, a study carried out by Plo-Alaustré, Hornero & Mur (2013) underlines the fact that students believe “they devote most of their class time to grammar and vocabulary, using the textbook and writing. Moreover, their answers reveal that speaking activities are given less time in class as they progress from one class to another” (p.121). In Catalan high schools, English lessons now consist on teaching the four traditional basic skills (reading, listening, writing, speaking) as well as grammar and vocabulary under the dimensions established in the Basic Competences provided by the Department of Education (2015). Theoretically speaking, in contrast to the students’ vision above mentioned, the traditional teaching of concepts using mainly a textbook should steadily be put aside.

This is where the need to implement cooperative learning using ICT might arise, providing room for students to improve, among others, their oral communicative skills. Nevertheless, it is important to observe the students' language choice, that is to say, the frequency of L1 usage as compared to English through the activities. Gené, Juan & Noguera (2012) conducted a case study exploring the oral language choice between the target language and the L1 in CLIL and EFL secondary education in the Balearic Islands and found out that in EFL contexts the “oral language choices seemed to greatly depend on whether the learning situation was planned or unplanned. [...] It is remarkable that specialized terms were always referred to in English, even when speaking in the L1”. In this sense, the authors continue “what seems clear is that the L1s were chosen orally as a source of relief and support for both the teachers and the pupils” (p.143).

Knowing that all the beneficial elements described in the previous sections added together are paramount to perceive progress in students, let us briefly have a look at the specific advantages cooperative learning could bring to the foreign language classroom in terms of pupils' language choice. Zhang (2010) suggests, “cooperative language learning provides much more opportunities for learners to have comprehensible input and output” (p.82), that is, students get many more opportunities to talk as compared to other learning methods (e.g. individualistic). Furthermore, if the suggestions stated by Dörnyei (2001) are applied, a positive and effective atmosphere will be found in the classroom. As mentioned in section 2.1.2., regarding engagement and motivation levels, when working in cooperation, students feel less pressured or anxious while speaking with their fellow teammates, potentially leading to a higher target language production.

3.Method

In an attempt to provide an answer to the research questions established, a case study was conducted in a public high school located in central Catalonia. A mixed methodology was followed to gather evidence, with a predominance of qualitative data collection through a participant observation of a cooperative activity using ICT and a designed interview with all the teachers in the English department that due to the ongoing lockdown situation had to be adapted into an open answer questionnaire. When it comes to the quantitative data collection, a self-assessment of the cooperative activity

was created so as to receive a direct opinion of the participants once the implementation was over.

3.1. Setting and participants

The public high school where the case study took place belongs to the group of high complexity high schools and accounts for a high percentage of immigration. It is embedded within a working-class neighborhood in Manresa (Barcelona) and provides its services to about 900 students mainly of a medium-low socioeconomic profile distributed along the institution's educational offer—compulsory secondary education, upper-secondary education and a wide selection of vocational studies. According to the high school's educational project document (Institut Guillem Catà, 2019), the institution has the objective of providing an education that will strengthen and develop the social skills of students, that will help them to acquire basic skills using active methodologies and that will encourage the use of ICT. In this line, there is a commitment to offer quality training that facilitates the insertion in the job market. In addition, education is seen as a comprehensive process that is developed considering the diversity of skills, interests and learning process of each student and it is understood as a collective/ team work. The backbone of teaching is to aim for meaningful learning. Hence, an active pedagogy is applied in order to stimulate the students' self-education, curiosity, creativity and critical/reasoning attitudes.

For the purposes of this research, during my school placement period as a trainee teacher I had the opportunity to implement a four week long didactic unit with the two 1st year upper-secondary groups that took part in the present study. Because of the need to prepare pupils for the coming high-stakes examination that grants access to university, upper-secondary classes are mainly based on following a textbook and individual or pair work outweigh group work, which is sometimes disregarded due to timing and program constraints. Nonetheless, this DU was designed so as to meet the program demands while also granting room to include a cooperative activity through ICT at the end, which was analyzed via a participant observation. The fact that I am a former student of the institution and I was raised in the neighborhood helped in my swift adaptation. In this regard, given that I could understand the reality of the classroom from the beginning, I managed to quickly build rapport with the participants in the present study.

The groups, formed by 18 and 19 pupils respectively, are both mixed ability in essence. There are differences in terms of ethnicity, attitudes and motivation towards learning the foreign language, aptitude and language proficiency. In this sense, nationalities from all over the globe are portrayed in the collective of participants, ranging from Indians, South Americans, Moroccans, Nigerians and Catalans. As an initial consideration, when it comes to motivation and language proficiency there is not always a direct link between factors, that is, not always the most capable students are the ones who are more motivated to learn whereas pupils who struggle with the language are not necessarily the ones who are demotivated. In terms of language ability, there is a noticeable overall difference between one group and the other. While in one group the general language aptitude is higher and a wide range of activities can be implemented, the other group struggles to keep up the rhythm at times and the content introduced must be adapted to their needs. Most of the pupils in both groups have known each other for years, as they coincided during their stage of compulsory secondary education; hence there has been an ongoing work in group cohesion, which in both cases is outstanding.

3.2. Measurement instruments

In order to gather evidence from the participant observation, an observation grid (Appendix 1) has been adapted from Cannorazzo *et al.* (2019), who conducted a study on teachers' performance in a classroom. The structure of three columns with different areas to examine, grade—using a four level Likert scale— and add any relevant personal comment has been kept from the original source but as the study at hand mainly places the focus on students, the reference area has been designed bearing in mind the objectives of the current research.

First, we find a general section regarding behavior, attitudinal and motivational factors: the atmosphere in the classroom must be suitable for learning, otherwise the implementation will not have a positive outcome. The active degree of participation of students and whether they show a positive attitude towards the teacher's instructions are areas also considered. Furthermore, the effect of the premade grouping in the implementation of the activity is also valued. Next, the focus is placed on each team's performance. Here the understanding of the different roles in every team is checked alongside the pupils' willingness to sort out doubts with the teacher. Conversely, three

negative references that encompass whether students may get discouraged, bored or easily off task are also encountered.

Finally, there is a focus on the language preference in each group. Divided in three more reference areas, the language choice ranges from communicating ideas in English, including the new content introduced in the unit to making an effort to include some chunks of the TL and, finally, using mainly the L1 with a sporadic production of basic English.

When it comes to the pupils' self-assessment of the activity, a user-friendly easy-to-use Google forms was created to gather the data from every student in a quick, reliable and convenient manner (Appendix 2). The form was organized in eleven compulsory statements and questions plus an extra open statement where students could add any comment they wished regarding the activity. The eight compulsory statements had to be answered following a four-level Likert scale, with 1 being the minimum and 4 the maximum rating. These statements checked the students' level of engagement, their thoughts towards working in teams, how clear they found the instructions given, the amount of help provided by the teacher, their understanding of roles as well as their sense of commitment towards the task and their teammates, their feeling towards time management, the amount of new vocabulary and grammar structures present in their work and their effort to use chunks of English in their speech. Adding to these eight statements, two questions complemented the statement that checked the levels of engagement and the one that dealt with role-taking respectively. The former was left as an open answer question and the latter had to be answered in a dichotomic yes/no way.

Last but not least, an open answer questionnaire (Appendix 3) was used to perceive the direct experiences from the English teachers in the high school. The queries include whether they usually use teacher-student or student-student interaction and the reasons why. There is also the intention to know the perception they have towards their groups' cohesion—necessary to have a positive environment to implement a cooperative method—, whether they use cooperative learning at any time and the part of the language they generally work on. What is more, the benefits that the cooperative method could entail are also discussed as well as a final query to know the role of ICT in their daily life in the classroom, their perception of such technologies and the kind of

applications, programs and web pages they use as a support to cooperative and collaborative learning.

3.3. Data collection: procedure and analysis

The cooperative learning activity with the support of ICT, by which all the data of the participant observation was collected, took place in two different sessions for each of the groups analyzed. The didactic unit implemented dealt with passive structures and the topic of health, diseases and fitness. For this reason, the cooperative activity devised took place almost at the end of the unit, once the necessary material had already been covered. It consisted on creating, in teams, an informative brochure of a health-related topic using *Canva*, an online tool that is easy to use and allows student to work hand-in-hand choosing one of the vivid and eye-catching templates available to create infographics and brochures. Then, in a further session, all teams would present their information to their classmates.

In the first session, students were divided in heterogeneous premade teams of four with the possibility to expand to five if any of the students who were frequently absent decided to show up. The heterogeneous teams were created with the help of my mentor considering to the maximum of our possibilities the diversity of factors such as different motivations, aptitude and language proficiency as well as ethnicity. In an attempt to favor the assembling process, all the different teams were projected on the board. After all teams were ready, the instructions (Appendix 4) were handed out, projected and explained. In addition, students were shown a sample model² of the intended brochure format and desired outcome. Pupils were specifically told all the roles available³, clarifying that they had to choose one per team member. Moreover, they were also told to include passive structures and health-related vocabulary in their piece of work and were strongly encouraged to use the target language to communicate their ideas based on the fact that they later had to present their content in English in front of the classroom and it would be strongly beneficial for each of them to familiarize with their topics as soon as possible. Next, a representative of each team would pick up one of the

² The intended brochure format was projected from https://www.cdc.gov/flu/pdf/freeresources/updated/flu-you-brochure_2019.pdf

³ Shared role of information seekers, plus: Supervisor, Content Curator, Spokesperson and Helper (see Appendix 4)

topics (asthma, dangers of smoking, dangers of sun exposure, coronavirus) at random - they were wrapped up in small pieces of paper so that nobody could guess. After that, one team member would go fetch the laptops that had already been booked in advanced and the creation of the brochures would begin -two laptops were thought to be used per team of four, but due to logistical reasons only one laptop could be used per team in one of the groups.

Once the activity began, all the data was collected moving around the class and playing the role of the teacher as a facilitator, helping out students when needed and examining each team's performance up close. Any interesting event was noted down in the field notes and each team's conduct was discretely rated in the observation grid (see Appendix 1). Then, when teams presented their content, all relevant instances were also noted down and feedback was given to students, reinforcing the positive aspects of their presentation and noticing other areas to work on. Short after the activity was over, a reflexive analysis took place to gather all the thoughts after the observation. Furthermore, for convenience purposes all the elements analyzed through a Likert scale were transferred into a Google Forms in order to obtain the results in percentages. In this sense, results were run for both groups separately to check whether any noticeable difference was found and then a global version was also obtained.

Let us proceed to the other two measurement instruments. As far as the self-assessment data collection is concerned, students were told to answer the form (see Appendix 2) individually right after all the presentations were over. Some of the students, though, did not pay attention and provided a unified team answer. Twenty-five samples were collected and were automatically translated into percentages by the Google Forms tool itself. In addition, the answers to the open question have been categorized into topics of common occurrence in an Excel spreadsheet, assigning a percentage to each of the topics highlighted (see Appendix 10 described in results section). Focusing on the open answer questionnaire which was originally thought to be a face-to-face interview, all the questions were written in a document and were sent to my mentor, the head of the English department. Then, she forwarded it to the rest of the teachers in the department-unfortunately, only two versions of all the possible answers have been collected. These two versions have been analyzed comparing and contrasting the answers to each of the queries.

4.Results

The results of the participant observation are presented for group A and B. During the cooperative activity using *Canva*, the general classroom performance regarding the category *motivation, attitude and behavior* (see Appendix 1) in group A shows an excellent classroom atmosphere—warm, open and accepting—good overall levels of active and lively participation, an excellent attitude towards the teacher’s proposals and a positive evaluation of the premade grouping helping in the implementation of the activity, although in the following section we will discuss that results can be improved in that sense. Focusing on group B, a positive outcome was also obtained in this category, with the three first statements obtaining a good, and the premade grouping being considered an excellent decision (Appendix 5).

Turning to the specific team performance with regard to *motivation, attitude and behavior*, on the one hand three out of four teams in group A understood their roles and cooperated, with one obtaining an excellent result and a fourth team that had more issues with the roles and were turning cooperation into collaboration. All teams showed an excellent attitude towards clarifying doubts with the teacher. When it comes to the negative aspects considered, 50% of students felt just a little discouraged initially after the instructions were given due to the highly demanding cognitive nature of the activity and 75% of students were intermittently distracted or off task and needed to be monitored closely to avoid an unfair distribution of workload (Appendix 6), as we will argue in the following section. On the other hand, teams in group B also understood their roles and cooperated to achieve their goal, with three teams obtaining an excellent result. In addition, teams showed an excellent predisposition to clarify doubts with the teacher and only a small percentage of students (25%) got a bit discouraged if they did not understand the task initially. In this line, the students who got a bit distracted and off task while other team members carried all the workload also represent a 25% of the class total (Appendix 7), but their distractions were intermittent and addressable.

Language choice in group A showed that 50% of students tried to include some new structures and vocabulary even if their L1 predominates while they communicated with

their peers and the rest of the class only used English sporadically. On the other hand, 75% of students in group B made an effort to include chunks of English in their speech, while also using their L1, 12% of students used English in full and the rest mainly used their L1. When it comes to the presentations of the brochures, all students used English to explain their topic with a reasonable degree of confidence and most of the texts (Appendix 8) followed the instructions provided, although two out of eight should be considered infographics (Appendix 9) rather than brochures.

After presenting the outcome of the participant observation, let us examine the pupils' self-assessment of the activity. Out of the 25 samples collected, 60% of students thought the task was very engaging whereas the other 40% thought it was quite engaging. With the intention to gain a wider vision as to why they thought the task was engaging, students were provided an open answer question. All the answers have been categorized into themes (Appendix 10) so that 20% of students underlined it was a *dynamic task*, 20% remarked the *interesting topic*, 4% *learned to work in teams*, 8% *learned to use ICT tools (Canva)*, 36% of students referred to the task as being *practical and facilitated meaningful learning* and 12% of students gave *other* answers not relevant to the question at hand. Furthermore, 96% of pupils thought working in teams added dynamism to the task, 84% of learners answered that the instructions were very clear and 88% thought the teacher was present every time they needed help. With respect to the role-taking in a cooperative team, 76% of students reported they were used to taking on roles and said they understood it and cooperated with their teammates to fulfill the task. Time management towards the completion of the activity was regarded as good by the 48% and excellent by the remaining 52% of students. Finally, the 92% of students considered they had learned and used new health-related vocabulary, 36% of which thought they had learned a lot, whereas 76% admitted they included passive structures in the brochure. In terms of language choice, 92% considered they had tried to use chunks of English in their speech.

Last but not least, two opinions from teachers of upper-secondary education (A) and compulsory secondary education (B) have been collected. Regarding the first of the queries, the teacher of upper-secondary education mentioned that teacher-student interaction has more weight in her lessons whereas in compulsory secondary education student-student interaction predominates. In the case of upper-secondary education, the

opinion is that teaching mainly comes from the teacher but some space is given to cooperative learning in the shape of short projects and to work on the oral language, as students feel more confident to use the TL in those kinds of settings. When it comes to the compulsory secondary education, it is stated that students work in collaboration most of the time instead of cooperation. In this line, anything can be worked cooperatively or collaboratively, but the oral dimension is generally preferred (role-plays, conversations, discussions, etc.).

As a response to cooperative methods favoring the learning process of students to the maximum of their possibilities as well as helping acquiring social values -solidarity, coexistence, respect, etc.-, both teachers are in favor of the statement, but teacher A remarks that these values are inherent in all teaching situations and the fact that students rely on their educator to guide them. Interestingly enough, both teachers perceive a great cohesion in the groups they are in charge of and, what is more, teacher B states that she tries to create a positive environment in class where students feel comfortable and are able to work with different classmates solving problems by themselves.

When it comes to cooperative learning allowing for a wider attention to diversity, opposed views have been drawn. Teacher A reports that some students need different ways of approaching their learning, being monitored by the teacher, because in groups they tend to remain silent and separate from the group. Conversely, teacher B mentions that cooperative learning can be really useful with regard to attention to diversity. Furthermore, as a reply to the matter of heterogeneous vs. homogeneous grouping in their lessons, teacher A states that depending on the activity students choose their own group, they are randomly mingled or divided on purpose. On the other hand, teacher B usually makes heterogeneous groups.

Guaranteeing equitable participation and simultaneous interaction between team members is a matter of monitoring the groups closely and giving them different tasks according to their abilities (teacher A). The selection of significant topics is considered a “must” for teacher B, who focuses on creating plausible contexts in order to motivate students. Addressing the matter of ICT as a facilitator of collaborative/cooperative learning, teacher A states they use computers for all kind of projects and they follow a Moodle course where students have extra resources. Nonetheless, teacher B warns that

incorporating ICT in her daily teaching practice is not always easy, as technical problems tend to occur too often and computer devices are usually scarce, albeit she tries to encourage the use of Google Docs to facilitate collaborative tasks, in this case.

5. Discussion

Going back to the objectives of the current paper, the results obtained lead us to believe that cooperative learning blended with ICT helps towards the learning process of EFL students in a mixed-ability classroom setting, if implemented considering several of the factors addressed in Section 2. As both teacher A and B have mentioned, group cohesion is paramount for the teaching and learning practice, and must be kept in mind on a daily basis (Pujolàs *et al.*, 2011). The outcome of the participant observation reinforces the words of the teachers, as the classroom atmosphere facing the activity was open and accepting in both groups. The positive environment within the walls of the classroom, which helped applying the activity, could be proved from day one and throughout all the school placement period, not only at the specific point of the participant observation.

After realizing that both groups were cohesive enough, it was time to aim for Kagan's (2001) cornerstone principles that need to be assured when assembling cooperative learning teams, such as equal participation and simultaneous interaction. To achieve this, the selected literature (Kagan, 2001; Pujolàs *et al.*, 2011; Cornelius-White & Harbaugh, 2009) resorts to forming premade heterogeneous teams in terms of ethnicity, gender, achievement level, ability and language aptitude, motivation, etc. As mentioned in Section 3.3 each team was designed to be a representative of the reality of the classroom to the maximum of its possibilities. Despite teacher's A reluctance, the results indicate that cooperative learning and heterogeneous grouping seem to allow for a wider attention to diversity, as defended by Kagan (1985), Hooper & Hannafin (1988) or Pujolàs, *et al.*, (2011), among others. Regarding diversity and team structures Felder (2007) reminds us of the fact that granting students the possibility to choose their teammates may cause the best students to work together, having friends working with friends and leaving the weaker pupils out.

Notwithstanding that teacher A recognizes a teacher-student relationship towards learning predominates in the lessons, some room is also reserved to cooperative activities which generally come disguised so as to work on the oral dimension. After dividing the room into heterogeneous teams, the instructions and the roles available were carefully designed. As mentioned in section 2.1.2, assigning roles makes learners responsible of their own learning and increases their autonomy. Regarding this aspect, the results drawn from the participant observation and the self-assessment practically match. Within the two groups analyzed in the participant observation, one team in group A⁴ spent more time and needed support from the teacher to sort out the roles within the team members and start cooperating. This particular case questioned whether students were really used to working cooperatively, but their own positive answers in the self-assessment of the brochure seem to confirm that a wide majority of pupils (75%) are used to adopting roles in the occasional cooperative activities they have done during their educational process.

The implementation of premade heterogeneous teams lead to excellent results in group B, whereas in group A the outcome was also good, but there is room for improvement. The day of the activity, all teams were supposed to be working with two laptops but due to logistical reasons only one computer could be fetched. Therefore, students were instructed to use their phones to search for information on the given topic. With Kagan's (2001) individual accountability and positive interdependence in question, the situation required close monitoring from the teacher, as suggested by teacher A, to avoid students from getting distracted and off task. Although the situation was mainly under control, results show that 75% of pupils got intermittently distracted and probably if teacher monitoring had not been present, a negative overall outcome would have been obtained. Teacher B reassures the ongoing logistical problems when she states the frequent scarcity of the shared laptops and computer rooms as a result of the considerable amount of students in the high school. Furthermore, with regard to the intermittent distractions found in group A, a student that hardly ever attended classes was present the day of the participant observation. Hence, a team was composed of five team members instead of four -a role was repeated twice- and it was harder to ensure equal participation and simultaneous interaction, as seen in Pujolàs *et al.*, (2011). In

⁴ Teams in group A have an overall lower competence as compared to their peers in group B.

group B, students could work with two computers and the situation improved, having only 25% slightly distracted at times but participation was also quite lively. Looking at the students' reactions, 96% of them answered that working in teams made the task more dynamic.

Regarding motivation, the task was designed with the clear intention to have sufficient intrinsic incentives for students to be engaged. The teacher showed enthusiasm towards the subject matter (Dörnyei, 2008) and was supportive throughout the activity. As a consequence, results show that pupils mainly reacted positively towards their teacher's proposals, with an excellent predisposition to sort out doubts during the lesson. The initial spark of discouragement after the explanation of the task in group A (50%), probably originated by the generalized lack of trust in their abilities towards the foreign language, was soon readdressed by the teacher. In this vein, 84% of pupils agreed to answer that the instructions were very clear and 88% recognized the help received from their educator.

The support of ICT integrated in cooperative learning is devised to enhance students' achievement (Manlunas, 2006) and add dynamism to the task whilst fostering learner's autonomy (Benson, as cited in Dörnyei, 2008). In our case, the addition of ICT helped fostering high-order skills (Smeets & Mooij, 2001) in the shape of handling and discovering new information on a health-related topic that also complemented the vocabulary and the grammar structures previously introduced in the unit. These topics were selected to be interesting and represent a plausible context for students (Chambers, 1999; in Dörnyei, 2008), as teacher B defends, hereafter potentially becoming another reason of intrinsic motivation facing the task. Results regarding engagement are compelling, with 60% of samples coinciding to depict the task as very engaging while the other 40% addressed it as being quite engaging. As seen in Section 4, the majority of students thought it presented plausible contexts, it was interesting and practical. Consequently, the results obtained regarding the use and acquisition of new health vocabulary as well as the use of passives were also positive. In this context, as seen in Section 4, 92% of students reported they had learned and used new health-related vocabulary, whereas 76% admitted they included passive structures in the brochure.

In terms of language choice, very few students were found to speak entirely in English during the *Canva* activity (12%). Surprisingly, another bright student of whom I expected a greater commitment to speaking the TL during the cooperative task, made use of the L1 while also trying to include some chunks of English. The latter was the option of major occurrence, finding 50% of students in group A who included chunks of English whilst mainly communicating in L1 with their peers and 75% in the case of group B. In accordance to Gené *et al.* (2012), the students referred to the specialized terms of their topic in English. The noticeable percentage of pupils in group A using mainly their L1 (50%) proves the foreign language proficiency gap between group A and B. This 50% of the class resorted to online dictionaries to check the meaning of words or directly asked the teacher for help. During the presentations stage, all students used the target language irrespectively of their fluency level. Nonetheless, those students who followed their educator's advice and produced English orally while working on the *Canva* showed more control of the situation, translated in a more natural speech while presenting as compared to those that barely used the TL during the first stage of the task. The comparison of language choice between both stages of the task confirms what Gené *et al.* (2012) suggested regarding the language choice being closely related to the learning situation being planned or not. As far as the students' opinion on language choice is concerned, their answers cannot be directly compared to the results obtained during the participant observation in the first stage of the task, as they responded after finishing all the presentations. As a consequence, 92% of students reported they had tried to use chunks of English in their speech, which cannot be argued after taking the presentations into account. All in all, the overall outcome is remarkable and students seemed to have learned to the maximum of their possibilities with the structure followed.

6. Conclusion

The present research reveals that cooperative learning used in close relation to ICT seems to improve the learning process of pupils in mixed-ability EFL upper-secondary groups, regardless of the fact that the participants may not be used to working cooperatively on a daily basis but rather sporadically. The results drawn from the participant observation and the self-assessment questionnaire show that pupils were committed to the task and reported it was engaging, very dynamic and contributed to

expanding their knowledge on the selected topic, whilst they also widened their vocabulary and allowed them to practice the use of the grammar structures introduced in the unit.

The positive outcome of the activity confirms and strengthens the points of view of the majority of authors who discuss the factors that ought to be considered when implementing a cooperative learning structure. In this case, the task was carefully designed to be administered in an environment of an excellent group cohesion, as observed during the data collection process and remarked by the teachers who contributed to the research and. Moreover, every small detail regarding grouping was taken into account so that each team represented the reality of the classroom to the maximum of its possibilities. In addition, students also had the support of online tools that aided the process of knowledge building.

The fact that students regarded the cooperative task blended with ICT as being engaging and dynamic reinforces the need to make all tasks as attractive as possible, presenting plausible contexts with attainable objectives tailored to the reality of the groups at hand. Likewise, assigning roles to each team member definitely helped raising the interest in the activity, in which pupils showcased an overall satisfactory level of commitment .

Turning to the language choice of students, the results show that L1 is of common occurrence in team discussions but students generally make an effort to include chunks of English in their speech, especially when referring to specific terminology linked to the selected topics. Students who strived to use the TL in the first stage of the activity became familiar with the content and presented it naturally in the second and final stage of the task. Further research is needed over an extended period of time to have a deeper insight on the language choice of students in EFL contexts under the umbrella of cooperative learning blended with ICT.

This case study was limited to the implementation of the cooperative method during two lessons and further research is needed in a similar context, being able to apply cooperative structures on a daily basis, having heterogeneous base teams that can be complemented by occasional homogeneous teams as well as being able to assess student's performance and achievement over a longer time period, ideally a whole

school year. Another limitation to the research worth underlining is the already mentioned scarcity of computers during the implementation of the activity with one of the groups, which had a slight impact on the results. Furthermore, right after the school placement ended one of the instruments for data collection still had to be applied. In this case, a face-to-face interview was supposed to be held with all of the teachers in the English Department during the two last weeks of March but, due to the lockdown situation and the difficulty to arrange a videocall with all of them, the interview had to be adapted into an open answer questionnaire. Despite the fact deeper opinions could have been gathered in a face-to-face interview, with the opportunity to direct the topic according to the situation demands, it must be noted that both of the teachers who answered the questionnaire provided exhaustive explanations that have been very useful to round up the positive results of the current research.

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APPENDICES

Appendix 1. Participant observation. Classroom observation grid

Appendix 2. Informative brochure self-assessment

Appendix 3. Open answer questionnaire

Appendix 4. Cooperative task instructions

Appendix 5. Motivation, attitude and behavior – general group performance

Appendix 6. Motivation, attitude and behavior – group A team results

Appendix 7. Motivation, attitude and behavior – group B team results

Appendix 8. Informative brochure example A

Appendix 9. Informative brochure example B

Appendix 10. Informative brochure open answer results

Appendix 1. Participant observation. Classroom observation grid.

Adapted from Cannorazzo *et al.* (2019) *The peer observation: “Mentore” Project*

<i>Reference area</i>	<i>Tick one number from a minimum of 1 to a maximum of 4</i>				<i>Personal comments</i>
	1. Not at all	2. Just a little	3. Pretty much	4. Very much	
<i>Motivation, attitude and behavior</i>					
1. Class atmosphere is warm, open and accepting.					
2. Student participation is active and lively.					
3. Students show a positive attitude towards their teacher’s proposals.					
4. The premade grouping helps leading to a successful implementation of the activity.					
<i>Motivation, attitude and behavior – Team</i>					
5. Students understand their role and cooperate to achieve their goal					
6. Students are willing to clarify doubts with the teacher.					
7. Students are discouraged if they do not understand the task.					
8. Students get bored easily.					
9. Students are distracted and get off task while others in the group do all the work.					
<i>Language preference - Team</i>					
10. English is used to communicate ideas and fulfill the task. Students include new structures and vocabulary in their speech.					
11. Some chunks of spoken English are used, with an effort to include some new structures and vocabulary, but students’ L1 predominates.					
12. L1 generally used, with sporadic production of basic English.					

Teacher:

Lesson:

N. of students:

Appendix 2 Informative brochure self-assessment



SELF-ASSESSMENT ONLINE BROCHURE

Dear students,
For research purposes, please rate the following statements individually. Thank you for your collaboration!

Group (1rA / 1rB) *

Texto de respuesta corta

Team number *

Texto de respuesta corta

1. The task was engaging *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

1.5. Why do you think the task was/ wasn't engaging? (can be answered in Catalan) *

Texto de respuesta larga

5.5. Are you used to taking on roles in a context of group activities? *

- Yes
- No

6. Rate time management in your team *

- 4. Excellent
- 3. Good
- 2. Bad
- 1. Terrible

7. I learned and used new health-related vocabulary *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

8. Passive structures were included in the brochure *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

2. Working in groups added dynamism to the task *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

3. The instructions were clear *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

4. The teacher provided help whenever needed *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

5. I understood my role and cooperated with my teammates to fulfill the task *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

9. I tried to use chunks of English in my speech *

- 4. Very much
- 3. Pretty much
- 2. Just a little
- 1. Not at all

10. If you have any comment, add it below:

Texto de respuesta larga

Appendix 3 Open answer questionnaire

THE VOICE OF EXPERIENCE- COOPERATIVE LEARNING THROUGH ICT IN AN EFL ENVIRONMENT

As a final step of data collection for my TFM on cooperative learning and ICT in the EFL classroom I planned on conducting an interview to gather all your different opinions regarding the topic. Given the current situation, I am sending you the questions instead. Please answer them the best you can. Your help is truly appreciated!

- In your lessons, what would you say has more weight: the teacher-student interaction and the individual work of each student (traditional teacher-centered methodology) or the student-student interaction and teamwork (student-centered)? **(SHORT ANSWER)**
- If you mainly follow a traditional methodology, what are the reasons? Still, do you try to work cooperatively even if sporadically?
- When do you think it is useful to apply cooperative learning and what part of the language do you generally work on? (oral language, written...)
- Do you consider that cooperative work favors the learning process of students to the maximum of their possibilities and helps acquiring values such as solidarity, respect for differences, coexistence, etc.?
- Group cohesion is essential to be able to work in a team. How do you deal with this aspect? Do you have a positive perception towards the cohesion of the different groups you are currently in charge of?
- Do you think that following a cooperative learning structure allows / would allow greater attention to diversity within the class-group?
- When you divide the class into teams, do you make homogeneous or heterogeneous groups (according to abilities, ethnicity, motivation, language level, etc.)?
- Two of the basic principles of any cooperative structure are equitable participation and simultaneous interaction between all team members. How do you try to guarantee these two aspects? (e.g. assign **roles** to each participant, selection of interesting and relevant topics for students, etc.).
- What is the role of ICT in your daily life in the classroom and to what extent do they help you when you apply a collaborative / cooperative learning activity? Do you think they are useful for enhancing learning? What applications, programs, web pages do you prefer when it comes to facilitating cooperative learning?

Appendix 4 Cooperative task instructions

Write an **INFORMATIVE ONLINE BROCHURE (Canva, 150-250 words)** on the topic that has been assigned to your team. The following sections should be included:

- 1- A compelling headline
- 2- A short description of the topic
- 3- Facts / details specified for the topic
- 4- "Where can I learn more?" section, with links to other websites that talk about your topic.

In order to make an eye-catching brochure, you may want to add relevant images. The **use of content** seen in class will be valued.

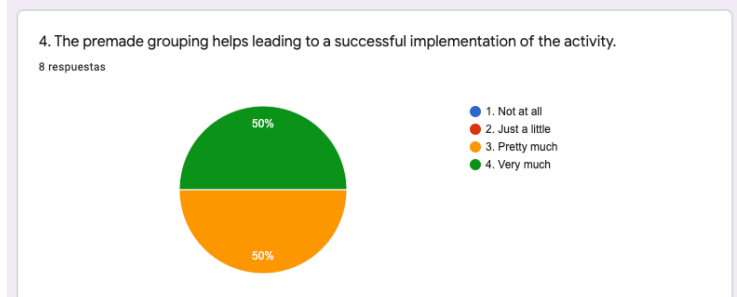
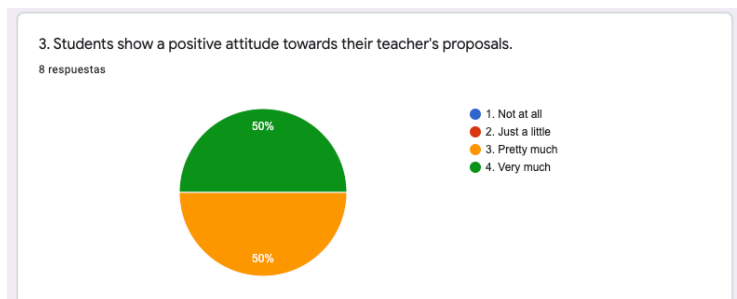
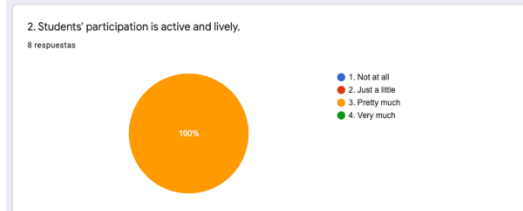
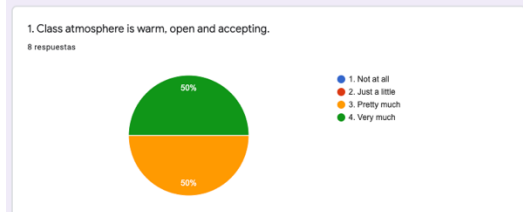
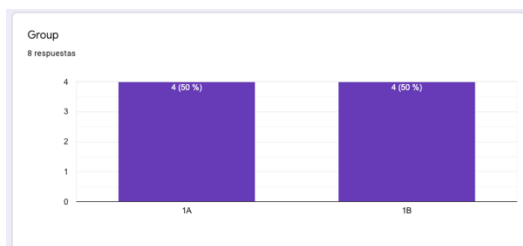
All team members share the role of information seekers. In addition, each team must select:

- A spokesperson: connection between the teacher and the team.
- A content curator: Checks that the content selected is suitable to the task.
- A supervisor: Checks that the use of English is appropriate.
- A helper: Controls timing, turn-taking (if necessary) and provides extra help to any of the other team members.

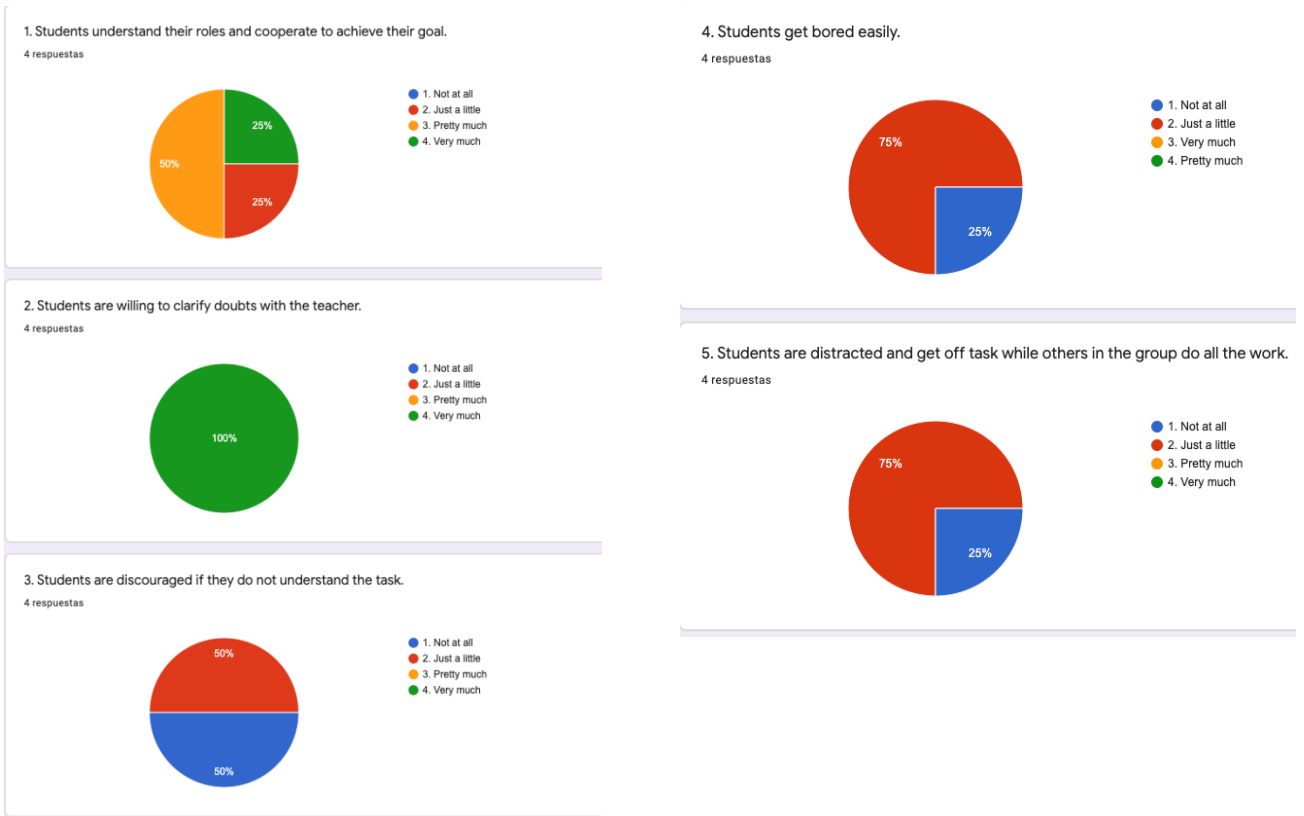
TOPICS

- Dangers of smoking (why stop smoking, what are cigarettes made of, conditions linked to smoking, etc.)
- Dangers of exposure to the sun (concerns, protection tips, etc.)
- Acupuncture (conditions treated, benefits, risks, etc.)
- Asthma (symptoms, treatment)
- Coronavirus (prevention, symptoms, spread, treatment)

Appendix 5 Motivation, attitude and behavior – general results



Appendix 6 Motivation, attitude and behavior – group A team results



Appendix 7 Motivation, attitude and behavior – group B team results



THE LATEST WORLDWIDE THREAT: CORONAVIRUS



What has happened?

As of Feb 17, 2020, 2019-nCoV has caused 71 331 human infections and 1775 deaths in China and 24 other countries, and it is distinct from SARS-CoV in biological, epidemiological, and clinical features. People develop panic at the thought of a re-occurrence of SARS.

Scientists call this disease as 'coronavirus' because it seems that the virus wears a crown

What is the coronavirus?

A coronavirus is a virus that was found in animals and started to affect humans in Wuhan (China) at the end of 2019. Scientists do not know what animal caused the Wuhan coronavirus, although it is linked to wild animals, like snakes, bats and crocodiles.

What causes a coronavirus?

First of all, humans get a coronavirus from contact with animals. Then, it was transmitted from human to human. Scientists do not know what animal caused the Wuhan coronavirus. This can be spread when a human comes into contact with an infected person and this person coughs dropping droplets with the virus. It might also be caused by touching something that an infected person has touched and then touching your mouth, nose, or eyes without washing your hands before.

What are the symptoms of a coronavirus?

It can take 2 weeks for symptoms to develop. Symptoms include:

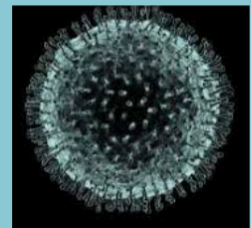
- Shortness of breathing.
- A headache.
- A fever.
- A cough.
- A runny nose.
- A sore throat.

Coronavirus treatment

Symptoms of a coronavirus usually go away on their own. If you feel worse than a common cold, see your doctor for be cured with medication. You have to drink plenty of fluids and take a rest as you would do with a normal cold.

Can a coronavirus be prevented?

Scientists are still working to find a vaccine for Coronavirus. Try to avoid people who have it, wash your hands often, and avoid touching your mouth, nose, or eyes before washing it. If you are traveling to a place where the Wuhan coronavirus is present, speak with your doctor first.

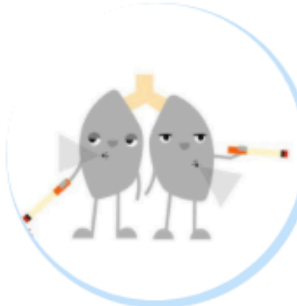


Where can i learn more?

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30419-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30419-0/fulltext)<https://familydoctor.org/condition/co>

DANGERS OF SMOKING

Risks and diseases




DANGERS

Smoking has a lot of risks:

- Death
- Cancer
- Coronary heart disease
- Addiction
- Cardiovascular disease


WHY STOP SMOKING?

- 90% of all lung cancer is caused by smoking
- 80% of deaths from chronic obstructive pulmonary diseases are caused by smoking
- Increases risk for death




CIGARETTES COMPOSITION

• Butane	• Paint
• Cadmium	• Methanol
• Stearic Acid	• Carbon Monoxide
• Hexamine	• Arsenic
• Toluene	• Methan
• Nicotine	• Acetic Acid
• Ammonia	



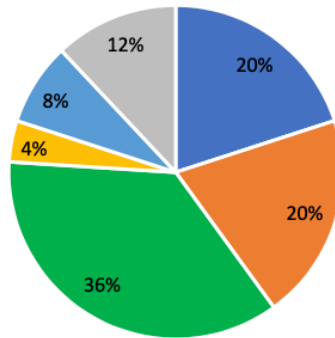
WHEN I CAN FIND MORE INFORMATION?

<https://www.myvmc.com/lifestyles/whats-in-a-cigarette/>
https://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm
<https://my.clevelandclinic.org/health/articles/11870-why-should-i-quit-smoking>



Appendix 10 Informative brochure open answer results

Why do you think the task was / wasn't engaging?



- Dynamic task
- Interesting topic
- Practical and meaningful learning
- Learn to work in teams
- Learn to use ICT tools
- Other